

**Ministry of Health and Social Protection of the Population
Republic of Tajikistan**

**Data Collection Survey on
Primary Health Care
in the Republic of Tajikistan**

Survey Report

August 2021

Japan International Cooperation Agency (JICA)

Koei Research & Consulting Inc.

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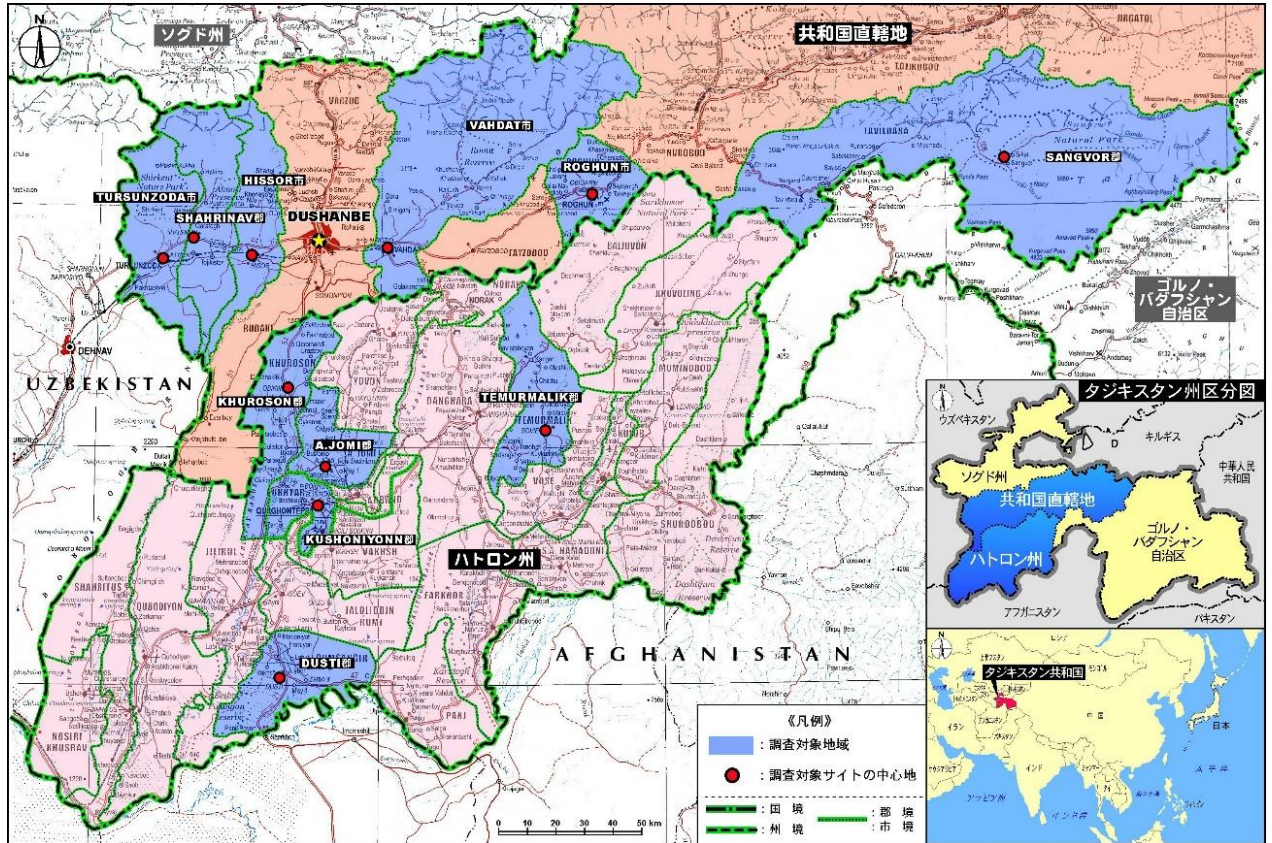
Conversion rate

1 US dollar = 109.811 yen

1 Tajikistan Somoni = 9.721 yen

(JICA rate for June 2021)

Map of Survey Sites



Photos

Examples of equipment in PHC facilities :

	
<p>Diarrhea in children is one of the most serious health challenges. An example of a treatment room equipped with a special bed for children and a portable toilet. (Jomi)</p>	<p>Wash basin in the health house. Water is drawn from the canal and stored in a small tank for hand washing. (Kushoniyon)</p>
	
<p>Facade of the health house. Since there are no health care facilities in the area, this was built by the community fund. (Shakhrinav)</p>	<p>A water supply facility at the rural health center, marked with the UAE's support. Water is collected from a nearby water source via pipes into a tank for supply. (Jomi)</p>
	
<p>Facade of the health house. The health house is located in a residential area with an irrigation canal running right in front of it. (Jomi)</p>	<p>The water source is located near the health house. All households in the area get water from a pipe drawn from this source. Water is gushing at the center of the photo. This water source is regarded as a sacred place in the community. (Shakhrinav)</p>

Record keeping at PHC : Health house in Jomi District (Khatlon Oblast)



A notebook is used to record the results of outpatient care and home visits. No standardized forms are distributed, only commercial notebooks are used. These notebooks are purchased by health staff at their own expense and individually do their own recording.



A sample record, which includes the names, telephone numbers, and other information of the heads of the household visited during home visit. Audits are conducted several times a year to check on the implementation of home visits.

Activities at PHC : Health house in Kushoniyon District (Khatlon Oblast)



A nurse injects a child with a prescription for antibiotics.



A poster for COVID-19 prevention distributed to the PHC facilities by the Ministry of Health and Social Protection of the Population.

Healthy Lifestyle Center : Kushoniyon District (Khatlon Oblast)

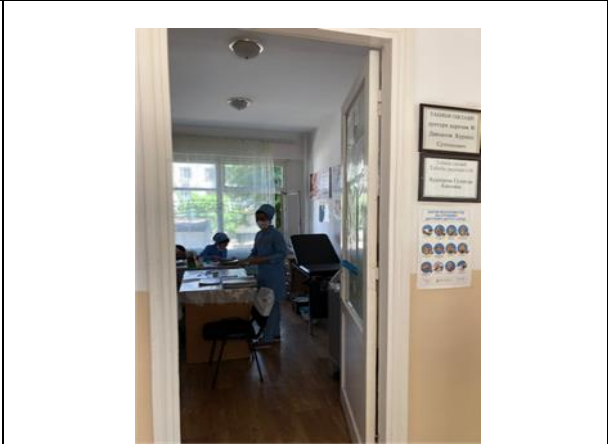


Computer operator has set up a Facebook page to disseminate health information.



Information, education, and communication (IEC) materials. If stock is available, these are distributed at the seminars and home visits.

District Health Center (DHC)



A diagram of the layout of PHC facilities posted on the wall of the DHC. The diagram shows which rural health centers have jurisdiction over which health houses. (Tursunzoda)

One of the five outpatient consultation rooms at the DHC, where family medicine doctors and nurses consult with patients and refer them to the department if they need medical attention. (Tursunzoda)



PHC facility layout map. The northern and southern parts of the county are less populated due to the mountainous terrain, and most facilities are located in the central part of the county. (Shakhrinav)

Vahdat DHC is located at the center of the county and has a lot of foot traffic.

PHC surroundings and patients: Kushoniyon District (Khatlon Oblast)



In front of the house is an irrigation canal. The woman at the center of the photo is washing something in the canal. (The road between the rural health center and health house in Navbahor jamoat in Kushoniyon District.)

A child in the hospital due to malnutrition. Accompanied by her mother and two brothers and sisters. (Numeral hospital number 6, located in the same building of Uljaboev Rural Health Center in Khuroson District.)

Abbreviations

Abbreviation	Official Name	Remarks
ADB	Asian Development Bank	
AKDN	Aga Khan Development Network	
BBP	Basic Benefit Package	
CHP	Community Health Promoter	Names of health volunteers being trained by AKDN projects
CHT	Community Health Team	
CME	Continuous Medical Education	
DH	District Hospital	
DHC	District Health Center	Including city health centers
DHIS	District Health Information System	
DHS	Demographic Health Survey	
DRS	Districts of Republican Subordination	
EU	European Union	
FMD	Family Medicine Doctor	
FMN	Family Medicine Nurse	
FMC	Family Medicine Center	
GBAO	Gorno-Badakhshan Autonomous Oblast	
GIZ	<i>Gesellschaft für Internationale Zusammenarbeit</i>	
HEARTS	Hearts: Technical Package for Cardiovascular Disease Management	
HH	Health House	
HLC	Healthy Lifestyle Center	
IMCI	Integrated Management of Childhood Illness	
JICA	Japan International Cooperation Agency	
MCH	Maternal and Child Health	
MCH handbook	Maternal and Child Health Handbook	
MOHSP	Ministry of Health and Social Protection of People	
TB	Tuberculosis	
TB Center	Center on Prevention of Population from TB	
TJS	Tajik Somoni	
MCH	Maternal and Child Health	
NCDs	Non-communicable Diseases	
NH	Numeral Hospital	
NHS 2030	National Health Strategy 2030	
PHC	Primary Health Care	
PHC Plan	Primary Health Care System Development Plan based on Principles of Family Medicine for the Period of 2021 – 2025	
PGMI	Post-Graduate Medical Education Institute	
PRA	Participatory Rural Appraisal	
RepHC	Reproductive Health Center	
RHC	Rural Health Center	
RHLC	Republican Healthy Lifestyle Center	
SDGs	Sustainable Development Goals	
SRMNCAH	Sexual, reproductive, maternal, newborn, child and adolescent health	
STEPS	WHO STEPwise Approach to NCD Risk Factor Surveillance	
SUN	Scaling Up Nutrition	
UHC	Universal Health Coverage	

UNICEF	United Nations Children's Fund	
USAID	United States Agency for International Development	
WASH	Water, sanitation, and hygiene	
WB	World Bank	
WFP	World Food Programme	
WHO	World Health Organization	

Summary

In the Republic of Tajikistan (hereinafter referred to as "Tajikistan"), both the maternal mortality rate and the under-five mortality rate are improving but still remain high. In addition, Tajikistan has a tremendous need for the prevention and treatment of NCDs, such as cardiovascular diseases and strokes account for about 70% of deaths. In order to solve these problems, it is necessary to strengthen primary health care (PHC). The Japan International Cooperation Agency (JICA) has decided to conduct a data collection survey for the formation of effective technical cooperation projects with the aim of strengthening PHC.

This report describes (1) the health policy of the Ministry of Health and Social Protection of the Population of Tajikistan and its policy on PHC, (2) the current status of primary health care provision based on observations and interviews during the field survey, and (3) related projects conducted by other development partners. At the end of the report, (4) project proposals are presented.

(1) As for Tajikistan's health policies, the timing of this survey coincided with the timing of the revision of the National Health Strategy, which is prepared every ten years, and the PHC Strategy, which is prepared every five years, and both policies were obtained and approved in early 2021. In the National Health Strategy, strengthening PHC systems is one of the goals, along with health systems management, health delivery systems, health financing, health human resources, and health information systems development. In addition, the PHC System Development Plan based on Principles of Family Medicine for the Period of 2021–2025, calls for (1) improving access to and quality of services at the PHC level, (2) modernizing information systems to improve management at the PHC level, (3) improving the integration and development of basic services in PHC facilities, such as palliative care, emergency care, and vertical programs; and (iv) community involvement in health issues.

(2) During the field survey and interviews, it was confirmed that the current situation is still not up to the policy targets. Particularly, there is a lack of human resources for PHC; there is a lack of infrastructure for PHC facilities to provide safe and hygienic services. Maternal and child health activities are well established in terms of health service delivery; however, staff knowledge and activities are not well established in NCD prevention. Moreover, although there are specialized centers called healthy lifestyle centers that promote healthy living, but these centers lack capacity at the district level.

(3) Other major development partners were found to be focusing on strengthening PHC in Tajikistan such as *Gesellschaft für Internationale Zusammenarbeit* (GIZ) and the United States Agency for

International Development (USAID). They have been working with JICA technical cooperation project "Improving Maternal and Child Health System, Phase II in Khatlon Oblast" until around 2020, and currently, they are implementing projects to strengthen PHC. In addition, there are many other partner agencies supporting PHC activities.

(4) Based on the results of these surveys, this report proposes the following projects: The first is to strengthen health service delivery through capacity building, especially for staff at the PHC facilities. The second focuses on community activities to improve the health knowledge of the population on disease prevention and management, and to strengthen their capacity to proactively engage in health activities. The third is a project to promote health administration capacity building in PHC by strengthening the capacity of district health centers, the core of community health administration.

Survey Report

Data Collection Survey on Primary Health Care in Tajikistan

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Chapter 1 Purpose, Schedule, and Interviewees of the Survey

1.1 Background and Purpose of the Survey

The Republic of Tajikistan (hereinafter referred to as "Tajikistan") continues to have high rates of maternal and under-five mortality (maternal mortality: 68 out of 100,000 live births (1990) → 32 (2015) while under-five mortality: 108 out of 1,000 live births (2010) → 43 (2016) (World Bank: WB)), although both data on maternal and child deaths have been declining. In addition, non-communicable diseases (NCDs) such as cardiovascular disease and stroke account for about 70% of deaths in Tajikistan (World Health Organization: WHO, 2018), and in particular, cardiovascular disease is the leading cause of death in Tajikistan, so there is a great need for prevention, diagnosis, and treatment of NCDs. In addition, issues related to under-nutrition, such as low height and low weight, and NCDs caused by over-nutrition have been identified, and promotion of improved nutrition is required. To meet these challenges, the primary health care (PHC) needs to be strengthened.

The country's National Development Strategy 2030, formulated in 2016, aims to raise the living standards of its citizens through sustainable economic development and lists four priority initiatives in the health sector, i.e.: (1) health system reform; (2) improving access, quality, and efficiency of health services; (3) developing health care resources; and (4) introducing a healthy lifestyle model, with PHC strengthening being at the core of health system reform with particular emphasis in the rural areas.

The ten-year National Health Strategy 2010-2020 aims to improve the health of the population and create a healthy living environment. One of the goals to be achieved by 2020 is to strengthen PHC. Strengthening PHC will continue to be a priority in the next National Health Strategy (2021-2030), which is currently being drafted.

In Tajikistan, hospital services and PHC services have been separated from the remnants of the former Soviet era, and it is said that 80% of the population is directly accessing hospitals without going through PHC facilities. Therefore, PHC facilities have not sufficiently played their role as a gatekeeper. Health Houses (HHs), Rural Health Centers (RHCs), and District/ City Health Centers (DHCs) are responsible for providing PHC services in Tajikistan, but there are other various centers under the Ministry of Health and Social Protection of the Population (MOHSPP) for each specific disease. The branch centers are responsible for some of the PHC services in various locations. In response to this situation, the Strategic Plan for Development of Family Medicine-Based Primary Health Care 2016-2020, which is based on the concept of home healthcare, has been a specialized medical service that exists in each vertical program. The MOHSPP is promoting the integration of these centers into PHC services by 2020, with emphasis on integrating PHC services with the aim to improve the overall PHC services.

Regarding the PHC personnel, the MOHSPP has set the allocation standards, but the availability of general practitioners who are called Family Medicine Doctors (FMDs) and nurses is low, implying a shortage of human resources engaged in family medical care. FMDs often do not settle in rural areas due to low salary and poor working and living conditions, and there is a need to correct the imbalances between urban and rural areas. In addition, since doctors have tended to be highly specialized in the past, many doctors are engaged as specialists

in other fields even if they received specialized education in home care. Improving the ability to respond to health problems and prevent diseases at the PHC level is an urgent issue. Particularly in rural areas, there is a shortage of PHC personnel such as FMDs and nurses, hence, improvement in the quality of education is also required.

In terms of finance, in Tajikistan, the total health expenditure is 7% of the gross domestic product (GDP) (2016) and health expenditure per patient is increasing at USD 55.7, while health budget as a percentage of government budget is low at 6.8%. The source of total health expenditure is 29% of government funding, 62% of household self-pay, and 9% of overseas funding through international development assistance. Even with free vaccinations and PHC services, informal payments, such as rewards to healthcare providers, are rampant. Although 40% of the health budget is to be allocated to PHC, about 80% to 90% of labor costs are occupied by personnel, and practical input to PHC services is limited.

Against this background, as the MOHSPP promotes the integration of PHC services, further strengthening of PHC is required, and it is necessary to collect and confirm basic information for effective cooperation project formulation. The cooperation project is assumed to be a technical cooperation aimed at forming a service delivery model to address new issues, such as NCDs and nutrition, centered on PHC.

The purposes of this survey are: to identify the current situation and challenges, cooperation needs, and cooperation trends among other aid implementing agencies in strengthening PHC in Tajikistan; to examine the direction (approach) and framework of effective cooperation envisioned based on these findings; and to collect and organize basic information for forming cooperation projects.

1.2 Schedule of the Survey

The survey was conducted in April and May 2021 on the following dates.

Dates		Survey Area / Interviewees
Apr/26	Mon	Avicenna Tajik Medical University Post Graduate Medical Institute (PGMI)
27	Tue	Director of PHC unit, MOHSPP (Explanation of the survey outline) Sharing schedule with PHC unit staff and request of calling each surveyed district
28	Wed	Reproductive Health Center (RepHC) Integrated Management of Childhood Illness Center (IMCI)
29	Thu	Center on Prevention of Population from Tuberculosis (TB) United Nations Children's Fund (UNICEF)
30	Fri	Clinical Training Center for Family Medicine (FMC) Healthy Lifestyle Center (HLC)
May/1	Sat	Data compilation
2	Sun	Data compilation
3	Mon	Jomi (District Health Center, District Hospital, Numeral Hospital)
4	Tue	Jomi (RHC, 2 HH)
5	Wed	Kushoniyon (District Health Center, District Hospital)
6	Thu	Kushoniyon (Healthy Lifestyle Center, 2 RHC, HH)
7	Fri	Khuroson (District Health Center, District Hospital, Numeral Hospital RHC, HH)
8	Sat	Data compilation
9	Sun	Data compilation

10	Mon	(Victory day) Data compilation
11	Tue	World Health Organization (WHO) – UNICEF – Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) (online) United States Agency for International Development (USAID) (online)
12	Wed	Asian Development Bank (ADB) (online) European Union (EU)
13	Thu	(Eid holiday) Data compilation
14	Fri	World Bank (online) Healthy Lifestyle Center
15	Sat	Director of Medical Education, Human Resource Policy, and Science, MOHSPP
16	Sun	Data compilation
17	Mon	Hissor (District Health Center, District Hospital, RHC, HH, Focus Group Discussion with young mothers) Dusti (District Health Center, RHC, HH)
18	Tue	Dusti (District Health Center, District Hospital, Numeral Hospital, RHC, HH)
19	Wed	WB Temurmalik (District Health Center)
20	Thu	Tursunzoda (District Health Center, RHC, HH) Temurmalik (RHC, HH)
21	Fri	Shakhrinav (District Health Center, RHC, HH) Sangvor (District Health Center, District Hospital, Numeral Hospital, RHC, HH) Khuroson Healthy Lifestyle Center
22	Sat	Immuno-prophylaxis Center Director, Maternal and Child Health Service, and Family Planning, MOHSPP
23	Sun	Data compilation
24	Mon	Roghun (DHC, District Hospital, Numeral hospital, RHC, HH)
25	Tue	Director, PHC unit, MOHSPP (Report of the Result of the Survey and Discussion) JICA Tajikistan Office
Jun/7	Mon	World Food Programme (WFP) <i>Since the interview schedule did not coincide with the field survey period, the interview was conducted after returning to Japan.</i>
Jun/10	Thu	Aga Khan Development Network (AKDN) (online) <i>Since the interview schedule did not coincide with the field survey period, the interview was conducted after returning to Japan.</i>

1.3 Interviewees of the Survey

The key interviewees in this survey are as follows:

Organization /Facilities	Interviewees	Name of Main Interviewer (honorific name omitted)
MOHSPP	Director, PHC Unit of Department for Reform, PHC and International Relations Director, Department of Medical and Pharmaceutical Education, Staff Policy and Science Director, Department of Maternal and Child Health Service, Family Planning	Bandaev Ilhom Yusufi Salomiddin Nabiev Zoir
Republican Specialized Centers	Head of International Relation Dept. & Prof. of Pediatric Dept., Avicenna Tajik State Medical University Director, Institute of the Post Graduate Education of the Medical Personnel Director, Reproductive Health Center Director, Integrated Management of Childhood Illness (IMCI) Center Director of Institute Scientific Clinical Pediatric and Surgery for Children Director, State Institution "Republican Center for	Jamshed Dekhoev Muhiddinzoda Nuriddin Ghanizoda Munira Ikromov Turakhon Sharbatorich Rajabzoda Aslidin Ikromov Turakhon Sharbatorich

	Protection of the Population from Tuberculosis” Director, Clinical Training Center for Family Medicine Director, Healthy Lifestyle Center Director, Immuno-prophylaxis Center	Rajabzoda Salohiddin Rajab Mukhtorava Parvina Samadzoda
Survey Target Area	<u>Khatlon Oblast</u> Khuroson District District Health Center, District Hospital, Healthy Lifestyle Center, Numeral Hospital #6, RHC Uljaboev, HHGulreads Jomi District District Health Center, District Hospital, Numeral Hospital #3, RHC Qudriddin Giyosou, HH Isamoil Somoni, HH Mirzoobod Dusti District District Health Center, District Hospital, Numeral Hospital #4, RHC Ergash Sulton, HH Galaba Temurmaliq District District Health Center, RHC Dehai Kazoz, HH Dehai Hasanbegi Kushoniyon District District Health Center, District Hospital, Healthy Lifestyle Center RHC Navbahor, RHC Chorsu, HH Navruz <u>Districts of Republican Subordination (DRS)</u> Vahdat City District Health Center, RHC Burunov, HH Mekhrobod Hissor City District Health Center, District Hospital, Healthy Lifestyle Center, RHC Dahbed, HH Chamonzor Tursunzoda City District Health Center, RHC Toichi, HH 1 st May Shahrinav District District Health Center, RHC Istiqlol, HH Khuji	DHC: Aslam Sobiri DH: Faizzoda Jurabek HLC: Gultuhsor Turkmenova NH: Rahimov Avliyo RHC: Nazarova Sabokhat HH: Ismonova Zumratbi DHC: Saliev Amriadin DH: Nuralizoda Alihanjon NH: Ashurov Azamat RHC: Aimatov Olimjon HH: Pirova Sailigul HH Alieva Mijgona DHC: Sharipov Bozor DH: Razokov Mansur NH: Sapargeldy Kilichev RHC: Kuliev Farmon HH: Maya Tangriberdieva DHC: Izatzoda Nurullo RHC: Avleokulov Abdulhakim HH: Haydarov Hasanali DHC: Saidov Rasul DH: Davlatzoda Mahmad HLC: Jailov Erkin RHC: Atajonova Malika RHC: Mamadaliyeva Ziyoda HH: Khasanov Murod DHC: Kholov Shokir RHC: Murodov Mahmadshe HH: Sharipova Sitora DHC: Nosirov DH: Azamov HLC: Bobokul Yomgurov RHC: Kuliev Murodalay HH: Muhamadaliyeva Anora DHC: Rustamov Sharofiddin RHC: Yakubova Nigora HH: Tukhtamatova Nozima DHC: Ahmedov Tolim RHC: Khojaev Sharofiddin HH: Saidov Khujamlod

	Roghun City District Health Center, District Hospital, Numeral Hospital Obigarm, RHC Obigarm, HH Kady Ob Sangvor District District Health Center, District Hospital, Numeral Hospital Dehoty Childara, RHC Childara, HH Saridasht	DHC: Uruzov Umdechon DH: Akobirov Bakhtovar NH: Tosheva Farida RHC: Ilhomiddon Nasreddinov HH: Sharipov Fayziddin DHC: Mirzoev Mizosho DH: Saidov Rajabaly NH: Mirzoev Nazarhuja RHC: Ikromzoda ismon HH: Odinaev Aub
Development Partners	UNICEF (WASH) UNICEF (Nutrition) UNICEF (GIZ-WHO-UNICEF Project) WHO (GIZ-WHO-UNICEF Project) GIZ (GIZ-WHO-UNICEF Project) USAID ADB EU WB WFP AKDN	Ammar Orakzai, Malohat Shabanova Anthony Asije Parvina Makhmudova Natascha Bohlmann Malika Makhkambaeva Cebel, Isfandior Leila Emerson Mutriba Latypova Shamsiya Miralibekova Guldarbogh Sadonshoeva

Since the main objective of this survey is to understand the current status of PHC activities in the field, the Survey Team mainly stepped through district/city PHC centers and PHC facilities in the district/city. The Survey Team also visited district and numeral hospitals as time allowed in order to understand hospital functions and linkages with PHC services. The counties surveyed in this survey are as follows:

1) Khatlon Oblast

Khuroson District, Jomi District, Dusti District, Temurmaliq District, Kushoniyon District

2) Districts of Republican Subordination (DRS)

Vahdat City, Hissor City, Tursunzoda City, Shahrinav City, Roghun City, Sangvor District

1.4 Composition of the Survey Team

This Survey Team is composed of the following members:

Responsibilities	Name (All affiliations are with Koei Research & Consulting Inc.)
Team Leader/PHC · NCDs · Nutrition 1	AKIYAMA Yoshiko
PHC 1	KIDO Chiaki
PHC 2 · NCDs · Nutrition 2	MAKHMUDOV Alisher

Reference

The following is a list of districts and cities in Khatlon Oblast and DRS. Districts/cities shaded in orange were visited this time.

Khatlon Oblast

No.	District	Native Name	Capital	Area in km ²	Population (2020 est.)
1	Khuroson	Хӯросон	Obikiik	900	116,500
2	Yovon	Евон	Yovon	900	234,600
3	Baljuvon	Балҷувон	Baljuvon	1,300	30,400
4	Khovaling	Ховалинг	Khovaling	1,700	57,900
5	Jomi	Абдурахмони Ҷомӣ	Abdurahmoni Jomi	600	175,800
5	Danghara	Данғара	Danghara	2,000	161,000
6	Temurmalik	Темурмалик	Sovet	1,000	69,800
7	Muminobod	Мӯминобод	Muminobod	900	94,700
8	Kushoniyon	Кӯшониён	Ismoili Somoni	600	245,900
9	Vakhsh	Вахш	Vakhsh	1,000	199,300
10	Vose	Восеъ	Vose	800	216,500
11	Shamsiddin Shohin	Шамсиддин Шоҳин	Shuroobod	2,300	55,500
12	Nosiri Khusrav	Носири Хусрав	Bahori	800	39,300
13	Shahrituz	Шаҳритуз	Shahrituz	1,500	130,000
14	Qubodiyon	Қубодиён	Qubodiyon	1,800	188,100
15	Dusti	Дӯстӣ	Jilikul	1,200	117,100
16	Jayhun	Ҷайхун	Dusti	1,000	139,000
17	Jaloliddin Balkhi	Ҷалолиддин Балхӣ	Balkh	900	201,300
18	Farkhor	Фархор	Farkhor	1,200	170,800
19	Panj	Панҷ	Panj	900	119,700
20	Hamadoni	Ҳамадони	Moskovskiy	500	148,800
21	Bokhtar City	Бохтар	-	<100	111,800
22	Norak City	Норак	-	400	61,500
23	Levakant City	Леваконт	-	100	48,300
24	Kulob City	Қӯлоб	-	300	214,700

DRS

No.	District	Native Name	Capital	Area in km ²	Population (2020 est.)
1	Shahrinav	Шаҳринав	Shahrinav	1,000	123,000
2	Varzob	Варзоб	Varzob	1,700	82,200
3	Rasht	Рашт	Gharm	4,600	127,400
4	Lakhsh	Лахш	Vahdat	4,600	66,400
5	Rudaki	Рӯдакӣ	Somoniyon	1,800	518,200
6	Fayzobod	Файзобод	Fayzobod	900	103,600
7	Nurobod	Дарбанд	Darband	900	82,100
8	Tojikobod	Тоҷикобод	Tojikobod	700	46,000
9	Sangvor	Сангвор	Tavildara	6,000	23,300
10	Tursunzoda	Турсунзода	—	1,200	298,800
11	Hisor	Ҳисор	—	1,000	308,100
12	Vahdat	Ваҳдат	—	3,700	342,700
13	Roghun	Роғун	—	500	44,100

Source: Wikipedia (Names and native names of districts, capital, and area), Population of the Republic of Tajikistan as of 1 January 2020. Statistics Office of Tajikistan.

Chapter 2. Current Status and Issues on PHC in Tajikistan

2.1 Major Health Indicators

The Republic of Tajikistan is a country with a population of about nine million (World Bank, 2018). Life expectancy has steadily increased from 59.65 years in 1997, when the civil war ended, to 70.65 years in 2017 (World Bank). Data on key health indicators in 1990 immediately after the collapse of the Soviet Union, in 1995 during the civil war, in 2000 after the end of the civil war, and every five years thereafter and most recently in 2018, showed that the population of children aged 0-14 and the young and middle-aged population aged 15-64 have increased, respectively, while maternal, infant, and under-five mortality rates, indicators of maternal and child health, have all declined steadily (Table 2-1)¹.

Table 2-1 : Changes of Major Health Indicators of Tajikistan

Indicator Name/Year	1990	1995	2000	2005	2010	2015	2018
Life expectancy at birth, total (years)	58.8	58.5	62.0	66.1	68.7	70.1	—
Fertility rate, total (births per woman)	5.23	4.58	3.97	3.62	3.60	3.62	—
Population ages 0-14, total	2,315,241	2,552,473	2,643,500	2,581,666	2,685,570	3,029,879	3,347,678
Population ages 15-64, total	2,765,930	2,989,812	3,349,025	3,949,718	4,593,408	5,175,187	5,478,142
Number of maternal deaths	—	—	100	64	55	49	—
Maternal mortality ratio (national estimate, per 100,000 live births)	—	—	—	97	45	(33, Y2012)	—
Number of neonatal deaths	6,508	6,075	5,434	4,713	4,865	4,424	4,193
Mortality rate, neonatal (per 1,000 live births)	30.7	30.1	28.5	23.3	20.4	16.3	15.0
Number of infant deaths	16,866	17,433	12,823	9,409	8,711	8,839	8,449
Mortality rate, infant (per 1,000 live births)	80.7	87.3	67.8	47.4	37.3	32.9	30.4
Number of under-five deaths	21,267	22531	15,946	11,079	9,993	10,081	9,627
Mortality rate, under-5, male (per 1,000 live births)	109.9	—	91.3	—	48.1	42.2	38.8
Number of deaths ages 5-14 years	1,729	—	1,744	—	939	888	920
Probability of dying at age 5-14 years (per 1,000 children age 5)	12.2	—	9.9	—	5.5	4.9	4.5

Source : World Bank

On the other hand, in relation to the Sustainable Development Goals (SDGs), there is a target to combat non-communicable diseases (NCDs), which aims to reduce the number of premature (or young people's) deaths caused by NCDs by one-third through prevention and treatment by 2030. Specific indicators include hypertension treatment and control rates, diabetes treatment and control rates, cervical cancer screening rates, and smoking rates. As for NCDs in Tajikistan, the data for every five years from 2000 are shown in Table 2-2. While the rate of deaths from infectious, perinatal, and nutritional diseases is decreasing, the rate of deaths from NCDs is increased in 2016. NCDs accounted for 69.2% of all 46,000 deaths in Tajikistan. In addition, deaths from cardiovascular diseases in Tajikistan accounted for 42% of all deaths, higher than the global average of 31%².

¹ The World Bank Data, <https://data.worldbank.org/country/tajikistan>, accessed Jan. 30, 2020.

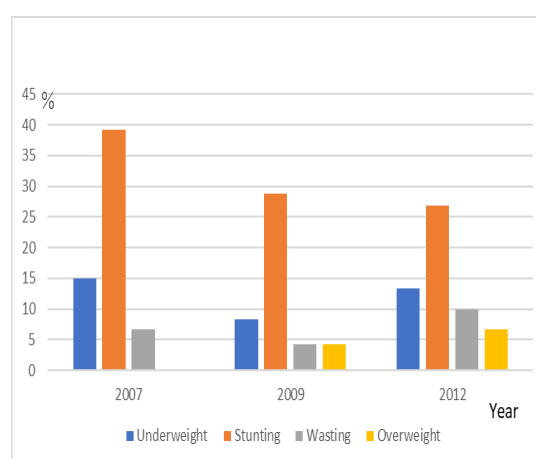
² World Health Organization-Non-communicable Diseases Country Profiles, 2018

Table 2-2 : Changes of NCDs Indicators in Tajikistan

Indicator/ Year	2000	2005	2010	2015	2016
Percentage of mortality from NCDs of total death (%)	50.9	—	64.0	68.2	69.2
Percentage of death by communicable diseases and maternal, antenatal and nutrition conditions (%)	40.0	—	27.3	24.0	23.2
Diabetes prevalence (% of population ages 20 to 79)	—	—	5.0	—	—
Total alcohol consumption per capita, male (liters of pure alcohol, 15+ years of age)	—	—	4.2	—	5.7

Source : World Bank

Other indicators of NCDs, such as obesity rate among those aged 18 years and older, have also increased from 5% in men and 8% in women in 2000 to 10% in men and 15% in women in 2015. The change in children's nutritional status is also noticeable from 2007 to 2012, as shown in Figure 2-1. The rate of underweight (weight for age less than two standard deviations) declined but increased again in 2012. Stunting (less than two standard deviations of height to age) continues to decrease, but the rates of both wasting (less than two standard deviations of weight to height) and overweight (more than two standard deviations of weight to height) are increasing.



Source : Nutrition Landscape Information System, WHO

Fig. 2-1 : Change of Nutrition Status of Under 5

The World Health Organization (WHO) has developed the WHO Package of Essential NCD Intervention (PEN) in response to the need for technical guidelines to address NCDs, which have become a global problem. The WHO-PEN believed that in dealing with clinical approach or management of NCDs in Tajikistan, a conceptual framework for a comprehensive plan of basic NCDs interventions is useful to increase equity and efficiency of primary health care (PHC) in resource-poor environments.

2.2 Position of PHC in the Tajikistan Ministry of Health and Social Protection Policies, and National Plans

The literature below was reviewed and has confirmed that PHC plays an important role in the health system in Tajikistan.

2.2.1 National Development Strategy 2030

The National Development Strategy (NDS) of the Republic of Tajikistan up to the period of 2030 is based on the three basic principles for future development, i.e.: 1. Prevention (reducing vulnerability of future development), 2. Industrial (effective use of national resources), and 3. Innovativeness (the development on the basis of innovations in all spheres of socio-economic life of the country).

The goal of the long-term development of Tajikistan is to increase the living standards of the population on the basis of sustainable economic development, which is characterized by the following strategic development

objectives:

- Ensuring energy security;
- Development of transportation and communication of the country;
- Ensuring food security and nutrition; and
- Expansion of productive employment.

In the framework of the NDS-2030, there are three main tasks at the new stage of development. First, to achieve the level of socio-economic development comparable to countries of the middle segment with an average income. Second, to ensure sustainability through diversification and increasing competitiveness of the national economy, and thirdly, to expand and strengthen the middle class.

To address the first problem, it is necessary to:

- Keep a steady pace of economic growth at 7-8%;
- Improve three or more times the gross domestic product (GDP) of the country;
- Increase more than 2.5 times the level of GDP per capita;
- Reduce more than 2 times the poverty level and eradicate extreme poverty; and
- Significantly increase expenditure (cost) on social protection of the population.

For the second challenge, it is vital to:

- Ensure a higher rate of industrial growth and increase its share in the GDP of the country;
- Increase the efficiency of agriculture and increase its contribution to food security, including nutrition;
- Accelerate the pace of growth in services with a higher degree of difficulty;
- Promote diversification of the national economy (index of concentration of exports on three major products from 83% to 58%); and
- Increase the level of competitiveness of the national economy.

To meet the third challenge, it is necessary to increase the share of the middle class up to 50% in 2030. Key activities under this task should be:

- Promotion of incomes of the population, especially the rural population, youth, and women;
- Creation of conditions for decent and productive work, including the employment of vulnerable segments of the population; and
- Reduction of the inequality level in the society.

2.2.2 National Health Strategy 2030

The “National Health Strategy 2030 (NHS 2030) was approved in early 2021. The NHS 2030 consists of the following:

Chapter 1: Introduction

Chapter 2: Review of the Current Health Situation in Tajikistan

Chapter 3: Vision, Overall Goal and Strategic Directions of the National Health Strategy 2030

Chapter 4: Strategic Direction for the Health System

Chapter 5: Strategic Direction for Improving the Accessibility and Quality of Health and Social Protection Services
Chapter 6: Financing of the Strategy
Chapter 7 Monitoring the Strategy
Chapter 8 Final Provisions

The NHS 2030 describes a review of the overall health situation in Tajikistan during the previous National Health Strategy 2010-2020 in Chapter 2, which is presented as follows:

- The health of Tajikistan's citizens has improved since the civil war: Since 2000, life expectancy has increased by 6.8 years (2019) to 73.0 years for men and 76.9 years for women.
- According to data from the Global Burden of Disease study, between 2007 and 2017, the top ten causes of death in Tajikistan remained the same: ischemic heart disease, lower respiratory tract infections, stroke, neonatal disorders, acute intestinal infections, liver cirrhosis, hypertensive heart disease, diabetes, congenital malformations, and Alzheimer's disease. On the other hand, the number of deaths due to metabolic diseases (diabetes) has increased by 112% over the same period.
- Significant progress has been made in improving maternal and child health indicators. The maternal mortality rate decreased from 97.7 per 100,000 live births in 1990 to 24.1 per 100,000 live births in 2018; from 2005 to 2017, the global maternal mortality reduction rate was 2.8 percent, while Tajikistan's maternal mortality rate decreased by 4.2 percent.
- The situation also improved for child health indicators: In 2017, the under-five mortality rate was 33 (per 1,000 live births) and the infant mortality rate was 24 (per 1,000 live births) (Demographic and Health Survey 2017).
- Per capita healthcare expenditure was USD 62.80 in 2018. Of this, 26.4% was financed by public sources, 66.6% was mainly self-financed by patients, and 7% was financed by development partners and international development partners. Tajikistan spent 7.5% of its GDP on health care (World Bank, 2018), which is below the average for the Europe and Central Asia Oblast.

In Chapter 3 of the NHS 2030, the following are raised as strategic directions, and PHC is positioned as one of them.

- Effective management of healthcare system;
- **Strengthening of PHC delivery systems to achieve universal health coverage (UHC);**
- Modernizing and improving the healthcare service delivery system;
- Ensuring appropriate and sustainable financing for healthcare;
- Providing the healthcare system with qualified and motivated human resources; and
- Develop modern management information systems, extend the digitization of healthcare, and social protection system.

Chapter 5 of the NHS 2030 is divided into eight sections: Health Services, PHC Improvement, Maternal and Child Health Services, Infectious Diseases, NCDs, Pharmaceuticals, Public Health and Healthy Lifestyles, and Preparing for the Public Health Crisis. Section 2, PHC Improvement, describes the past ten years of progress, challenges, goals, and activities to achieve them. These are listed in the table below.

Table 2-3: PHC Improvement Section of the NHS 2030

Item	Outline
<p>History of PHC (2010-2020)</p>	<ul style="list-style-type: none"> • Primary health care (PHC) is the foundation of the healthcare system. Tajikistan has adopted PHC model based on family medicine approach and has invested heavily in training family medicine doctors (FMDs) and nurses (FMNs) to provide needs-based and setting-appropriate care. With consideration that over 73% of the country's population live in the rural areas, PHC is a gateway to health promotion and health services for most of the population. • PHC services should not be limited only to treatment of patients but should be focused on disease prevention and maintenance of good health, provision of rehabilitation and palliative care, taking into account gender and age differences, especially for people living in conditions of poverty and vulnerability and people with disabilities, elderly people, and people with implications of NCD and trauma. • (On October 25, 2018, the United Nations (UN) member states unanimously passed the adoption of the Astana Declaration, pledging to strengthen the PHC system as an important step towards achieving UHC.) The strategy, in the spirit of the Astana Declaration, aims to strengthen PHC based on Family Medicine, make it affordable, fair, and effective for all. One of the key goals of NHS2030 is to improve the access, quality, and responsiveness of PHC services based on Family Medicine for the population of Tajikistan. PHC services are essential and fundamental for improving and maintaining the health of communities and individuals. • Care provided should meet evidence-based practice recommendations and in a setting that is safe and acceptable for patients, and finally, PHC should be responsive to the needs of individuals and communities and national agenda for health. • Tajikistan has successfully introduced and improved the model of family medicine at the primary healthcare level. The share of PHC institutions practicing the principles of family medicine increased from 56% in 2010 to 70.1% in 2017. • Universal coverage with family medicine services and the quality of these services and infrastructure at their point of delivery, has been a focus of the reforms during the last decade, especially with a focus on rural and hard-to-reach areas. Currently, there are 53 cities, 54 districts, 844 rural health centers, and 1,711 health houses that provide PHC to the population.
<p>Challenges</p>	<ul style="list-style-type: none"> • Inequalities in access by the poor and marginalized groups despite significant successes in the development of healthcare service delivery infrastructure and improvements in access, are still evident. • Lack of awareness among public regarding their legal rights and lack of awareness of citizens regarding their eligibility for medical and social services, which limits effective use of these guarantees when needed. • Outpatient services are highly fragmented as part of legacy from Soviet-style medicine. This makes services more expensive by doubling expenditures, and on the other hand, limits access to patients. Physical services under one roof and establishing effective referral linkages to care, are needed in order to allow patients access the needed services through a “one-stop-shop” principle. • Along with fragmentation, lack of competencies at the PHC level leads to multiple referrals to other specialized outpatient and in-patient services.
<p>Goals</p>	<ul style="list-style-type: none"> • Increase quality and competencies of the PHC services • Develop information system to improve process and management at the PHC level • Provide access to essential medicines at the PHC level • Enhance integration and development of essential service under the umbrella of PHC • Engage communities and build partnerships between communities and the PHC providers
<p>Main Activities</p>	<ul style="list-style-type: none"> • Develop a National PHC Development Master Plan based on the principles of family medicine aiming at ensuring universal accessibility, economic efficiency, and provision of patient-centered and integrated services. • Develop and approve an investment plan for the construction, rehabilitation and equipping of Primary Health Care facilities in accordance with the National PHC Development Master Plan. • Develop emergency care/ambulance service integration model under the umbrella of PHC at the district level and include infrastructural upgrades of ambulance services. • Approve a mechanism for the development and adoption of national clinical practice guidelines for PHC services; determine the priority of their development and application. • Develop and implement the clinical practice guidelines for early diagnosis and treatment of somatic,

	<p>reproductive, infectious, neuropsychiatric, psychological diseases, including those among adolescents.</p> <ul style="list-style-type: none"> • Develop and approve a system for monitoring and evaluating the application of national clinical practice guidelines for PHC services. • Include an assessment of the application of clinical practice guidelines in the PHC medical institution accreditation system. • Review competencies of FMDs/PHC provides to broaden their capacity for delivering comprehensive care and gatekeeping access to specialized services (to be implemented in conjunction with infrastructural and managerial integration of services). • Downsize the number and volume of reporting for PHC facilities then streamline and optimize reporting process. • Gradually develop and implement digital information technologies for PHC; a successful experience of Dushanbe City implementation of “Automation of clinics and hospitals of the Republic of Tajikistan” can serve as a learning platform for developing this integrated and unified system. • Develop an optimized system of performance-based indicators and health status measurements to be collected at the PHC level and utilized for payment and health status monitoring systems. • Develop a set of indicators on health of adolescents, description of mechanisms for data collection and documentation of adolescents’ development, and its introduction in the information system. • Develop standards for provision of care to palliative patients, both by medical and social workers, as well as by families and the community. • Develop provision of palliative care for patients at home, where they live, by an interdisciplinary group of professionals, which is the preferred model, with a reserve of a limited number of hospital beds located in the existing hospitals. • Promote the arrangement of new hospices in the country. • Integrate appropriate functions of vertical service delivery structures (human immunodeficiency virus (HIV)/ acquired immunodeficiency syndrome (AIDS) and tuberculosis (TB) Centers, Healthy Life Style Centers, Immuno-prophylaxis Centers, and others) under the umbrella of PHC services, as part of the optimization and restructuring of the PHC network and ensuring “one-stop-shop” access to patients. • Develop and gradually integrate emergency care/ambulance service and transportation under the umbrella of PHC at the district level. • Implementation of the model “Partnership with Communities on Health Issues” approved by the Ministry of Health and Social Protection of People (MOHSPP), and joint activities of communities, healthy lifestyle centers and PHC facilities on health promotion/strengthening. • Community participation in the planning process (business planning) and implementation of PHC institutions.
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Source: NHS 2030

2.3 Policy Documents, Strategy, and Guidelines on PHC of MOHSPP

The policy document of the MOHSPP on PHC is "Primary Health Care System Development Plan based on Principles of Family Medicine for the Period of 2021 – 2025 (PHC Plan)" which was approved by the Minister on January 26, 2021. According to the head of the PHC Department of the MOHSPP, all future PHC activities until 2025 will be implemented based on this policy document.

The following four items are identified as key in the PHC Plan.

1. Improving access and quality of services at the PHC level;
2. Modernizing the information system to improve processes and management at the PHC level;
3. Improve integration and development of basic services in PHC facilities, including palliative care, emergency care and vertical service provision structures; and
4. Engaging communities to health issues.

The list of activities, tasks, and outputs/indicators for the above four items is shown below.

Table 2-4: Activities, Tasks, and Outputs/Indicators of the Primary Health Care System Development Plan based on Principles of Family Medicine for the Period of 2021 – 2025

Activity	Task	Output/Indicator
1. Improving access and quality of services at the PHC Level		
1.1 Develop a new and update the existing national guidelines on clinical practices for PHC services	1. Analyze the existing national guidelines on clinical practices for PHC 2. Approve the calendar of updates 3. Review the existing and develop the new clinical guidelines	• Order of the MOHSPP on the Establishment of Working Group, Number of new and updated clinical guidelines for PHC
1.2. Development and approval of the regular monitoring and evaluation system for application of national guidelines on clinical practices for PHC Services	1. Increase the number of internal committees at the level of PHC network facilities 2. Develop, approve and implement the external monitoring system for regular monitoring visits to support specialists at the local level	• Number of PHC facilities with internal quality committees • Number of supportive supervision visits to the PHC facilities of cities and districts
1.3. Review of competencies of family doctors / service providers on PHC allows an expansion of their abilities to provide complex care and access to specialized services	1. Review the qualification requirements of family doctors and nurses 2. Staged review of PHC Network Facility Regulations 3. Review the qualification requirements of narrow specialists at the PHC network facilities	• Qualification requirements of family doctors and nurses are updated • Regulations of PHC network facilities are updated • Qualification requirements for narrow specialists at PHC network facilities are updated
1.4. Continuous improvement and modernization of PHC network facility infrastructure	1. Renovation of existing and construction of new PHC facilities 2. Provision of PHC network facilities with modern equipment	• Number of renovated PHC facilities • Number of newly constructed PHC facilities
1.5. Increase the number of Family Medicine Specialists	1. Increase the number of family doctors among the graduates of the medical universities. 2. Increase the number of students in Family Medicine Specialty. 3. Regular qualification development courses for PHC network specialists.	—
1.6. Continuous capacity building for PHC health workers	1. Rollout introduction of continuous medical education (CME) based on credits 2. Introduce distance learning methods 3. Create the Continuous Medical Education website	• Number of pilot districts with introduced CME • Number of distance-learning courses
1.7. Update and develop standards for accreditation of PHC facilities and increase the number of accredited PHC facilities	1. Update PHC facility accreditation standards 2. Increase the number of PHC accredited facilities	• Number of accredited PHC facilities
1.8. Improve the motivation of specialists in family medicine	1. Ensure financial and communal (e.g., housing) incentives to attract and retain	• Improved provision of health staff in remote districts

Activity	Task	Output/Indicator
Improve the motivation of specialists in family medicine	healthcare staff in the oblasts with shortage of medical specialists 2. Develop, pilot, and introduce performance-based remuneration system for compensation of certain types of medical activities and services. 3. Review the family doctors' remuneration system in consideration of services integration, quantity, and quality of health care.	<ul style="list-style-type: none"> • Reduced level of migration among health care specialists

Activity	Task	Output/Indicator
2. Modernizing the information system to improve processes and management at the PHC level		
2.1. Reduce the number and volume of reporting for PHC facilities, and rationalize and optimize the reporting process	1. Reduce the number and volume of reporting for PHC facilities 2. Rationalize and optimize the reporting process	<ul style="list-style-type: none"> • Reporting forms of the PHC network facilities are analyzed • Reporting process complies with modern requirements
2.2. Develop and implement digital and information technologies in the PHC facilities	1. Develop and implement digital and information technologies in the PHC facilities	<ul style="list-style-type: none"> • Number of PHC facilities with introduced digital and information technologies
2.3 Build managerial capacity of PHC managers	1. Rollout business planning 2. Build capacity of PHC managers	<ul style="list-style-type: none"> • Number of districts with implemented business planning is increased • Share of PHC managers that passed the public healthcare management courses is increased
2.4. Support in justified decision-making	1. Conduct regular studies on relevant topics of family medicine and health of population	—

Activity	Task	Output/Indicator
3. Improve integration and development of basic services in PHC facilities, including palliative care, emergency care, and vertical service provision structures		
3.1. Develop the standards of care for palliative patients both by healthcare workers at PHC, and by family and community	1. Develop standards of care to palliative patients by the PHC 2. Develop standards of care by family and community 3. Introduce the standards in practice	<ul style="list-style-type: none"> • Standards of care to palliative patients by both health workers at PHC, and by family and community are approved and piloted
3.2. Develop and introduce mechanisms of palliative care at home by multidisciplinary group of professionals	1. Develop and introduce the mechanism of palliative care to patients at home by multidisciplinary group of professionals	<ul style="list-style-type: none"> • Mechanism of palliative care to patients at home by multidisciplinary group of professionals is developed and introduced
3.3. Integrate provision of services by vertical structures (outpatient care	1. Develop integration model for vertical services into family medicine 2. Pilot the integration model for vertical	<ul style="list-style-type: none"> • Integration model for vertical services into family medicine is developed

Activity	Task	Output/Indicator
in case of HIV / AIDS and TB, healthy lifestyle centers, immunization centers, etc.) into PHC / Family Medicine	<p>services into family medicine</p> <p>3. Analyze the integration of vertical services into family medicine</p> <p>4. Expand the integration model of vertical services into family medicine</p>	<ul style="list-style-type: none"> • Integration model for vertical services into family medicine is piloted • Integration of vertical services into family medicine is analyzed • Integration model of vertical services into family medicine is expanded
3.4. Develop and introduce integration model for emergency / urgent care services under the PHC at the district level	1. Development and staged introduction of integration model of emergency / urgent care services under the PHC at the district level	<ul style="list-style-type: none"> • Number of districts with integrated emergency / urgent care services under PHC
3.5. Improve the access to and quality of services for mothers, children and adolescents at PHC and among vulnerable population	<p>1. Ensure coverage of all women with services on pregnancy diagnostics, antenatal observation and obstetrical care, as well as services of integrated management of childhood illnesses of all children below five years</p> <p>2. Coverage of all pregnant women, feeding mothers and parous women consulting on care, nutrition and feeding of children at age of below two years, and on exclusive breastfeeding</p> <p>3. Create necessary conditions to ensure safe deliveries at the PHC level in remote mountainous districts (ensuring air-medical services)</p> <p>4. Raise awareness of population on reproductive maternal newborn child and adolescent health issues using modern technologies</p> <p>5. Provision of youth- and adolescent-friendly services;</p> <p>6. Communication events on changes in social and behavioral standards among population with regard to nutrition for the purpose of preventing malnutrition among children under five years, adolescents and women of birth age.</p> <p>7. Expand accessibility of early child development programs with various developmental disorders and their families, including expanding the programs on early diagnostics of genetic disorders</p>	<ul style="list-style-type: none"> • Reduced maternal mortality • Reduced newborn and children mortality • Reduced prevalence of anemia among women at birth age and children under five years • Increased prevalence of exclusive breastfeeding • Reduced prevalence of stunting among children under five years • Reduced number of children with diarrhea • Reduced adolescent pregnancy rates • Reduced suicide rates among adolescents • Reduced prevalence of all forms of nutrition disorders (stunting, malnutrition and obesity), as well as reduced deficit of nutritional elements among population, especially among children and women at birth age through improved access to nutrition services with focus on children under five years, adolescents and women at birth age • Improved accessibility of early child development to identify and provide services to children of early age with various developmental disorders and their families, including expansion of program on early diagnostics of genetic disorders
3.6. Reduce the burden of NCDs	<p>1. Reduce the prevalence of general risk factors of major NCDs among population, such as smoking, unhealthy diet, abuse of alcohol, low physical activities and psychosocial stress through awareness raising campaigns</p> <p>2. Integrate programs on NCD screening at the PHC level</p>	Reduced rates of premature mortality and disabilities related with NCDs, consequences of trauma and aging, and improved quality of life and social integration of people with disabilities, aged people, and people with consequences of NCD and trauma

Activity	Task	Output/Indicator
	<p>3. Expand the coverage of individual services aimed at improving early detection, registration, and effective management of hypertension and diabetes, appropriate and timely intervention in acute cases, as well as rehabilitation aimed at reduction of premature and preventable mortality from stroke and heart attacks</p> <p>4. Conduct regular demographic and institutional studies to assess the needs for prevention of NCD and their control, as well as to promote evidence-based decision-making</p>	
<p>3.7. Reduce the burden of infectious diseases (HIV, TB, etc.)</p>	<p>1. Expand coverage of women with HIV screening</p> <p>2. Improve system of early detection and communication with TB patients</p> <p>3. Develop protocols to manage and organize training of healthcare staff, including family doctors with purpose of improving efficiency of managing the infectious diseases</p>	<ul style="list-style-type: none"> • Mother to child transmission of HIV is eliminated • TB mortality is reduced • Morbidity rates of TB is reduced

Activity	Task	Output/Indicator
4. Engaging communities to health issues		
<p>4.1 Rollout of the Guidelines on “Partnership with Communities on Health Issues”</p>	<p>1. Train specialists / facilitators to work with the communities</p> <p>2. Engage Hukumats³ and public organizations to community mobilization</p> <p>3. Strengthen the capacity of PHC staff in working with the communities</p> <p>4. Develop a coordinated approach of PHC and HLC to establish a sustainable cooperation with communities</p> <p>5. Create the system for monitoring of activities of community health teams</p>	<ul style="list-style-type: none"> • Number of trained facilitators • Number of existing Community Health Team (CHT) • Number of introduced topics to work with CHT in compliance with the priorities of the MOHSPP • Number of present members of CHT on topics and dates; replacement of CHT members (departure of previous and arrival of new CHT members)
<p>4.2. Active involvement of PHC facilities into programs and activities to work with communities on health issues</p>	<p>1. Close cooperation of health workers with local public and international organizations with communities on health strengthening / promotion</p>	<p>Number of joint activities, training courses</p> <p>Number of engaged districts, villages and population</p>
<p>4.3. Participation of communities in the business-planning process of PHC facilities</p>	<p>1. Train the PHC facility health workers on engagement of communities to the business-planning process</p>	<ul style="list-style-type: none"> • Increased number of districts, where communities participate in business-planning process
<p>4.4. Raise awareness of population in the area of disease prevention and</p>	<p>1. Activities of health workers in communities through direct meetings and mass media</p>	<ul style="list-style-type: none"> • Number of events in mass media • Number of community planning activities on health promotion among

³ Hukumat – Executive State Government Body

Activity	Task	Output/Indicator
health promotion, as well as promotion of healthy lifestyle.	2. Training population on planning and management of their own health determinant initiatives	population

Source: Primary Health Care System Development Plan based on Principles of Family Medicine for the period of 2021-2025

As for the response of the MOHSPP, the Government of Tajikistan does not have the budget to implement each of the above items, so it is basically relying on the support of development partner agencies. Currently, each development partner agency is in the process of coordinating which items and areas they will support.

As for Section 4 of the PHC Plan, describes community involvement in health issues, Guidelines on the "Partnership with Communities on Health Issues" provides more details. The guidelines also specify the roles of PHC facilities and Healthy Lifestyle Centers (HLCs) as they play a key role in the PHC sector. The following sections of the guidelines, "1. Introduction" and "2. Roles and Functions of Organizations in Partnership with the Community on Health Issues," are described below.

Guidelines on the Partnership with Communities on Health Issues

1. Introduction

The guidelines regulate the single technique, approach, and method of the activities at the community level on health issues based on the principles of partnership on health promotion which aims at community empowerment and involvement in health issues between the health system and communities for all rural areas of Tajikistan.

The coordinated approach is defined in these guidelines that involve the health system structures in charge of health promotion, Primary Health Care (PHC), and Healthy Lifestyle Centers (HLC). This will ensure that these structures and the health system are fully engaged and have the right of ownership of these programs. This will also ensure capacity building for PHC and HLC staffs to implement such programs and it will increase their sustainability.

The guidelines contain the following four elements as indispensable for the program "Partnership with Communities on Health Issues":

1. The Primary Health Care (PHC) and Healthy Lifestyle Center (HLC) structures are the lead agencies in working with communities on health and must be involved in all such programs and activities.
2. The Republican Healthy Lifestyle Center (RHLC) coordinates the "Partnership with Communities on Health Issues".
3. In the village communities, the independent organizations of volunteers, so called Community Health Teams (CHTs), shall be the key partners of the PHC and HLC for promoting health.
4. The choice of the topics for the work with the communities must be guided by priorities identified by the communities themselves and by priorities identified by the MOHSPP in the frame of the NHS 2010-2020 issued by the Decree of the Government of the Republic of Tajikistan, No. 368 dated August 2020.

The method of choice to identify people's priorities is the Participatory Reflection and Action (PRA) process which is described in the guidelines.

These guidelines define the roles and functions of structures in partnership with the communities and health issues.

2. Roles and Functions of Organizations in Partnership with Communities on Health Issues

2.1 Republican Healthy Lifestyle Center (RHLC)

2.1.1 RHLC coordinates the cooperation of the health system and its partner projects with the CHTs and with other community-based organizations.

2.1.2 RHLC selects the health topics for work with the CHTs by taking into account people's proprieties as identified through PRA, as well as, priorities of the health system as outlined in the NHS 2010-2020.

2.1.3 RHLC closely collaborates with all partner projects and requests them to coordinate their health promotion programs with the CHTs.

2.1.4 RHLC develops appropriate programs, so called health actions on the selected health topics. This includes the approach, messages, education materials, and training modules for these health actions. Development partners are invited to support the RHLC in this task. The RHLC coordinates this development with the relevant specialty department of the health system as well as with partner projects that plan to implement a program on the topic in question.

In the frame of such health actions CHTs may be asked to distribute health messages in various ways by talking to people at the community gatherings, organizing events on specific health issue, etc., as well as, to take other actions supporting awareness raising and behavioral change in their communities.

2.1.5 In designing health actions, the RHLC takes into account that CHT members are volunteers and that they therefore cannot be expected to fulfil tasks like paid staff.

2.1.6 RHLC selects the topics for the organizational development of the CHTs and develops relevant trainings on these topics.

2.1.7 RHLC trains and organizes the training of the specialists at the HLC at oblast, town, and district levels on all matters regarding the partnership with communities on health issues and supports and supervises their work. For this, the RHLC prepares a national pool of specialized trainers on the partnership with communities on health issues.

2.1.8 RHLC supports the oblast, district HLCs in organizing and holding workshops that inform Hukumats, Jamoats, and other relevant local structures about the "Partnership with Communities on Health Issues" before it is being implemented in a region. In this instance, the Rural Health Centers (RHCs) will inform the Mahalla⁴ Committees about conducting the activities in the frame of "Partnership with Communities on Health Issues".

2.1.9 RHLC develops with each partner project that works with communities on health promotion a transition process from its current approach that is outlined in these guidelines. It offers the partner projects to hire trainers from the national trainer pool in order to train local PHC and LHC personnel and

⁴ A mahalla is a division in communities which today exist in Uzbekistan, Kyrgyzstan, and Tajikistan. Historically, mahallas were autonomous social institutions built around familial ties and Islamic rituals.

the project staff on the initiation in their project region of approach, as outlined in these guidelines. This initiation includes information workshops with local structures and PRA process with identification of people's priorities and with the formation of CHTs. The RHLC shall request the partner projects to finance this initiation and then to cooperate with the CHTs on their specific project topics. Simultaneously, the local HLC or other projects in agreement with the RHLC may ask these CHTs to cooperate with them in other programs in the same region.

Involvement of PHC and HLC staff should include training them on specific project topics as well as assigning them to active roles in the day-to-day implementation of the project so that they can continue this work even after the completion of the project.

2.1.10 RHLC plans the gradual expansion of the realization of this Guidelines on the "Partnership with Communities on Health Issues" throughout Tajikistan and incites all development partners to support this endeavor. It continuously develops the program "Partnership with Communities on Health Issues" in cooperation with all relevant partners based on experiences and monitoring data.

2.1.11 RHLC develops a monitoring system for the program "Partnership with Communities on Health Issues" and adapts it over time to the evolving needs of the program. The monitoring system should cover at least the following issues:

- Number of PRA sessions held per region
- People's priorities and determinants of health by region
- Number of CHTs and number of members of CHTs per region
- Regions, villages and population covered
- Number of HLC and PHC structures, involved in project activities
- Topics covered
- Number of activities on its own initiatives of CHTs on determination of health
- Number of CHTs, involved in Business Planning cycles of the RHCs
- The quality of relationship of all partners with the CHTs that is reflected in adherence to the concepts of partnership and independence of CHTs from other structures, as well as the attitude of PHC staff towards CHTs members that is based on respect, appreciation, non-dominant/non-authoritarian behavior, recognition, and gratitude.

2.2 Oblast HLC

2.2.1 The oblast HLC trains and organizes the training of specialists at the district HLC and supports and supervises their work on the "Partnership with Communities on Health Issues".

2.2.2 The oblast HLC coordinates the cooperation of local government and non-government structures on oblast level with the program "Partnership with Communities on Health Issues" in case such support is useful for health actions or own initiatives of CHTs on determinants of health.

2.2.3 In the course of implementation of the Guidelines on the "Partnership with Communities on Health Issues", the oblast HLC closely collaborates with oblast PHC structures.

2.3 District HLC

2.3.1 The district HLC coordinates its work plan on the “Partnership with Communities on Health Issues” with the PHC manager.

2.3.2 The district HLC trains the staffs of RHCs and Health Houses (HHs) on all matters concerning the formation of and cooperation with CHTs and supports and supervises them in this work.

2.3.3 The district HLC coordinates the cooperation of local government and non-government structures on the district level with the “Partnership with Communities on Health Issues” in case such support is useful for health actions or own initiatives of CHTs on determinants of health.

2.4 PHC Center at the District Level

2.4.1 As the main part of its preventive task, the district PHC puts into practice a close collaboration with the district HLC and actively participates together in the implementation of activities based on the Guidelines on the “Partnership with Communities on Health Issues”.

2.4.2 The district PHC supports the RHCs and HHs financially and technically in their respective roles in the program of Partnership with Communities on Health Issues. It facilitates and promotes the cooperation between these structures in this program as well as with other relevant structures.

2.5 Republican Clinical Center for Family Medicine (RFMC)

2.5.1 RFMC trains PHC staff in their role in the “Partnership with Communities on Health Issues”.

2.5.2 RFMC coordinates the activities of the PHC of the districts in the implementation of the Guidelines on the “Partnership with Communities on Health Issues”.

2.5.3 RFMC closely collaborates with the Republican HLC in the implementation of the Guidelines on the “Partnership with Communities on Health Issues”.

2.6 Rural Health Centers and Health Houses

2.6.1 The RHCs and HHs are the main partners of the CHTs on the side of health system.

2.6.2 They are not members of the CHTs.

2.6.3 Cooperating with the CHTs on health promotion is the central task of RHCs and HHs in regard to preventive part of their work.

2.6.4 They facilitate the conduct of PRA sessions in their communities to identify people’s priorities on health and to form CHTs.

2.6.5 The RHCs and HHs will build the capacity of CHTs in the two areas. One, they train them on health actions and support them as needed in their implementation. On the other, they provide training and support on organizational development of the CHTs.

2.6.6 The RHCs involve the representatives of CHTs in their business planning cycles (elaboration of yearly plans, monitoring, quarterly and annual analysis). The purpose is to give communities a voice in the yearly planning by the RHCs and in monitoring their work, thus increasing transparency and accountability of RHCs to communities.

2.6.7 The RHCs invite the representatives of CHTs to the business planning and review meetings early

enough so that CHTs can identify issues their representatives will bring into the meetings. The involvement of CHTs in the business planning cycles will take place according to adopted documents.

2.6.8 In all these tasks the RHCs and HHs respectfully relate to the CHTs as their equal partners, not as their subordinates, respecting their opinion and showing appreciation, recognition, and gratitude for what the CHT members offer as volunteers for the improvement of health in their communities.

2.7 CHTs

2.7.1 CHTs are informal, independent, community-based organizations in rural communities. They consist of community members who are concerned about the health of their communities.

2.7.2 CHT members offer their time and skills as volunteers, without remuneration, for united efforts to improve the health and wellbeing of their communities.

2.7.3 In rural areas, CHTs are the main community-based partners of the health system.

2.7.4 Their role is to assist in disease prevention through health actions, to address determinants of health at the community level through their own initiatives, and to take part in the business planning cycle of the RHCs as representatives of their communities.

2.7.5 Usually, the formation of CHT is part of the PRA process and is facilitated by PHC/HH staff with support by district HLCs (information is provided in the part “Partnership with Communities on Health Issues”). During this process, the communities initially propose and elect the CHT members. The CHTs can later, with approval of the majority of its members, invite further people to become members, for example to replace members who left or to increase their membership.

2.7.6 As a rule, there should be one CHT per village. In big villages and communities, CHTs and RHC/HH may decide to form more than one CHT.

2.7.7 CHT receives training on the implementation of health actions and on organizational capacity building by RHC or district HLC.

2.7.8 The role of CHT in health actions may be to distribute health messages as well as to take other actions supporting awareness raising and behavioral change in their communities. As volunteers, CHT members decide by themselves on how much time they can spend on such tasks and therefore how much coverage can be achieved. They are not expected to work as if they were paid staff.

The organizational capacity building should encourage and enable CHTs to take their own initiatives that tackle local determinants of health, which they themselves should identify and prioritize. In both these tasks, i.e., health actions and own initiatives, the CHTs are encouraged to cooperate with other non-governmental and governmental organizations on the village level and beyond, such as schools, clubs, Mosque Committees, community groups active in non-health sectors, Mahalla Committees, Jamoats, Hukumats, RHC/HH, and others. In cooperating with such organizations, CHTs are independent partners, not subordinate to any of them. This also applies to their relations with the Mahalla Committees, Jamoats, Hukumats, and RHC/HH.

2.7.9 There is no requirement that a representative of the CHT should be a member of the Mahalla Committee or vice-versa, but there is no objection to this if a community elects a person to both organizations.

2.7.10 The representatives of CHTs are invited to take part in the business planning cycles at the THCs. Each CHT will select one representative to take part in the meetings. Each CHT will discuss and agree on issues its representative will bring into the meetings. This will ensure that health priorities of the people are taken into consideration in the RHC planning and it will increase transparency of the RHCs and their accountability towards their communities.

2.4 Governance, Human Resources and Finances of PHC

In Tajikistan, health facilities on PHC are organized as follows:

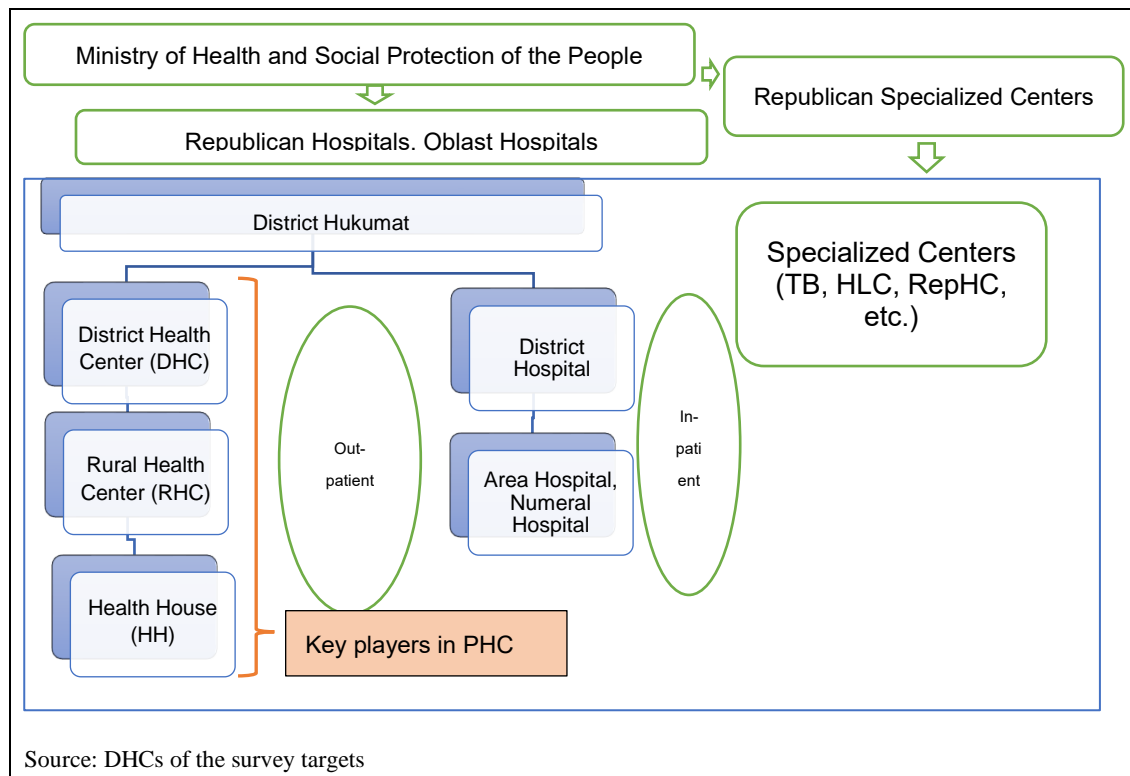


Figure 2-2: Organization Chart Related to PHC

The current status and challenges of governance, human resources, and finance can be summarized as follows:

Table 2-5: Current Status and Challenges of Governance, Human Resources, and Finance in PHC

	Current Situation	Challenge
Governance	<ul style="list-style-type: none"> Specialized centers and vertical programs led by specialized centers have not been integrated under DHC 	<ul style="list-style-type: none"> Various reporting formats are mixed. The DHC Director cannot comprehensively monitor the health status of the community.
Human Resources	<ul style="list-style-type: none"> The target number of FMDs in the country is 3,800, while the current number is 2,403. About 30-40 FMDs per year can be trained with donor support, however, only 12 FMDs were trained last year due to lack of donor support. The districts where the number of FMDs is relatively high are Roghun, Sangvor, Shahrinav, Tursunzoda, Hissor, and Temurmalik, where there is one FMD for every 3,000 people. On the other hand, Khuroson, Jomi, and Kushoniyon have only one FMD for every 10,000 or more people. Especially in Jomi, according to the DHC director, all 12 FMDs are working in the DHC and there is not a single FMD in the RHC. 	<ul style="list-style-type: none"> Although it is important (and a minimum requirement) that qualified Family Medicine Doctors (FMDs) and Family Medicine Nurses (FMNs) take charge of PHC activities at RHCs, the numbers are in shortage. Also, FMD is not settled in RHC (going out from the country). The government cannot cover the cost of human resource development (training of FMDs and FMNs).
Finance	<ul style="list-style-type: none"> Since 2016, the budget formula for PHC has been the per capita financing formula. The budget for PHC facilities in urban areas (city) is calculated at TJS 67 per capita per year, while the budget for PHC facilities in the district areas is calculated at TJS 54 per capita per year, which is distributed to local governments. However, 95% of the budget is allocated to personnel costs. 	<ul style="list-style-type: none"> The World Bank (WB) is promoting performance-based financing, but it is difficult to manage the budget at the health center level.

Sources : Governance and finance are based mainly on interviews with the World Bank. Human resources are based on interviews in FMC and survey sites.

2.4.1 Governance

The NHS 2030, which reviews Tajikistan's health governance for the period 2010-2020, includes the following main points:

- Restructuring the Ministry of Health of the Republic of Tajikistan into the Ministry of Health and Social Protection of the Population of the Republic of Tajikistan into a single structure.
- An active business planning process was introduced at PHC level, and a longer (two years) postgraduate specialized training for family doctors was introduced.
- Successful pilot projects aimed at creating perinatal centers in the district and oblast hospitals of Khatlon Oblast.
- Various cooperation agreements and treaties were signed in the framework of the meetings of the Council of Heads of State of Shanghai Cooperation Organization, as well as during intergovernmental bilateral and multilateral high-level meetings (with presidents of the Russian Federation, China, Germany, Belarus, Kazakhstan, Kyrgyzstan, Azerbaijan, Armenia, Turkmenistan, Uzbekistan, Iran, Czech Republic, Latvia, Lithuania, etc.), including directions for the development of the healthcare sector in the country.

The NHS 2030 also describes the challenges of health governance as follows:

- Health management at the district level is incomplete and inefficient; the district/city health department was

abolished in 2012 and the district hospital director is now responsible for the entire health department at the same level, but this management model is inefficient.

- The health management function is not based on evidence. This has led to inefficient use of resources and poor decision making.
- Inefficiency and poor coordination in managing external resources and foreign investments have reduced the effectiveness of the funds raised in achieving the main objectives.

Also, in the health information section of the strategy, the lack of appropriate legislation to ensure effective implementation of health information systems, e-Health, digital health care, and telemedicine is mentioned first. The challenges also include excessive requirements for data and reporting at the PHC level, and the fact that such information is not actually used for decision making.

The role of district/city health centers, district hospitals, and specialized centers at the district/city level

The District Health Centers (DHCs) are located in each district and have two roles: 1) to manage PHC facilities (Rural Health Center (RHC) and Health House (HH)) in the district/city, and 2) to engage in clinical practice as district-level outpatient centers.

District Hospital (DH) has two roles: (1) to manage district/city hospitals (e.g., numeral hospital) and (2) as an inpatient facility at the district level. In addition, although the head of the district hospital is considered to be the head of all health care in the entire district, in reality he only manages the hospital. However, the head of DHC and the head of DH are often familiar with the inner workings of both, as it is normal for personnel to slide over to the head of DH when the term of office of the head of DHC ends, for example.

In addition, each district has a branch of the Republican Specialized Center. The main specialized centers include the following:

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| <ul style="list-style-type: none">• Reproductive Health Center (RepHC)
Centers that focus on women's health, from youth to pregnant women and mothers of childbearing age• Integrated Management of Childhood Illness Center (IMCI Center)
Centers that provide training in the comprehensive management of pediatric diseases• Center on Prevention of Population from Tuberculosis (TB Center)
Center for the prevention and control of tuberculosis• Healthy Lifestyle Center (HLC)
Center to promote people's health and prevention of NCDs, etc.• Immuno-prophylaxis Center
Vaccine supply and management center for immunization |
|--|

These specialized centers should be placed under the DHC, but currently, they are not placed under the DHC because the specialized centers receive their budget directly from the Republic Specialized Center, while the budget source of the DHC is the local government. Therefore, vertical programs such as tuberculosis and immunization have not been integrated under the DHC in many districts.

The lack of integration of specialized centers and vertical programs led by specialized centers under DHC means that DHC needs to contact each specialized center to ascertain the status of TB, HIV, etc. The DHC director and PHC facility staff pointed out some problems such as the existence of multiple reporting formats for DHC and each vertical program at the PHC facility level. This point was also raised in sections 2.1 and 3.3 of the PHC Plan.

2.4.2 Human Resource

Regarding human resources for health, the NHS 2030 cites the lack of systematized human resource development plans and strategies, geographical imbalance in the distribution of medical personnel and the outflow of doctors, and the lack of systematic continuing education for medical personnel as issues. The report also states that the specialties particularly lacking are FMDs, pediatricians, neonatologists, psychiatrists, drug addiction specialists, infectious disease specialists, rehabilitation specialists, and prosthetists.

In addition, the NHS 2030 states the following about human resources for health.

- Healthcare is one of the main employment sectors in Tajikistan and at the moment the number of employees in the healthcare sector has reached 11,200 (MOHSPP, 2018)
- Over the past decade, the number of physicians increased by 34.5% while the number of professionally trained staff (e.g., nurses)/mid-level providers increased by 70.1%. As a result, in 2018, the country had 18,716 physicians and 51,788 nurses. The ratio of medical staff per 10,000 population has also increased over the past decade by 12.2% for physicians and 41.8% for nurses, with a ratio of 21.2 physicians and 58.6 nurses per 10,000 people.
- Despite the overall increase in the number of human resources for health, there are significant inequalities in geographical distribution within the country. The largest proportion is in Dushanbe, with 8.25 doctors per 1,000 population, while in Khatlon Oblast there are only 1.15 doctors per 1,000 population.
- Despite an overall increase in the number of human resources for health, Tajikistan has a shortage of doctors in certain specialties (FMDs, pediatricians, neonatologists, psychiatrists, drug addiction specialists, infectious disease specialists, rehabilitation specialists, prosthetists, etc.).
- Out-migration of healthcare professionals is one of the causes of the shortage of qualified human resources.
- Medical education in the country is provided by public and private medical schools; compared with 2010, the number of medical schools has increased, also the number of students and graduates. There is a growing demand for medical education in the country, and all available slots are being filled.
- Continuous medical education (CME), based on credit-hours is currently being piloted for family doctors in Tursunzoda City. This pilot is an implementation of developed regulations on CME and 101 doctors, and 100 nurses are already engaged in the process. Positive results of this pilot should become a foundation of gradual rollout of this strategy nationwide.
- New healthcare system requires well-trained healthcare managers. There are currently two programs in healthcare management, namely: a two-year program which grants qualifications of a health systems manager (59 graduates in 2018) and a one-year training on Public Healthcare Management Course for the primary healthcare managers, which was developed and initiated in 2015.

- Health science has also seen some progress in recent decade. Despite outdated infrastructure and limited funding, stand-alone research institutions, as well as research departments within the medical schools and hospitals are engaged in ongoing national and international projects. This institution consists of 14 scientific centers, research departments of the Avicenna Tajik State Medical University, Khatlon State Medical University, and the Institute of Post-Graduate Education in Healthcare Sector.

In PHC, Family Medicine Doctor (FMD) and Family Medicine Nurse (FMN) play a key role in health human resources. The current status of FMDs and FMNs obtained from this survey is as follows:

(1) Current status of FMD

According to the Republican FMC, the target number of FMDs nationwide is 3,800, and the number of FMDs as of May 2021 was 2,403. FMDs, like other specialists, are trained through a six-year medical school education followed by two years of specialist education. For the first two to four years, the Ministry of Health and Social Protection decides where to place them, taking into account their place of origin. With the support of development partners, it is possible to train about 30-40 people per year for the two-year of specialist education, but in 2020, only 12 people were trained due to lack of support from the development partners.

The role of the FMD is to implement the services provided at the PHC (medical treatment and first aid treatment, health screening for pregnant women and children, immunization, management of PHC facilities under its jurisdiction, disease prevention activities and health promotion activities for the population).

The number of FMDs in each district based on interviews is shown in the table below. Among the sites targeted in this survey, many districts in DRS have trained nearly half of the target number of FMDs, while the districts in Khatlon Oblast have trained only about 10% of the target except for Temurmalik and Dusti.

Table 2-6: Number of FMDs by District

Oblast	District	District Population ¹⁾ (a)	Actual Number of FMD ²⁾ (b)	Population per FMD (c)=(a)/(b)	Target Number of FMD ³⁾ one in 1,500 (d)	Achievement of Target (e) = (d)/(b)
Khatlon	Dusti	122,000	28	4,357	81	34%
	Jomi	180,000	12	15,000	120	10%
	Khuroson	126,000	11	11,455	84	13%
	Kushoniyon	249,787	25	9,991	167	15%
	Temurmalik	71,000	24	2,958	47	51%
	Total	748,787	190	7,488	499	20%
DRS	Hissor	330,162	89	3,710	220	40%
	Roghun	46,000	12	3,833	31	39%
	Sangvor	23,350	14	1,668	16	90%
	Shakhrinav	124,805	40	3,120	83	48%
	Tursunzoda	324,000	92	3,522	216	43%
	Vahdat	387,000	90	4,300	258	35%
	Total	848,317	1,110	2,517	566	60%

Source : 1) 3) Interviews in this survey (conducted in May 2021), 2) Calculated based on "Strategic Rationalization Plan for Health Facilities 2011-2020".

In Khatlon Oblast, the problem is that the overall number of FMDs is insufficient, but another aspect of the problem is the lack of PHC specialists in the field, for example, in Jomi, all 12 FMDs are working in DHC and none of the FMDs are posted in PHC facilities.

In the former Soviet Union, primary medical care was customarily provided by physicians in internal medicine, pediatrics, and obstetrics and gynecology. Even today, RHCs without FMDs are often headed by one of the above doctors. However, specialists are only allowed to treat patients within their own specialty, and other patients must go to the district DHC.

In Tursunzoda, the Survey Team had the opportunity to interview an FMD working for the DHC. The doctor highlighted the following health issues in Tursunzoda.

- The biggest problem is NCDs. Particularly, there are three problems: 1) diabetes, 2) cardiovascular disease, and 3) mental health. There have been six cases of malnutrition this year, but the Survey Team recognized that most of them are due to congenital diseases.
- In order to prevent diseases, especially among children, it is important to raise the health awareness of people in the community. The following activities are particularly important.
 - Mother's classes are held at DHC during pregnancy, and this activity is important for the development of the child.
 - The cooking class is held in collaboration with FMC. The target audience are mothers of children under two years old.
 - It is important to complete breastfeeding for six months of the child's life. From the seventh month, increasing the mother's nutritional knowledge is essential.
 - Early detection of diseases in children through home visits is critical.

According to the FMD, about 25% of the mothers in Tursunzoda City have inadequate nutritional knowledge, and these people mainly lived in remote areas. One of the most memorable moments of the activity was when he taught them how to make mashed potatoes in a cooking class. Most of the mothers could not understand how to cook. He tried to find out the reason behind this problem. He discovered that these mothers had no concept on the units of measurement such as quantity (gram) due to lack of basic education. This memorable experience made him realize that he should not deal with the general public with the same common sense he has as a doctor.

Another FMD mentioned antenatal care checkups as another concern for male FMDs (FMD of the first May HH in Tursunzoda City). In Tajikistan, where there is psychological resistance to receive antenatal checkups by male doctors, some pregnant women do not come to antenatal checkups if their FMD is male. He is trying to have FMNs take measurements that require direct contact with the woman's body; however, according to him, it will be necessary to take one more step until they understand the importance of antenatal checkups.

(2) Current situation of FMN

The numbers of FMNs in the interviewed five districts in Khatlon Region and six districts/cities in DRS are shown in column (b), Table 2.

MOHSPP set targets of “population per FMN” in the year of 2020 as 600 in Khatlon Region and 750 in DRS⁵. Target numbers of FMN based on these standards are shown in column (d), Table 2. As in Khatlon, actual numbers of FMN in all visited five districts were far below the targets. Achievements of target, shown in column (e), are 15% in average of the five districts.

In DRS, except for two districts, namely; Tursunzoda and Vahdat, four out of six visited districts achieved the target numbers of FMNs.

Table 2-7: Number of FMNs by District

Region	District/ City	District Population ¹⁾ (a)	Actual Number of FMN ²⁾ (b)	Population per FMN (c)=(a)/(b)	Target Number of FMN ³⁾ (d)	Achievement of Target (e) = (d)/(b)
Khatlon	Dusti	122,000	22	5,545	203	11%
	Jomi	180,000	18	10,000	300	6%
	Khuroson	126,000	88	1,432	210	42%
	Kushoniyon	249,787	51	4,898	416	12%
	Temurmalik	71,000	11	6,455	118	9%
	Total	748,787	190	3,941	1,233	15%
DRS	Hissor	330,162	593	557	440	135%
	Roghun	46,000	39	1,179	61	64%
	Sangvor	23,350	72	324	31	231%
	Shakhrinav	124,805	218	573	166	131%
	Tursunzoda	324,000	188	1,723	432	44%
	Vahdat	387,000	11	35,182	516	2%
	Total	848,317	1,110	764	1,131	98%

Source : ^{1) 2)} Results of the interview survey conducted in May 2021, ³⁾ Calculated based on the target shown in “Restructuring Strategy of Health Facilities 2011-2020”, MOH.

About the roles of FMN, the director of PHC Department in MOHSPP explained that “the most important role of FMN is house visit”. States of implementation of house visit were summarized as below, based on the results of interview by the Survey Team.

- **Activities during house visit**

On the occasion of house visit, mainly FMN reminds child’s vaccination schedule, confirms health conditions of all family members, checks blood pressure if the client has a sphygmomanometer, monitors the condition of pregnant woman, baby, and NCD patient. Sometimes doctors are accompanied by the FMN in house visit. Some HLCs dispatch their staff to join in the house visit with the FMN.

⁵ “Restructuring Strategy of Health Facilities 2011-2020”, MOH

- **Assigned households per FMN and frequency of visit**

In average, one FMN covers 80-100 households. In many cases, one FMN visits 30-40 households per day. Usually, one FMN repeats visit of the same household every third or fourth day. About the frequency of house visits, most of the FMNs commented that they thought it was too often, but they had no choice because it was what their job requires. Some FMNs commented that house visits consumed a lot of their energy because they had to visit houses on foot, since transportation costs are not paid. As for house visit, some households said that there was no need to come so frequently, while a lot of households wait expectantly for FMN's visits, especially in the rural areas. Some households call to ask FMN's visit when they are not visited by FMN in several days. FMN regards that house visits are important opportunities of communication with community people.

- **Management of lifestyle related diseases**

At the time of house visit, FMN provides follow-up of NCD patients suffering from cardiovascular disease, hypertension, and diabetes. Some FMNs said that patients had to change their way of thinking on their diseases because there are many who thought like this: "I can eat and drink anything I want because I take the medicine." "There is no need to go to the hospital nor take medicine anymore after my symptoms are improved."

- **Opinions of community people**

The Survey Team conducted one focus group discussion in Hissor City, DRS, to collect users' opinion on the PHC service including house visit. About house visit, most of the participants accepted it very affirmatively. Typical comments on the house visit are: "it is a good opportunity to get an advice on rather minor health problems because FMN comes frequently", "FMN gives an advice on family planning after the delivery", etc.

One of the participants commented that FMNs are very reliable persons who protect the health of her family. She said that she thought one of the FMNs at the nearest health house as her "another mother". Other participants agreed with her comments intensely.

The "Healthy Mother, Healthy Baby" Project of the United States Agency for International Development (USAID) is taking the lead in determining the TORs for FMN among development partners and submitting them to the MOHSPP as a result of development partner discussions (as of June 14, 2021).

2.4.3 Finance

In the NHS 2030, one of the biggest risks of the strategy is the high out-of-pocket costs incurred by households (67% of total healthcare costs are borne by patients), despite the fact that public healthcare expenditures have increased significantly over the past ten years. In addition, the fact that hospitals were not downsized despite the approval of the Hospital Rationalization Plan was cited as an issue, and proactive policies are needed.

According to the Decree of the Government of Tajikistan No. 827 of December 31, 2015, the health budget for PHC facilities is calculated using the per capita financing method. The budget for PHC facilities in urban areas is calculated at TJS 67 per capita per year, and the budget for PHC facilities in the district areas is calculated at

TJS 54 per capita per year, which is distributed to local governments. However, 95% of this budget is currently spent on the salaries of health personnel⁶.

2.5 Service Delivery System, Contents and Utilization: District/City Health Center, Rural Health Center, Health House

The population, number of Rural Health Centers (RHCs), and number of Health Houses (HHs) in each district of the survey area based on interviews with the District Health Center directors are shown in the table below.

Table 2-8: Number of PHC Facilities in Each District in Khatlon Oblast

Numbers	Khuroson District	Jomi District	Dusti District	Temurmalik District	Kushoniyon District
Population	120,000	180,000	122,000	71,000	249,787
RHC	15	7	14	28	24
HH	31	53	32	10	50

Source : DHC Chief

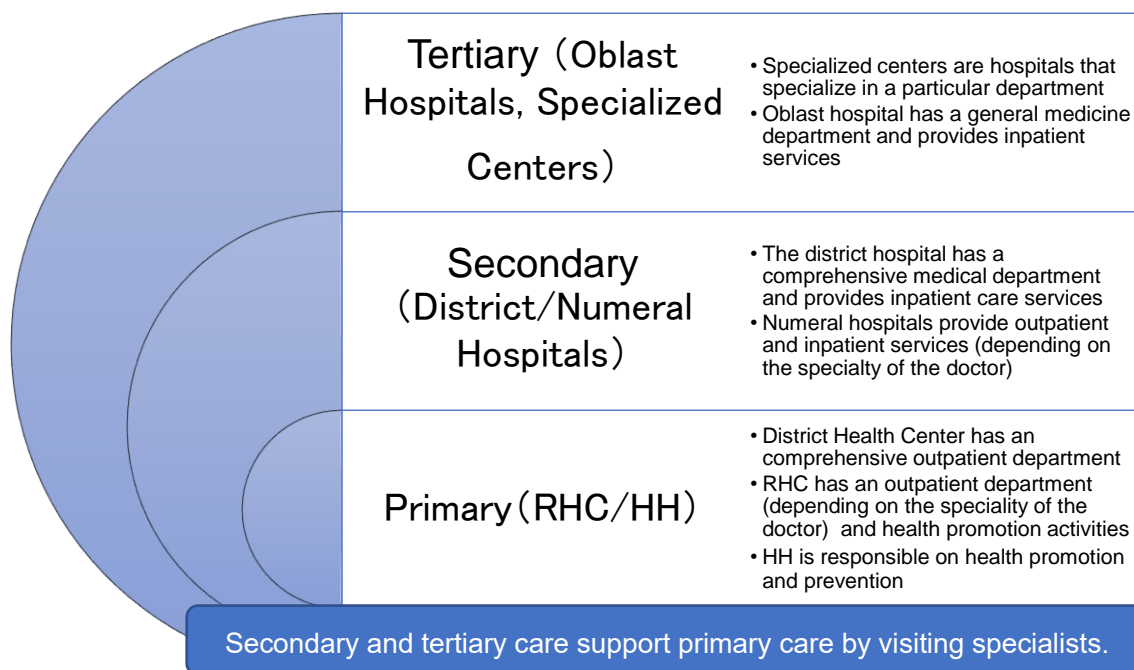
Table 2-9: Number of PHC Facilities in Each District of the DRS

Numbers	Vahdat City	Hissor City	Tursunzoda City	Shahrinav District	Roghun City	Sangvor District
Population	387,000 Including Afghan immigrants	330,162	324,000	124,805	46,000	23,350
RHC	30	35	28	20	4	4
HH	70	41	50	15	12	22

Source: DHC Director

The Health Service Delivery System for Health Houses, Rural Health Centers, District/City Health Centers, and District and Numeral Hospitals can be summarized as shown in the figure below.

⁶ Based on the interview with the World Bank



Source: Compiled by the Survey Team based on interviews.

Figure 2-3: Comparison of Services Provided by Health Facility Level

2.5.1 District/City Health Center

The District/City Health Center (DHC) is in charge of the diagnosis and care for outpatient as the central health center of the district/city. DHC also collaborates with various specialized centers at the district/city level to provide disease prevention and other services. In addition, there is a health center administration office under the director of the district/city health center, which manages all the health centers in the district. The DHC collects the monthly reports from the health centers and submits them to either the oblast health department (Khatlon) or the MOHSPP (DRS) quarterly. The DHC also hold weekly meetings with the health centers.

(1) Periodic Reporting Items

Quarterly data reported by the DHC to the oblast health department or MOHSPP include the following major items:

- Number of Health Facilities
- Population (by age group)
- Number of Delivery
- Number of Out-patients
- Number of Home Visits
- Number of Health Human Resources
- Finance
- Status of New Construction and Rehabilitation of Health Facilities
- New Medical Equipment
- Points Raised by Community People as Complaints
- Maternal and Child Health Services
- Status of Support for People with Disabilities

- Progress of the National Program
- Status of Implementation of IMCI, TB, HIV, and Other Vertical Programs

Including reports on health programs implemented in various verticals, there are as many as 17 different reports per year.

Initiative activities in Hissor and Tursunzoda

In Hissor, the DHC director has developed his own sheet for monitoring FMD performance. The DHC is using this sheet for follow-up of FMD activities.

In Tursunzoda, the head of the DHC set up an FMD section in the DHC for the maximum use of FMDs, which is divided into five rooms for maternal consultation, postpartum consultation, child health consultation, teenager consultation, and disease prevention consultation. Each consultation room is staffed by at least one FMD and one FMN. Patients consult the FMD here first, and the FMD refers them to a specialist for diagnosis if necessary.

(2) Diagnostic Services

As for diagnostic services (laboratories), most districts/cities have contracted with a company called "Behdoshti, LLC" to provide these services. According to an interview with the World Bank, originally, there was no charge for the tests conducted at the DHCs, but since the contract between Behdoshti and each DHC, half of the test fee is charged to the patient.

According to Behdoshti's fee tariff, the patient's cost for major tests is TJS 22 (about JPY 220) for general blood tests, TJS 17 for general urine tests, and TJS 18 for general stool tests. Other items such as protein in urine, cholesterol in blood, blood glucose, etc., are set at TJS 15-20 each.

In addition, DHCs have electrocardiographs, ultrasound, and X-rays to diagnose outpatients, while some DHCs do not have X-rays and send patients to the District Center for Prevention of Tuberculosis or the district hospital.

(3) NCDs Early Detection Activities

There are no systematic early detection activities for NCDs. In some districts, there are caravan trips to remote areas when mobile X-ray vehicles are available, but they are ad hoc.

It is required that school physical tests be conducted, such as health checkups for the students once a year, although it is not specific for the early detection of NCDs. The students whose tests reveal abnormalities will be sent for re-examination at the district hospitals.

(4) Health Promotion Activities

Some districts have local radio and newspapers, the DHC produces radio programs in collaboration with HLC and broadcast them in crowded markets and in front of mosques. The use of mobile apps has not been

implemented or considered.

Awareness raising activities rely largely on PHC health workers, who are expected to provide individual health guidance, especially during home visits. However, there are no interview responses or surveys that confirm the quality of PHC workers' knowledge for health awareness and their methods of teaching and communicating with the general public, hence, it is unclear how appropriate the PHC workers' knowledge and practices are.

(5) Number of Patients by Disease

The Survey Team asked the number of registered outpatients per year in the last five years for cardiovascular diseases, diabetes, cancer, malnutrition in children, and anemia in pregnant women through interviews in Khuroson District, Tursunzoda City, and Vahdat City. The numbers are shown in the following table. For cardiovascular disease, diabetes, and cancer, the ratio per 100,000 population is also shown in parentheses. The number of patients per 100,000 population in 2020 differs greatly from Khuroson 187, Tursunzoda 915, and Vahdat 118 for cardiovascular diseases; whereas, Khuroson 171, Tursunzoda 593, and Vahdat 469 for diabetes. If there is no significant difference in the prevalence of diseases in the entire country, the difference in these figures may be due to the difference in the number of diseases that can be diagnosed and detected.

Table 2-10: Number of Outpatients with Diseases of Cardiovascular, Diabetes, Cancer, Child Malnutrition, Anemia among Pregnant Women in Khuroson, Tursunzoda, Vahdat for the Last Five Years

District	Disease	2016	2017	2018	2019	2020
Khuroson (Number of patients per 100,000 population in parentheses for 2020)	Cardiovascular	214	210	221	231	236 (187)
	Diabetes	109	125	143	178	215 (171)
	Cancer	3	4	2	6	0 (0)
	Child malnutrition	4	5	6	3	4
	Anemia among pregnant women	76	98	110	198	307 (244)
Tursunzoda (Number of patients per 100,000 population in parentheses for 2020)	Cardiovascular	2,921	3,306	3,091	3,193	2,966 (915)
	Diabetes	1,907	1,654	1,720	1,797	1,920 (593)
	Cancer	321	402	444	477	464 (143)
	Child malnutrition	158	148	116	166	114
	Anemia among pregnant women	1,540	1,412	1,316	1,264	1,075 (332)
Vahdat (Number of patients per 100,000 population in parentheses for 2020)	Cardiovascular	352	376	402	436	455 (118)
	Diabetes	1,515	—	1,609	1,693	1,814 (469)
	Cancer	96	98	102	105	125 (32)
	Child malnutrition	103	108	126	126	132
	Anemia among pregnant women	1,327	1,411	1,424	1,424	1,432

							(370)
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Source: Interview with the directors of district health centers

2.6 Status of Service Supply System, Contents, and Utilization of District Hospital and Numeral Hospital

2.6.1 District Hospital

Seven district hospitals were visited in the survey, and their number of beds, physicians, and in-patients in 2020 are as follows:

Table 2-11: Number of Beds, Doctors, and Inpatients in 2020 at the District Hospitals Visited in the Survey

	Khuroson	Jomi	Dusti	Kushoniyon	Hissor	Roghun	Sangvor
Number of beds	111	226	220	245	283	78	70
Number of doctors	36	46	-	51	94	9	8
Total number of in-patients in 2020	-	8,626	7,305	25,370	10,055	1,086	679

Source: Based on interviews with District Hospital Directors

A characteristic feature of hospital-related statistics in Tajikistan is that the statistics reported to the higher levels are the total number of statistics for all hospitals in the district, not the number of each hospital. In addition, the hospitals do not keep the numbers of their own facilities (the reason is unknown). Therefore, it is necessary to calculate each hospital statistics by re-stacking the records in the hospital if the number of statistics for the hospital alone is required, which is very time-consuming.

The reporting format for district hospitals consists of the following items for each department: inpatient admissions, including those from rural areas, children under 17 years, transfers from other departments, deaths, discharges, and bed utilization. The data from the jurisdictional numeral hospitals will also be sent along with the report to the upper level such as oblast. According to the impression of the Survey Team obtained from the visits, the number of inpatients was low and the beds were conspicuously empty, although the Survey Team did not obtain statistical data for all the hospitals. The utilization rate of hospital beds is even lower in numeral hospitals.

At the district hospital, the Survey Team visited the cardiovascular and pediatric departments as much as time allowed, but every hospital was deserted with only about two patients in the hospital and about five patients at the most.

Another characteristic of the Cardiovascular Department in Tajikistan was that there are many inpatient women in the hospital. When the Survey Team asked the doctors about this case, they said that cardiovascular patients are generally female. According to the opinions of the doctors in the Cardiovascular Department, the two reasons are:

- Many males go to Russia and other countries to work.
- Women are physically active in housework until their own children get married, but are free from work

when they become mothers-in-law. After that, many of them do nothing at home and tend to become obese, which increases the risk of NCDs.

2.6.2 Numeral Hospital

In this survey, the Survey Team visited five numeral hospitals (Khuroson, Jomi, Kushoniyon, Hissor, Roghun, and Sangvor districts). Most of the numeral hospitals had around 20 beds, the largest being 78 beds at Obigarm Numeral Hospital in Roghun. Except for Obigarm Numeral Hospital, numeral hospitals were deserted with only one or two doctors and few inpatients. For example, the 4th Numeral Hospital in Dusti, with 25 beds, had 228 inpatients in 2020; the Obigarm Numeral Hospital, with 97 beds and 8 doctors, had 69 inpatients in 2020 in its 20-bed Internal Medicine Department.

The diseases that can be treated in the numeral hospitals and the medical services provided depend largely on the specialties of the doctors assigned to them. Basically, doctors only diagnose and treat diseases in their own specialties and refer patients in other fields to the district hospitals.

2.6.3 Rural Health Center

Rural Health Center (RHC) provides immunizations, antenatal checkups, prescription-based treatment, and first aid. In general, the RHC is headed by an FMD and staffed by FMDs, but some facilities are staffed by obstetricians, pediatricians, ophthalmologists, and dentists.

Each RHC is staffed with about two to six FMNs, who provide medical care at the facility and also conduct home visits, which is their main task.

During the home visits, they mainly remind people of the immunization schedule, check if they are sick, measure blood pressure (if the household has a blood pressure machine), check the health of pregnant women and children, and monitor the progress of patients with NCDs. Doctors and HLC staff other than FMNs sometimes participate in the home visits.

The RHCs have jurisdiction over around three to five health houses (HH), and the RHC managers hold weekly meetings with the HH managers to receive reports on how the facilities are being used.

2.6.4 Health House

Health house (HH) provides home visits, immunizations, antenatal checkups, prescription-based treatment, and first aid. Each facility is staffed with two to four full-time FMNs or midwives, and some facilities get an obstetrician from DHC once or twice a week, and community people receive antenatal checkups based on this schedule.

The HHs that were interviewed tended to place even more emphasis on home visits than the RHCs. The nature of the work performed during home visits was similar to that of the RHCs.

Since HHs have a smaller catchment area and are closer to the community people than RHCs, FMNs in the HH have become a place where many community people feel free to call for advice on their health conditions. On the other hand, there are still some community people who do not respond to the call for vaccination, and FMNs were asked about their concerns on how to approach these people.

2.7 Service Provision System, Contents and Utilization: Specialized Centers

Major specialized centers include the Reproductive Health Center (RepHC) for maternal and child health, the Integrated Management of Childhood Illness (IMCI) Center for pediatric disease treatment, the Center on Prevention of Population from TB (TB Center), and the Healthy Lifestyle Center (HLC) for health promotion. These centers are located at the district/city level and have medical specialists who provide diagnosis and treatment.

As RepHCs will be described in 2.8 and HLCs in 2.10, IMCI Centers and TB Centers will be discussed below.

2.7.1 IMCI Center

IMCI Center deals with the diagnosis and treatment of diseases up to the age of 18 years, and mainly with nutrition, anemia, pneumonia, obesity, malnutrition, disability, and renal dysfunction in children under five years. It has nine professors and ten assistant professors at the republican level, who also conduct research on the above diseases. IMCI Center organizes IMCI training, conducts training of trainers (TOT) at the oblast level, and cascades the training to the district/city level and below. Since there is no comprehensive registration system for the training graduates and prospective graduates, it is expected that this will be managed by a computer in the future.

2.7.2 Center for Prevention of Population from TB

The Center for Prevention of Population from TB (TB Center) conducts tuberculosis prevention, diagnosis, and treatment activities. At least one TB specialist is assigned at each district/city level. In Tajikistan, the TB-DOTS program was launched between 1998 and 2001, and the National TB Control Program was launched in 2003. Tuberculosis drugs and test reagents are supported by USAID and the Global Fund.

According to the Director of the Republican TB Center, although TB-DOTS has achieved a certain level of success, the problem is that patients sometimes stop treatment at his/her own discretion when they are burdened with the cost of tuberculosis treatment or when their symptoms improve with the drugs.

The incidence and mortality rates of TB in the districts/cities included in this survey are as follows:

Table 2-12: Tuberculosis Incidence and Mortality Rates per 100,000 Population in the Survey Districts/Cities (2020)

District	Tuberculosis Incidence Rate per 100,000 Population	Tuberculosis Mortality Rate per 100,000 Population
Khuroson	31.3	0.9
Jomi	46.6	2.3
Dusti	34.8	0.9
Temurmalik	40.4	1.4
Kushoniyon	44.0	2.1
Vahdat	43.0	0.9
Hissor	45.9	1.0
Tursunzoda	29.1	1.0
Shahrinav	23.4	1.6
Roghun	34.2	2.3
Sangvor	39.0	0.0

Source: Republican TB Center

As a general hospital, the republican-level hospital is visited directly by patients who want to receive referral or specialty care from district/city hospitals. At the oblast level, there are also a number of specialized centers such as cardiovascular centers, pediatric centers, tuberculosis centers and neurology centers, all of which are staffed by specialists from various departments. Other specialized centers that conduct preventive activities include reproductive health centers that perform maternity check-ups and healthy lifestyle centers that promote healthy living habits.

Specialized centers on NCDs and nutrition, which are the foci of this survey, include family medicine centers (maternal and child handbooks are distributed here), reproductive health centers and healthy lifestyle centers.

2.8 Situation of Antenatal Care, Nutrition Education during Pregnancy, and Use of Maternal and Child Handbook

In Section 3 of the strategic directions in Chapter 5 of the NHS 2030, maternal and child health is mentioned. The section includes a review of the past ten years, issues, goals by 2030, key activities, and expected results, as below.

Table 2-13: Section 3 of Chapter 5 of the NHS 2030: Maternal and Child Health

Item	Outline
Review 2010-2020	<ul style="list-style-type: none"> Complex approach leads to reduction of maternal and newborn mortality, women having access to reproductive healthcare services, including family planning, which contributed to reduction of unwanted abortions from 87.8 (2010) to 55.3 (2018) per 1,000 live births and reduction of interval between deliveries of at least two years from 37.2% (2010) to 30% (2018). Further, there is a decrease in the number of home deliveries (less than 4.9% in 2018 as compared with 11.9% in 2010), and 77% of deliveries occurred with attendance of qualified staff. According to the results of studies conducted in 2010, 64.9% pregnant women passed antenatal examination in compliance with national standards. In 2017, this figure reached 93.3%, which represents improvement for 28.4% for seven years. Demographic Health Surveys (DHS) conducted in 2012 and 2017 indicated that share of children with growth retardation reduced from 26% in 2012 to 18% in 2017, distribution of malnutrition reduced from 10% in 2012 to 6% in 2017 and share of children with insufficient body weight reduced from 12% in 2012 to 8% in 2017. Nonetheless, current rates of reduction are not sufficient to achieve global goals set by the World Health

	<p>Assembly, which is to reduce the number of children in the world at age of below five years old with developmental retardance for 40% by 2025.</p> <ul style="list-style-type: none"> • Two of every five (41%) women in Tajikistan suffer from anemia. • Despite the measures adopted by the MOHSPP, the observed trends in improvement of child nutrition status are insignificant. Thus, exclusive breastfeeding up to age of six months is provided to 36% of children in 2017 as compared with 34% in 2012 (DHS 2017) and share of children under prevailingly breastfeeding (zero to five months) was 70%.
Issues	<ul style="list-style-type: none"> • Overall health status of mothers and children is poor: starting for high level of morbidity during antenatal care, labor complications and post-natal and neonatal periods, to high level of maternal, neonatal, infant and child mortality all impose significant health burden on the country's population. • Limited access and underutilization of family planning and antenatal care services. • Limited access to evidence-based and highly efficient interventions to improve the maternal and child health, such as intake of folic acid and iron supplements, as well as insufficient level of exclusively breastfeeding practices of children under six months. • Despite the observed decreasing tendency of home delivery indicators across the country, this indicator remains high in certain geographically remote regions. • Wide incidence of anemia among women of reproductive age, frequent births and inadequate nutrition status of pregnant women and children under five years old lead to high incidence of developmental retardation among children. • Limited capacity at the PHC level to provide complex care, as well as timely referral to other levels of healthcare. • Limited access to sexual and reproductive health and rights services, as well as mental health of adolescents influences the birth rates among adolescent girls and suicide among adolescents.
Goals	<ul style="list-style-type: none"> • Expand accessibility to comprehensive set of sexual and reproductive health, mother, newborn, child and adolescent health services. • Improve infrastructure and service delivery network for MCH services. • Ensure mechanisms for continuous improvement of service delivery quality in PHC, maternity, and pediatric care facilities. • Decrease prevalence of all forms of nutrition disorders (stunting, malnutrition, and obesity), as well as reduce deficit of nutritional supplements among population, especially among children and women of reproductive age by improving access to nutrition services with focus on children under five years old, adolescents and women of reproductive age. • Expand accessibility of early child development programs on identification and provision of services to children at early age with various developmental disorders and their families, including expansion of program on early diagnostic of genetic disorders. • Organize the system, geographic accessibility and quality of services on antenatal screening of congenital heart disorders and genetic malformation.
Main Activities	<ul style="list-style-type: none"> • Improve regionalization and referral system to ensure access to necessary healthcare services. • Provide all women with services of pregnancy diagnostic, antenatal observation and obstetric care, as well as services of integrated management of childhood diseases for all children under five years old. • Provide consultation of pregnant women, feeding mothers, feeding and nutrition of children under two years old, including those on exclusive breastfeeding. • Improve the quality of emergency obstetric and neonatal care. • Create necessary conditions to ensure safe delivery at the PHC level in remote mountainous areas (providing air medical service). • Strengthen awareness of population on reproductive, maternal, newborn, child and adolescent health using modern technologies. • Provide adolescent/youth-friendly services in compliance with international standards. • Inform population on basic benefits package of reproductive, maternal, newborn, child and adolescent health, including those in the frame of "Partnership with Communities on Health Issues". • Establish modern perinatal centers based on principles of geographic accessibility. • Establish systems for transportation of pregnant women, ill mother and newborns, including air medical services. • Develop and implement uniform standards on all levels of obstetric and neonatal care. • Provide women with reproductive choice and wanted pregnancy. • Organize urgent consultations and air medical services.

	<ul style="list-style-type: none"> • Improve quality of life for women through access to preventive and rehabilitation services, as well as introduction of innovative technologies. • Develop and update guidelines and tools, and train teams to conduct assessments / self-assessments of the quality of healthcare services to women and children at the PHC, obstetric and pediatric care facilities. • Establish quality teams at the PHC facilities, as well as at maternal and pediatric care departments of district hospitals and familiarize them with service quality improvement principles. • Develop, update, and disseminate clinical guidelines and support their introduction process. • Support quality improvement teams in developing and implementing quality improvement plans, including provision of necessary equipment, improvement of basic infrastructure, such as functioning water supply and sewage systems, as well as infection prevention and control. • Expand and improve mechanisms for introduction of audits on maternal and perinatal mortality and critical case analysis. • Develop and introduce effective system for external supportive supervision. • Communication activities to change social and behavioral norms among population on the issues of nutrition with the purpose of preventing malnutrition among children under five, adolescents and women of reproductive age. • Strengthen the capacity at the national and district levels to provide necessary assistance to improve nutrition of mother and child. • Integrate full package of activities related with nutrition into basic healthcare services at the national and oblast, district, and jamoat (village) level. • Improve feeding practices to children at breastfeeding and early age. • Institutionalize the protocols on Complex Treatment of Acute Malnutrition at hospital and ambulatory care facilities at the national level. • Facilitate development of intersectoral collaboration and coordination to implement comprehensive early childhood development measures. • Improve early detection and early childhood intervention infrastructure and services for children with various developmental disorders. • Introduce clinical standards on early detection and standards for quality-of-service delivery for tender-age infants, including children with various developmental disorders at every service delivery level. • Develop and introduce sustainable education programs and approaches to support families and the communities to improve parenting skills in providing care, education, and early stimulation of tender-age infants. • Promote the Regulations on Family and Child Support Centers with the purpose of preventing hospitalization of tender-age infants to hospital care facilities. • Increase the share of public financing to procure vaccines, contraceptives, clinical nutrition, and micronutrients (iron sulphate, folic acid), syringes and safe disposal boxes with subsequent transition to self-financing. • Revise the Resolution of the Government of Republic of Tajikistan No. 600 dated December 2, 2008 “On Procedures of Delivering Healthcare Services to the Population of the Republic of Tajikistan” to reduce financial burden of obtaining quality healthcare services for children under 5 years old falling under the context of integrated management of childhood diseases and indicators of underdevelopment in terms of weight and height at any level of healthcare facilities. • Tajikistan is preparing to obtain membership of international research network “Healthy Attitude of Schoolchildren” and therefore, it is necessary to include support in conducting at least two rounds of international research along with other WHO Member-States in European Region.
Expected Results	<ul style="list-style-type: none"> • Quality Improvement Teams are established and function at the PHC, obstetric and pediatric care facilities. • District / oblast health managers are trained and possess skills on continuous monitoring of performance and ensuring supportive supervision and self-assessment of health care of women and children. • Prevalence of anemia among women of reproductive age and children under five years old is reduced. • Prevalence of exclusive breastfeeding is increased. • Prevalence of dwarfishness among children under five years old is decreased. • Maternal and infant mortality is reduced. • Mechanisms to change behaviors and attitude on healthy school feeding are implemented. • Teenage pregnancy rates are reduced. • Mortality among adolescents from suicide is reduced.

Source: NHS 2030

A specialized center that specializes in maternal and child health is the Reproductive Health Center (RepHC). The main indicators monitored by RepHCs at the republican level and their figures for the first quarter of 2020 and 2021 are as follows:

Table 2-14: Comparison of Main Indicators of Reproductive Health between the First Quarter of the Year 2020 and 2021

Indicator	First Quarter of 2020	First Quarter of 2021
Contraceptives use	37.8%	40.7%
Percentage of abortions (per 1,000 live birth)	56.0	48.7
Maternal mortality rate (per 100,000 live birth)	21.7	27.2
Percentage of receiving antenatal care	89.9%	90.4%
Home delivery rate	2.3%	3.0%
Percentage of assisted by health personnel among home delivery	41.9%	44.5%

Source: Republican Reproductive Health Center of the Ministry of Health and Social Protection of the Population of the Republic of Tajikistan, Activity analysis in three months of 2020-2021

The rate of implementation of antenatal checkups has remained at a high level of around 90% numerically, although the reporting system of the MOHSPP does not have a clear definition of the calculation. The percentage of women who received antenatal checkups by the 12th week of pregnancy was 90.4% on average nationwide, 98.4% in Dushanbe City, 93.1% in Sogd Oblast, 92.7% in Khatlon Oblast, 85.6% in GBAO, and 82.4% in DRS, showing a relatively high percentage, although there are differences between Dushanbe City and DRS.

As for the home delivery rate, the following districts were identified as having high rates. All of them belong to DRS, Khatlon Oblast and GBAO, which are mountainous areas.

Table 2-15: Districts with High Home Delivery Rates

District	Rate (%)
Nurobod (DRS)	32.6
Khovaling (Khatlon Oblast)	25.0
Sangvor (DRS)	22.3
Lakhs (DRS)	21.6
Baljuvon (Khatlon Oblast)	20.6
Rasht (DRS)	18.5
Vanj (GBAO)	15.7
Sh. Shohin (Khatlon Oblast)	14.6
Darvoz (GBAO)	14.2
Murghob (GBAO)	10.5

Source: Republican Reproductive Health Center of Ministry of Health and Social Protection of the Population of the Republic of Tajikistan, Activity analysis in three months of 2020-2021

Regarding the rate of tuberculosis among pregnant women detected during antenatal check-ups, 60 pregnant women were detected in 2020; for HIV, 90 pregnant women were registered as positive and under control nationwide, as of 2021.

The Maternal and Child Health Handbook (MCH handbook) has not been expanded beyond UNICEF's pilot districts Fayozobod, Shohin, Rasht, Danghara, Norak, Khovaling, and Baljuvon. According to the United Nations Children's Fund (UNICEF) and the director of the Maternal and Child Health (MCH) Department of the MOHSPP, it is necessary to review the contents of the handbook before it is expanded to other areas. The director of the MCH Department told that the handbook is considered to be the best tool to educate mothers on child-rearing in general, and therefore, he is willing to cooperate with the expansion if it is revised. According to UNICEF, a randomized controlled trial is currently being conducted in the three pilot districts of Fayozobod, Shohin, and Rasht to measure the impact of the MCH handbook.

2.9 Status of NCD Incidence and Prevalence, Status of Health Checkup Implementation for Early Detection, and Status of Public Awareness of NCDs

NCDs are described in the NHS 2030 Chapter 5, Strategic Direction Section 5 in terms of review, issues, goals, and main activities as follows:

Table 2-16: Chapter 5, Strategic Direction Section 5 of NHS 2030, NCDs

Item	Outline
2010-2020 Review and Issues	<ul style="list-style-type: none"> • Prevention of diseases is a priority of this strategy in order to reduce the burden of NCDs. Actions need to be strengthened in relation to four common risk factors related to lifestyle and behavior: tobacco use, harmful use of alcohol, inadequate physical activity, and unhealthy diet. • Positive experience in number of countries shows that it is possible to achieve twofold and more reduction of mortality, mainly through prevention of diseases. Despite the fact that the country achieved certain success in the implementation of anti-smoking campaign, reducing the harmful impact of alcohol, as well as strengthening the policies in the areas of nutrition and food, there are wide opportunities to achieve substantial impact on health of population. • Increased access to screening and early diagnosis programs is needed. Among other things, this will help prevent disabilities and deaths and improve quality of life. • Cardiovascular diseases are the leading cause of death in Tajikistan. Based on estimated data, cardiovascular diseases accounted for nearly half of all mortality cases in the country. • Cancer is a growing issue in Tajikistan. Country faces challenges in terms of early detection, treatment outcomes, and provision of palliative care. Currently, there are over 15,000 individuals with neoplasms registered in the country and incidence rate is raising (35.5 per 100,000 population (2018)). Most of the cancers are detected at stage II and III. There are over 4,000 adult patients in need of palliative care. It is estimated that about 8,550 children per year will benefit from palliative care. • In the last decade, Tajikistan has seen a significant increase in excessive weight and metabolic diseases, as in the rest of the world. Incidence of diabetes per 100,000 population has increased from 321.6 in 2007 to 482.1 resulting to more than 30,000 patients in the country. • The burden of NCDs is increasing due to aging of population and negative effects of tobacco consumption, physical inactivity, malnutrition, and harmful use of alcohol. • Most of the risk factors for NCDs cannot be eliminated by the health sector only, and this emphasizes the importance of applying an intersectoral approach and priority of preventive medicine. • Low detectability of NCDs is one of the key issues. For example, only 0.2% of hospitalized patients in the cardio center of Dushanbe in 2018 had a referral. • Poorly developed infrastructure for the diagnosis and treatment of NCDs, insufficient funding for specialized services and assisting devices creates barriers to improve the availability and quality of services in this direction. • Research shows that only a small share of people in need in Tajikistan have access to appropriate means for rehabilitation. It is necessary to expand delivery, however, these challenges are related to deficit of financing and resources. Quantity, quality, and range of assistive technologies / devices accessible through public supply are not sufficient to fulfill the demand. Majority of healthcare workers have limited understanding with regard to assistive technologies / devices, and only few healthcare workers have necessary special knowledge. • Today in Tajikistan, more than 10,000 patients are suffering from various oncological diseases and more than

	<p>4,000 patients are registered in need of palliative care aimed at improving their quality of life. Palliative care is currently a necessary component of the comprehensive treatment of cancer patients at all stages, and in some cases, it acquires independent significance.</p> <ul style="list-style-type: none"> • Currently, more than 148,000 people in Tajikistan live with different types and groups of disabilities. There are up to 25,000 children with disabilities, i.e., 0.8% of all children population, are registered in Tajikistan. • In 2016, the first ever National Strategic Plan on Rehabilitation of Disabled People for the period of 2017 – 2020 was developed and approved by the President of the Republic of Tajikistan. In March 2018, the Government of the Republic of Tajikistan signed the UN Convention on the Rights of Persons with Disabilities. • The Dushanbe Forum conducted on October 18, 2019 in Tajikistan commemorated the adoption of new and comprehensive declaration on the issues of disabilities. The new declaration reaffirms commitment of the Government of the Republic of Tajikistan to ensure improved rehabilitation, healthcare and education services, as well as social care services.
Goals	<ul style="list-style-type: none"> • Reduce premature mortality and disability due to NCDs, and improve quality of life and social integration of people living with disabilities. • Reduce prevalence of general risk factors of major NCDs, such as smoking, unhealthy diet, excessive alcohol consumption, low physical activities, and psychosocial stress. • Deploy effective infrastructure for prevention of NCDs and ensure universal access to screening. • Reduce financial burden of NCDs on households and protect low-income households from further impoverishment. • Promote healthy lifestyle throughout the lifecycle. • Improve access to and quality of rehabilitation services on all levels of service delivery and expand access to technical assets for rehabilitation of people with disabilities.
Main Activities	<ul style="list-style-type: none"> • Conduct public awareness interventions on factors influencing the development of NCDs. • Draft regulatory framework on reducing the risk factors for major NCDs. • Create effective system of intersectoral collaboration and partnership to improve priority on prevention and control of NCDs. • Extend the coverage of individual services focused on improvement of early detection, registration and effective management of hypertension and diabetes, appropriate and timely intervention in acute cases, as well as rehabilitation aimed at reducing the level of premature and preventable deaths due to stroke and infarction. • Integrate screening programs for NCDs at the PHC level. • Conduct regular population and institutional research to assess the needs for prevention and control of NCDs and for facilitation of evidence-informed decision-making. • Promote development and implementation of registries of NCDs. • Create effective infrastructure for the diagnosis and treatment of NCDs. • Introduce modern diagnostic and treatment methods. • Adopt and implement integrated clinical protocols for the prevention and control of major NCDs at the PHC level recommended by the WHO. • Explore possibilities of fair financing to cover the costs of diagnostic and treatment services for chronic patients, including providing access to modern treatment methods. • Simplify procedure for certification of disability for the category of people in transient state (missing organs, limbs, etc.), which would eliminate recurrent certification costs. • Further strengthen public health services, and integrate advocacy, health prevention, and medical literacy into the PHC. • Create an effective mechanism for managing rehabilitation services under the auspices of the MOHSP. • Develop rehabilitation standards for the provision of health and social services and quality control. • Develop targeted support and rehabilitation programs for certain groups with disabilities: cerebral palsy, autism, chromosomal diseases, and diabetes. • Integrate rehabilitation services in the primary, secondary, and tertiary levels of the health system. • Ensure availability of specialized rehabilitation units for inpatients with complex needs in hospitals. • Allocate sufficient quantities of resources for financing of rehabilitation services and procurement of quality assistive devices; ensure distribution of service based on principle of “One-Stop-Shop on Assistive Devices for People with Disabilities” throughout the country. • Ensure appropriate training for assistants and technology users. • Collaborate with development partners to assess the current state of disability, rehabilitation, and assistive technologies in the Republic of Tajikistan to identify factors contributing to the improvement of the situation in this sector, in order to determine the best ways to support the country in strengthening policies, systems and

	<p>services in rehabilitation as part of Universal Health Coverage.</p> <ul style="list-style-type: none"> • Facilitate the engagement of the private sector in the opening of rehabilitation centers and rehabilitation service delivery. • Include rehabilitation services into the medical insurance program. • Develop unified system for determination and classification of disabilities in compliance with the International Classification of Functions and updating the Guidelines on Identification of Disabilities. • Ensure integration of data collection on disabilities into unified healthcare information system. • Create the enabling social infrastructure for people with disabilities and modernize technologies ensuring access for people with disabilities. • Develop inclusive services and enabling services for people with disabilities through elimination of obstacles to access. • Strengthen and extend the services on rehabilitation, adaptation, support, and assistance to the people with disabilities. • Develop the unified users' database based on the National Social Protection Registry as a tool for electronic registration of people with disabilities. • Strengthen collection of existing, reliable, and comparable international data on disabilities, and related services to make informed decisions. • Raise awareness of population on the needs of women and girls and other vulnerable groups of people with disabilities and eliminate their stigmatization and discrimination. • Improve coordination and strengthen links with policy measures and programs of other sectors to ensure access of people with disabilities to basic social services and their participation in economic activities. • Create conditions for socialization and integration of vulnerable groups (elderly people, graduates of boarding schools, etc.) in society through rehabilitation at the community level.
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Source: NHS 2030

Statistics on the number of cardiovascular and diabetic hospitalizations in each of the surveyed district/city hospitals are listed below. The common occurrences for each district were that the numbers could not be ascertained at the facility unless the facility kept statistical data records. As shown in the following table, statistics prior to the previous year are not immediately available or are not kept at the district hospitals.

Table 2-17: Trends in the Number of Cardiovascular and Diabetic Inpatients in District Hospitals (only those for which data were collected)

District	2016	2017	2018	2019	2020	Remarks
Dusti	—	—	—	—	Cardiology 127 (Internal Medicine 539)	No records for each disease. (Number of inpatients per department is recorded.)
Hissor	Cardiovascular 774 Diabetes 105	Cardiovascular 871 Diabetes 102	Cardiovascular 868 Diabetes 92	Cardiovascular 924 Diabetes 97	Cardiovascular 639 Diabetes 81	
Roghun	—	—	—	—	Cardiovascular 84 Diabetes 16 Cancer 0	
Sangvor	—	—	—	—	(Surgery 160, Internal Medicine 120)	No records for each disease. (Number of inpatients per department is recorded.)
Jomi	Cardiovascular 58 Diabetes 23	Cardiovascular 45 Diabetes 28	Cardiovascular 52 Diabetes 19	Cardiovascular 62 Diabetes 29	Cardiovascular 58 Diabetes 61	

Source: Interview with District Hospital Directors

The number of outpatients according to the information from DHC is as follows:

Table 2-18: Changes in the Number of Outpatients at the District Health Centers
(only those for which data were collected)

District	2016	2017	2018	2019	2020
Tursunzoda	Cardiovascular 2,921 Diabetes 1,907 Cancer 321	Cardiovascular 3,306 Diabetes 1,654 Cancer 402	Cardiovascular 3,091 Diabetes 1,720 Cancer 444	Cardiovascular 3,193 Diabetes 1,797 Cancer 477	Cardiovascular 2,966 Diabetes 1,920 Cancer 464
Vahdat	Cardiovascular 352 Diabetes 1,515 Cancer 96	Cardiovascular 376 Diabetes - Cancer 98	Cardiovascular 402 Diabetes 1,609 Cancer 102	Cardiovascular 436 Diabetes 1,693 Cancer 105	Cardiovascular 455 Diabetes 1,814 Cancer 125
Khuroson	Cardiovascular 214 Diabetes 109 Cancer 3	Cardiovascular 210 Diabetes 125 Cancer 4	Cardiovascular 221 Diabetes 143 Cancer 2	Cardiovascular 231 Diabetes 178 Cancer 6	Cardiovascular 236 Diabetes 215 Cancer 0

Source: Interview with the DHC Directors

Regarding the registration of NCDs at the health center level, out of the total of 24 health centers visited through this survey, 19 health centers kept data for at least the previous year (2020), while six health centers kept data for the years of 2016 or 2017 and beyond. In Khatlon Oblast, there were only two health centers in Khuroson District that kept multiple years' data. The four health centers with data since 2016 that provided some indication of trends in NCDs patient enrollment are the Tursun Ujiaboev Jamoat RHC, Gulreds HH in Khuroson District, the Toichi RHC in Tursunzoda, and the Burunov RHC in Vahdat. In these health centers except Burunov RHC in Vahdat, increase of cardiovascular disease and diabetes patients is noted.

These patient statistics depend not only on record keeping, but also on the ability to diagnose the disease. For example, in the table above, the number of cardiovascular outpatients differs by an order of magnitude even in cities of similar size, such as Vahdat City with a population of 387,000 and Tursunzoda City with a population of 324,000. Considering that the number of patients with diabetes is in the range of 1,600-1,900 in both cities, the number of outpatients varies greatly depending on the cardiovascular diagnostic capacity.

Table 2-19: Number of Patients Registered at the Health Center Level
(only those for which data were collected)

District	2016	2017	2018	2019	2020	Remarks
Tursun Ujiboev Jamoat RHC, Khuroson	Cardiovascular 38 Diabetes 10 Cancer 6	Cardiovascular 39 Diabetes 13 Cancer 5	Cardiovascular 42 Diabetes 15 Cancer 0	Cardiovascular 44 Diabetes 26 Cancer 2	Cardiovascular 48 Diabetes 26 Cancer 0	The transition is somewhat clear for cardiovascular and diabetes.
Ergash Sulton RHC, Dusti	-	-	-	Cardiovascular 24 Diabetes 10 Cancer 1	Cardiovascular 26 Diabetes 10 Cancer 0	
Galaba RHC, Dusti	-	-	-	-	Cardiovascular 26 Diabetes 4 Cancer 0	
Dahbed RHC, Hissor	Cardiovascular 5 Diabetes 4 Cancer NA (not available)	Cardiovascular 3 Diabetes 4 Cancer NA	Cardiovascular 7 Diabetes 6 Cancer NA	Cardiovascular 6 Diabetes 5 Cancer NA	Cardiovascular 6 Diabetes 6 Cancer NA	
Obigarm RHC, Roghun	-	-	-	-	Cardiovascular 60 Diabetes 35 Cancer 15	
Childara RHC, Sangvor	-	-	-	-	Cardiovascular 15 Diabetes 7 Cancer 0	
Istiqol RHC, SHanrinav	-	-	-	-	Cardiovascular 24 Diabetes 19 Cancer 14	
Dehai Kazoz RHC, Temurmaliq	-	-	-	-	Cardiovascular 6 Diabetes 4 Cancer -	
Toichi RHC, Tursunzoda	Cardiovascular 134 Diabetes 23 Cancer 2	Cardiovascular 245 Diabetes 26 Cancer 3	Cardiovascular 177 Diabetes 24 Cancer 3	Cardiovascular 204 Diabetes 39 Cancer 3	Cardiovascular 209 Diabetes 28 Cancer 4	The transition is somewhat clear for cardiovascular system and diabetes.
Burunov RHC, Vahdat	Cardiovascular 50 Diabetes 15 Cancer 6	Cardiovascular 46 Diabetes 18 Cancer 5	Cardiovascular 41 Diabetes 18 Cancer 5	Cardiovascular 45 Diabetes 18 Cancer 5	Cardiovascular 40 Diabetes 16 Cancer 3	The transition is somewhat clear for cardiovascular system and diabetes.
Chorsu RHC, Kushoniyon	Cardiovascular 4 Diabetes 2	Cardiovascular 46 Diabetes 1	Cardiovascular NA Diabetes 1	Cardiovascular NA Diabetes 2	Cardiovascular NA Diabetes 5	
Kady Ob HH, Roghun	-	-	-	-	Cardiovascular 20 Diabetes 3	
Saridasht HH, Sangvor	-	-	-	Cardiovascular 27 Diabetes 7 Cancer NA	Cardiovascular 28 Diabetes 8 Cancer 0	
Khuji HH, Shannrinav	-	Cardiovascular 2 Diabetes 3 Cancer 0	Cardiovascular 3 Diabetes 2 Cancer 0	Cardiovascular 1 Diabetes 2 Cancer 0	Cardiovascular 1 Diabetes 2 Cancer 0	No data for 2016 due to pre-opening.
Dehai Hasanbegi HH, Temurmaliq	-	-	-	Cardiovascular 6 Diabetes 6 Cancer NA	Cardiovascular 6 Diabetes 4 Cancer 0	
Mekhrobod HH, Vakhdat	-	Cardiovascular 18	Cardiovascular 14	Cardiovascular 18	Cardiovascular 13	

		Diabetes 5 Cancer 1	Diabetes 4 Cancer 1	Diabetes 4 Cancer 2	Diabetes 3 Cancer 2	
Ismoil Somoni HH, Jomi	Diabetes 1	Diabetes 3	Diabetes 1	Diabetes 4	Diabetes 7	
Gulreds HH, Khuroson	Cardiovascular 16 Diabetes 11 Cancer 3	Cardiovascular 18 Diabetes 19 Cancer 3	Cardiovascular 23 Diabetes 22 Cancer 0	Cardiovascular 27 Diabetes 26 Cancer 3	Cardiovascular 25 Diabetes 35 Cancer 0	The transition is somewhat clear for cardiovascular system and diabetes.
Navruz HH, Kushoniyon	-	-	-	-	Cardiovascular 7 Diabetes 5 Cancer 2	

Source: Interviews with directors of health centers

In terms of the trend of number of outpatients, only the Numeral Hospital #4 in Dusti District kept outpatient volume data from 2018 to 2020, with cardiovascular having 36 patients in 2018, 36 in 2019, and 34 in 2020. There were no diabetes patients in 2018 and 2019 and one in 2020.

In the target districts in this survey, based on the interviews of the number of patients over the past five years, there was no trend of change in cardiovascular diseases and cancer, although there was an increasing trend in diabetes in some areas. Patients diagnosed at the DHC and discharged from the district hospital are registered at the RHC or HH and monitored during home visits.

In terms of early detection of NCDs, awareness and response differ greatly depending on whether the doctor in RHC is an FMD or not. As FMDs are strongly aware that early detection of NCDs, they are aware of the issue, but many of them are not working on it due to lack of budget.

Examples of initiatives in Shahrinav

Two years ago, the HEARTS program⁷ was launched by MOH, WHO, and FMD to provide early detection of hypertension and diabetes. The 20 RHCs were divided into ten programmed and ten non-programmed sites, and the following interventions were conducted in the ten sites.

- (1) Train doctors on the criteria for hypertension
- (2) Identify risk groups using a matrix of blood pressure, age, and cholesterol levels for each resident over the age of 18.
- (3) Measuring the BMI of community people
- (4) Training on obesity criteria
- (5) Training on criteria for referral to higher level
- (6) Training on treatment steps for hypertension
- (7) Train on the information need to provide for a healthy lifestyle for community people
- (8) Training on diabetes criteria
- (9) Training on treatment steps for diabetes

With this program, ten RHCs, covering a total of 46,804 people, are now able to measure blood pressure, to ask lifestyle questions, and to measure BMI for all community people over the age of 18 once a year. In addition, the number of early detections of NCDs increased dramatically compared with RHCs in non-target areas (according to the DHC Director).

According to the interviews with PHC staff, the following are the perceptions of the people regarding the

⁷ Technical package for CVD management in primary health care, WHO

prevention of NCDs. In most of the PHCs, the first response was "no problem", but when the Survey Team asked them after some time, their true opinions started to emerge. The following are some of their opinions:

- It is well known that too much fat, salt, sugar and carbohydrates are not good for health. However, Tajikistan's traditional diet is high in carbohydrates, and I do not know how to guide them.
- I went to the school and instructed the students to cut down on fat, salt, and sugar, but the reality is that there is a pastry shop right in front of the school and according to the students, they are all buying and eating there. It's true that sweets such as doughnuts are delicious, so I don't think it's possible to tell students not to buy them.
- In Tajikistan, women who are thin are now considered beautiful. Women who are concerned about this are going to the gym.

2.10 Promotion of Healthy Lifestyle, Situation and Possibilities of Health Education at School, and Roles and Activities of HLC

The DHCs and HLCs are in-charge of promotion of healthy lifestyle. Those organizations constantly provide opportunities of seminars to raise awareness of community people, writing articles on health issues for local newspapers, and appearing on local radio programs. Each one of HLCs in Khatlon Region and DRS is on Facebook and providing information on health issues.

For the school children, health check-up must be provided once a year according to the MOHSPP ordinance and DHCs are responsible for it. RHCs and HHs dispatch doctors and FMNs to schools to provide lectures on prevention of seasonal diseases.

RHC holds weekly meetings with the head of HH and the school principals in the catchment area.

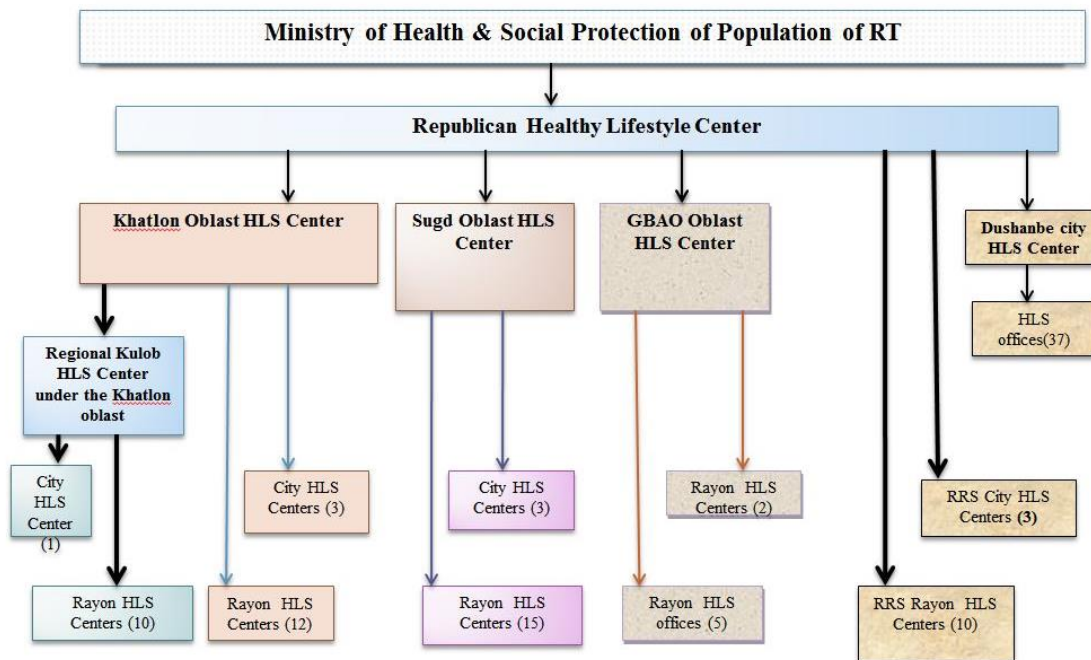
Although these various activities are promoted, evaluation on the impact on the past activities is not attempted. It is necessary to try impact evaluation on the past activities such as health check-up at schools, dispatch of lecturers to schools, and weekly meeting with school principals, to improve the quality of health-related activities and education at school.

Background, activities, and support from the development partners on HLC are summarized below.

Healthy Lifestyle Center (HLC)

HLC is a specialized center which aims to support people's health promotion through raising awareness on improvement of nutrition and prevention of NCDs. Similar to the other specialized centers such as reproductive health, IMCI, TB and immuno-prophylaxis, it has branches in the oblast and district/city level. Organization structure of HLC is shown in Figure 2.

The Organizational Structure of the Healthy Lifestyle Service under the MoH SPP RT



Source: Website of HLC

Figure 2-4: Organization Chart of HLC

(1) Background

Republican HLC was established in 1999 by the assistance of the Asian Development Bank (ADB). Its model case was the Kazakhstan’s Healthy Lifestyle Development Center. In 2020, HLCs were established in all oblasts. Each oblast establishes HLCs in district/city level according to their financial situation.

At the time of establishment of HLC, MOHSPP focused on the “treatment” of diseases as their policy. Gradually MOHSPP shifted to emphasize on the “prevention” of diseases and it promotes expectations for the roles of HLC. In 2010, a status of HLC as a specialized organization was strengthened because it became an institute in-charge of “Healthy Lifestyle National Program”. At present, it implements “The Third Healthy Lifestyle National Program (2021-26)”. The program focuses on the prevention of NCDs as in the past, in addition to the prevention of infectious diseases due to the pandemic of coronavirus disease 2019 (COVID-19). In 2017, a guideline for the awareness raising in the community, “Guidelines on the Partnership with Community on Health Issues” was developed. The guidelines specified the roles of the republic, oblasts, districts/cities and each health facility for the partnership between PHC facilities and HLCs. In the PHC Plan, MOHSPP aimed to promote the guidelines as one of the priority issues. Multiple donors started supporting its promotion

(2) Activities of HLC at the district/city level and its management structure

District/city level HLCs promote their activities based on the annual and monthly schedule. The formats of

annual and monthly schedule are commonly used throughout the country. Their main tasks are implementation of awareness raising activities and filling up various reporting format.

As part of this survey, three HLCs located in the two districts (Khuroson and Kushoniyon) and one city (Hissor) were visited and interviewed. Significant differences are not found among their activities since all districts/city HLCs promote their activities based on the national format. However, each HLC adds original ideas to its routine. Characteristics of each district/ city HLC are shown below.

- HLC in Khuroson District, Khatlon Oblast

They hold seminars as part of awareness raising activities. In addition to that some of HLC staff accompany FMNs in their house visits. They also join DHC's school visits and provide health education. For raising awareness of local people, the director of HLC sends an article to the local newspaper every week about health issues such as infection prevention and hygiene improvement. They do not assign staff at the Jamoat level.

- HLC in Kushoniyon District, Khatlon Oblast

They hold seminars as part of awareness raising activities. In addition to that some of HLC staff accompany FMNs in their house visits similar in Khuroson. They are on Facebook and provide information related to health promotion. They assign one person in-charge, either teachers or medical specialist, to the Jamoat level.

- DRS Hissor City

They hold seminars as part of awareness raising activities, but they do not make house visits. They send articles on health issues to the local newspaper twice a month. In some Jamoats, persons in-charge were assigned. The rest of Jamoats, which do not have persons in-charge are supervised by the HLC staff directly.

(3) Recording of activities

Activities at the district/city level are recorded in the form of daily, monthly, and quarterly report. Monthly and quarterly reports were submitted to republican HLC through oblast HLC (in case of district/ city of DRS, they submit reports directly to republican HLC.) Submitted data was aggregated at the analytical department of republican HLC. The department circulates increase/decrease of numbers of seminars, articles to newspaper, TV/radio programs in comparison with the last term and analyzed increase/decrease ratio of those numbers.

Republican HLC monitors activities of district level HLCs through the collection of monthly and quarterly reports. However, they do not make data analysis on the quality of activities at the district level. They do not make evaluation on effectiveness and efficiency of activities at the district level either.

(4) Assistance by donors

Recently, donors' activity in the field of PHC came to emphasize the relationship with HLC as a partner working for awareness raising in the district/city. The opportunities for HLC staff to be active as lectures for trainings held by the assistance of donors. Outlines of the relationship with HLC and major donors, such as USAID, ADB and AKDN are shown below.

- USAID

For the promotion of the “Guidelines on the Partnership with Community on Health Issues”, which was developed by the assistance of Swiss Agency for Development and Cooperation, USAID plans to conduct a course of training for the 12 districts in Khatlon and Sughd oblasts. The guidelines aim to share health promotion in the communities through the linkage of PHC facilities and HLC. Under this training program at the district level, works such as prioritization of health issues and development of action plan will be conducted.

- ADB

ADB conducted a baseline survey for the improvement of health status at the community level. As a part of this survey, they collected information on capacities of HLC. (The survey was conducted in November 2020 and ADB already submitted a draft of survey report to MOHSPP. However, the draft was not shared with the Survey Team because the draft was not approved by MOHSPP yet.)

Hereafter, ADB has a plan to conduct capacity building training of PHC staff. Master trainers for the training were already developed by the TOT conducted in 2021. Two officers of republican HLC are included in the master trainers.

- AKDN

AKDN also assists to promote the “Guideline on the Partnership with Community on Health Issues” similar to USAID. Forward the promotion of activities in communities, AKDN aims to establish linkage with HLC. When the Survey Team interviewed AKDN, the person in-charge commented that the capacities of HLCs at the district level are still weak and need to be strengthened.

- WFP

WFP promotes a project, entitled “Prevention and Treatment of Moderate Acute Malnutrition Project”, in four districts (Balkhi, Shahritus, Kulob, and Dusti) in Khatlon Oblast and one district in Sughd Oblast. When the Survey Team interviewed WFP, a person in-charge of the project commented that WFP did not had a direct linkage with HLC at present, but it would be necessary in the future.

- Donor coordination

The promotion of “Guidelines on the Partnership with Community on Health Issues” is one of the priority issues of MOHSPP. However, some districts are not covered by the assistance of donors⁸. When the Survey Team interviewed Republican HLC, they commented that they would like to expect assistance from JICA.

Republican HLCs are not involved in the process of development of donor’s activity plan because donor coordination was taken cared by MOHSPP. HLC commented that they would like to be involved in the donor coordination if donors’ activities are related to HLC.

⁸ Tursunzoda, Shahrinav, Hissor, Vahdat, Khovaling, Baljuvon, Muminobad, Shezod

(5) Issues in activities

All of the three HLCs at the district/city level, which were targeted for the interview survey, do not have budget needed for awareness raising such as transportation cost. Staff of HLCs said that they had to get the transportation cost from their own pockets. It is desirable to provide appropriate amount of budget allocation to HLCs according to their annual work plan.

Regarding awareness raising, two HLCs in Khatlon Oblast sent their staff to accompany FMNs in their home visit. In order to utilize the limited number of HLC staff, it is better to reconsider the necessity of home visit by HLC staff.

As to the training program for HLC staff, sometimes thematic trainings focused on COVID-19, environmental health, etc., were held at the oblast level. However, trainings related to the method of awareness raising such as communication skills, are not provided so far. It is desirable if HLC staff could have opportunities of training on communication skills to community people.

Currently, performances of district/city HLC are monitored by the “numbers” of seminars and public relations activities. Increase/decrease of the ratios in comparison with the last term are the target of monitoring. In addition to this, it is necessary to monitor the “quality” of their activities. For example, some indicators such as population coverage of health promotion activities, satisfaction and understanding of community people on health promotion activities should be included in the monitoring items.

Also, it is necessary to consider the methods of health promotion activities based on the disease trend of community people. Analysis of disease data at the district/ city level can be added to the tasks of HLC.

At present, there is no mechanism of evaluation on the performance of the district level of HLCs by the upper level HLC. It is necessary to make an evaluation once a year and to have an opportunity for discussion to improve their activities.

2.11 Situation of Malnutrition Related Diseases

When the Survey Team asked about the number of patients with malnutrition related diseases, most of the facility chiefs collected various notebooks kept by individual FMNs, and facility staff started aggregation of monthly/yearly numbers. One of the facility chiefs explained the number of patients without referring to his records because “he memorized all cases”. There are four facilities, which said that they could not provide the number of patients because it will take them a long time to aggregate these numbers from separately kept records.

As shown in the table below, most of the visited facilities did not keep records on the number of patients in chronological order. Although all facilities submit monthly reports to DHC every month, they are not mandated to keep copies of monthly report in their facility. There are no facilities to keep them either.

When the Survey Team asked the trend of patients’ number regarding child malnutrition and women’s anemia,

most of the facilities answered that they did not find any changes. There were a few facilities which regarded malnutrition and women’s anemia as serious health issues. They rather commented that they had to control children’s diarrhea as a priority. As to the question of the Survey Team on the causes of children’s diarrhea, their common replies were: “Eating fruits without washing”, “Eating something, which once dropped on the floor”. But there was no comment mentioning the usage of river or canal water without treatment.

Table 2-20: Number of Cases of Malnutrition Related Disease

District	Disease	RHC						HH					
		2016	2017	2018	2019	2020	2021	2016	2017	2018	2019	2020	2021
Dusti	Child malnutrition				10	5					54	48	
	Anemia				20	20						5	
Jomi	Child malnutrition												
	Anemia												
Khuroson	Child malnutrition	4	6	5	3	2		Never had malnutrition case before					0
	Anemia	8	12	23	35	27		No data available					3
Kushoniyon	Child malnutrition										3	2	
	Anemia											18	
Temurmalik	Child malnutrition				6	3					2	1	
	Anemia				70	150					5	5	
Hissor	Child malnutrition												0
	Anemia												1
Sangvor	Child malnutrition				NA	2					NA	0	
	Anemia				NA	5				NA	35	35	
Shahrinav	Child malnutrition					5	6		3	2	1	1	
	Anemia					20	15		3	5	2	4	
Tursunzoda	Child malnutrition												1
	Anemia												19
Roghun	Child malnutrition				NA	50						0	
	Anemia				NA	40						8	
Vahdat	Child malnutrition	38	35	30	28	21			2	3	2	4	
	Anemia	25	20	18	16	14			14	18	16	14	

Source : Results of the interview survey

2.12 PHC Facilities and Conditions of Equipment

In general, facilities of PHC are deteriorated. Regarding medical equipment, most of RHCs do not have laboratory. They examine patients with “sphygmomanometers, stethoscope, thermometer, height and weight meters”. About electricity, it is available in all the visited facilities. More than half of facilities used river or canal water as water sources.

2.12.1 Buildings

Most of RHCs were built during the 1950s to 1980s. Only one out of the ten visited facilities aged ten years after construction. The rest of the facilities are more than 30 years old. There is no support from the government for the rehabilitation of these facilities. When necessary, facility staff covers the costs of rehabilitation work from their pocket.

Some HHs were constructed in the 1950s and 1960s. Four out of the 11 visited facilities were constructed in the 2010s by donation of community people. Non-government organizations (NGOs) or community people cover the cost of rehabilitation of building. To the community people, HHs are more familiar facility than RHC.

2.12.2 Equipment

Two out of five RHCs in Khatlon Oblast and one out of six RHCs in DRS are equipped with laboratories. In DRS, there is one RHC that had obsolete electrocardiogram. All facilities in Khatlon and DRS are equipped with sphygmomanometers, stethoscope, thermometer, height and weight meters.

Equipment in HHs are very limited to basic items such as sphygmomanometers, stethoscope, thermometer, height and weight meters. Almost all facilities are equipped with such basic items but one HH in Khatlon had a set of stethoscope and thermometer only.

2.12.3 Electricity and Water

Most of the facilities in Khatlon Oblast and DRS answered that they did not have problem on electricity supply except in the winter season.

As for water, no facilities in Khatlon Oblast have piped water supply systems. They use well or river/ canal water as water sources. Four out of 11 facilities in Khatlon Oblast use river/canal water.

In DRS, two out of the ten facilities have piped water supply systems in their facilities. Two facilities bring water from the piped water supply systems in the neighborhood house. Two facilities use well, while the rest of the six facilities use river/canal water.

2.13 Impacts of COVID-19 on Provision of PHC Service and Future Issues

As part of the interview survey, the Survey Team asked target facilities about COVID-19 cases. Most of the facilities answered clearly. It was confirmed that the data on COVID-19 was managed more properly than NCDs related data⁹.

⁹ Newly appointed health minister has daily online meetings with all the directors of DHCs in the nation at 7:00 in the morning. The directors of DHC are responsible in reporting newly infected cases every day.

Table 2-21: Number of COVID-19 Cases at Visited Facilities

Oblast	City/ District	RHC			HH		
		Suspected Cases	Positive Cases	Deaths	Suspected Cases	Positive Cases	Deaths
Khatlon	Dusti		2	0		0	0
	Jomi *		6	0	119	0	0
	Khuroson	20	10	1		7	1
	Kushoniyon	> 100	10	1	2	0	0
	Temurmalik	0	0	0	0	0	0
	計	>120	28	2	121	7	1
DRS	Hissor		26	4		6	0
	Roghun	160		4		0	0
	Sangvor		0	0		5	0
	Shahrinav	19	1	0	8	0	0
	Tursunzoda	54	1	0		3	0
	Vahdat	3	0	0	12		1
	Total	236	28	8	8	14	0

Source: Results of interview survey

* Only Jomi District includes data of one RHC and two HHs. Other cities and districts include one each of RHC and HH.

After the COVID-19 pandemic in 2020, RHC and HH called community people's attention to infection prevention through home visit by FMN on "wearing a mask, hand washing, avoiding crowds". Interviewed FMNs said that such calls to people were very effective and most people acquired the habit of handwashing. According to the FMN, people wore masks and opportunities of community gathering had reduced visibly. However, as of May 2021 when interviews were conducted, community people as well as the staff of health facilities did not wear masks. It was generally understood that COVID-19 pandemic had been settled already.

Some of interviewed FMNs mentioned that there were positive changes after COVID-19 pandemic because people's consciousness on hygiene had improved, and people come to ask for advice freely when they find problems in their health.

Chapter 3 Development Partner Agencies in the Field of PHC in Tajikistan

3.0 Development Partner Mapping in the Survey Target Area

In recent years, each development partner has become increasingly active in entering the primary health care (PHC) field. The major development partners active in the survey area (including future plans) are listed below. All surveyed areas were covered by one development partner or the other. In the future, it will be important for the Japan International Cooperation Agency (JICA) project planning to closely monitor the activities of each development partner, especially the United States Agency for International Development (USAID) and the *Gesellschaft für Internationale Zusammenarbeit* (GIZ), and consider the areas where they can share or cooperate.

Table 3-1: Development Partner Mapping in the Survey Target Area

JICA Survey Site		USAID	GIZ (kfW) (Collaboration Project with WHO- UNICEF)	Others
Khatlon	Kuroson			
	Jomi			
	Dusti			WFP and USAID (nutrition)
	Temurmalik			
	Kushoniyon			
DRS	Vahdat		In the future	
	Hissor		In the future	
	Tursunzoda		In the future	
	Shakhrinav		In the future	
	Roghun			Aga Khan
	Sangvor			Aga Khan

Source: Interview with development partners

USAID is currently implementing the “Healthy Mother, Healthy Baby” Project in the Bokhtar districts of Khatlon Oblast, which is the same oblast as the Feed the Future Maternal and Child Health Project for 2015-2020. Therefore, USAID's commitment to the Bokhtar districts is strong. Since USAID is not widely publicized non-communicable diseases (NCDs) in the project, there is a possibility of cooperating in the NCDs field in this area, although public relations activities and community education may overlap with nutrition.

As one of the ideas for JICA future project in PHC level to share and cooperate with USAID in the Bokhtar districts, strengthening the family medicine doctor (FMD) capacity of PHCs for early detection of NCDs can be considered. However, the small number of FMDs in Khatlon Oblast poses a considerable risk to the implementation of the project.

The World Health Organization (WHO)/United Nations Children's Fund (UNICEF) joint project in GIZ overlaps with the target areas of Vahdat, Hissor, Tursunzoda and Shakhrinav in the Districts of Republican Subordination (DRS). However, no activities have been initiated yet, and detailed plans for activities are still being developed by GIZ.

Aga Khan Development Network (AKDN) has been providing support to PHC not only in the field of health but also in the field of social development, such as construction and renovation of facilities, provision of equipment and furniture, training of FMDs and in-service trainings, and supporting public awareness activities. Taking into account the AKDN's large presence in the target areas, JICA should not duplicate in the same target areas.

3.1 World Bank (WB)

The World Bank is implementing the "Health Services Improvement Project". The project is focused on improving PHC coverage and quality and Performance-based Financing in targeted districts in Sogd and Khatlon oblasts, with a pre-pilot in Spitamen District in 2014 and full-scale implementation in Khatlon from 2015. In 2015, the project was expanded to Kadiyoni, Farkhor, J. Balkhi, and Yavan in Khatlon, Mastchoh, Devashtich, and J. Rasulov in Sogd Oblast, and Dangar and Faizabad in 2016. It has been expanded to Hamadoni, Kushonien, Jomi, and Kulyab in Khatlon, Zafarabad in Sogd, and Darvaz in GBAO.

Performance-based financing

The system provides funding to health facilities as a bonus if they are judged to have achieved the following indicators. The following indicators have been established.

- Number of people who received all vaccinations by 13 months.
- Number of children up to 24 months who received physical measurements and whose parents received guidance on nutrition and childcare.
- Number of parents of children diagnosed with malnutrition who received guidance on nutrition and childcare with positive outcomes.
- Number of women who received the first postpartum health checkup by home visit within three days of leaving the hospital after delivery.
- Number of newly enrolled patients with diagnosis of hypertension; number of people aged 17 years and older who have been diagnosed and are receiving treatment for hypertension.
- Number of home visits during the specified period.

In addition, the following activities have been carried out so far.

- Six-month refresher training in Family Medicine (617 participants)
- Technical support for the Family Medicine Center to produce teaching materials
- Clinical protocol training for continuing education in the workplace (3,000 health staff)

- Printing of clinical protocols (12,000 copies of 3rd edition, 9,760 copies of 4th edition)
- Training of 236 new FMDs and family medicine nurses (FMNs)
- Basic laboratory service training for 315 health staff
- Training to improve PC literacy, training in the use of DHIS2-2 software

3.2 Health Development Program by Collaboration of WHO/UNICEF/GIZ

The goal the Health Development Program is "Realization of UHC in Tajikistan" and it has three outcomes: "1. Strengthening of governance and financing mechanisms in the health sector with emphasis on PHC"; "2. Improved access and quality of integrated PHC service delivery"; and "3. Effective infection prevention and control systems for health care delivery systems, including COVID-19 compliance".

Every outcome involves all development partners in some activities. Broadly speaking, WHO is primarily responsible for Outcome 1, GIZ for Outcome 2, and UNICEF for Outcome 3.

In particular, the GIZ has expressed its support for each of the items in the PHC Plan as follows: The GIZ covers 17 districts/cities in total, ten districts/cities in Khatlon Oblast (Bokhtar City, Djirkul, Muminobod, Vose, Khovaling, S.Shohin, Panji, Nurek, Baljuvon), three districts in Sogd Oblast (Panjkent, Bodojon Gahurov, Kuhistoni Mastchoch), and four districts in DRS (Hissor, Vahdad, Tursunzoda, Shahrukh). The following table shows the areas in which WHO and UNICEF plan their support as well.

Table 3-2: Items for GIZ, WHO, and UNICEF Planning to Support in the PHC Plan

Activity	GIZ Cooperation Areas	Areas of Cooperation by WHO and UNICEF
1. Improve access and quality of services at the PHC Level		
1.1 Develop a new and update the existing national guidelines on clinical practices for PHC services	<ul style="list-style-type: none"> • Support TWGs to review existing clinical guidelines and develop new clinical guidelines as needed. 	<ul style="list-style-type: none"> • Support for the development of new PHC guidelines (WHO) • Support for the development of guidelines in the field of Maternal and Child Health (UNICEF)
1.2. Development and approval of the regular monitoring and evaluation system for application of national guidelines on clinical practices for PHC services	<ul style="list-style-type: none"> • Support the establishment of internal quality committees for PHC in 17 districts/cities 	<ul style="list-style-type: none"> • Monitoring support (UNICEF)

Activity	GIZ Cooperation Areas	Areas of Cooperation by WHO and UNICEF
1.3. Review of competencies of family doctors / service providers on PHC that allows them to broaden their abilities to provide complex care and access to specialized services	<ul style="list-style-type: none"> Support for the review of qualification requirements for FMD and FMN. Support phased review of PHC facility rules. Support the TWG in updating the PHC regulations. 	<ul style="list-style-type: none"> Support for preparation of regulations related to PHC facilities (WHO) Review of Human Resource Capacity for Health (UNICEF)
1.4. Continuous improvement and modernization of PHC Network facility infrastructure	<ul style="list-style-type: none"> Provision of medical equipment and computers to PHCs in the project area. Training in the use and simple maintenance of medical equipment and computer use. 	<ul style="list-style-type: none"> Support through cooperation with the Islamic Development Bank (UNICEF)
1.5. Increase the number of Family Medicine Specialists	<ul style="list-style-type: none"> It will train at least 50 FMDs per year, and about 100 FMDs per year once all 11 training centers to which GIZ provides equipment are operational. Support ongoing credentialing and development through the development of E-learning modules and additional training to assist FMDs, FMN, and midwives. 	<ul style="list-style-type: none"> Support through cooperation with the Islamic Development Bank (UNICEF)
1.6. Continuous capacity building for PHC health workers	<ul style="list-style-type: none"> Continuation or introduction of a credit system for continuing education of health care personnel in 17 project areas. E-learning modules will be developed and implemented in all 11 training centers. Continuing Education Website Support. 	<ul style="list-style-type: none"> Support in cooperation with other development partners (UNICEF)
1.7. Update and develop the standards for accreditation of PHC facilities and increase the number of accredited PHC facilities	<ul style="list-style-type: none"> Training for PHC facility "Rapid Self-Assessment". PHC facility accreditation support. 	<ul style="list-style-type: none"> Support in cooperation with other development partners (UNICEF)
1.8. Improve the motivation of specialists in family medicine	<ul style="list-style-type: none"> Improved medical staffing in remote areas. Decreased migration of medical professionals. Review of the compensation system for FMDs. 	<ul style="list-style-type: none"> Review of BBPs and revenue based on drugs (therapeutics) (WHO) Cooperation with the World Bank (UNICEF)

Activity	GIZ Cooperation Areas	Areas of Cooperation by WHO and UNICEF
2. Modernizing the information system to improve processes and management at the PHC level		
2.1. Reduce the number and volume of	<ul style="list-style-type: none"> Analysis of reporting forms for PHC facilities. 	—

reporting for PHC facilities, and rationalize and optimize the reporting process	<ul style="list-style-type: none"> Support for electronic reporting (in accordance with the Electronic Patient Registries developed by the World Bank) and training of staff in electronic reporting. 	
2.2. Develop and implement digital and information technologies in the PHC facilities	<ul style="list-style-type: none"> Conduct training. (Examples of training topics: demographic analysis of the oblast, chronic health problems, etc.) 	<ul style="list-style-type: none"> Technical review to digital health at PHC level (WHO)
2.3 Build managerial capacity of PHC managers	<ul style="list-style-type: none"> Conduct training of PHC managers to ensure that business plans are implemented in all 17 project areas. 	—
2.4. Support in justified decision-making	—	<ul style="list-style-type: none"> WHO support

Activity	GIZ Cooperation Areas	Areas of Cooperation by WHO and UNICEF
3. Improve integration and development of basic services in PHC facilities, including palliative care, emergency care, and vertical service provision structures		
3.1. Develop the standards of care for palliative patients both by healthcare workers at the PHC, and by family and community	<ul style="list-style-type: none"> Support for the development of standards for palliative care by PHC health care providers, families and communities, piloted in 17 target areas. 	<ul style="list-style-type: none"> Technical Support (WHO)
3.2. Develop and introduce mechanisms of palliative care at home by multidisciplinary group of professionals	<ul style="list-style-type: none"> Installation in 17 target areas. 	—
3.3. Integrate provision of services by vertical structures (outpatient care in case of HIV / AIDS and TB, healthy lifestyle centers, immunization centers, etc.) into PHC / Family Medicine	<ul style="list-style-type: none"> Building an integrated model. 	<ul style="list-style-type: none"> Conduct a situational analysis of the current status of PHC facilities and the potential for vertical program integration as part of the optimization and restructuring of the PHC network (WHO) Supporting Integration in the HIV Field (UNICEF)
3.4. Develop and introduce integration model for emergency / urgent care services under the PHC at the district level	—	—
3.5. Improve access to and quality of services for mothers, children and adolescents at the PHC and	<ul style="list-style-type: none"> Activities to reduce maternal mortality, newborn and child mortality. Nutrition activities to reduce the rate 	<ul style="list-style-type: none"> Expanding access to early development programs for children with various developmental disabilities

Activity	GIZ Cooperation Areas	Areas of Cooperation by WHO and UNICEF
among vulnerable population	<p>of anemia among women of childbearing age and children under five, increase the rate of full breastfeeding, reduce stunting among children under five, and reduce the number of children with diarrhea.</p> <ul style="list-style-type: none"> • Activities that take place to reduce the rate of pregnancy in adolescents. • Improve access to developmental disability prevention for infants and young children. • Add services for youth to the training of FMDs, midwives, and FMN. 	and their families, including organizing communication events on changes in people's social and behavioral standards for nutrition and expanding early diagnosis programs for genetic disorders (UNICEF)
3.6. Reduce the burden of NCDs	<ul style="list-style-type: none"> • Community approach to develop healthy lifestyles. • Develop NCD programs and integrate them into PHC. • Develop a checklist for adults for early detection of risks. • Application of the HEARTS Technical Package and STEPS developed by WHO. • Promote evidence-based decision making in all training. 	<ul style="list-style-type: none"> • HEARTS Implementation and STEPS Survey Support (WHO)
3.7. Reduce the burden of infectious diseases (HIV, TB, etc.)	<ul style="list-style-type: none"> • Prevention of mother-to-child transmission of HIV. • Prevent death from tuberculosis. 	—

Activity	GIZ Cooperation Areas	Areas of Cooperation by WHO and UNICEF
4. Engaging communities to health issues		
4.1 Rollout of the Guidelines on the “Partnership with Communities on Health Issues”	<ul style="list-style-type: none"> • Work with the HLC to implement this training package. 	<ul style="list-style-type: none"> • UNICEF Support
4.2. Active involvement of PHC facilities into programs and activities to work with communities on health issues	—	—
4.3. Participation of communities in the business-planning process of PHC facilities	—	—
4.4. Raising awareness of population in the area of disease prevention	—	<ul style="list-style-type: none"> • UNICEF Support

Activity	GIZ Cooperation Areas	Areas of Cooperation by WHO and UNICEF
and health promotion, and well as promotion of healthy lifestyle		

Source: Primary Health Care System Development Plan 2021-2025 based on the Concept of Family Medicine, MOHSPP

3.3 Asian Development Bank (ADB)

The ADB is implementing the Maternal and Child Health Integration Project from 2019. The project outcomes are: (1) quality maternal and child health care services are provided in the target districts; (2) infrastructure and equipment for maternal and child health services are improved in the target districts; and (3) knowledge of maternal and child health care and health-seeking behaviors are improved in the target districts, which are Fayzobod (direct jurisdiction of the republic), Rasht (direct jurisdiction of the republic), and Shamsiddin Shohin (Khatlon Oblast).

According to an interview with ADB, as part of the baseline survey, a Knowledge-Attitude-Practice survey was conducted in November 2020 by UNICEF consultants on maternal and child health services, health facilities and staff, and outreach activities to communities. It is currently in the finalization stage and can be shared with the respective development partners and other stakeholders after approval by the Ministry of Health and Social Protection of People (MOHSPP). An assessment of the capacity of the HLC is also being conducted.

Activities implemented under the project to date include training of trainers (TOT) to HLCs, RepHCs, and FMCs at the republican level on communication for behavior change, referral systems from PHC facilities, and care and nutrition during pregnancy. The trainers were consultants invited from India and national trainers from Ibn Sina Medical College. After the TOT training, more TOTs will be conducted in the target districts.

3.4 World Food Programme (WFP)

For the improvement of nutrition from the viewpoint of food security, WFP implements two activities, namely: 1) School Feeding Programme, and 2) The Prevention and Treatment of Moderate Acute Malnutrition Project.

3.4.1 School Feeding Programme

This program is to provide school meals at the targeted 52 districts in Khatlon and Sughd Oblasts, Gorno-Badakhshan Autonomous Oblast (GBAO), and DRS where food security is not sufficient. It also aims to assist capacity building of Tajik government in operation and management of school

meals. It is planned that involvement of WFP will be reduced gradually. Operation and management of school meals aims to be fully transferred to Tajik government by the year of 2027.

During the closure of school due to coronavirus disease 2019 (COVID-19) in 2020, food materials (fortified flour, vegetable oil and chick-pea) for school lunch were distributed to the household of school children. After the re-open of schools, hot and nutritious school meals were provided to the first to fourth grades of primary school students at approximately 2,000 schools in the target districts. Times for school meals are utilized as educational opportunities of nutrition intake and hygiene for students.

3.4.2 Prevention and Treatment of Moderate Acute Malnutrition Project

The project provides therapeutic food to PHC facilities for the treatment of moderate acute malnutrition of under five children. It targeted four districts (Balkhi, Shahritus, Kulob, and Dusti) in Khatlon and Ayni District in Soghd. In 2020, more than 9,000 malnourished children had treatment at about 250 PHC facilities. Screening of malnourished children is conducted through home visits and immunization at PHC facilities.

In 2020, “Social behavior change communication plan on the prevention of malnutrition in Tajikistan”, to promote behavior change of community people for nutrition improvement, was finalized. The plan specified methods of diffusion of knowledge to community people by health promoters about food hygiene, reduction of usage of cooking oil and preservation of vegetables.

3.5 United Nations Children’s Fund

Regarding water, sanitation and hygiene (WASH), only 24% of health facilities in the country have access to safe water. Although infrastructure development is important, before that, it is necessary to establish standards and guidelines on WASH because regulations are outdated. There are many other development partners related to water supply support, and UNICEF will take the lead of the coordination. In addition, UNICEF is currently conducting a survey to improve water supply in 50 secondary health care facilities nationwide.

There are two major issues regarding nutrition. First, there is no nutrition survey in Tajikistan, hence it is not possible to discuss the actual situation and causes of the problems based on the data. Second, there is no available position for nutritionist in Tajikistan, and doctors, nurses, and other health staff provide nutrition guidance. No one at the field level has specific and comprehensive nutrition knowledge.

3.6 European Union (EU)

The EU's support to all sectors in Tajikistan was called "Human Development Support" and was implemented from 2011 to 2018 at a cost of EUR 1,600 million. The main areas of cooperation were economic support, public financial management, budget transparency, and health sector policy support. The EU budget was paid to the MOHSPP, but between 2016 and 2017, the EU refused to pay because some items did not meet the conditions for payment.

The direction of health support in the EU has changed from the district level to the PHC level. The previous project was the District Health Information System (DHIS) development, which produced some results such as the creation of software, but health management could not be integrated during the project period.

The current project is a financial support to the Health Development Program (WHO-GIZ-UNICEF joint project) which was mentioned earlier. While the operation of the DHIS developed in the previous project is left to the discretion of GIZ and other implementing agencies, EU believes that DHIS should be at the core, rather than introducing various other management systems. As for human resource development at the PHC level, the EU and WB will continue the FMD/FMN training project, which was still implemented by Switzerland, by taking it over.

3.7 USAID

The main policies in the health sector are human immunodeficiency virus (HIV) control, tuberculosis control, and maternal and child health with focus on nutrition. Currently, there are two main projects, namely: 1) Healthy mother, Healthy baby project and 2) joint project with other development partners.

3.7.1 Healthy Mother, Healthy Baby Project

The project is being implemented from October 2020 to September 2025 with the objective of enabling the Tajikistan government health system to sustainably improve its capacity to provide quality maternal and child health and nutrition services. The target areas are the districts/cities of Balkhi, Dusti, Jaihun, Jomi, Khuroson, Kushoniyon, Levakant, Nosiri Khisrav, Qubodiyon, Shahritus, Vakhsh, and Yovon in the Bokhtar area of Khatlon Oblast. The components include improving behaviors related to water, sanitation, and hygiene during the first "1000 days," and supporting the MOHSPP for capacity building in Scaling Up Nutrition. Particularly, activities for behavior change are being conducted in collaboration with HLC. Future plans include the production of awareness raising TV programs and providing necessary training support for HLC staff.

The project is led by Abt Associates and is a joint effort between Changeable, a company that promotes

women's business, and Dimagi, a software technology company.

3.7.2 Collaborative Projects with Other Development Partners

- Support of WFP activities in Kulob, Dusti, Shartuz, Valhi, Aini (Therapeutic food supply, Malnutrition online monitoring system - data input directly into tablets to be sent to the Institute of Pediatric Diseases at the IMCI Center)
- Support for UNICEF to improve the quality of iodized salt (remotely from Washington D.C.)

3.8 Aga Khan Development Network (AKDN)

AKDN is implementing the “Integrated Health and Habitat Improvement Project” in Rasht, Tojikobod, Sangvor, Nurobod, Rogun and Lakhsh districts. The project has three components: 1) community participation in local development, 2) community access to public health services, and 3) community members' ability to live in a healthier, environmentally sustainable, and disaster safe manner.

The main activities are as follows: (In parentheses, there are advice from AKDN, which has been implementing activities at the community level for a long time.)

- Construction, rehabilitation and minor renovation of PHC facilities and provision of basic medical equipment.
(AKDN believes that the provision of facility rehabilitation and basic medical equipment is essential for the interventions at the PHC level. Investment in facilities and equipment at the beginning of the project will provide a great motivation for health care workers, and the initial provision of facilities and equipment will facilitate subsequent activities.)
- Training of medical personnel, including FMDs, FMNs, and other medical personnel.
(As for training, use guidelines and manuals already approved by the MOHSPP.)
- Establishing a Clinical Excellence Center by e-Health-based for continuous medical education.
A clinical excellence center is a room equipped with e-Health equipment, a library, and internet access that is partly provided by the district hospital and other healthcare facilities and is used as a base for continuous medical education for healthcare workers in the district.

At the community level, it has established a network of Community Health Promoters (CHPs) and is implementing the Guidelines on the Partnership with Communities on Health Issues approved by the MOHSPP. At the community level, the project is also working with the HLC to raise awareness among the population on the prevention of NCDs.

CHPs are volunteers who are selected after a rigorous selection process. The volunteers are selected based on their passion for volunteering, as well as recommendations from local government, religious leaders, and PHC staff. The volunteers are paid only a basic daily allowance and accommodation, but once a year they are given a gift of about USD 20. Currently, 1,600 CHPs have been trained.

The AKDN also produces booklets that CHPs use to educate community members about health. according to the AKDN, one of the most important aspects of the booklets is that the messages should be simple. In addition, CHP also accompanies PHC staff on home visits to provide health education to families. This has been a great relief to the FMNs who are busy with their daily work.

In addition, AKDN also conducts nutrition activities in schools, especially in GBAO where there are many stunting children. Through the Project, cooking class is conducted, and nutritional supplements such as F75 and F100 are provided. AKDN is planning to conduct similar activities in Khatlon Oblast under the GIZ Project.

Chapter 4 Recommendation of Technical Cooperation Details

4.1 Identify High-priority Issues for Cooperation

The following points were taken into consideration in identifying issues of high priority for the Japan International Cooperation Agency (JICA) technical cooperation project.

- Project goals and outcomes should be in line with the National Health Strategy 2030 (NHS 2030) as well as primary health care (PHC) Plan of the Ministry of Health and Social Protection of People (MOHSPP).
- As key development partners are initiating projects in the PHC field, it is preferable to avoid duplication of activities in the same area.

In addition, the Survey Team suggests that the following prerequisites need to be met in order to provide support in the PHC field.

- There should be enough numbers of family medical doctors (FMDs) and family medical nurses (FMNs), as well as human resources involved in nutrition.
- Basic infrastructure and equipment should be in place. (If infrastructure and equipment development is included in the activity, the target area should be narrowed down.)

In addition, the project includes reviewing reporting formats on PHC, strengthening district health center administrative capacity, and strengthening healthy lifestyle centers (HLCs), as activities, special attention should be given to the following:

- Since the PHC system is still under development in Tajikistan, it would be more effective to focus on creating a model that can be reflected in the policy at a later stage.
- Information sharing and coordination of activities among partners is particularly important since key development partners have started their projects at PHC level. Especially, defining the roles of human resources in the PHC field, integrating reporting formats, conducting trainings, which MOHSPP plans, infrastructure development and equipment provision, etc., must avoid duplication or it may cause unnecessary confusion.

As for the development partner coordination, as of the end of May 2021, the following three development partner coordination meetings were approached the Survey Team. Since there is a possibility that new conferences will be established in the future, it is necessary to continue to collect information together with the current conferences.

- Coordination meeting on WASH (led by UNICEF, the First Deputy Minister as well as the officer

in charge of infection control participated in the kick-off meeting)

- Coordinating Council on Maternal and Child Health (USAID-led, with the Deputy Minister of Maternal and Child Health from MOHSPP)
- Coordination meeting to clarify terms of references (TORs) for FMN (USAID-led)

As a result of the survey, the following is a list of issues that have a high priority for cooperation and have potential for cooperation. At the same time, the possible preconditions at this stage are also listed.

Table 4-1: High-Priority Issues for Cooperation

	Issues with High Priority for Cooperation and Potential for Cooperation	Prerequisite
1	Data Management in DHC as well as Health Centers	<ul style="list-style-type: none"> • Items in the monthly report will be reviewed. • Data collection tools at PHC facilities will be organized. • FMD is assigned in the health center.
2	Nutrition	<ul style="list-style-type: none"> • Water and sanitation sector will be improved. • Training of nutrition-related personnel is completed. (At least one staff member in charge of nutrition is needed in each district.)
3	NCDs Prevention Activities	<ul style="list-style-type: none"> • Sufficient numbers of FMDs and FMNs are assigned in health centers.
4	Early Detection of NCDs	<ul style="list-style-type: none"> • FMD is assigned in the health center. • Guidelines for diagnosis and treatment are in place.
5	Strengthen HLC Capacity	<ul style="list-style-type: none"> • The role of the HLC is being reviewed and its position in disease prevention and awareness raising activities is being clarified. • Human resources are sufficient at the district level.
6	Water Supply and Other Infrastructure Support	<ul style="list-style-type: none"> • The water source is a pipe (no need to dig a well), making infrastructure support relatively easy. • Close to Dushanbe (to make monitoring not too difficult)

Source: Compiled by the Survey Team

In addition, the PHC Plan covers the necessary activities aimed at resolving the issues that PHC is currently facing. The following table lists the activities that can be implemented by JICA technical cooperation projects in accordance with this plan. However, the following activities should be carried out in areas where the prerequisites, such as sufficient human resources, have been met.

Taking into consideration the high-priority issues mentioned above, the following items are considered to be essential components to support PHC activities.

- Awareness raising activities for healthy lifestyle in collaboration with PHC facilities and HLCs

at the community level.

- Participation of the community in PHC planning and activity monitoring.
- Provision of infrastructure and equipment to PHC facilities.
- Improve knowledge in nutrition and NCDs among PHC facility staff and HLC staff.
- Strengthening management skills for PHC managers.

Table 4-2: Items can be Implemented by the JICA Technical Cooperation Projects based on "PHC System Development Plan Based on the Principles of Family Medicine 2021-2025"

Activity Number	Activities of the "PHC Plan"	Items that can be Implemented in JICA Technical Cooperation Projects
1.4	Continuous improvement and modernization of PHC network facility infrastructure	<ul style="list-style-type: none"> • Provision of computers, equipment, and infrastructure to PHC in the project area • Training in the use and simple maintenance of medical equipment and computer use
1.7	Update and development of standards for accreditation of PHC facilities and increase the number of accredited PHC facilities	<ul style="list-style-type: none"> • Training on "Rapid Self-Assessment" of PHC Facilities • PHC Facility Accreditation Support
2.1	Reduce the number and volume of reporting for PHC facilities, and rationalize and optimize the reporting process	<ul style="list-style-type: none"> • Analysis of reporting formats and development of model formats
2.2	Develop and implement digital and information technologies in the PHC facilities	<ul style="list-style-type: none"> • Training in computer-based data management, etc.
2.3	Build managerial capacity of PHC managers	<ul style="list-style-type: none"> • Training implementation support
3.6	Reducing burden of NCDs	<ul style="list-style-type: none"> • A community approach to develop healthy lifestyles • Support for the application of WHO's HEARTS technical package • Patient registration and disease data management training, etc.
3.7	Reduce the burden of infectious diseases (HIV, tuberculosis, etc.)	<ul style="list-style-type: none"> • Improve water and sanitation in the facilities
4.1	Rollout of the Guidelines on the "Partnership with Communities on Health Issues"	<ul style="list-style-type: none"> • Training implementation support
4.2	Active involvement of PHC facilities into programs and activities to work with the communities on health issues	<ul style="list-style-type: none"> • Promote community participation in PHC activities
4.3	Participation of communities in the business-planning process of PHC facilities	<ul style="list-style-type: none"> • Participation in planning for PHC facilities in the community
4.4	Raising awareness of population in the area of disease prevention and health promotion, as well as promotion of healthy lifestyle	<ul style="list-style-type: none"> • Build partnerships between PHC facilities and HLCs and the communities • Community participation in HLC activities

Source: Compiled by the Survey Team based on the "Primary Health Care System Development Plan 2021-2025; Based on the Concept of Family Medicine

4.2 Technical Cooperation Proposal

First, the Survey Team proposes that JICA's technical cooperation projects be implemented in a two-stage approach. For example, the Survey Team proposes that a detailed planning survey (including baseline survey) and a detailed intervention plan be conducted in the first two years of the four-year project, and that intervention activities be implemented in the second two years. The reason for this is that, as mentioned above, in the first two years after the project starts, the activities of other development partners will be in full swing and new systems may be introduced in the PHC field. At the same time, this period will be used to design the second half of the project activities including identifying the target districts for the second half of the project.

The following are some examples of technical cooperation projects in accordance with the high-priority issues for cooperation discussed in 4.1.

4.2.1 Example of Technical Cooperation Project "Capacity Enhancement Project for PHC Facilities"

The project aims to improve the quality of health services provided at PHC facilities by: improving the infrastructure and equipment at PHC facilities in the target areas; increasing activity at PHC facilities through improved knowledge of disease prevention and nutrition among PHC staff; early detection of NCDs, especially cardiovascular and diabetes; and strengthening data management capacity at the PHC managerial level. Strengthening data management capacity at the PHC managerial level will be the outcome. Possible activities include the following for each outcome.

Output 1 (PHC facility and equipment)

- Survey on infrastructure and equipment of the target PHC facilities
- Infrastructure repair, especially water supply support
- Provision of equipment
- Maintenance of infrastructure and equipment

Output 2 (Nutrition)

- Survey of PHC staff on their knowledge of disease prevention and nutrition
- Selection of necessary training and implementation of training
- Planning and implementation of nutrition awareness activities, using MCH handbook as a tool

Output 3 (Early detection of NCDs)

- Current status survey based on the WHO HEARTS Technical Package
- Introduction and monitoring of the package

Output 4 (Data Management)

- Survey on data management
- Selection of equipment, and training required for data management-related
- Implementation of database planning

Outline of Technical Cooperation to Strengthen PHC (Draft)

Project Name	Capacity Enhancement Project for PHC Facilities	
Project Duration	Four years	
Implementing Organization	Ministry of Health and Social Protection of the Population of Tajikistan PHC facilities in the target area, DHC in the target area	
	Objective	Indicator
Overall Goal	Improve the health status of community people in the target area.	
Project Purpose	The quality of health services provided at PHC facilities in the target areas is improved.	
Outputs	1. Improve the functioning of PHC facilities in the target areas.	Routine maintenance Periodic monitoring
	2. PHC staff to increase their activities on disease prevention and nutrition.	Training related to disease prevention and nutrition
	3. Improve early detection of NCDs by PHC staff.	Related to early detection of NCDs (e.g., HEARTS technical package, etc.)
	4. Data management capacity of district and PHC facility directors will be strengthened.	Development of data collection methods Planning based on utilization of data
Inputs from the Japanese Side	Training: Training in Japan or training in a third country Japanese experts: chief advisor, medical facility management, medical equipment, PHC, health promotion, data management, NCDs, nutrition, etc.	

It should be noted that the selection of target sites for the implementation of this project is very important. Since the project includes support for facility infrastructure, it would be more realistic if the number of target PHC facilities is not too big. In addition, to ensure the feasibility of the project, it is suggested to select an area that is easily accessible from Dushanbe and where water sources are secured to some extent.

4.2.2 Examples of Technical Cooperation Projects "Community Participation in Health Issues"

With the aim of establishing partnerships between PHC facilities and communities in health issues, a project is proposed that includes the following outcomes and activities.

<p>Output 1 (Infrastructure development, equipment provision)</p> <ul style="list-style-type: none"> • Survey on infrastructure and equipment of the target PHC facilities • Infrastructure repair, especially water supply support • Provision of equipment • Maintenance of infrastructure and equipment <p>Output 2 (Guidelines on the "Partnership with Communities on Health Issues" training)</p> <ul style="list-style-type: none"> • Collaborate with HLC to plan for guidelines training • Training implementation and monitoring <p>Output 3 (Evidence-based planning and community participation in PHC facilities)</p> <ul style="list-style-type: none"> • Survey on data collection at the target PHC facilities • Training on data management and provision of necessary materials and equipment

- Participation in PHC planning by community representatives
- Output 4 (Improvement of healthy lifestyle of the community)
- Survey on health awareness and behavior of community people
 - Awareness raising activities for community people
 - Activities for behavioral change toward a healthier lifestyle in the community

Outline of Technical Cooperation for Community Participation in Health Issues (Draft)

Project Name	Community Participation in Health Issues Project	
Project Duration	Four years	
Implementing Organization	Ministry of Health and Social Protection of Population of Tajikistan PHC facilities in the target area, etc.	
	Objective	Indicator
Overall Goal	Improve the health status of community people in the target area.	
Project Purpose	Partnerships between PHC facilities and communities in health issues are established.	
Outputs	1. Improve the functioning of PHC facilities in the target area through infrastructure development, equipment provision, etc.	Points enhanced by infrastructure development, impact
	2. Training on the Guidelines on the "Partnership with Communities on Health Issues" is conducted in the target areas.	Training implementation and its effects
	3. PHC facilities develop evidence-based business plans, and communities participate in the planning process.	Planning based on the use of evidence (data)
	4. Increase public awareness of disease prevention, health promotion, and healthy lifestyle.	Knowledge, attitude and practice survey among community people.
Inputs from the Japanese Side	Training: Training in Japan or training in a third country Japanese experts: chief advisor, medical facility management, medical equipment, PHC, health promotion, data management, NCDs, nutrition, etc.	

4.2.3 Example of Technical Cooperation Project " Capacity Enhancement Project for District Health Centers on PHC Promotion"

The project is designed to strengthen the capacity of PHC in the target districts, particularly in the district health centers, and the results are expected to include the establishment of roles of PHC stakeholders, improvement of information systems for PHC, strengthening of PHC management capacity, familiarization of PHC facilities and staff with their roles in the jurisdiction, promotion of multi-sectoral cooperation within the district, and strengthening of linkages between PHC facilities and schools at the community level. The possible activities include: establishing the roles of stakeholders in PHC activities; improving the information system for PHC; strengthening the management capacity of PHC; disseminating the roles of PHC facilities and staff in the jurisdiction; promoting multi-sectoral cooperation within the district; and strengthening the linkages between PHC facilities and schools at the community level. Possible activities include the following for each output.

- Output 1 (Establishment of roles for those involved in PHC activities)
- Conduct a review of PHC activity stakeholders with a focus on the District Health Center.

<ul style="list-style-type: none"> • Establish a forum to discuss the roles of each party involved. • Establish each role and clarify the responsibilities.
Output 2 (Improvement of the information system for PHC)
<ul style="list-style-type: none"> • Conduct a review of the information system for PHC in the district. • Consultation on integration of information systems, including vertical programs, and development of information systems. • Conduct information system training for PHC managers and provide necessary materials and equipment. • Monitoring of information systems.
Output 3 (Strengthening PHC's management capacity)
<ul style="list-style-type: none"> • Survey on management skills of personnel involved in PHC management, including DHC. • Identification of necessary management skills and implementation of management training.
Output 4 (Awareness of the roles and capabilities of PHC facilities and staff in the jurisdiction)
<ul style="list-style-type: none"> • Identification of roles and required competencies of PHC facility staff in the jurisdiction by DHC. • Survey on the roles and capacity of PHC health workers. • Conduct necessary capacity building training.
Output 5 (Promotion of multi-sectoral cooperation in the district)
<ul style="list-style-type: none"> • Recognition of the need for multi-sectoral cooperation with water, environment, and education sectors in the district and confirmation of DHC initiative. • Survey on the preparation for multi-sectoral cooperation. • Multi-sector forum held by DHC. • Model building and proposal.
Output 6 (Strengthened linkages between PHC facilities and schools at the community level)
<ul style="list-style-type: none"> • Survey on the current status of collaboration between PHC facilities and schools. • A model development for collaboration between PHC facilities and schools. • Expansion of collaboration between PHC facilities and schools in communities to the entire district by DHC.

Outline of Technical Cooperation to Strengthen District-level PHC Capacity (Draft)

Project Name	Capacity Enhancement Project for District Health Centers on PHC Promotion	
Project Duration	Four years	
Implementing Organization	Ministry of Health and Social Protection of the Population of Tajikistan District governments, DHCs, HLCs, PHC facilities, and schools in target districts	
	Objective	Indicator
Overall Goal	The quality of health services provided at PHC facilities in the target districts will be improved.	
Project Purpose	Management capacity for PHC service delivery in the target districts will be strengthened.	
Outputs	1. Roles of stakeholders in PHC provision in the target areas are reviewed and improvement measures are developed.	Conduct a review
	2. Information systems on PHC in the target areas are reviewed and improvement measures are developed.	Conduct a review
	3. PHC management capacity at DHC is strengthened based on the improvement measures developed in 1 and 2.	Implementation of capacity building training Develop an annual plan based on evidence Conduct monitoring and

		evaluation of PHC facilities
	4. Operations in RHC and HH are updated based on the improvement measures developed in 1 and 2.	Conduct training on business operations
	5. Collaboration with district government officials (water and environmental sectors, education) is strengthened.	Organize workshops Improve the management policy of monthly meetings
	6. Collaboration between PHC facilities and schools at the community level is strengthened.	Organize workshops Improve the management policy of monthly meetings
Inputs from the Japanese Side	Training: Training in Japan or training in a third country Japanese experts: Chief Advisor, Health Administration Capacity Strengthening, Data Management, NCDs, School Health, etc.	

Annex 1

To the Resolution of the Government of
the Republic of Tajikistan

No. _____ dated _____ 2021

STRATEGY ON HEALTHCARE OF POPULATION OF THE REPUBLIC OF TAJIKISTAN UP TO 2030

Dushanbe - 2021

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List of abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
CPE	Continuous Professional Education
DOTS	Directly Observed Treatment Short Course
GDP	Gross Domestic Product
HIS	Health Information System
HIV	Human Immunodeficiency Virus
MoF	Ministry of Finance of the Republic of Tajikistan
MoHSPP	Ministry of Health and Social Protection of Population of the Republic of Tajikistan
MTEF	Medium-Term Expenditure Framework
NHA	National Health Accounts
NHSRT	National Health Strategy of the Republic of Tajikistan for 2010 - 2020
NDSRT	National Development Strategy of the Republic of Tajikistan for the period up to 2030
PHC	Primary Health Care
PPP	Purchasing Power Parity
SDC	Swiss Agency for Development and Cooperation
SRMNCAH	Sexual, Reproductive, Maternal, Newborn, and Child and Adolescent Health
STI	Sexually Transmitted Infections
TB	Tuberculosis
ATSMU	Avicenna Tajik State Medical University
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WFP	World Food Program
WHO	World Health Organization

I. INTRODUCTION

1. The Strategy on Healthcare of Population of the Republic of Tajikistan up to 2030 (hereinafter referred to as the Strategy) determines strategic areas of health system reforms. Strategy defines ways of further development of health system to protect the health of population.
2. This Strategy is guided by the national priorities of the country as reflected in the Constitution, National Development Strategy of the Republic of Tajikistan (NDSRT) – 2030, Addresses of the President, Medium-Term Development Program of the Republic of Tajikistan and facilitates inventory of international commitments of the Republic of Tajikistan with regard to Sustainable Development Goals (hereinafter referred to as SDG).
3. Implementation of the Strategy will be evaluated through Joint Annual Review (JAR) process, which takes account of achievements and existing challenges as identified through assessments conducted in 2018 and 2019, as well as in technical report developed in 2018.

II. REVIEW OF CURRENT STATUS OF HEALTH CARE OF POPULATION IN THE REPUBLIC OF TAJIKISTAN

§1. Health Status of Population

4. Along with improved social and economic conditions, health of Tajik citizens has been improving in post-civil war period. Since 2000, life expectancy has increased by 6.8 years (2019) and is 73.0 for male and 76.9 for females.
5. Various factors affecting the health of population in Tajikistan include non-communicable, as well as communicable diseases, such as cardiovascular diseases and lower respiratory diseases. Based on Global Burden of Diseases study data, during period of 2007 – 2017 in Tajikistan, top ten causes of death in the country remain unchanged, including ischemic heart disease, lower respiratory infections, stroke, neonatal disorders, acute intestinal infections, liver cirrhosis, hypertensive heart disease, diabetes, congenital malformations, Alzheimer disease. At the same time, a 112% growth in deaths caused by metabolic disorders (diabetes) was observed during the same period.
6. The country demonstrates substantial progress in improving mother and child health indicators. Maternal mortality rates decreased from 97.7 per 100,000 live births in 1990, to 24.1 per 100,000 live births in 2018. Global maternal mortality ratio during period from 2005 to 2017 decreased for 2.8%, while maternal mortality coefficient in Tajikistan decreased for 4.2%.
7. Further, situation improved with regard to child health indicators. In 2017, the mortality rates among children under 5 years old was 33, and mortality of children below 1 year old – 24, respectively (DHS 2017). In 2018, per capita healthcare expenditures were USD 62.80, where 26.4% is covered from public sources, and 66.6% are private expenditures on healthcare, mostly including out-of-pocket expenditures of the patients, and 7% are covered by development partners and international donors. In general, the country spends 7.5% of its GDP on overall healthcare costs (2018), which is below average for the region¹.

¹ <https://databank.worldbank.org/>

§2. Healthcare System Review

8. The healthcare system of Tajikistan includes policy-making bodies in healthcare sector, which are also responsible for development of legal and regulatory mechanisms in the sector, as well as for planning of resources, including human resources. These are primarily Ministry of Healthcare and Social Protection of Population, as well as other line ministries, such as ministries of finance, economy, education, justice, employment, etc. Local government bodies are responsible for provision of services and financing of these services.
9. Cumulatively, these structures perform main functions on improving the health of population of Tajikistan: governance, provision of financial and human resources, data collection and analysis, provision of services and pharmaceutical products, ensuring prevention and epidemiological security of the country.
10. **Governance Function.** The Government of the Country, executive government bodies at central and local level committed to the following functions to ensure governance and adoption of feasible decision with regard to the health of nation:
 - Developing the fundamental values, guiding principles and state policy in the area of public healthcare;
 - Modernizing the legislation and regulatory framework and supervising their implementation;
 - Forming intersectoral and interagency partnerships to improve living standard in the country;
 - Reinforcing focus on international best practices;
 - Coordinating international assistance and technical cooperation.
11. The strategy will focus on enriching this process by focusing on key aspects of healthcare governance and implementation of short and long-terms actions.
12. **Finance Function.** Reasonable health financing policies form the basis of healthcare system. It determines public vision on resource mobilization, resource consolidation, purchasing and compensation of expenditure.
13. Administrative inefficiency and substantial regional and district disparities in allocation of healthcare funds are first of all caused by fragmentation of public funding sources. This Strategy will address these challenges through development of instructions on consolidation of public finances from various sources under unified administration at oblast level in first stage within required pilot mechanisms, and on second phase – through their inclusion under single structure of public health insurance – upon completion of institutionalization in the frame of process establishing the health insurance fund.
14. Proposed Strategy considers the reforming of existing healthcare financing system as an important step on the way to improving efficiency of the system for provision of healthcare services and addressing issues of equality, accessibility and affordability of Primary Health Care services and other basic healthcare services for population.
15. Financing arrangements that improve efficiency or change benefits package implemented in isolation from additional interventions on demand side will be unlikely to achieve desired outcomes. Rationalization of hospital sector will improve impact of public expenditure on hospital care.

16. **Provision and Development of Human Resources.** Delivery of healthcare services will depend on availability of informed, competent, and motivated healthcare workforce (HWF). Human resource planning and training, in particular that of healthcare workers, is a lengthy process and its outcomes will have impact on accessibility and quality of healthcare for population.
17. Healthcare workforces include “all individuals engaged in operations with primary goal of health promotion” (WHO, 2006). This includes staff directly participating in delivery of medical and preventive services with or without medical education, as well as managers, administrative and supporting personnel. Staff participating in training and teaching of healthcare workers and workers of healthcare science, are also integral part of healthcare workforce.
18. The cornerstone for implementation of this Strategy is establishing the **HWF Strategic Planning System**. Availability of human resources delivering appropriate services is necessary to achieve goals and objectives of healthcare system, in particular with regard to accessibility, equity, quality and performance of the system. This system shall provide for efficient public management of labor market in healthcare, allow implementing unified policy on improvement of health of population and ensure sustainable development of healthcare system. Such approach stipulates systemic approach to planning of (1) training for healthcare system; (2) establishing appropriate and enabling conditions for employment; (3) conditions for continuous improvement in quality and delivery of post-graduate education; and (4) building capacity and scientific activities in medical field. **Establishing the integrated model for training, generation of clinical skills and development of medical science are among major outcomes of implementation of this Strategy.**
19. Healthcare Management Information System (HMIS) will serve as a basis for MoHSPP in making decisions on critical areas of governance, setting standard for reporting and exchange of information in real-time, ensuring high levels of safety and confidentiality of patient information. In addition, the HMIS will be able to improve administering, execution and monitoring of expenditure and establishing fruitful partnership with stakeholders. The HMIS will provide informational support of decision-making process at every level of the system to assist in rational procurement of services to ensure health of population.
20. The agenda of sustainable development up to 2030 acknowledges the need for development of information and communication technologies. Extending access, utilization and quality of ICT may become the key factor for implementation of all Sustainable Development Goals (SDGs).
21. **Service Delivery.** Improving the health and well-being of population requires access to basic healthcare services. Substantial progress had been achieved during the last decade in the frame of implementation of NHS 2020 in improving access to quality healthcare services, as well as in improving the health indicators of population.
22. Nonetheless, still there is substantial potential in the country to improve human capital, health, and well-being of people. Life expectancy at birth of citizens in Tajikistan is one of the lowest in WHO European Region, and comparing to some other countries in the region, this difference is at least 10 years.
23. In order to ensure Universal Health Coverage, healthcare services shall be accessible, financially affordable, acceptable, and satisfactory. Delivery of services in compliance with these values will require evidence-based / informed practices, and people / patients shall be in the center of any service delivery model.

24. This Chapter reviews the basic structural elements of services, and each of such structural elements will be aimed at improving specific aspects of healthcare or elimination of inequalities with regard to the healthcare of vulnerable groups. Combination of all of the above will promote health and well-being of population in Tajikistan:
25. Ensuring Universal Health Coverage:
 - Strengthening the Primary Health Care based on principles of Family Medicine;
 - Maternal and Child Healthcare, as well as services related with Protection of Sexual and Reproductive Health and Rights of Adolescents;
 - Infectious diseases: prevention, management, and treatment;
 - Non-communicable diseases: prevention and treatment.
26. Ensuring access to basic public healthcare services:
 - Improving accountability of population for their health, health surrounding people through promotion of healthy lifestyle
 - Improved access to WASH in healthcare facilities both within healthcare sector, as well as beyond
 - Introduction of effective mechanisms to provide safe and acceptable water supply
 - Fully functioning healthcare system and laboratory system.

§3. Opportunities and Major Challenges

27. Implementation of the National Health Strategy of the Republic of Tajikistan for the period of 2010 – 2020 (NHS-2020) led to substantial improvement with regard to the population health indicators. Many goals and objectives of the previous Strategy were achieved. However, some of them were not implemented in full dues to various objective factors. As with previous NHS-2020, this Strategy will face certain challenges, and appropriately planned and coordinated actions of the Government can and will mitigate potential challenges related with its implementation, which, in turn, will contribute to achieving the outcomes at maximum possible extent.
28. Below are some of key opportunities that shall be utilized in the best way possible:
 - Strong political support: implementation of healthcare services will be related with substantial public expenditure. Considering the scarcity of public resources, extensive political support and prioritization in health sector will be crucial for resource mobilization for healthcare investments;
 - Favorable political context: The National Development Strategy that defines overall direction of the country’s development pay substantial attention on economic growth of the country, which, in turn, will make substantial contribution in health and social well-being of population;
 - Demographic “Window of Opportunities”: Tajikistan is the country with high proportion of young population, especially when compared to other states of WHO European Region. Investments in health at younger age can ensure higher productivity in terms of generating human capital and future economic growth;
 - Demographic and Epidemiologic Transition: ageing of population and growth in non-communicable diseases cause significant pressure on healthcare system. Hence, it will be important to concentrate on addressing these challenges by focusing on prevention of non-communicable diseases rather than dealing with their implications;

- Support by Development Partners and International Donor Organizations: International partners not only contribute with important financial resources, but also with know-how, knowledge and experience to address health sector challenges. This support will be vital to deliver basic healthcare services and materials, build human resource capacities and improve infrastructure;
 - Partnership with Private Sector: Improving the public-private partnership mechanisms and ensuring space for private investments will lead to increase in resource mobilization and improved sustainability of healthcare service delivery.
29. Along with opportunities, it will be necessary to review relevant challenges:
- Deficit of funding: Tajikistan is the lower income country with least expenditure for healthcare in the region. Low level of healthcare expenditures in absolute and relative figures represents a problem, since resources could be insufficient to cover basic services;
 - Decrease in donor support: gradual decrease in donor funding is occurring despite lower income status of the country (which often is the criterion for allocation of funds by donors). Requirements of donors to the Government on allocation of funds for specific activities could represent substantial burden for budget, as well as hindering factor having impact on decisions by the Government in the course of fund allocation;
 - Migration that causes challenges, such as staff turnover, as well as cross-border challenges in healthcare sector;
 - Insufficient infrastructure: health and social well-being include multiple health determinants ranging from education to accessibility of transportation and communication systems. Substantial improvement of human health indicators will be impossible without overall national development in other sectors of economy;
 - Inequity and inequality. Wide geographic variability is observed in the country with regard to health status and access to healthcare services. Moreover, gender inequality and domestic violence represent serious challenge;

III. VISION, OVERALL GOAL AND STRATEGIC DIRECTIONS

30. Access to health services is guaranteed by the Constitution of the Republic of Tajikistan, highlighted through the Presidential addresses, and the attainment of constitutional guarantees is supported by the Health Code and other national laws and regulations and relevant state strategies and programs.
31. The **vision** for this Strategy was developed in line with the long-term NDS-2030 of the Republic of Tajikistan priorities and obligations in achieving SDGs, in particular reduce inequality, enhance social justice and well-being, build up human capital and improve the health and longevity of the nation by ensuring equal access to health and social care and nutrition.
32. The overall goal of this Strategy is to provide every citizen of Tajikistan with accessible and quality healthcare through effective governance, sustainable financing, workforce provision and development of information technologies.
33. This Strategy outlines the following strategic directions and objectives to be achieved by 2030.
- 1) Strategic directions:
- Effective governance, sustainable financing, workforce provision and development of information technologies;

- Accessible, affordable, and quality health and social services.
- 2) Strategic objectives:
- Effective management of healthcare system;
 - Strengthening of Primary Health Care delivery systems to achieve Universal Health Coverage;
 - Modernizing and improving the healthcare service delivery system;
 - Ensuring appropriate and sustainable financing for healthcare;
 - Providing the healthcare system with qualified and motivated human resources;
 - Develop modern management information systems (MIS), extend the digitization of healthcare and social protection system.
34. Achieving the vision, goal and strategic objectives are based on the following main principles:
- 1) **Reduction of inequalities and inequities in health:** population of Tajikistan experiences inequalities in access to healthcare services due to geographic variability and differentiated economic capacity of administrative units in the country. Mechanisms to enable achieving these objectives are:
 - **Progress towards Universal Health Coverage** through provision of access to necessary quality healthcare services without financial challenges to reduce inequalities with regard to health care service delivery and improvement of health indicators of population.
 - Enabling lifelong approach within health and social welfare field.
 - Protecting population from impoverishing healthcare expenditures by enhancing efficiency and pooling of the financial resources within the systems and mobilizing resources from outside of the system.
 - Increasing efficiency and effectiveness in spending of current scarce financial resources to gain better return on investment in healthcare sector.
 - 2) Strengthening evidence-based and informed decision making, and
 - 3) People-centered healthcare system is the main concept to ensure equity in access to quality services through utilization of multisectoral approach to address key social determinants of health inequities.
 - 4) Ensuring social integration and equal access for all people to healthcare services free of any form of discrimination and social isolation based on the gender, age, location, profession, level of income and poverty, race, ethnicity, religion, nationality, social category of citizen.

IV. STRATEGIC DIRECTION I: EFFICIENT GOVERNANCE, SUSTAINABLE FINANCING, HEALTHCARE WORKFORCE AND DEVELOPMENT OF INFORMATION SYSTEMS

1. Methods of Achieving Goals

35. This Strategy will be implemented through series of activities that will be structured by two main directions:
- Efficient management, sustainable financing, staffing and development of information technologies;
 - Accessible, affordable, and quality healthcare services.

§1. Chapter 1: Governance

36. The National Health Strategy of the Republic of Tajikistan for 2010 - 2020² was an important milestone in the development of the country's healthcare system. This first comprehensive strategy ensured strategic coherence and promoted integration of health across all sectors and policy areas.
37. During this implementation process, overall health system stewardship function and overall management of the system was improved, leading to:
 - Significant improvement in general state of public health and modernization of the national health system for sustainable development of human capital in the country;
 - Creation of an effective system of interaction and management of the reform process;
 - Significant improvement in intersectoral cooperation between ministries and state bodies, both at the republican and regional and district levels.
38. Restructuring of the Ministry of Health of the Republic of Tajikistan into the Ministry of Health and Social Protection of Population of the Republic of Tajikistan into a single structure is a special “window of opportunity”. For effective implementation of this merger, more than 400 new sectoral regulatory legal acts of republican, regional and district significance were developed, revised, and approved.
39. During this period, new structures were established (Republican Accreditation Center under the State Oversight Service for Medical Activities and Social Protection of the Population, National HIV/AIDS Prevention and Control Fund, Republican Center for Medical Genetics, specialized centers for diagnosis and treatment of people with disabilities, and rehabilitation of people with disabilities at the National Medical Center of the Republic of Tajikistan - "Shifobakhsh" and others.).
40. An active business planning process was introduced at PHC level to support management of Healthcare Facilities and provides a mechanism to provide institutions with greater autonomy and community participation in budget planning and priority setting processes. Until the end of 2018, business planning at the PHC level was implemented in 24 regions of the republic with the intention of expanding business planning to the remaining regions of the republic.
41. “Strategic Plan for the Rationalization of Healthcare Facilities of the Republic of Tajikistan for 2011-2020,” was successfully implemented in the country. Successful pilot projects aimed at creating perinatal centers in district and regional hospitals of Khatlon region will rolled out throughout the country.
42. An important step in strengthening the regulatory framework was the adoption of the Health Code of the Republic of Tajikistan (2017), Laws of the Republic of Tajikistan “On Protection of the Right of Child” (2015), , “On Limiting the Use of Tobacco Products” (2018), and “On Fortification of Food” (2019).
43. The Republic of Tajikistan has actively interacted with international partners and donor community. Various cooperation agreements and treaties were signed in the framework of the meetings of the Council of Heads of State of Shanghai Cooperation Organization, as well as during intergovernmental bilateral and multilateral high-level meetings (with presidents of the Russian Federation, China, Germany, Belarus, Kazakhstan, Kyrgyzstan, Azerbaijan, Armenia,

² Decree of the Government of the Republic of Tajikistan from August 2, 2010, No. 368.

Turkmenistan, Uzbekistan, Iran, Czech Republic, Latvia, Lithuania, etc.), including directions for the development of healthcare sector in the country.

44. Quality Improvement and Control: Quality of higher and secondary medical education remains one of the main factors requiring attention. Substantial progress was achieved in the area by introduction of decentralized clinical year at undergraduate level of medical education and a longer (2 years) postgraduate specialized training for family doctors.
45. As of now, Tajikistan had introduced a functioning system of accreditation for hospitals, as well as outpatient services. During the period of 2014-2015, 5 maternity hospitals have obtained official accreditation. The important phase in development of the accreditation system was its international endorsement by supreme body on quality assessment - ISQua (International Society on Quality in Healthcare). The ISQua certified the Accreditation Body of the Republic of Tajikistan and endorsed obstetric care standards. Upon endorsement of accreditation process of PHC in 2018, 47 facilities received accreditation, where 14 out of them are private facilities. Clinical standards, protocol and guidelines are continuously developed in Tajikistan under the Health Code. There more than 700 various standards and 50 guidelines developed during the last decade.
46. Along with the achievements, there remain unresolved issues related to the improvement of the healthcare system and the new challenges of the developing environment:
 - The district-level health management model is imperfect and ineffective. In 2012, the district and city departments / health sectors were abolished. As an interim solution to this issue, it was decided to empower the heads of the hospital service to take responsibility on the entire health sector at the district and city levels. However, such a management model is extremely inefficient.
 - The integration of health and social protection services is not yet complete. Given the expanded functions, the Ministry of Healthcare and Social Protection of Population faces a very difficult task of immediate urgent integration of the activities of health and social protection services, which again will require additional funding.
 - Health management functions are not always backed by appropriate information support. Limited use of evidence and low recognition of contextual impacts lead to inefficient use of resources and poor decision making. In particular, this relates to issues of rational use of resources of regional and district health systems; this complicates the process of monitoring and evaluating the implementation of the strategy. Indicators do not always correspond to the real situation.
 - Inefficient health information systems: currently, the health management information system contains aggregated information at the level of oblasts, districts, and healthcare institutions on the state of public health and the activities of healthcare institutions, as well as information on national health accounts, revenues, and expenses of healthcare institutions. This information is very important for the operational management of the healthcare system and the assessment of the performance of healthcare facilities; however, it does not contain personalized patient data, which limits its use.
 - Problems in intersectoral coordination remain key. Vertical tools and plans have been adopted as tools of NHS-2020 that require full integration and coherence. The relationship between the health strategy and other sectoral strategies is still not well defined and needs to be improved. By ensuring coherence between comprehensive development strategies, health policies and other sectoral policies, strategies and plans, a country can also directly

contribute to the achievement of SDG 17.14, which calls for greater policy coherence for sustainable development, and to break the ice of industry work towards SDG implementation. The long terms of coordination of strategic documents with interdepartmental institutions and the existing disagreements during the implementation of individual projects slow down the reform process.

- Low efficiency and poor coordination in managing external resources and foreign investment, which in turn reduces the effectiveness of the funds raised in achieving the main goal.
47. Goals, Objectives, actions, and expected outcomes. The National Program on Strategic Developments defines the following objectives with respective tasks and actions under each objective to ensure their achievement.
48. The main goal is to promote effective governance of National Healthcare System and includes the following objectives:
- Improve management of the health sector and social protection at both the central and local (oblast, district) levels;
 - Improve management capacity at all levels of healthcare system governance through training;
 - Create an effective, centralized system of the State Sanitary and Epidemiological Service;
 - Assume an effective role for oversight and control of quality and safety of healthcare service delivery by facilities and specific legal entities and natural persons;
 - Create effective coordination mechanisms for donor support in creating comprehensive pool of financial resources for the implementation of this Strategy.
49. Following actions will be implemented to achieve these goals:
- 1) Improve management capacity of the health sector at both the central and local (oblast, district) levels:
 - o Improve regulatory framework for a clear delineation of the rights and competencies of local governments in the field of healthcare. Improving the managerial capacity of local governments in the area of policy and management of the health sector.
 - o Design phased implementation of the business management model in state Healthcare Facilities at all levels, taking into account the increased autonomy independence and responsibility of these institutions.
 - o Develop clear guidelines for intersectoral collaboration and public participation in decision-making and policy making.
 - 2) Improving management capacity at all levels of service delivery through training:
 - o Improving and ensuring sustainability of one-year innovative Public Healthcare Management Course at the level of postgraduate education and continuous professional development.
 - 3) Achieving effective performance of centralized system of the State Sanitary and Epidemiological Service:
 - o Developing the regulatory framework on all activities that will govern compliance with sanitary and epidemiological norms and rules.
 - o Developing and updating the criteria for water supply, sanitation and hygiene, and healthcare waste management for accreditation of healthcare facilities.

- Improve governance structure of bodies and institutions of the State Sanitary and Epidemiological Service of the Republic of Tajikistan and introduce acceptable management model at all levels.
 - Clearly delineate responsibilities among supervisory authorities to eliminate cases of duplication of each other.
 - Increasing the managerial capacity of bodies and institutions of sanitary and epidemiological surveillance by attracting senior employees in the specialty of hygiene, epidemiology, sanitation, and public health.
- 4) Assume an effective role for oversight and control of quality and safety of healthcare service delivery by facilities and individuals:
- Strengthening the education of doctors and mid-level staff in the country through implementation of concept of medical education based on quality of undergraduate, postgraduate education and continuous professional development.
 - Strengthening the country's capacity to develop, disseminate, evaluate, and update evidence-based clinical practice guidelines and protocols
 - Updating and developing the standards for accreditation of healthcare organizations and support applicability of these standards in all relevant facilities of the country
 - Reviewing existing and development of new accreditation standards for the most popular services, such as the TB prevention and treatment service, HIV, dentistry, immunization, laboratory services, sanatorium services, palliative care, private medical practice.
 - Training health workers and managers in improving the quality of health services and quality management skills in accordance with international standards.
 - Developing and implementing patient safety and treatment quality outcome monitoring systems.
50. The impact of these actions will be the establishment of effective stewardship function and management of healthcare sector, based on the following expected results:
- An integrated management and evaluation model of healthcare services is introduced;
 - The business planning model at the PHC is institutionalized across the country;
 - The curriculum of one-year innovative Public Healthcare Management Course at postgraduate medical education and continuous professional development is improved and functions in sustainable manner;
 - Transparency and accountability of the whole system is improved;
 - A model of effective partnership and coordination for the management of external assistance is functioning;
 - The unified health information management system is introduced;
 - An effective and centralized system of the State Sanitary and Epidemiological Service of the Republic of Tajikistan has been created;
 - Integration of health aspects into all sectors of public policy reform.

§2. Chapter 2. Sustainable Financing

51. Steady economic growth in the republic has led to a significant increase in government spending for healthcare. In 2019, spending grew to 1.7 billion somoni, which is 4 times more than in 2010 (404 million somoni). In 2018, overall public health spending was 2.3% of GDP compared to 1,7% in 2010. Despite a steady increase, the share of public health expenditure

(PHE) as a share of GDP and per capita health spending is among the lowest in the region leaving significant share of out-of-pocket payments by household for health account (66.6%), which indicates the high risk of impoverishment due to healthcare related costs³.

52. Within the framework of the “National Health Strategy of the Republic of Tajikistan for 2010–2020”, the Government has begun to implement systemic changes in the field of health financing. For the rational use of public resources and to improve efficiency in the administration of the health financing system, the “Strategic Plan for Further Reforming of Healthcare Financing in the Republic of Tajikistan for the Period 2015-2018” and the “Strategic Plan for Reforming Healthcare Financing in the Republic of Tajikistan for the Period 2019- 2021” were developed and approved.
53. Within the framework of these reforms, the following achievements can be distinguished:
 - Introduction of per capita financing of Primary Health Care services, allows equitable distribution of financial resources at the PHC level. In addition, a pilot of performance-based financing mechanism (PFM) carried out with the support of the World Bank, has established an efficient model to improve performance of healthcare facilities;
 - Extending the Basic Benefits Package (BBP). The Strategy will focus on reducing out-of-pocket payments by forming the foreseeable and transparent system of rights and obligations of patients.⁴ Currently, the BBP Program covers more than 21% of population of Tajikistan.
 - Institutionalization of the National Health Accounts (NHA) system that allows improving tracing of healthcare resources to make decisions and adopt appropriate policy measures.
54. Along with achievement, there are remaining issues that need to be addressed and relate with healthcare financing system:
 - Low level of government health spending -- despite the steady increase in government spending on health and social protection, a low level of public health expenditure is one of the main obstacles and the main risk for the implementation of this strategy.
 - Fragmentation of health resources -- the existing revenue collection model is fragmented and does not allow pooling funds at regional or national level. Neither are there mechanisms in place to pool public and private resources and thus improve financial risk protection. The Law on Health Insurance, which has been adopted, but not yet implemented will allow increased pooling of private sources of financing.
 - Use of inefficient form of “passive”/input-based financing -- An outdated and extremely inefficient form of “passive” financing is maintained on the basis of the historical budget, which is planned on the basis of inputs, such as the number of hospital beds and staff.
 - Outdated and redundant medical infrastructure -- Service delivery is still characterized by an underutilized infrastructure, most of which was inherited from the Soviet era. Despite approved of hospital rationalization plan, hospital provider network was not downsized. There is need for more pro-active policy in this direction.
 - Design of the BBP is not optimized, and the BBP is not universally available and does not respond to basic healthcare needs of the population. Substantial efforts are needed to optimize the BBP and ensure universal access to free basic services. Ensuring full public

³ WHO Global Health Expenditure Database

⁴ Resolution of the Government of the Republic of Tajikistan No. 237 dated July 2, 2005

awareness on benefits package will be crucial to improve access of population of basic services in the frame of BBP;

55. Goals, Objectives, actions, and expected outcomes. The main goal is to ensure adequate and sustainable funding and responsible management of public resources, and includes the following tasks:

- Improve mobilization of resources, ensure adequate and sustainable financing of healthcare system
- Promote equity in the allocation of financial resources
- Improve public purchasing of healthcare services
- Rationalize medical infrastructure based on the principles of economic efficiency and needs and interests of the population
- Improve financial management and increase financial autonomy of publicly run health facilities

56. Achieving these goals will be carried out by the following actions:

- 1) Improve mobilization of resources, ensure adequate and sustainable financing of healthcare system:
 - Increase government spending on healthcare services through strengthening Midterm public expenditure framework (MTEF) for budget planning by fully integrating the Strategy goals into the annual budget planning process.
 - Develop other mechanisms to increase the healthcare budget through mobilization of additional centralized funding sources (target revenues), such as excise tax on alcohol products, sugar-containing drinks, tobacco products, fine for traffic violations causing injuring and harms to human health, environmental factors, etc.;
 - Create appropriate legal foundation and a favorable environment for the development of the health insurance system;
 - Develop and approve an economic model for introducing a health insurance system, taking into account the economic justification for implementing the Law;
 - Reduce administrative barriers and support public-private partnerships (PPPs) in healthcare;
 - Develop a roadmap to attract investments and increase the share of investments by private sector;
 - Create conditions for the development of voluntary health insurance (VHI).
- 2) Promote equity in the allocation of financial resources:
 - Develop and implement equalization model for healthcare expenditures to reduce regional disparities
 - Develop appropriate legal and regulatory foundation for accumulation of funds at sub-national and national levels.
 - Ensure improvement and unification of BBP the whole population, with the emphasis on social guarantees for vulnerable groups of the population:
 - Inform and raise public awareness regarding BBP
- 3) Improving public purchasing mechanism for healthcare services:
 - Improve the per-capita funding mechanisms at PHC facilities using the adjustment factors:

- Develop/expand PBF⁵ models for healthcare facilities and healthcare personnel
 - Develop/expand case-based payment methods in hospital care facilities;
 - Introduce the Single Healthcare Service Purchasing Mechanism and develop mechanisms to regulate contracting processes with healthcare service providers;
 - Improve contract management and managerial capacity of public facilities and healthcare service providers;
- 4) Rationalize healthcare infrastructure based on the principles of economic efficiency, needs and public interests, Reviewing goals and timelines for phased implementation of the Medical Infrastructure Rationalization Implementation Plan.
- 5) Improve management and increase autonomy of public healthcare facilities:
- Develop and gradually introduce efficient models for management of public healthcare and social facilities.
 - Develop a regulatory system that allows independent decision-making at the facility level, including fund retention and reallocation.
57. The outcome from implementation of these actions will be increased equity and efficiency of resource allocation in the healthcare and social protection systems. Specific results expected are the following:
- Adequate, fair, and sustainable financing for healthcare services
 - Basic Benefits Package is accessible for the entire population
 - Improve protection of population from financial risks, especially of vulnerable groups;
 - Rational and efficient management of public financial resources for healthcare is ensured
 - Quality and effectiveness of the management of Healthcare Facilities is improved.

§3. Chapter 4: Ensuring Sustainable Development of Human Resources –Workforce for Healthcare System

58. Healthcare is one of the leading sectors for employment in Tajikistan, and as of now, number of employees in healthcare sector reaches 11.2 thousand people (MoHSPP RT, 2018).
59. During the last 10 years, number of doctors and professionally trained staff (nurses and others)/mid-level providers has increased by 34,5% and 70,1% accordingly. As a result, in 2018 country had 18,716 practicing doctors and 51,788 mid-level professionals. Density of healthcare staff per 10,000 population for the last decade had also increased by 12.2% and 41.8% accordingly. Hence, density of medical doctors per 10 000 is 21.2, and that of mid-level staff is 58.6.
60. Despite the overall positive numbers of HRH, the country is experiencing significant inequalities in terms of geographic distribution of HRH. The highest density is observed in Dushanbe, where there are 8.25 doctors per 1 000 population, but there are only 1.15 doctors per 1 000 population in Khatlon district.
61. Despite the overall growth in the numbers of healthcare workers, Tajikistan is facing the challenge related with deficit of doctors on certain specific specialties (such as family doctors, pediatricians, neonatologists, psychiatrists – drug addiction specialists, infectious diseases specialists, rehabilitation specialists, prosthetists, orthotists, etc.).

⁵ PBF – Performance-Based Funding

62. Migration of healthcare workers outside the country is one of the reasons for observed shortage of qualified human resources.
63. Medical education in the country is delivered by public and private medical schools. Compared to 2010, the number of medical schools have increased, as well as number of students and graduates. There is a growing demand for medical education in the country and all available spots are filled.
64. Continuous medical education (CME), based on credit-hours is currently being piloted for family doctors in the city Tursunzoda. This pilot is an implementation of developed regulations on CME and 101 doctors, and 100 nurses are already engaged in the process. Positive results of this pilot should become a foundation of gradual rollout of this Strategy nationwide.
65. New healthcare system requires well-trained **healthcare managers**. There are currently two programs in healthcare management: a 2-year program which grants qualifications of a health systems manager (59 graduates in 2018) and 1-year training Public Healthcare Management Course for the primary healthcare managers, which was developed and initiated in 2015.
66. **Health science** has also seen some progress in recent decade. Despite outdated infrastructure and limited funding, stand-alone research institutions, as well as research departments within medical schools and hospitals are engaged in ongoing national and international projects. This institution consists of 14 scientific centers, research departments of the Avicenna Tajik State Medical University, Khatlon State Medical University, and the Institute of Post-Graduate Education in Healthcare Sector.
67. Over 80 research projects and 11 innovative research has been carried out during this period with public funding and number of publications in peer-reviewed journals – local and international, has increased.

Currently, there are 10 Dissertation Councils operating in the Republic of Tajikistan.

68. Along with achievements there are remaining issues related with development of Human Resources for Healthcare:
 - 1) Availability of medical personnel:
 - Lack system for strategic planning of human resources;
 - Deficit of healthcare staff;
 - Largescale migration;
 - Geographic imbalance in distribution of healthcare workers;
 - Unfavorable working conditions.
 - 2) Medical Education:
 - Only few of faculty staff have scientific degrees and ranks;
 - Lack of university clinics;
 - Lack system for continuous professional education and development (CPD).
 - 3) Medical Science:
 - Obsolete logistical base of scientific institutions and deficit of investment funds for their upgrade;
 - Deficit of grant funding for research purposes;
 - Limited interest of private sector in medical research.
69. Goals, objectives, actions and expected results. The main goal is to ensure supply of sufficient quantities of healthcare human resources that meet the requirements, engage specialists to

science and identify new funding sources by attracting of private investments in science and research, and will include the following tasks:

- Improve strategic planning of HRH by introducing systems and tools for strengthening data for monitoring, planning and informed decision-making, in general, with regard to HRH.
- Improve HWF training process with focus on clinical and management personnel with the purpose of enhancing the quality of training and stimulating the improvement of HWF availability in the regions. This will include aspects of equipping the healthcare workers with necessary theoretical knowledge and clinical skills and introduction of the continuous professional development system to support knowledge and skills.
- Improve the working conditions for HWF (clinical and non-clinical staff, faculty, and scientists).
- Support development of science, modern technologies, and innovations in health sector of the country.

70. The following activities will be implemented to achieve these goals:

1) Improve strategic planning of Human Resources for Healthcare:

- Develop, pilot, and introduce the National Registry of Human Resources in Healthcare, including regulatory framework and IT-platform.
- Develop, approve, and introduce guiding principles and ratios for HWF strategic planning.
- Develop the National Program for Human Resource Training for the period up to 2030 in compliance with the process of reforms stipulated under the National Development Strategy up to 2030, NHS 2030 and SDGs.
- Review the list of specialties and qualification requirements for the staff with higher and secondary medical and pharmaceutical education.
- Review and simplify the rules, regulations that allow employment of foreign healthcare specialists in Tajikistan.

2) Improve training/education process of HRH

- Review the Medical Education Concept that covers all levels of education – undergraduate, postgraduate, and continuous professional education.
- Introduce clinical training year (9 months) in all medical universities.
- Roll out continuous professional education system nationwide.
- Redesign CPE programs based on accumulation of credit hours, peer-review groups, and mentorships for young doctors.
- Substitute existing system attestation of doctors and related recertification every 5 year by new CPE program by 2030.
- Extend duration of post-diploma/specialization training for all specialties to at least 2 years; Programs should be referred to as residency programs, instead of “ordinature”.
- Ensure support to training more family medicine doctors, including family practitioners with post-graduate training, through establishing new training/education centers.
- Provide financial and social incentives to doctors in the 2nd year of residency program in family medicine.
- Improve infrastructure within medical education/training institutions to bring the quality up to acceptable international standards.

- Develop education/training programs new specialties/skills, as well as update existing programs.
 - Continue support for training medical specialists abroad in specialization which are not available in Tajikistan.
- 3) Improve employment conditions for Human Resources for Healthcare
- Review and, when necessary, provide financial and communal (e.g., housing) incentives to attract and retain medical personnel in regions with low staffing levels.
 - Provide incentives to applicants and students from cities and regions with low healthcare staffing levels to receive medical education, such as privileges during admission process.
 - Develop, pilot, and implement a system of payment by performance for reimbursement of selected medical activities.
 - Revise reimbursement system in order to account for complexity, quantity, and quality of medical care.
- 4) Support development of science, modern technologies, and innovations in the field of medicine in the country
- Increase the number and quality of research activities
 - Improve procedures for ethical review of medical research through implementing Good Clinical Practice
 - Improve standards and increase access to ethical review of research activities involving human subjects
 - Increase the number of dissertation councils to increase the number of doctoral research scholars from within holders of PhD degrees to enroll in training at the doctorate candidate training within the country.
 - Expand the licensing and accreditation system for all education and scientific institutions.
 - Gradually modernize infrastructure of scientific institutions from account of public and private funding.
71. As a result of these activities the healthcare system will have an equitable access to adequately trained and qualified human resources for health, which stipulates the following specific working results:
- Human resources planning process for the health sector is improved, through informed decision making based on data collected and processed from the National Register for Human Resources for Health. The impact of these activities will be rational and adequate use of existing human resources for health.
 - Existing educational and training programs for students and health workers will be gradually revised to allow building and improving theoretical and clinical skills among undergraduate and postgraduate students, as well as among practicing professionals. In addition, healthcare staff will be equipped with managerial skills and healthcare managers will be trained.
 - Gradual increase of payment for medical personnel and establishment of financial incentive system will address geographic inequalities and improve quality and performance of medical services. This will also reduce the migration of medical personnel inside and out of the country. This will improve the quality and accessibility of medical services in the country.

- Scientific capabilities of the country will be strengthened. More specialists will be involved research activities and commercialization of results in order to attract new sources of funding and utilize the results of these studies.

§4. Chapter 4. Management Information Systems and Digital Health

72. There are remaining issues that need to be addressed with regard to development of Management Information Systems and Digital Healthcare:

- Lack of appropriate legislation that ensures effective introduction of the HMIS, e-Health, digital healthcare and telemedicine.
- Fragmentation of health information system. The Unified Healthcare Information Management System that functions on the basis of DHIS2 had been implemented under support of the Government of the Republic of Tajikistan and European Union. This system allows generating complete online information on the health of population and performance of healthcare facilities in compliance with National Indicators. In addition, individual healthcare structures had been sporadically developing their own information systems, which led to fragmentation of healthcare information systems, dissemination and weakening of accountability and competing interests of various subjects from various sectors.
- Quality of certain generated data does not meet standards. One of the most relevant challenges in the area of healthcare information systems is the analysis and adoption of national standards of data in healthcare sector.
- Excessive requirements for data and reporting. Healthcare workers, especially at the level of primary health care are overburdened with excessive requirements for data and reporting. Another problem is that small amount of generated information is not in fact used to inform decision-making.
- Insufficient financing. Establishing the national network of facilities to introduce HMIS will require detailed assessment / forecast of all expenditure that shall be duly considered in the budget and financed to ensure continuity of implementation.
- Underdeveloped ICT infrastructure and administration capacities: ICT infrastructure is underdeveloped, underfinanced and unevenly distributed.

73. Goals, objectives, actions and expected results. The main goal is to improve the management information system, expansion of digitalization and telemedicine systems of healthcare and social protection, which will include the following tasks:

- Adjust legal and regulatory frameworks for HMIS and digital health and telemedicine development
- Strengthen the digital infrastructure of the Ministry of Health and Social Protection of Population;
- Strengthen administrative and human capacity of MoHSPP to use digital platforms and to provide telemedicine and digital health services to the population
- Develop the National Investment Plan for the development of HMIS, digital medicine services and telemedicine

74. The following actions will be implemented to achieve these goals:

- 1) Adjust legal and regulatory frameworks for HMIS and digital health development:

Improve national policies and legislation to promote HMIS development by conducting the legal review of related normative and regulation documents; and adopting the enabling legislation towards HMIS and digital health services.

- Develop and approve national healthcare data standards by: Bringing national standards to compliance with international best practices; Clearly identifying roles and responsibilities of all facilities participating in the functioning of HMIS and digital healthcare at various levels and agreeing the minimum set of national health indicators; Develop and maintain effective HMIS and health digital services.
- 2) Strengthen the ICT infrastructure, ensuring access of population to digital health services:
- Deploying the national, regional, and specialized network to improve HMIS and digital healthcare;
 - Assessing the needs and supply of ICT equipment and trained staff for MIS of health and social care facilities.
75. The following specific outcomes are expected of these activities, which will have impact of improvement of health system management.
- Appropriate legal and regulatory frameworks are adopted, and financial support is provided to ensure effective expansion of HMIS and digital healthcare in the country;
 - Minimal set of national health indicators is developed;
 - Tools for information management and its utilization are developed;
 - Opportunities for training on utilization of HMIS and digital healthcare in educational institutions (medical HEIs / postgraduate educational institutions) are established;
 - Role and responsibilities of all subjects with regard to improvement of HMIS and introduction of digital healthcare are determined;
 - National digital healthcare system and telemedicine service are established and functioning.

V. STRATEGIC DIRECTION II: ACCESSIBLE AND QUALITY HEALTHCARE AND SOCIAL PROTECTION SERVICES

§1. Chapter 5. Healthcare Services

76. Implementation of the given Program provides real opportunities for the improvement of access and quality of healthcare services in Tajikistan. The expected outputs include the followings:
- Reduction of inequality of access to the high-quality services at all levels;
 - Total coverage of the SGBP for the entire population, taking into account the peculiarities of needs and interests of vulnerable layers of the society;
 - Reduction of newborn, child, and maternal mortality;
 - Improving access to quality drinking water, reducing inequalities between the urban population and residents of rural areas and remote areas;
 - Reducing the prevalence of all forms of malnutrition among population, in particular among children and women of reproductive age;
 - Improving delivery of quality PHC services, reducing the level of gender inequality and prohibition of age discrimination in the area of services;
 - Improving access and quality of services for mothers, children, and adolescents. These services shall be based on the principles of economic efficiency and the needs of patients;

- Increasing the share of services and facilities where national clinical standards have been introduced;
- Reducing the burden of infectious and noncommunicable diseases;
- Reducing premature mortality from noncommunicable diseases;
- Improving family-based care and feeding practices, such as exclusive breastfeeding among children under 6 months of age;
- Widespread introduction of innovative technologies in the activities of the healthcare system;
- Ensuring the rehabilitation and social integration of people with disabilities;
- Reducing stigma and discrimination in obtaining specialized services;
- Integration of health aspects into all sectors of public policy reform;
- Enhanced participation of all stakeholders, including target groups of population;
- Implementation of the model “Partnership with Communities in Health Matters”, approved by the Ministry of Health and Social Protection of Population of the Republic of Tajikistan at the national level and its sustainability in the healthcare system of the Republic of Tajikistan;
- Training of qualified specialists on ensuring the quality of medicines and manufacturing activities in the pharmaceutical industry;
- Improving the material and technical base of drug quality laboratories at the central and regional levels;
- Use of international standards (GLP, GCP, GMP) in the local pharmaceutical industry;
- Establishing the new pharmaceutical production capacities and increasing the share of local production of medicines in the pharmaceutical market of the country;
- Implementation of electronic drug procurement system;
- Adoption of necessary measures by local executive government bodies to organize new pharmacies in rural areas and improving accessibility of medicines at local level.

§2. Improving Access, Quality and Responsiveness of Primary Health Care

77. Primary healthcare (PHC) is the foundation of the healthcare system. Tajikistan has adopted PHC model based on family medicine approach and has invested heavily in training family physicians and nurses to provide needs-based and setting-appropriate care. With consideration that over 73% of the country's population live in rural areas, PHC is a gateway to health promotion and health services for the majority of population.
78. PHC services should not be limited only to treatment of patients but should be focused on disease prevention and maintenance of good health, provision of rehabilitation and palliative care, taking into account gender and age differences, especially for people living in conditions of poverty and vulnerability and people with disabilities, elderly people, and people with implications of NCD and trauma.
79. The aim of implementing this Strategy is to avoid fragmentation and taking into account existing national resources and limitations, to facilitate the provision of a wide range of services and types of care within PHC, including, but not limited to, vaccination, screening, prevention, control and management of noncommunicable and infectious diseases; assistance and services aimed at strengthening, maintaining and improving the health of mothers, newborns, children and adolescents of their mental and reproductive health and rights.
80. The strategy, in the spirit of the Astana Declaration, aims to strengthen PHC based on Family Medicine, make it affordable, fair, and effective for all. One of the key goals of NHS2030 is to improve access, quality, and responsiveness of PHC services based on Family Medicine for the population of Tajikistan. PHC services, which are essential and fundamental for improving and maintain health of communities and individuals, therefore:
 - PHC services based on the principles of Family Medicine are to be accessible and affordable for any individuals.
 - Care provided should meet evidence-based practice recommendations and in a setting that is safe and acceptable for patients, and finally,
 - PHC should be responsive to the needs of individuals and communities and national agenda for health.
81. The country has successfully introduced and improved the model of family medicine at the primary healthcare level⁶. The share of PHC institutions practicing the principles of family medicine increased from 56% in 2010 to 70.1% in 2017.
82. Universal coverage with family medicine services and the quality of these services and infrastructure at their point of delivery, has been a focus of the reforms during the last decade, especially with a focus on rural and hard-to-reach areas. Currently, there are 53 city, 54 districts and 844 rural health centers and 1711 health houses that provide Primary Health Care to the population.
83. PHC development is an ongoing process, key challenges for PHC development in the country include:

⁶ In 2016, the Government of the Republic of Tajikistan approved the "Strategic Plan for Development of PHC based on Principles of Family Medicine for the period of 2016 – 2020"

- Inequalities in access by poor and marginalized groups despite significant successes in the development of healthcare service delivery infrastructure and improvements in access, inequality in access for poor, rural population and marginalized groups are still evident.
 - Lack of awareness among public regarding their legal rights and lack of awareness of citizens about regarding their eligibility for medical and social services, which limits effective use of these guarantees when needed.
 - Fragmentation of service: outpatient services are highly fragmented as part of inheritance from soviet-style medicine. This on one hand, makes services more expensive by doubling expenditures, and on the other hands, limits access to patients. Physical of services under one roof and establishing effective referral linkages to care, is needed in order to allow patients accessing needed services through “one-stop-shop” principle.
 - Along with fragmentation, lack of competencies at PHC level leads to multiple referrals to other specialized outpatient and in-patient services
84. Objectives, actions, and expected outcomes. The main goal is to facilitate development of Primary Health Care that includes performing the following tasks:
- Improve access, quality, and responsiveness of PHC services based on family medicine.
 - Increase quality and competences of PHC services
 - Develop Information system to improve process and management at PHC level
 - Provide access to essential medicines at PHC level
 - Enhance integration and development of essential service under the umbrella of PHC
 - Engage communities and build partnerships between communities and PHC providers
85. The following activities will be implemented to achieve these goals:
- 1) Improve access, quality, and responsiveness of PHC services
 - Develop a National PHC Development Master plan based on the principles of Family Medicine aiming at ensuring of universal accessibility, economic efficiency, and the provision of patient-centered and integrated services;
 - Develop and approve an investment plan for the construction, rehabilitation and equipping of Primary Health Care facilities in accordance with National PHC Development Master plan;
 - Develop emergency care/ambulance service integration model under the umbrella of PHC at rayon level and include infrastructural upgrades of ambulance services.
 - 2) Increase quality and competencies of PHC services
 - Approve a mechanism for the development and adoption of national clinical practice guidelines for PHC services; determine the priority of their development and application;
 - Develop and implement the clinical practice guidelines for early diagnosis and treatment of somatic, reproductive, infectious, neuropsychiatric, psychological diseases, including those among adolescents;
 - Develop and approve a system for monitoring and evaluating the application of national clinical practice guidelines for PHC services;
 - Include an assessment of the application of clinical practice guidelines in the PHC medical institution accreditation system.
 - Review competencies of family physicians/PHC provides to enlarge their capacity for delivering comprehensive care and gatekeeping access to specialized services (to

be implemented in conjunction with infrastructural and managerial integration of services)

- 3) To develop Information system to improve process and management at PHC level
 - Downsize the number and volume of reporting for PHC facilities, but streamlining and optimizing reporting process
 - Gradually develop and implement digital information technologies for PHC; a successful experience of Dushanbe city implementation of “Automation of clinics and hospitals of the Republic of Tajikistan” can serve as a learning platform for developing this integrated and unified system;
 - Develop optimized system of performance-based indicators and health status measurements to be collected at PHC level and utilized for payment and health status monitoring systems.
 - Develop set of indicators on health of adolescents, description of mechanisms for data collection and documentation of adolescents’ development and its introduction in the information system.
- 4) Enhance integration and development of essential service PHC facilities, including palliative care, emergency medical care and vertical service delivery structures
 - Develop standards for provision of care to palliative patients, both by medical and social workers, as well as by families and the community;
 - Develop provision of palliative care for patients at home, where they live, by an interdisciplinary group of professionals, which is the preferred model, with a reserve of a limited number of hospital beds located in existing hospitals;
 - Promote the arrangement of new hospices in the country.
 - Integrate appropriate functions of vertical service delivery structures (HIV/AIDS and TB Centers, Healthy Life Style Centers, Immunization Centers, and others) under the umbrella of PHC services, as part of the optimization and restructuring of the PHC network and ensuring “one-stop-shop” access to patients.
 - Develop and gradually integrate emergency care/ambulance service and transportation under the umbrella of PHC at rayon level
- 5) Engaging communities to health issues and building partnerships between communities, Healthy Lifestyle Centers and PHC facilities
 - Implementation of the model “Partnership with Communities on Health Issues” approved by the Ministry of Health and Social Protection of Population of the Republic of Tajikistan, and joint activities of communities, healthy lifestyle centers and PHC facilities on health promotion/strengthening;
 - Community participation in the planning process (business planning) and implementation of PHC institutions;

§3. Improving health of mothers, newborns, children, and adolescents, and their access to sexual and reproductive health services and rights

86. Maternal and child healthcare services are especially sensitive to failures of healthcare system. System-wide characteristics, such as degree of universality, inequalities and inequities, access to proper nutrition and social support, inefficiencies in financial arrangements all directly influence outcomes for mothers and children.

87. With growing and young population, Tajikistan puts a special emphasis on ensuring health of mother and children. During the last decade core health indicators have been improving, but there is still a significant area for improvement.
88. Specific measures are adopted in Tajikistan in this area to ensure sustainable development of the reproductive health, maternal, children, adolescents, and youth healthcare services. Activities of the sector are implemented in compliance with international standards, strategies and programs and based on clinical guidelines / protocols, including on improvement of quality of services in the area of maternal and child, sexual and reproductive health.
89. Complex approach leads to reduction of maternal and newborn mortality, women having access to reproductive healthcare services, including family planning, which contributed to reduction of unwanted abortions from 87.8 (2010) to 55.3 (2018) per 1,000 live births and reduction of interval between deliveries of at least 2 years from 37.2 (2010) to 30% (2018). Further, there is a decrease in the number of home deliveries (less than 4.9% in 2018 as compared to 11.9% in 2010), and 77% of deliveries occur with attendance of qualified staff. According to results of studies conducted in 2010, 64.9% pregnant women passed prenatal examination in compliance with national standards. In 2017, this figure reached 93.3%, which represents improvement for 28.4% for 7 years.
90. Early childhood interventions are ultimate approach to improve health of children and need for prevention of disability is especially acute for Tajikistan. Children with developmental delays and disabilities are the most vulnerable category.

Lack of adequate nutrition of pregnant women and newborns remains one of the main reasons for complications and disabilities.

91. According to the data of Medical Statistics and Information Department under the Ministry of Healthcare and Social Protection of Population of the Republic of Tajikistan, from 2,000 to 3,000 children are born every year with congenital malformations. Structure of these malformations, high numbers and mortality related with such conditions indicate at acute need for perinatal diagnostics of genetic disorders of fetus.
92. Demographic Health Surveys (DHS) conducted in 2012 and 2017 indicated that share of children with growth retardation reduced from 26% in 2012 to 18% in 2017, distribution of malnutrition reduced from 10% in 2012 to 6% in 2017 and share of children with insufficient body weight reduced from 12% in 2012 to 8% in 2017. Nonetheless, current rates of reduction are not sufficient to achieve global goals set by the World Health Assembly reduce number of children in the world at age of below five years old with developmental retardance for 40% by 2025.
93. Share of women at age of 15-49 years old with body weight deficit reduced since 2012 from 11% to 7%, where two of every five (41%) women in Tajikistan suffer from anemia.
94. Healthy and balanced nutrition of children, especially in early age represents a challenge in the country. Despite the measures adopted by the Ministry of Healthcare and Social Protection of Population of the country, the observed trends in improvement of child nutrition status are insignificant. Thus, exclusive breast feeding up to age of 6 months is provided to 36% of children in 2017 as compared to 34% in 2012 (DHS 2017) and share of children under prevailingly breast feeding (0 – 5 months) is 70%.
95. Healthcare System of Tajikistan faces number of challenges to ensure health of mothers and children:

- Overall health status of mothers and children is poor: starting for high level of morbidity during antenatal care, labor complications and post-natal and neonatal periods, to high level of maternal, neonatal, infant and child mortality all impose significant health burden on the country's population
- Limited access and underutilization of family planning and antenatal care services
- Limited access to evidence-based and highly efficient interventions to improve the maternal and child health, such as folic acid and iron supplements, as well as insufficient level of exclusively breast-feeding practices of children under 6 months.
- Despite the observed decreasing tendency of home delivery indicators across the country, this indicator remains high in certain geographically remote regions.
- Wide incidence of anemia among women of reproductive age, frequent births and inadequate nutrition status of pregnant women and children under 5 years old lead to high incidence of developmental retardation among children.
- Limited capacity at PHC level to provide complex care, as well as timely referral to other levels of healthcare.
- Limited access to the SRHR (sexual and reproductive health and rights) services, as well as mental health of adolescents influence the birth rates among adolescent girls and suicides among adolescents.

96. Objectives, actions, and expected outcomes. The main goal is to improve the health care of mothers and children, which will consist of the following tasks:

- Expand access to comprehensive set of Sexual, and Reproductive Health, Mother, Newborn, Child and Adolescent Health services
- Improve infrastructure and service delivery network for MCH services
- Ensure mechanisms for continuous improvement of service delivery quality in PHC, maternity and pediatric care facilities.
- Decrease prevalence of all forms of nutrition disorders (stunting, malnutrition and obesity), as well as reduce deficit of nutritional supplements among population, especially among children and women of reproductive age by improving access to nutrition services with focus on children under 5 years old, adolescents and women of reproductive age;
- Expand accessibility of early child development programs on identification and provision of services to children at early age with various developmental disorders and their families, including expansion of program on early diagnostic of genetic disorders;
- Organize the system, geographic accessibility and quality of services on antenatal screening of congenital heart disorders and genetic malformation.

97. The following activities will be implemented to achieve these goals:

- 1) Expand access to complete range of sexual and reproductive health care, healthcare of mother, newborns, children and adolescents:
 - o Improve regionalization and referral system to ensure access to necessary healthcare services;
 - o Provide all women with services of pregnancy diagnostic, antenatal observation and obstetric care, as well as services of integrated management of childhood diseases for all children under 5 years old;
 - o Provide consultation of pregnant women, feeding mothers and puerperant on matters of care, feeding and nutrition of children under 2 years old, including those on exclusive breast feeding;

- Improve quality of emergency obstetric and neonatal care;
 - Create necessary conditions to ensure safe delivery at PHC level in remote mountainous areas (providing air medical service);
 - Strengthen awareness of population on SRHMNCAH using modern technologies;
 - Provide adolescent/youth-friendly services in compliance with international standards;
 - Inform population on basic benefits package of SRHMNCAH, including those in the frame of “Partnership with Communities on Health Issues”;
- 2) Improve infrastructure and service delivery networks for maternal and child healthcare:
- Establish modern perinatal centers based on principles of geographic accessibility;
 - Establish systems for transportation of pregnant women, ill mother and newborns, including air medical services;
 - Develop and implement uniform standards on all levels of obstetric and neonatal care;
 - Provide women with reproductive choice and wanted pregnancy;
 - Organize urgent consultations and air medical services;
 - Improve quality of life for women through access to preventive and rehabilitation services, as well as introduction of innovative technologies;
- 3) Ensure mechanisms for continuous quality improvement of services PHC facilities, and facilities of obstetric and child care:
- Develop and update guidelines and tools, and train teams to conduct assessments / self-assessments of the quality of healthcare services to women and children at PHC, obstetric and pediatric care facilities;
 - Establish quality teams at PHC facilities, as well as at maternal and pediatric care departments of district hospitals and familiarize them with service quality improvement principles;
 - Develop, update and disseminate clinical guidelines and support their introduction process;
 - Support quality improvement teams in developing and implementation of quality improvement plans, including provision of necessary equipment, improvement of basic infrastructure, such as functioning water supply and sewage systems, as well as infection prevention and control;
 - Expand and improve mechanisms for introduction of audits on maternal and perinatal mortality and critical case analysis;
 - Develop and introduce effective system for external supportive supervision;
- 4) Decreasing incidence of all forms of nutrition disorders (malformation, attenuation, and obesity), as well as reducing the micronutrient deficiency among population, especially among children and women of reproductive age through improvement of access to the nutrition services with focus on children under 5 years old, adolescents and women of reproductive age.
- Communication activities to change social and behavioral norms among population on the issues of nutrition with the purpose of preventing malnutrition among children under 5, adolescents and women of reproductive age.
 - Strengthening capacity at national and subnational levels to provide necessary assistance to improve nutrition of mother and child.

- Integrating full package of activities related with nutrition into basic healthcare services at national and subnational level (at level of oblasts, districts and jamoats).
 - Improving practices of feeding the children at breastfeeding and early age.
 - Institutionalizing the protocols on Complex Treatment of Acute Malnutrition at hospital and ambulatory care facilities at national level.
- 5) Expanding accessibility of early childhood development programs to identify and provide services to tender-age infants with various developmental disorders and their families, including expanding programs of early detection of genetic disorders.
- Facilitating development of intersectoral collaboration and coordination to implement comprehensive early childhood development measures
 - Improving early detection and early childhood intervention infrastructure and services for children with various developmental disorders
 - Introducing clinical standards on early detection and standards for quality of service delivery for tender-age infants, including children with various developmental disorders at every service delivery level.
 - Developing and introducing the sustainable education programs and approaches to support families and communities to improve parenting skills to provide care, education, and early stimulation of tender-age infants.
 - Promoting Regulations on Family and Child Support Centers with the purpose of preventing hospitalization of tender-age infants to hospital care facilities.
- 6) Ensuring sustainability and high levels of coverage through major activities to improve health of mother and child
- Increasing the share of public financing to procure vaccines, contraceptives, clinical nutrition, and micronutrients (iron sulphate, folic acid), syringes and safe disposal boxes with subsequent transition to self-financing.
 - Revising the Resolution of the Government of Republic of Tajikistan No. 600 dated December 2, 2008 “On Procedures of Delivering Healthcare Services to the Population of the Republic of Tajikistan” to reduce financial burden of obtaining quality healthcare services for children under 5 years old falling under context of integrated management of childhood diseases and indicators of underdevelopment in terms of weight and height at any level of healthcare facilities.
 - Tajikistan is preparing to obtain membership of international research network “Healthy Attitude of Schoolchildren” HBSC, and therefore, it is necessary to include support in conducting at least two rounds of international research along with other WHO Member-States in European Region.
98. The following specific outcomes are stipulated from implementation of these activities:
- Quality Improvement Teams are established and function at PHC, obstetric and pediatric care facilities.
 - District / oblast health managers are trained and possess skills on continuous monitoring of performance and ensuring supportive supervision and self-assessment of health care of women and children.
 - Prevalence of anemias among women of reproductive age and children under 5 years old is reduced.
 - Prevalence of exclusive breast feeding is increased.
 - Prevalence of dwarfishness among children under 5 years old.

- Maternal and infant mortality is reduced.
- Mechanisms to change behaviors and attitude on healthy school feeding are implemented.
- Teenage pregnancy rates are reduced.
- Mortality among adolescents from suicides is reduced.

§4. Reduce Burden of Infectious Diseases

99. The burden of infectious is high in Tajikistan. Some of the main public health threats and priorities identified in the country includes HIV, TB, viral hepatitis, and STDs – out of those, TB is the 10th leading cause of death in the country.
100. The Strategy aims to reduce mortality and morbidity due to infectious diseases, through prevention and improving access to treatment for those living with the diseases.
101. The focus this Program is on HIV, TB, viral hepatitis and STIs, although, improvements regarding prevention and management of infection diseases are incorporated in all strategic directions – starting from improved access to water and sanitation, epidemiological surveillance to improvements in the quality of healthcare services.
102. Approach to improvement in management of infectious diseases is mainly based on improving the effective epidemiological surveillance system, including data collection to ensure efficient control and informed decision-making. Further, it is necessary to concentrate on prevention and community engagement, integration of diagnostic and care with basic health care and patient-centered models of service delivery.
103. This would ensure improvement of health status with regards of these conditions and would also improve overall healthcare system and its response to other communicable conditions. Peculiar challenge with regards of TB and HIV is a process of transition from donor funding, which calls Tajikistan to take prudent actions to provide domestic funding for services which are cost-effective, appropriate, and acceptable in order to maintain expand achievements.
104. Tajikistan is the country with lower prevalence of HIV, and epidemic mostly concentrates within the group of higher behavioral risks, such as migrants, IDU, MSM and CSW. None the less, the main way of transmission – heterosexual contacts – contributed generalization of the HIV epidemic. According to the data of State Institutions “Republican Center of Prevention and Control of AIDS”, number of new cases of HIV-infection registered in 2019 was 1,320. Number of lethal outcomes from total number registered HIV cases as of the end of 2019 was 3,244 people, where 1,681 died from AIDS, which constitutes 51.8%.
105. Among pregnant women living with HIV, 95% referred for care or prevention to avoid vertical transmission. Among people living with HIV, 73% patients continuing to receive ART demonstrated suppressed virus load.
106. Tajikistan joined the Strategy 90-90-90, however, the observed progress in achieving goals is slow: only 67.4% of assessed number of PLHIV as of the end of 2019 are aware of their status and only 79.4% of diagnosed cases are covered by antiretroviral therapy.
107. Some of the key objectives to control the HIV epidemic in the country include the following aspects:
 - Obstacles for high behavioral risk groups and general population to receive HIV-related care.
 - Challenges related to the vertical mother-to-child transmission.

- Testing the blood donors and ensuring safety of blood products through appropriate laboratory tests and quality control systems.
 - Dependence of HIV/AIDS Control Programs from donor financing and generating the pressure on the country's budget in connection with transition under public financing.
 - Observed challenges in HIV testing services, especially for the higher behavioral risk group.
108. The following tasks are stipulated in the area of controlling the HIV Epidemics:
- Eliminate mother to child transmission of HIV;
 - Ensure 100% coverage of donor blood screening with quality diagnostic methods for blood born infections, including HIV;
 - Develop mechanisms for sustainable financing of HIV interventions;
 - Provide 100% coverage with ART for people living with HIV.
109. The following activities will be implemented to achieve identified goals and objectives:
- 1) Eliminate mother to child transmission of HIV
 - Extending coverage of pregnant women by HIV screening;
 - Providing appropriate support, medication and consumables HIV-negative pregnant women, whose spouses are HIV-positive to prevent HIV infection during the period of pregnancy;
 - 2) Ensure 100% coverage of donor blood screening with quality diagnostic methods for blood born infections, including HIV;
 - Develop infrastructure and capacity at local levels to use applicable and reliable laboratory screening methods for donor blood;
 - Develop regulations to ensure that 100% of blood and blood products used in hospitals are safe;
 - 3) Develop mechanisms for sustainable financing of HIV interventions;
 - Further development of enabling regulatory framework to ease existing barriers with regard to access to prevention, care, and therapy.
 - Reducing stigmatization through targeted social campaigns.
 - Supporting development of programs focused on migrants and other higher behavioral risk groups.
 - 4) Provide 100% coverage with ART for people living with HIV.
 - Ensuring ART coverage of people living with HIV according to the WHO recommendations;
 - Provide uptake and adherence support to patients on ART
 - Expand procurement of fix-dose combinations in order to increase adherence to treatment regimens.
110. The following outcomes will be expected from implementation of these activities:
- HIV transmission rates fall in line with international commitments
 - Mother to child transmission of HIV is eliminated
 - 100% of donor blood is screened for HIV
 - Quality of life for people living with HIV is improved.
 - HIV services and supplies are sustainable – at least 30% of costs are covered from public budget

111. Tajikistan is among 20 high MDR-TB burden countries in the world. TB and especially drug resistant forms lead to significant morbidity and mortality issues and the treatment elicits significant costs, including direct treatment-related costs, as well as broader societal costs, like loss of employment. Therefore, reduction of TB burden and ending TB is an important strategic objective for Tajikistan. Per the international commitments, the country aims to:
- Reduce the number of TB death compared with 2015 – 90% (SDG 2030) and 95% (END TB 2035)
 - Reduce TB incidence rate with 2015 – 80% (SDG 2030) and 90% (END TB 2035)
 - TB-affected families facing catastrophic costs due to TB – zero.
112. Outdated TB infrastructure and focus on hospital-based treatment limits the capacity of the system to timely detect, start on treatment and successfully treat patients. Regional disparities in terms of availability of qualified human resources and services, also impact access to TB care. Growing resistance among patients limits success rates of treatment and affordability of services.
113. In order to reduce TB morbidity and mortality, manage growing drug-resistance and protect households from TB-related expenditures, NHS2030 sets the following Tasks:
- 1) Improving systems for early detection and linkage to care, especially with focus on vulnerable populations by enhancing detection through:
 - Patient-initiated pathway – providing patients who actively seek TB diagnostics and treatment with appropriate, responsive and quality services;
 - Screening pathway – providing patients with suspected TB with services to diagnose and link to care (including contact tracing, clinical risk groups and high-risk populations);
 - Systematic screening with focus of congregated setting
 - 2) Ensuring availability of high-quality TB diagnostics and treatment, especially in the context of MDR-TB
 - 3) Supporting development of patient-centered model of TB care with focus on integration of services, especially at primary healthcare level, enhancing access to out-patient treatment models and engaging communities
 - 4) Enhancing TB prevention by introducing LTBI treatment
 - 5) Ensuring sustainability of TB services, especially in the context of transition from donor funding to domestic funding
 - 6) Ensuring availability of qualified human resources for detection (including laboratory), treatment and drug surveillance (including resistance monitoring) of TB;
 - 7) Ensuring adequate surveillance, data collection and reporting related to TB.
114. The following activities will be implemented to achieve determined goals and objectives:
- Ensuring active TB screening programs in congregated settings (Prisons and institutions, such as orphanages, elderly shelters, etc.)
 - Enhancing TB screening and high quality and rapid diagnostic capabilities in TB dispensaries, as well as in general healthcare settings through increasing access to Xpert MTB/RIF.
 - Gradually increasing the number of patients in out-patient treatment, including with introduction of VDOT in cities and regions.

- Optimizing TB in-patient infrastructure and human resources with a focus to enhance out-patient treatment.
 - Developing protocols of LTBI treatment and provide training to healthcare staff, including family doctors in order to improve LTBI treatment uptake.
 - Developing training programs and train/re-trained appropriate number of laboratory specialists, doctors and nurses, including family doctors/nurses and training in PAL.
 - Integrating TB surveillance into overall public health surveillance system.
 - Raising awareness of population with the purpose of improving the screening in case of alarming symptoms.
115. Realization of this Program is expected to deliver the following results in line with targets set in the END TB strategy:
- Reduction of mortality from tuberculosis
 - Reduction of tuberculosis morbidity rate
 - No affected families facing catastrophic costs due to tuberculosis
116. Viral hepatitis (B and C) has been a growing concern worldwide. New treatment option increasingly provides options for successful treatment and thus eliminating a death toll called by viral hepatitis worldwide. Tajikistan has joined a Coalition for Global Hepatitis Elimination and has set targets to prevent transmission and improve outcomes for patients.
117. It is estimated that 473 death occur per year due to Hepatitis B and 22% of liver cancer death is attributable to HBV. Death related to HCV is estimated to be 511 a year and 41% of liver cancer deaths is attributable to HCV⁷.
118. Similarly, STIs pose significant public health risk, and prevention, detection and treatment should be available for vulnerable population
119. Expensive treatment and lack of diagnostic capabilities limit access to diagnostic and treatment of patients.
120. The strategy aims timely detection and support for elimination of viral hepatitis and syphilis, and the following tasks are stipulated to achieve this goal:
- Establishing the effective system of epidemiological surveillance of viral hepatitis at healthcare facilities and household service facilities;
 - Expanding the range of services provided – Improving the range, quality and availability of essential health services that are needed;
 - Covering the populations in need of services – Improving the equitable and optimal uptake of services in relation to need;
 - Reducing the direct costs of services – Providing financial protection for those who need the services.
 - Eliminating mother-to-child transmission of syphilis.
121. The following activities will be implemented to achieve determined goals and objectives:
- Introduce immunization against hepatitis B for high-risk groups
 - Prevention of mother-to-child transmission of hepatitis B through introduction of hepatitis B screening programs during antenatal care and prevention measures during childbirth.

⁷ Source: Institute for Health Metrics and Evaluation. Global Burden of Disease Project, 2017.

And <https://www.globalhep.org/data-sources-and-methodology>

- Enhanced activities aimed at blood and injection safety
 - Prevention programs among people who inject drugs
 - Expanding the medical examination and treatment of syphilis among pregnant women.
122. The following activities will be implemented to achieve determined goals and objectives:
- New infections are reduced by 90% by 2030
 - Mortality due to viral hepatitis is reduced by 65% by 2030
 - Mother to child transmission of syphilis is eliminated

§5. Improve Prevention and Management of Non-Communicable Diseases and Disabilities

123. Prevention of diseases is a priority of this strategy in order to reduce the burden of non-communicable diseases. Actions need to be strengthened in relation to four common risk factors related to lifestyle and behavior: tobacco use, harmful use of alcohol, inadequate physical activity, and unhealthy diet.
124. Positive experience in number of countries shows that it is possible to achieve twofold and more reduction of mortality, mainly through prevention of diseases. Despite the fact that the country achieved certain success in implementation of antismoking campaign, reducing the harmful impact of alcohol, as well as in strengthening the policies in the area of nutrition and food, there are wide opportunities to achieve substantial impact on health of population.
125. Increased access to screening and early diagnosis programs is needed. Among other things, this will help prevent disabilities and deaths and improve quality of life.
126. It is very important to have sufficient resources to ensure adequate treatment and prevent disability. Access to rehabilitation and improved care models can help people maintain their autonomy and economic activity.
127. An integral part of long-term care is palliative care, in which people are supported in order to maximize the quality of life at the terminal stage.
128. Cardiovascular diseases are the leading cause of death in Tajikistan. Based on estimated data, CVDs accounted for nearly half of all mortality cases in the country.
129. Cancer is a growing issue in Tajikistan. Country faces challenge in terms of early detection, treatment outcomes and provision of palliative care. Currently, there are over 15 thousand individuals with neoplasms registered in the country and incidence rate is raising (35.5 per 100,000 population (2018)). Most of the cancers are detected at stage II and III. There are over 4 thousand adult patients in need of palliative care. It is estimated that about 8,550 children per year will benefit from palliative care.
130. In the last decade, Tajikistan has seen a significant increase in excessive weight and metabolic diseases, as in the rest of the world. Incidence of diabetes mellitus per 100 thousand population has increased from 321.6 in 2007 to , 482.1 resulting more than 30 thousand patients in the country.
131. Unfortunately, with growing burden of mental illness and more patients in need of treatment, little has been changed in the public provision of mental health services. Those in need of intensive treatments are placed in large public institutions with demolished

infrastructure and poor quality of services, which fall short from meeting acceptable quality standards and treatment approached and basic human rights.

132. The burden of noncommunicable diseases is increasing both due to aging of the population and negative effects of tobacco consumption, physical inactivity, malnutrition and malnutrition, and harmful use of alcohol.
133. Introduction of measures against tobacco is the second-best direction in terms of efficiency of investments in health promotion, following immunization of children. Price and taxation measures, including excise tax on tobacco and alcohol products shall be staged in such a way that motivates people to maintain healthy lifestyle, as well as to improve accountability of business for health of population.
134. Most of the risk factors for NCDs cannot be eliminated only by the health sector, and this once again emphasizes the importance of applying an intersectoral approach and the priority of preventive medicine.
135. Low detectability of NCDs is one of the key issues. For example, only 0.2% of hospitalized patients in the cardio center of Dushanbe in 2018 had a referral.
136. Poorly developed infrastructure for the diagnosis and treatment of NCDs, insufficient funding for specialized services and assisting devices creates barriers to improve the availability and quality of services in this direction.
137. Research shows that only small share of people in need in Tajikistan have access to appropriate means for rehabilitation. It is necessary to expand delivery, however that challenges related with deficit of financing and resources. Quantity, quality, and range of assistive technologies / devices accessible through the public supply are not sufficient to fulfill the demand. Majority of healthcare workers have limited understanding with regard to assistive technologies / devices , and only few healthcare workers have necessary special knowledge.
138. Today in Tajikistan⁸, more than 10 thousand patients suffering from various oncological diseases and more than 4 thousand patients are registered in need of palliative care aimed at improving the quality of life. Palliative care is currently a necessary component of the comprehensive treatment of cancer patients at all stages, and in some cases, it acquires independent significance.
139. Currently, more than **148,000 people in Tajikistan live with different types and groups of disabilities**. There are up to 25 thousand children with disabilities, i.e., 0.8% of all child population, are registered in Tajikistan.
140. In 2016, the first ever National Strategic Plan on Rehabilitation of Disabled People for the period of 2017 – 2020 was developed and approved by the President of the Republic of Tajikistan. In March 2018, the Government of the Republic of Tajikistan signed the UN Convention on the Rights of Persons with Disabilities (CRPD).

The Dushanbe Forum conducted on October 18, 2019 in Tajikistan commemorated adoption of new and comprehensive declaration on the issues of disabilities. The new declaration reaffirms commitment of the Government of the Republic of Tajikistan to ensure improved rehabilitation, healthcare and education services, as well as social care services.

⁸ According to statistical data of MoHSPP RT

141. An integrated approach to rehabilitation has proven effective in treating many chronic, complex and severe diseases that can significantly limit various areas of a person's functioning (vision, communication, ability to move and cognitive activity). Different rehabilitation disciplines require special skills, therefore multidisciplinary teams of specialists can significantly improve the quality of medical care and treatment results.
142. Strategy aims to achieve the following goals:
- reduce premature mortality and disability due to non-communicable diseases, and
 - improve quality of life and social integration of people living with disabilities.
143. The following tasks are stipulated to achieve these goals:
- Reduce prevalence of general risk factors of major noncommunicable diseases, such as smoking, unhealthy diet, excessive alcohol consumption, low physical activities and psychosocial stress;
 - Deploy effective infrastructure for prevention of noncommunicable diseases and ensure universal access to screening;
 - Reduce financial burden of NCDs on households and protect low-income households from further impoverishment;
 - Promote healthy lifestyle throughout the lifecycle;
 - Improve access to and quality of rehabilitation services on all level of service delivery and expand access to technical assets for rehabilitation of people with disabilities.
144. Following activities will be implemented to achieve identified goals and objectives:
- 1) Reduce prevalence of common risk factors for major non-communicable diseases -- smoking, poor nutrition, excessive alcohol consumption, low physical activity, and psychosocial stress
 - Conduct public awareness interventions on factors influencing the development of NCDs;
 - Draft regulatory framework on reducing the risk factors for major non-communicable diseases;
 - Create effective system of intersectoral collaboration and partnership to improve priority on prevention and control of noncommunicable diseases.
 - 2) Create effective infrastructure for the prevention of non-communicable diseases and ensure universal access to screening
 - Extend the coverage of individual services focused on improvement of early detection, registration and effective management of hypertension and diabetes, appropriate and timely intervention in acute cases, as well as rehabilitation aimed at reducing the level of premature and preventable deaths due to stroke and infarction;
 - Integrate screening programs for NCDs at PHC level;
 - Conduct regular population and institutional research to assess the needs for prevention and control of NCDs and for facilitation of evidence-informed decision-making;
 - Promote development and implementation of registries of non-communicable diseases
 - Create effective infrastructure for the diagnosis and treatment of NCDs
 - Introduce modern diagnostic and treatment methods;
 - Adopt and implement integrated clinical protocols for the prevention and control of major NCDs at the PHC level recommended by the WHO.

- 3) Reduce financial burden of NCDs on households and protect poor households from further impoverishment
 - Explore possibilities of fair financing to cover the costs of diagnostic and treatment services for chronic patients, including providing access to modern treatment methods.
 - Simplify procedure for certification of disability for the category of people in transient state (missing organs, limbs, etc.), which would eliminate recurrent certification costs.
- 4) Promote healthy lifestyle throughout a lifecycle
 - Further strengthen public health services, and integrating advocacy, health prevention, and medical literacy into the PHC.
- 5) To improve access and quality of rehabilitation services at all levels of service delivery and enhanced access to assistive devices
 - Create an effective mechanism for managing rehabilitation services under the auspices of the Ministry of Health and Social Protection of Population.
 - Develop rehabilitation standards for the provision of health and social services and quality control.
 - Develop targeted support and rehabilitation programs for certain groups with disabilities: cerebral palsy (CP), autism, chromosomal diseases, diabetes.
 - Integrate rehabilitation services in the primary, secondary, and tertiary levels of the health system.
 - Ensure availability of specialized rehabilitation units for inpatients with complex needs in hospitals.
 - Allocate sufficient quantities of resources for financing of rehabilitation services and procurement of quality assistive devices; ensure distribution of service based on principle of “One-Stop-Shop on Assistive Devices for People with Disabilities” throughout the country.
 - Ensure appropriate training for assistants and technology users.
 - Collaborate with development partners to assess the current state of disability, rehabilitation and assistive technologies in the Republic of Tajikistan to identify factors contributing to the improvement of the situation in this sector, in order to determine the best ways to support the country in strengthening policies, systems and services in rehabilitation as part of Universal Health Coverage.
 - Facilitate engaging the private sector to opening of rehabilitation centers and rehabilitation service delivery.
 - Include rehabilitation services in to the medical insurance program
 - Develop unified system for determination and classification of disabilities in compliance with the International Classification of Functions and updating the Guidelines on Identification of Disabilities.
 - Ensure integration of data collection on disabilities into unified healthcare information system.
 - Creating the enabling social infrastructure for people with disabilities and modernizing technologies ensuring access for people with disabilities.
 - Develop inclusive services and enabling services for people with disabilities through elimination of obstacles to access.

- Strengthening and extending the services on rehabilitation, adaptation, support, and assistance to the people with disabilities.
- Develop the unified users' database based on the National Social Protection Registry (NSPR) as a tool for electronic registration of people with disabilities.
- Strengthen collection of existing, reliable, and comparable international data on disabilities, and related services to make informed decisions.
- Raise awareness of population on the needs of women and girls and other vulnerable groups of people with disabilities and eliminate their stigmatization and discrimination.
- Improve coordination and strengthen links with policy measures and programs of other sectors to ensure access of people with disabilities to basic social services and their participation in economic activities.
- Create conditions for socialization and integration of vulnerable groups (elderly people, graduates of boarding schools, etc.) in society through rehabilitation at community level.

§6. Improving aspects related with supply of medicines and pharmaceutical activities

145. The availability and accessibility of medicines continues to be a problem, especially within the framework of existing health financing system, which does not provide for affordability of some medicines to vulnerable groups of population.
146. At the moment, the material and technical base of laboratories for controlling the quality of medicines in regional and regional centers does not meet the modern requirements of the organization of quality assurance, and there is no laboratory for conducting modern immunobiological and radiological studies.
147. Analysis of drug prescription practices shows that the issue of polypharmacy remains relevant. This problem is the more distributed among physicians working in city (urban) centers, than among physicians working at rural healthcare facilities. Another challenge in the area of rational use of medicines is the lack of knowledge of doctors and pharmacists, as well as sources of objective information on medicines.
148. A comparative analysis of physical affordability and drug prices between urban and rural pharmacies in some areas of the country shows low physical affordability and high prices in rural pharmacies. Currently, there are 2,450 pharmacy institutions operating in Tajikistan, of which 30% are located in rural areas, while as of January 1, 2019, the urban population in the country was 26.3% and the rural population 73.7%. Thus, basically all pharmacy institutions are located in urban centers, and only a small number of them are in rural areas. Another challenge related with development of rural pharmacies is lack of pharmacists. Nowadays, it is very difficult to hire pharmacists to work in rural pharmaceutical facilities, which in future will require development of mechanism to support functioning of rural pharmacies.
149. One of the state priorities of medicines policy of the country is development of local production of medicines and medical products. During the last 6-7 years 10 large companies were established through local and foreign investments in the area of pharmaceutical products using more than TJS 200 million for construction of buildings and their provision with production equipment.
150. Further, changes and amendments were introduced in the Tax and Customs Codes of the Republic of Tajikistan with the purpose of developing local production, whereby equipment,

substances, and pharmaceutical aids used for production of medicines and medical products will be exempted from value added tax and customs duties while being imported.

151. Thus, existing challenges related with quality assurances, rational use and accessibility of medicines would require adoption of appropriate measures for future development of pharmaceutical sector of the country in order to improve quality of healthcare services.

152. This Strategy aims to improve access to and affordability of safe, effective, quality, and affordable medicines and pharmaceutical preparations. This goal will be achieved through the following tasks:

- Provide equitable physical and economic access of the population to essential medicines
- Strengthen state control in the area of circulation of medicines to prevent counterfeit and unregistered medicines on the pharmaceutical market of the country.

153. The following activities will be implemented to achieve these goals:

- 1) Provide equitable physical and economic access of the population to essential medicines
 - Review the current List of Essential Medicines using the recommendations of the World Health Organization.
 - Improve the regulatory framework governing the pharmaceutical activities.
 - Use of the electronic procurement platform for public procurement of medicines and medical goods.
 - Attract local and foreign investors to create new pharmaceutical industrial enterprises.
 - Take measures for the rational use of medicines.
 - Develop local production of medicines and medical supplies.
- 2) Strengthen the state control in the field of circulation of medicines to prevent counterfeit and unregistered medicines in pharmaceutical market of the country
 - Improving the material and technical base of the republican and regional laboratories for the quality control of medicines and medical goods.
 - Developing the draft law on regulation of pricing and prices for medicines
 - Monitoring of side effects of the drugs used and the development of methods for informing the public about the safety and effectiveness of drugs.
 - Conducting research on the use of medicines and the regulation of pharmaceutical activities.
 - Implementation of international standards (GLP, GCP, GMP).

§7. Public Healthcare and healthy lifestyle Services

154. Tajikistan's national health system delivers public health services that aim to prevent diseases, extend life, and promote health of the population of Tajikistan.

155. Government of the Republic of Tajikistan pays priority attention on building the capacity of management and functioning of the immunization program, optimization of infrastructure and procedures for procurement, storage, and transportation of vaccines, as well as delivery of PHC services with accent on quality and safety of immunization. During the last decade, routine immunization coverage reached $\geq 95\%$. Rotavirus vaccine and Inactivate Polio Vaccine (IPV) were introduced in planned immunization schedule. With increase of public expenditure on immunization from less than 20% in 2015 to 29.4% in 2019, further increase in the share of

government financing and improving efficiency of program in the context of the healthcare system reforms is one of the crucial priorities of the National Immunoprophylaxis Program.

156. On November 30, 2018, the Government of the Republic of Tajikistan approved national goals and an action plan in the context of the Protocol on Water and Health⁹ at the 14th meeting of the Coordination Committee of the Dialogue on National Policy. Since 2000, the Republic of Tajikistan has made significant progress in providing access to improved drinking water sources. The modernization of the infrastructure for and improving surveillance of drinking water supply, sanitation and hygiene, energy supply, food systems, especially in rural areas and small towns, should be considered as an important component in ensuring quality medical care and access to it.
157. In May 2018, Republic of Tajikistan adopted the National Action Plan on Control of Antimicrobial Resistance, which stipulates actions to be implemented in corresponding sectors, including human health, animal health and environment to ensure coordinated and comprehensive approach of “Universal Health Coverage” to address the issue of antimicrobial resistance.
158. Delivery of public health services in Tajikistan faces number of challenges:
- Growing burden of noncommunicable diseases, such as diseases related with unhealthy diet and lifestyle, requires enhanced attention to the promotion of healthy lifestyle.
 - Resource mobilization remains insufficient to ensure financial sustainability of the National Program of Immunoprophylaxis.
 - There is a need for further improvement of program management, in extension of immunization coverage and in prevention of outbreaks of vaccine-preventable infections.
 - Limited capacity on surveillance and control of diseases: epidemiological surveillance and monitoring of diseases in Tajikistan is still at development stage, and quality of data requires improvement.
 - Emerging antimicrobial resistance and the need for capacity building in the area of prevention, detection and response.
 - Challenges of cross-border healthcare – high level of migration and limited access of migrants to basic healthcare services threaten their health, as well as health of population in Tajikistan.
 - Necessity to continue and strengthen introduction of programs on prevention and control of malaria, leishmaniasis, helminthiasis and other parasitic and vector-borne diseases among population of the country.
159. This Strategy aims to prevent diseases, promote health and prolonged life and this goal is served by the following
- 1) Improving and consolidating information on health and health status of nation through improvement of system of supervision over public healthcare services.
 - Ensuring sustainability and efficiency of National Program of Immunoprophylaxis.
 - Strengthening leading and educational role of the MoHSPP in improving the WASH and effective waste management at healthcare facilities, both within the healthcare sector, as well as beyond.

⁹ Resolution of the Government of the Republic of Tajikistan No. 676 dated December 3, 2012

- Introducing the most effective mechanisms to ensure safety and acceptability of water supply and sanitation (sewage) systems.
 - Preventing and containing emerging antimicrobial resistance through public healthcare measures.
 - Ensuring coordination and response to cross-border health issues, especially on matters related with migrants.
 - Engaging communities to health promotion and healthy lifestyle in the frame of introduction and implementation of the Guidelines on Partnership with Communities on Health Issues.
160. The following activities will be implemented to achieve determined goals and objectives:
- 1) Improve and consolidate information about health and health status of the nation by improving the system of supervision of public healthcare services:
 - Review and identify key legal and regulatory barriers to improve reporting of public health data, with a special focus on key demographic data.
 - Develop a model of staged reformation of public health reporting system with objectives to decrease reporting burden, paper-based reporting and double reporting.
 - Ensure integration of disease specific data collection into a unified health information system and use of data to develop priority measures on prevention and control of diseases.
 - Develop system of active surveillance and sentinel monitoring.
 - 2) Ensuring sustainability and efficiency of the National Program of Immunoprophylaxis:
 - Ensuring sustainability of financing of immunization programs within the frame of national healthcare budget, including with consideration of new vaccines introduction in the National Immunization Calendar.
 - Ensuring quality of supply chains and effective vaccine management to enable equal immunization coverage.
 - Collecting and monitoring the data, including those of complex epidemiological surveillance of vaccine-preventable diseases for their subsequent use in evidence-based decision making.
 - Achieving equal immunization coverage at national level and in all districts, including among the most vulnerable groups of population.
 - 3) Strengthen the leadership and advocacy role of the MoHSPP for improving WASH and healthcare wastes management at health facilities, both within the health sector and beyond:
 - Conduct a comprehensive national study to establish the baseline level of WASH in health facilities, including financial allocations and needs.
 - Reviewing existing national standards on prevention of nosocomial infections and developing the sanitary and epidemiological surveillance standards regarding the WASH and effective waste management in healthcare facilities in compliance with the WHO's guiding principles.
 - Integrating the WASH requirements and indicators into the system of national accreditation of healthcare facilities and establishing effective mechanisms to strengthen standards and rules.
 - Ensuring appropriate financing of WASH aspects in healthcare facilities.

- 4) Introducing the most effective mechanisms to ensure safety and acceptability of water supply and sanitation (sewage) systems.
 - Establishing the effective system of state supervision over the quality of drinking water through capacity building and introduction of risk-based approaches in practical operations.
 - Developing the national guidelines on implementation of Water Safety Assurance Plans (WSAP).
 - Introducing the risk assessment and risk factors management approaches at all stages of sanitation services and developing regulatory framework, roadmap and guidelines on implementation of Sanitary Safety Assurance Plans (SSAP).
 - Strengthening partnership and collaboration with drinking water supply and sanitation sectors and promote coordination of activities with other stakeholders (including service providers) to implement WSAP and SSAP.
 - 5) Contain emerging antimicrobial resistance through public health measures:
 - Ensuring implementation of appropriate measures of necessary response with the purpose of containing emerging antimicrobial resistance.
 - Strengthening capacity on surveillance over consumption and antimicrobial resistance.
 - Improving infection prevention and control programs, as well as guidelines on use of antimicrobial substances in healthcare facilities.
 - 6) Ensure coordination and response to transboundary health issues, especially that of migrants and their families:
 - Develop partnerships with recipient counties in order to improve access to prevention and healthcare services for Tajik migrants
 - Develop screening and referral programs for returning migrants on common infectious conditions using a right-based approach.
 - 7) Engage communities on health promotion and healthy lifestyle issues in the frame of introducing and implementation of Guidelines on Partnership with Communities on Health Issues:
 - Develop health promotion and communication activities in order to increase public awareness, health literacy and community participation in health promotion and disease prevention agenda of the country.
161. Expected outcomes on Public Healthcare:
- High coverage with immunization is ensured
 - Healthcare facilities have access to adequate water, hygiene and sanitation infrastructure
 - Population has access to the clean and safe drinking water.
 - Public health decision making is guided by reliable information regarding health status of the population;
 - Migrants/returning migrants have access to essential public health services;
 - Public awareness regarding healthy lifestyle is increased.

§8. Chapter 6. Emergency preparedness and response to public healthcare emergencies

162. Protecting the population from public healthcare emergencies and ensuring rapid and adequate response is the imperative of healthcare system and responsibility of national healthcare authorities.
163. Public healthcare emergencies could be caused by various reasons, including outbreaks of infectious, life-threatening diseases, natural disasters due to natural hazards, climate change implications and technical disasters, including chemical pollution of environment and emission of radiation.
164. Tajikistan's international commitments on management of public healthcare emergencies, including International Health Regulations (IHR-2005) are aimed at facilitation of prevention and management of public healthcare risks related with international transmission of diseases.
165. The Strategy aims to improve public health preparedness and response to public health emergencies in the country. This is achieved through the following activities:
- Create unified and effective system of sanitary and epidemiological surveillance
 - Improve surveillance/infection control methods
 - Improve national capacity for early detection, response and rapid reaction, including laboratory capacity
 - Enhance monitoring and surveillance of behavioral risks, food safety and environmental factors, including social determinants of health and collect data for evidence-based decision making
 - Enhance intersectoral collaboration and implementation of IHR;
 - Develop cooperation and coordination of actions between stakeholders, including legislators and environmental institutions, water supply and drainage service providers.
166. The following activities will be implemented to achieve these goals and objectives:
- 1) Create of a unified and effective system of sanitary and epidemiological surveillance
 - Develop regulatory documents on all types of activities governing compliance with sanitary and epidemiological norms and rules.
 - Create information systems for collection, processing, storage and exchange of information between structural divisions.
 - Establishing effective state system of surveillance over quality of drinking water through implementation of risk-based approaches.
 - 2) Improving surveillance/infection control methods
 - Ensuring high levels of coverage with vaccination against vaccine-preventable infections ($\geq 95\%$) in compliance with the provisions of the National Program of Immunoprophylaxis.
 - Improving and supporting the performance of the system of epidemiological surveillance of infectious diseases, including those related with water factor.
 - Improve the system of epidemiological supervision over vaccine-preventable infections, as well as adverse events following immunization.
 - Improving preparedness, prevention and mitigation of the consequences of emergencies caused by natural disasters, as well as man-made disasters with participation of international partners.

- Integrating the function of the State Services of Sanitary and Epidemiological Surveillance on ES into international system of response (sanctioning mobile laboratories) and conducting joint drills of mobile epidemiology control units.
- 3) Improve national capacity for early detection, response and rapid reaction, including laboratory capacity
 - Develop new laboratory standards and establish capacity to use these standards for chemical, bacteriological, and other laboratories.
 - Implement these diagnostic standards for laboratories at all levels of biosafety.
 - Introduce new innovative diagnostic technologies into practice.
 - 4) Enhance monitoring and surveillance of behavioral risks, nutrition and environmental factors, including social determinants of health and collect data for evidence-based decision making
 - 5) Enhance intersectoral collaboration and implementation of IHR
 - Strengthen incident management and compliance with the requirements under the International Health Regulations; and
 - Enhance multisectoral collaboration for active monitoring of human hygiene and environmental health issues.

VI. FINANCING OF THE STRATEGY

167. Financing of this Strategy will be carried out in the frame of annual funds allocated for health and social care sectors and from other sources, which are not prohibited under legislation of the Republic of Tajikistan.

VII. MECHANISM OF MONITORING AND EXPECTED OUTCOMES

168. Monitoring will be implemented based on regular control of selected indicators that comply with international standards and depend on high quality and reliable standardized information.
169. Responsibility for monitoring of the Strategy's implementation will be placed upon the Ministry of Health and Social Protection of Population.
170. Monitoring and evaluation of this Strategy will be carried out consistently and regularly in the form of annual reports. Evaluation will be carried out annually and discussed at the Joint Annual Review (Summit).
171. Evaluation and Monitoring Report on progress of the Strategy and proposals for improvement of activities will be discussed by the Ministry of Health and Social Protection of Population of the Republic of Tajikistan with Development Partners and submitted to the Government of the Republic of Tajikistan in compliance with established procedures.

VIII. FINAL PROVISIONS

172. This Strategy represents the baseline document for planning of programs and development of strategic plans in the area of healthcare of population of the Republic of Tajikistan for next ten years.

173. Implementation period of this Strategy is 10 years (2021-2030), and activities stipulated under the Strategy, budget and control indicators will be subject for verification for the next period up to 2030 based on annual review and assessment of progress with Strategy.
174. Matters related with participation of development partners in technical assistance and financial support of the activities under Strategy will be addressed in the frame of sectorial coordination of international cooperation in the area of health and social care of population of the Republic of Tajikistan.
175. Decennial programs will include direction and regulations that do not conflict with Strategy and provisions under earlier approved strategies on development of specific areas of healthcare, health systems and resources of the Republic of Tajikistan.

APPROVED
By the Minister of Health and Social Protection of
Population of the Republic of Tajikistan
(SIGNED) J. Abdullozoda
Dated January 26, 2021

Primary Health Care System Development Plan based on Principles of Family Medicine for the period of 2021 – 2025

1. Improving access to and quality of the services at PHC¹ Level

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
1.1 Developing the new and updating the existing national guidelines on clinical practices for PHC Services	1. Analyzing existing national guidelines on clinical practices for PHC	2021	Ministry of Health and Social Protection of Population and development partners	Order of the MoHSPP RT ³ on Establishment of Working Group
	2. Approving the calendar of updates 3. Reviewing existing and developing the new CG ²	2021 2022-2025		Number of new and updated clinical guidelines for PHC
1.2. Development and approval of the regular monitoring and evaluation system for application of national guidelines on clinical practices for PHC Services	1. Increase the number of internal committees at the level of PHC network facilities	2021–2025	Ministry of Health and Social Protection of Population and development partners	Number of PHC facilities with internal quality committees
	2. Develop, approve and implement the external monitoring system for regular mentoring visits to support specialists at local level	2021 – 2025		Number of supportive supervision visits to the PHC facilities of cities and districts
1.3. Review of competencies of family doctors / service providers on PHC allows expanding their abilities to provide complex care and access to specialized services	1. Reviewing qualification requirements of family doctors and nurses	2021	Ministry of Health and Social Protection of Population and development partners	Qualification requirements of family doctors and nurses are updated
	2. Staged review of PHC Network Facility Regulations	2022-2025		Regulations of PHC Network facilities are updated
	3. Reviewing Qualification requirements of narrow specialists at the PHC Network Facilities	2022-2024		Qualification requirements for narrow specialists at PHC Network facilities are updated

¹ PHC – Primary Healthcare

² CG – Clinical Guidelines

³ MoHSPP RT – Ministry of Health and Social Protection of Population of the Republic of Tajikistan

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
1.4. Continuous improvement and modernization of PHC Network facility infrastructure	<ol style="list-style-type: none"> 1. Renovation of existing and construction of new PHC Facilities 2. Provision of PHC Network facilities with modern equipment 	2021–2025	Ministry of Health and Social Protection of Population and development partners	<ul style="list-style-type: none"> Number of renovated PHC Facilities Number of newly constructed PHC Facilities
1.5. Increasing the number of Family Medicine Specialists	<ol style="list-style-type: none"> 1. Increase the number of family doctors from among graduates of the medical HEIs⁴. 2. Increase the number of students in Family Medicine Specialty. 3. Regular qualification development courses for PHC Network specialists. 	<ul style="list-style-type: none"> 2021–2025 2021–2025 2021–2025 	MOHSPP RT with involvement of development partners	
1.6. Continuous capacity building for PHC health workers	<ol style="list-style-type: none"> 1. Rollout introduction of continuous medical education (CME) based on credits 2. Introducing distance learning methods 3. Creating the Continuous Medical Education website 	<ul style="list-style-type: none"> 2021–2025 2023–2025 	Ministry of Health and Social Protection of Population and development partners	<ul style="list-style-type: none"> Number of pilot districts with introduced CME Number of distance-learning courses
1.7. Update and development of standards for accreditation of PHC facilities and increase the number of accredited PHC Facilities	<ol style="list-style-type: none"> 1. Updating PHC facility accreditation standards 2. Increasing the number of PHC accredited facilities 	<ul style="list-style-type: none"> 2021–2022 2021–2025 	Ministry of Health and Social Protection of Population and development partners National Accreditation Center	Number of accredited PHC Facilities
1.8. Improving motivation of specialists in family medicine	<ol style="list-style-type: none"> 1. Ensuring financial and communal (e.g., housing) incentives to attract and retain healthcare staff in the regions with shortage of medical specialists 2. Develop, pilot and introduce performance-based remuneration system for compensation of certain types of medical activities and services. 	<ul style="list-style-type: none"> 2021–2025 2023–2025 	Ministry of Health and Social Protection of Population and development partners	<ul style="list-style-type: none"> Improved provision of health staff in remote districts Reduced level of migration among health care specialists

⁴ HEI – Higher Educational Institutions (e.g., Universities)

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
	3. Review the family doctors' remuneration system with consideration of services integration, quantity and quality of health care.	2022–2024		

2. Modernizing the information system to improve processes and management at PHC level

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
2.1. Reduce the number and volume of reporting for PHC Facilities, and rationalize and optimize the reporting process	1. Analyzing the reporting forms of the PHC Network facilities 2. Optimizing and modernizing the reporting processes	2021–2022 2023–2025	Ministry of Health and Social Protection of Population and development partners	Reporting forms of the PHC Network facilities are analyzed Reporting process complies with modern requirements
2.2. Develop and implement digital and information technologies in the PHC Facilities	1. Developing and implementing digital and information technologies in the PHC Facilities	2021–2025	Ministry of Health and Social Protection of Population and development partners	Number of PHC Facilities with introduced digital and information technologies
2.3. Build managerial capacity of PHC Managers	1. Rollout business planning 2. Build capacity of PHC Managers	2021–2025 2021–2025	Ministry of Health and Social Protection of Population and development partners	Number of districts with implemented business planning is increased Share of PHC Managers that passed the public healthcare management courses is increased
2.4. Support in justified decision-making	1. Conducting regular studies on relevant topics of family medicine and health of population	2021–2025	Ministry of Health and Social Protection of Population and development partners	

3. Improve integration and development of basic services in PHC Facilities, including palliative care, emergency care and vertical service provision structures

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
3.1. Develop the standards of care for palliative patients both by healthcare workers at	1. Developing standards of care to palliative patients by the PHC 2. Develop standards of care by family and community	2021–2022 2021–2022	Ministry of Health and Social Protection of Population and development partners	Standards of care to palliative patients by both health workers at PHC, and by family and community are approved and piloted

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
PHC, and by family and community	3. Introducing the standards in practice	2023–2025		
3.2. Develop and introduce mechanisms of palliative care at home by multidisciplinary group of professionals	1. Developing and introducing the mechanism of palliative care to patients at home by multidisciplinary group of professionals	2021–2025	Ministry of Health and Social Protection of Population and development partners	Mechanism of palliative care to patients at home by multidisciplinary group of professionals is developed and introduced
3.3. Integrate provision of services by vertical structures (outpatient care in case of HIV / AIDS and TB, healthy lifestyle centers, immunization centers, etc.) into PHC / Family Medicine	1. Developing integration model for vertical services into family medicine 2. Piloting the integration model for vertical services into family medicine 3. Analyzing the integration of vertical services into family medicine 4. Expanding the integration model of vertical services into family medicine	2021–2025	Ministry of Health and Social Protection of Population and development partners	1. Integration model for vertical services into family medicine is developed 2. Integration model for vertical services into family medicine is piloted 3. Integration of vertical services into family medicine is analyzed 4. Integration model of vertical services into family medicine is expanded
3.4. Develop and introduce integration model for emergency / urgent care services under the PHC at district level	1. Development and staged introduction of integration model of emergency / urgent care services under the PHC at district level	2021-2025	Ministry of Health and Social Protection of Population and development partners	Number of districts with integrated emergency / urgent care services under PHC
3.5. Improving access to and quality of services for mothers, children and adolescents at PHC and among vulnerable population	1. Ensuring coverage of all women with services on pregnancy diagnostics, antenatal observation and obstetrical care, as well as services of integrated management of childhood illnesses of all children below 5 years; 2. Coverage of all pregnant women, feeding mothers and puerpera with consulting on care, nutrition and feeding of children at age of below 2 years, and on exclusive breast-feeding; 3. creating necessary conditions to ensure safe deliveries at PHC level in remote	2021 – 2025	Ministry of Health and Social Protection of Population and development partners	Reducing maternal mortality Reducing newborn and children mortality Reducing prevalence of anemia among women at birth age and children under 5 years. Increasing prevalence of exclusive breast-feeding. Reducing prevalence stunting among children under 5 years. Reducing the number of children with diarrhea Reducing the adolescent pregnancy rates. Reducing suicide rates among adolescents

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
	<p>mountainous districts (ensuring air-medical services);</p> <p>4. Raise awareness of population on SRZMNDP issues using modern technologies;</p> <p>5. Provision of youth- and adolescent-friendly services;</p> <p>6. Communication events on changes in social and behavioral standards among population with regard to nutrition with the purpose of preventing malnutrition among children under 5 years, adolescents and women of birth age.</p> <p>7. Expanding accessibility of early child development programs with various developmental disorders and their families, including expanding the programs on early diagnostics of genetic disorders</p>			<p>Reducing prevalence of all forms of nutrition disorders (stunting, malnutrition and obesity), as well as reducing deficit of nutritional elements among population, especially among children and women at birth age through improved access to nutrition services with focus on children under 5 years, adolescents and women at birth age.</p> <p>Improving accessibility of early child development to identify and provide services to children of early age with various developmental disorders and their families, including expansion of program on early diagnostics of genetic disorders.</p>
3.6. Reducing burden of Non-Communicable Diseases	<p>1. Reducing prevalence of general risk factors of major non-communicable diseases among population, such as smoking, unhealthy diet, abuse of alcohol, low physical activities and psychosocial stress through awareness raising campaigns</p> <p>2. Integrate programs on NCD screening at PHC level</p> <p>3. Expanding coverage of individual services aimed at improving early detection, registration, and effective management of hypertension and diabetes, appropriate and timely intervention in acute cases, as well as rehabilitation aimed at reduction of premature and preventable mortality from stroke and heart attacks</p>	<p>2021-2025</p> <p>2021-2025</p> <p>2021-2025</p>	<p>Ministry of Health and Social Protection of Population and development partners</p>	<p>Reducing rates of premature mortality and disabilities related with non-communicable diseases, consequences of trauma and aging, and improving quality of life and social integration of people with disabilities, aged people, and people with consequences of NCD and trauma</p>

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
	4. Conducting regular demographic and institutional studies to assess the needs for prevention of NCD and their control, as well as to promote evidence-based decision-making			
3.7. reducing burden of infectious diseases (HIV, TB, etc.)	1. Expand coverage of women with HIV Screening 2. Improve system of early detection and communication with TB Patients 3. Develop protocols to manage and organize training of healthcare staff, including family doctors with purpose of improving efficiency of managing the infectious diseases.	2021-2025 2021-2025 2021-2025	Ministry of Health and Social Protection of Population and development partners	Mother to child transmission of HIV is eliminated TB mortality is reduced Morbidity rates of TB is reduced

4. Engaging communities to health issues

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
4.1 Rollout of guidelines “Partnership with Communities on Health Issues”	1. Training specialists / facilitators to work with communities 2. Engaging Hukumats ⁵ and public organizations to community mobilization 3. Strengthening the capacity of PHC staff inworking with communities 4. Developing coordinated approach of PHC and HLSC to establish sustainable cooperation with communities 5. Creating the system for monitoring of activities of community health teams	2021–2025	Ministry of Health and Social Protection of Population and development partners, RCTCFM ⁶ , RHLSC ⁷	1. Number of trained facilitators 2. Number of existing CHT ⁸ 3. Number of introduced topics to work with CHT in compliance with the priorities of the MoHSPP RT 4. Number of present members of CHT on topics and dates; replacement of CHT members (departure of previous and arrival of new CHT members)

⁵ Hukumat – Executive State Government Body

⁶ RCTCFM – Republican Clinical Training Center of Family Medicine

⁷ RHLSC – Republican Healthy Lifestyle Center

⁸ CHT – Community Health Team

Strategic Activities	Tasks	Timelines	Stakeholders	Outcomes / Indicators
4.2. Active involvement of PHC facilities into programs and activities to work with communities on health issues	Close cooperation of health workers with local public and international organizations with communities on health strengthening / promotion	2021-2025	Ministry of Health and Social Protection of Population and development partners, RCTCFM, RHLSC	1. Number of joint activities, training courses 2. Number of engaged districts, villages and population
4.3. Participation of communities in the business-planning process of PHC facilities	1. Training the PHC Facility health workers on engagement of communities to the business-planning process	2021-2025	Ministry of Health and Social Protection of Population and development partners	Increasing the number of districts, where communities participate in business-planning process
4.4. Raising awareness of population in the area of disease prevention and health promotion, and well as promotion of healthy lifestyle.	1. Activities of health workers with communities through direct meetings and mass-media 2. Training population on planning and management of their own health determinant initiatives	2021-2025 2021-2025	Ministry of Health and Social Protection of Population and development partners	1. Number of events in mass media 2. Number of communities planning activities on health promotion among population

6. General Synthesis at National Level

The present chapter presents a global overview of the main strategic orientations and restructuring strategy for the three oblasts of the country, the Rayons under direct Republican Jurisdiction and Dushanbe.

In order to facilitate the understanding of this synthesis, the core planning parameters are reminded when relevant in the different sections.

Population forecast

The distribution of population per region by the 1 January 2010 and population growth projections for the years 2015 and 2020 are recapitulated in the table 1.

Table 1: Current population and population projections for Tajikistan 2009, 2015 and 2020

	2009	2015	2020
GBAO	194 160	201 008	209 180
Khatlon	2 700 200	3 044 652	3 434 061
Sogd	2 215 400	2 459 350	2 731 342
RPP	1 591 748	1 792 149	2 017 780
Dushanbe	700 700	758 579	821 000
TOTAL	7 402 208	8 255 738	9 213 363

Source: Agency of Statistics of Tajikistan, 2010¹

The overall population of Tajikistan will increase by 11,5% by 2015 and by 24,5% by 2020.

Population projections are used as essential parameter for planning future utilization of health services and capacity of primary, secondary and tertiary health care facilities for the Oblasts and rayons.

Strengthening of Primary Healthcare capacity

According to the overall approach proposed for the restructuring strategy, the strengthening of Primary Health Care (PHC) based on Family Medicine Practice constitutes a priority also confirmed in the National Health Strategy.

Primary healthcare will compose the backbone of Tajikistan health system. Family medicine practice will constitute the public health and clinical base for new model of prevention, diagnostic and treatment of the population (antenatal and postnatal care, childhood, infectious diseases and TB, non communicable and chronic diseases).

¹ 2010-2020 Population projection estimates are based on the last three year averages of year to year population changes per rayon – reported by the Agency of Statistics.

Number of PHC Facilities

In compliance with the planning parameters presented in the Chapter 2, the targets presented below were agreed:

- One comprehensive primary health care centre providing full range of PHC services per 20 000 population,
- In remote areas: one extended PHC centre with emergency services and minor surgery per 20 000 inhabitants,
- Rural health centres deployed among the Tajik territory according to population number and density,
- Health houses and outreach PHC Centres, in particular in remote areas and when justified by population density and conditions of accessibility to other PHC facilities,
- Mobile teams attached to the comprehensive PHC centres.

Specific values were defined for GBAO taking into account the specific geo-demographic characteristics of this region.

The table below presents the current and projected number of PHC facilities per category and oblast.

Table 2: Current and projected number of PHC facilities per category and Oblast

	Number of Rayon Health Centres and Urban Health Centres 2009	Number of Rural Health Centres 2009	Total 2009	Number of Health Houses	Number of specialized outpatient centres 2009	Number of comprehensive Rayon Health Centres 2020	Number of comprehensive Rural Health Centres 2020	Number of Basic rural health centres 2020	Total 2020	Number of health houses 2020
GBAO	7	38	45	240	2	7	26	12	45	190
Khatlon	32	293	331	698	31	34	142	157	333	282
Sogd	28	218	246	355	75	14	123	114	251	142
RPP	13	168	181	444	0	13	91	81	185	178
Dushanbe	13	0	13	0	5	20	0	0	20	0
TOTAL	93	717	816	1 737	113	88	382	364	832	792

The number of health houses retained as outreach PHC centres will be determined in every rayon based on population density and conditions of accessibility to the closest PHC Centre. As a general parameter, health houses should be maintained in the settlements with at least 300 inhabitants and located at more than 45 minutes from a PHC centre. As a global estimation for Khatlon, Sogd and RPP rayons, approximately 40% of the existing health houses should be retained as illustrated in the table above.

Taking into account the specific geographical context of Gbao and the difficulties of population accessibility to PHC facilities network, it is recommended to maintain 80% of the current health houses existing in the Oblast, as illustrated in the table 8 above. The 20% proposed to be removed correspond to the facilities located in the same settlement as a PHC centre and which role is then questionable.

In summary, there will be no reduction of the number of PHC facilities but rather a light increase (+ 16 PHC facilities by 2020). In order to reach the targets defined in the National Health Strategy and in the present Master Plan, the current PHC network should be strengthened with the transformation of 470 rayon and rural health centres into comprehensive or extended PHC centres, providing full range of PHC services. The remaining facilities are proposed to be retained as basic rural health centres with minimal investments infrastructures.

The 113 outpatient PHC specialized centres should be integrated within the comprehensive PHC centres.

PHC Staff Projections

The national targets and normative standards for Tajikistan are reminded below:

- 1 Family Doctor per 1 200 to 1 500 population (depending on geographical location)
- 1 Family Nurse per 400 to 750 population,
- 1 ob&gyn/5 000 women of reproductive age,
- 1 paediatrician/7 500 population under 14 years old

The table below presents the existing and projected number of family doctors, family nurses, paediatricians and Gyne-obs working at PHC level for the different regions of the country

Table 3: Existing and projected number of family doctors, family nurses, paeditricians and Gyne-obs

	Current number of GPs/Family Doctors, PHC Internists or paediatricians 2009	Current number of nurses/feldshers /midwives 2009	ratio FM/Population 2009	ratio GP nurse/Population 2009	Number of Family Doctors 2020 (low bracket)	Number of family nurses 2020 (low bracket)	Ratio FM/population 2020 (low bracket)	Ratio Family nurse/Family Doctor (low bracket)	Number of Family Doctors 2020 (high bracket)	Number of family nurses 2020 (high bracket)	Ratio FM/population 2020 (high bracket)	Ratio Family nurse/Family Doctor (high bracket)	Number of paediat. working at PHC level 2020	Number of Gyne-obs working at PHC level 2020
GBAO	29	421	1 FM/6,700 population	1 family nurse/461 population	139	348	1 FM/1,500 population	2,5 family nurse/1 Family doctor	173	519	1 FM/1,200 population	3 family nurse/1 Family doctor	8	11
Khatlon	1 061	3 475	1 FM/2 550 population	1 family nurse/777 population	2 286	5 715	1 FM/1,500 population	2,5 family nurse/1 Family doctor	2 859	8 577	1 FM/1,200 population	3 family nurse/1 Family doctor	159	169
Sogd	874	3 328	1 FM/2,534 population	1 family nurse/666 population	1 823	3 639	1 FM/1,500 population	2 family nurse/1 Family doctor	2 282	5 464	1 FM/1,200 population	2,4 family nurse/family doctor	113	131

RPP	570	1 896	1 FM/2,792 population	1 family nurse/840 population	1 345	2 690	1 FM/1,500 population	2 family nurse/1 Family doctor	1 681	5 044	1 FM/1,200 population	3 family nurse/family doctor	74	87
Dushanbe	147	346	1 FM/4,766 population	1 family nurse/2025 population	547	1 095	1 FM/1,500 population	2 family nurse/1 Family doctor	684	1 710	1 FM/1,200 population	2,5 family nurse/family doctor	33	44
TOTAL	2 681	9 466	1 FM/2,797 population	1 family nurse/792 population	6 140	13 487	1 FM/1,500 population	2 family nurse/1 Family doctor	7 679	21 314	1 FM/1,200 population	2,8 family nurse/family doctor	387	442

The data presented shows the need for major increase in the number of family doctors or general practitioners (GPs). Over the next decade, the number of GPs should be increased more than twofold even if the lower bracket of targeted number of the GPs is considered and by more than 2.8 times if the higher bracket target has to be achieved by the year 2020. These targets are challenging to achieve even if all the specialists working at the PHC level currently will be retrained into GPs.

The outlook for GP nurses appears to be similar. 42,4% of more nurses are required to be trained/retrained to accomplish the target of 13,487 (low bracket). The current number of nurses should be increased by 125% if the higher bracket target has to be achieved by the year 2020 (21,314 family nurses).

387 paediatricians and 442 ob&gyns are also required to work at PHC level in order to provide the adequate support to family doctors in antenatal and postnatal care and diagnostics and treatment of childhood illnesses and gynaecologic diseases.

Depending on the age structure of the current workforce (and predictable retirements) a detailed plan should be established at National level for the next decade in order to match the real needs of the country.

The objective should also be to reduce the regional discrepancies in terms of PHC services and staff available (e.g. a special attention should be paid to the strengthening of PHC staff in Gbao oblast).

Projections on PHC Visits

Once more, important discrepancies exists between the different regions of the country as regards PHC visits per population and per year. Sogd and RPP rayons are over the 3,5 visits/population per year while Gbao and Khatlon oblasts are under the national averages, with respectively 2,2 and 2,5 visits/population per year.

The assumptions concerning PHC utilization ratios are reminded in the box below:

<p>Target for Tajikistan for 2015: 5,5 to 6 consultations per capita per year Target for Tajikistan for 2020: 7 consultations per capita per year</p> <p>With the following assumptions:</p> <ul style="list-style-type: none"> - 70% of outpatient visits occurring at PHC level (currently 20%), i.e. 3,85 PHC visits/population per year in 2015 and 4,9 PHC visits/population per year in 2020 - 60% of the visits at PHC level managed by the GP, - 40% by nurse general practitioner with translates into 12 visits per GP/day and 8 visits per GP nurse/day.

The table below presents the current and projected number of PHC visits per Oblast in 2009, 2015 and 2020.

Table 4: Current and projected number of PHC visits per Oblast in 2009, 2015 and 2020.

	Total PHC visits 2009	Number of visits/population 2009	PHC visits target 2015	Number of visits per population 2015	PHC visits target 2020	Number of visits per population 2020
GBAO	426 700	2,2	775 889	3,85	1 024 983	4,9
Khatlon	6 807 634	2,5	11 716 567	3,85	16 815 346	4,9
Sogd	8 381 382	3,78	9 648 537	3,85	13 362 103	4,9
RPP	5 589 738	3,5	7 768 457	3,85	9 887 128	4,9
Dushanbe	806 097	1,15	2 920 528	3,85	4 024 068	4,9
TOTAL	22 011 551	2,9	32 829 978	3,85	45 113 628	4,9

The target of 3.85 PHC visits per capita in 2015 and 4.9 in 2020, correlated with projected population growth for the next decade, will mean that number primary care consultations are anticipated to increase by almost 49,10% in 2015 and by 105% in 2020.

Hospital sector restructuring strategy

Current and projected number of hospital facilities

Hospital sector in Republic of Tajikistan is delivered by 365 hospitals with a total bed number of 34 453 beds approximately.

Critical physical conditions of hospitals and low hospital services standards hindered the adequate functioning of these facilities, as well as the effectiveness, quality and efficiency of the services provided to the population. 65% of buildings from the period 1938 to 1990 do not meet basic requirements².

The current situation is characterized by:

- An oversupply of beds,
- Avoidable inpatient admissions. Researches have shown that each third hospital patient could receive treatment in outpatient polyclinic conditions³.
- Low occupancy rates (average from 57% to 40% for the country),

² Source : Tajikistan Hospital Service Restructuring Concept for 2006-2010

³Source : Tajikistan Hospital Service Restructuring Concept for 2006-2010

- Extended average length of stay.

The table 5 below presents the current number of facilities per category and oblast, as well as the number of hospital facilities proposed to be retained in the health system by 2020.

Table 5: Current number of hospitals per category and projected number of hospitals to be retained by 2020

	# of general hospitals (Central Rayon hospitals, city and oblast hospitals) 2009	# of rural hospitals 2009	# of specialized hospitals	Total	# of Oblast reference hospital 2020	# of central rayon hospitals	# of Community level hospitals 2020	# of Specialized hospitals 2020	# of acute care hospitals 2020	# of LTC facilities 2020
GBAO	8	15	9	32	1	7	3	0	11	3
Khatlon	27	73	35	135	3	24	6	4	37	7
Sogd	20	62	26	108	7	13	3		23	10
RPP	13	31	10	54	0	13	3	1	17	3
Dushanbe	6	0	30	36	4	0	0	10	14	4
TOTAL	68	181	80	365	11	57	15	15	102	27

The detailed description of current number of facilities and proposed restructured hospital network for Dushanbe is recapitulated in the table N°6.

Table 6: Current hospital facilities existing in Dushanbe and proposed restructured network

Hospitals by category	2009	2020	Observations and comments on the proposed restructuring strategy for 2020
National Centre for Health	1	1	Made up of the Hospital Holding grouping ten Republican hospitals, i.e.: Reasearch Institute of Gastroenterology, Republican clinical centre for dermatovenerology, Republican Hospital # 1 (Dermatovenerology), Republican vertebrology Centre, National Centre of Health, Republican Clinical Centre of Ophthalmology, Republican Centre of Urology, Republican Centre of Orthopaedics and Traumatology, Scientific Research Institute of Plastic Surgery, Republican centre of Mental Health
Specialized Republican Hospitals and specialized research institutes	16	5	Recapitulation of the 5 specialized Republican Hospitals: <ul style="list-style-type: none"> - Children National Reference hospital (by merger of the different scattered facilities existing today) - National Cancer Institute - National Institute for cardiology and cardiac surgery, - Republican Centre of Narcology,

			- Research Institute of Obstetrics and Gynaecology
General city hospitals	4	3	- City health centre (442 beds in 2009), - City Clinical Hospital # 5 (190 beds in 2009) - City Clinical Hospital # 3 (165 beds in 2009)
Specialized city hospitals	15	5	Recapitulation of the 4 city specialized hospitals: - City maternity # 2 - City maternity hospital # 3 - City clinical hospital of Emergency care, - City clinical hospital for infectious diseases, - Diagnostic Centre (mainly providing outpatient services).
TOTAL	36	14	
LTC facilities		4	Recapitulation of LTC facilities: - Republican Clinical Psychiatric hospital (700 beds in 2009), - Republican Centre of Mental Health (30 beds in 2009), - Hospital for occupational diseases (50 beds in 2009), - Hospital of Nursing care (80 beds in 2009). The number of beds in these facilities should be downsized in particular for the two psychiatric hospitals.

In summary, the number of hospital should be decreased by 72%. On the 365 hospitals existing today, 102 should be strengthened and modernized and 263 should be merged, transformed or closed. On these 263 facilities, 166 are rural hospitals (representing 63% of the total number of facilities to be reconfigured) and 65 are specialized facilities (representing 24,7% of the hospitals to be reconfigured).

On the 65 specialized hospitals to be restructured:

- 27 will be transformed into LTC facilities,
- 9 will be joined within the Hospital Holding grouping part of the Republican Hospitals existing in Dushanbe,
- 4 facilities will be merged within a new unified paediatric specialized hospital proposed to be created in Dushanbe,
- 2 other facilities will be merged in order to become a unified National Reference Institute for Cardiology and Cardiac Surgery,
- The other 23 are proposed to be merged with general hospitals and their premises should be dedicated to other activities.

The 166 rural hospital should be transformed into comprehensive PHC Centres.

Hospital beds, admissions and bed days

As illustrated in the table 7, the ratio bed/population varies strongly from a region to the other one. The same situation prevails as regards admission rates per population and hospital occupancy rates.

The ratios recorded in Khatlon and in the Rayons under Republican Subordination are weak with respectively 6,57 and 5 admissions per 100 population, comparatively with the utilization rates reported for Sogd and Dushanbe (with respectively 16,5 and 16,6 admissions per 100 population). In the reality, both are intimately connected, i.e. the low admission rates reported in RPP and Khatlon hospitals are, at least, partially explained by the “leak” of patients coming straight to Dushanbe’s hospitals.

Table 7: Current number of hospital beds, admissions and bed days and projected hospital utilisation rates

	# of beds 2009	Ratio Bed/1000 population 2009	# of hospitalizations 2009	Admission rate per 100 population 2009	# of bed-days 2009	ALOS 2009	Occupancy Rate (%) 2009	Projected # of beds by 2020	Ratio Bed/1000 population 2020	Projected # of hospitalizations 2020	Admission rate per 100 population 2020	Projected # of bed-days 2020	# day admissions	ALOS 2020	Occupancy Rate (%) 2020
GBAO	1 919	9,88	19 046	9,81	198 277	10	48,00	800	3,82	26 000	12	217 649	1 300	9	74,54
Khatlon	10 801	4,00	177 455	6,57	1 606 827	9	41,00	7 808	2,27	419 011	12	2 333 261	83 802	7	81,87
RPP	4 730	2,97	79 808	5,01	711 412	8,91	41,21	3 816 ⁴	1,89	179 597 ⁵	9/10	974 369 ⁶	45 400	7	79,30
Sogd	12 284	5,54	365 534	16,50	3 594 419	9,8	80,00	8 120	2,97	330 000	12	2 177 555	16 500	7	73,47
Dushanbe	4 719	6,73	116 404	16,61	1 107 475	9,5	64,00	2 874	3,50	152 549	19 ⁷	843 642	30 510	7	80,42
TOTAL	34 453	4,65	758 247	10,24	7 218 410	9,52	57,40	23 418	2,51	1 107 157	12	6 546 476	177 512	7	77,38

In conclusion, taking into account the forecast population growth and the targets in terms of admission rate per population, average length of stay and occupancy rate, significant decrease in the number of general or acute care beds should be planned, with a reduction by 2020 of 32% of the current bed capacity. According to the targets defined, **a maximum of 23 418 acute care beds are needed in the Republic of Tajikistan by 2020.**

Concomitantly, the number of hospital admissions should increase by 46% over the decade with improved hospital performance indicators (occupancy rates and ALOS), as illustrated in the table above.

⁵ Not including the activity of the TB specialized hospital in Vakhdat

⁶ Not including the activity of the TB specialized hospital in Vakhdat

⁷ The admission rate for Dushanbe’s hospitals includes also the referred patients from other oblasts, explaining the high ratio reported, i.e. 19 per 100 population versus 12/100 population for the other regions.

Staff projections for hospital sector

The projections for the medical and nursing staffing for hospital network is related to the bed capacity planned for the country. The proposed staff numbers have been calculated using the expected higher workload and occupancy rates as a result of the bed number optimization, which will require more intensive staff input. A change in the current doctor to nurse ratio in general hospitals is also expected through addressing the current imbalance between the medical and nursing professions, so that human resources are less centred on physicians. The resulting ratios suggested in the planning parameters section (see Chapter 2), were applied to the different hospitals of the country. The table 8 below presents the current and projected staff per category.

Table 8: Current and projected staff per category and Oblast

	Number of doctors 2009	Numbers of nurses 2009	Other staff 2009	Total 2009	Number of doctors 2020	Number of nurses 2020	Number of other staff 2020	Total
GBAO	208	721	N/A	N/A	240	544	424	1 208
Khatlon	1 174	3 074	N/A	N/A	2 342	5 309	4 138	11 789
Sogd	2 854	4 445	4 419	11 718	2 436	5 481	4 263	12 180
RPP	1 328	2 970	N/A	N/A	1 144	2 595	2 022	5 761
Dushanbe	1 390	2 203	N/A	N/A	1 450	3 277	2 552	7 279
TOTAL	6 954	13 413	N/A	N/A	7 612	17 206	13 399	38 217

According to these projections, the number of hospital doctors should increase by 9,5% over the next decade and the number of hospital nurses by 28,27%.

Strengthening of Long Term care and intermediary care capacity

The table 9 below presents the number medium term and long term care beds per Oblast, according to the planning parameters presented in the chapter 2.

Table 9: Number of medium term and LTC beds by 2020

	Medium Term care/rehabilitative care 2020	LTC capacity 2020
GBAO	76	74
Khatlon	1 130	1 150
Sogd	887	668
RPP	730	500
Dushanbe	286	246
TOTAL	3 109	2 638

3. High-Tech Medical equipment standards

The table 10 below recapitulates the number of high-tech medical equipment required by Oblast in 2015 and 2020, as a benchmark or guidance for future investment in the medical technology in Tajikistan.

Table 10: High tech equipment Proposed standard and proposed number of units per Oblast

EQUIPMENT	NUMBER OF UNITS REQUIRED IN 2015 IN KATHLON OBLAST	NUMBER OF UNITS REQUIRED IN 2020 IN KHATLON OBLAST	NUMBER OF UNITS REQUIRED IN 2015 IN GBAO OBLAST	NUMBER OF UNITS REQUIRED IN 2020 IN GBAO OBLAST	NUMBER OF UNITS REQUIRED IN 2015 IN SOGD OBLAST	NUMBER OF UNITS REQUIRED IN 2020 IN SOGD OBLAST	NUMBER OF UNITS REQUIRED IN 2015 IN RPP RAYONS	NUMBER OF UNITS REQUIRED IN 2020 IN RPP RAYONS	NUMBER OF UNITS REQUIRED IN 2015 IN DUSHANBE	NUMBER OF UNITS REQUIRED IN 2020 IN DUSHANBE	TOTAL 2015	Total 2020
MRI	2	4	1	1	2	2	0	0	3	5	8	12
CT Scans	3	5	1	1	3	5	2	4	4	8	13	23
Mammograph units	11	15	1	2	10	12	7	9	10	15	39	53
Radiation therapy equipment	2	4	0	0	2	3	0	0	2	4	6	11
Angiography	2	3	0	0	2	3	0	0	3	5	7	11
Lithotripsy	2	3	0	0	1	2	0	0	2	3	5	8
Haemodialysis	152	206	20	20	137	164	89	121	38	50	436	561
Neonatology beds (level 1)	164	185	8	8	132	147	98	110	73	73	475	523
Neonatology beds (level 2 – Intensive Care)	82	93	4	4	66	74	49	55	35	35	236	261
Neonatology beds (level 3 – Resuscitation unit)	41	47	0	0	33	37	0	0	20	20	94	104
ICU beds adults	107	120	8	8	86	96	63	70	120	130	384	424
Angiography Ophthalmology	23	26	1	2	18	20	13	15	22	25	77	88

Echograph general purpose	167	189	14	14	135	150	98	111	165	185	579	649
Echograph Ophthalmology	15	17	2	2	12	14	9	10	15	17	53	60
Defibrillator	152	172	10	10	123	137	0	0	150	167	435	486
Gamma Camera	3	3	0	0	2	3	0	0	4	5	9	11
Dental Unit	152	172	10	10	123	137	90	100	38	41	413	460
X-ray unit	30	34	7	7	25	27	18	20	20	20	100	108
X-ray unit mobile	91	103	14	14	74	82	54	60	60	60	293	319
X-ray hemodynamic unit	6	7	0	0	5	5	0	0	6	7	17	19
Extra corporeal unit	3	3	0	0	2	3	0	0	3	4	8	10
Laparascopy unit	33	38	7	7	27	30	20	22	30	30	117	127
Endoscopy flexible	107	120	7	7	86	96	63	70	70	70	333	363
Endoscopic Unit	29	33	3	3	23	26	17	19	20	20	92	101
Endoscopy video system	15	17	2	2	12	14	9	10	10	10	48	53

Conclusion

A major weakness of the Tajik healthcare system is a lack of integration and coordination between the various healthcare providers, inducing both gaps in services and services overlaps and duplication. The challenges facing the healthcare system are considerable. They include relatively low levels of investment, inefficiency and poor performance in many parts of the health sector, fragmentation and lack of integration, leading to the inappropriate utilisation of scarce financial and human resources, inappropriate distribution of healthcare resources relative population needs, the need for qualitative and quantitative improvements in healthcare infrastructure.

By many international and local standards the level of hospital services is low in Tajikistan and needs to be supplemented by good quality primary and hospital care and modern medical equipment. At the same time, the utilisation of hospital beds is poor, suggesting there is not unmet demand (as opposed to need) for hospital services –even though there is unmet need for appropriate healthcare services. Bed occupancies are low, lengths of stay are extended and inequities

are wide across the country, highlighting the inefficiency of the current healthcare and hospital system. The causes are complex, involving a wide range of influences including: insufficient and poorly distributed financial and human resources, the need to balance the tensions between efficiency and equity of access; poor coordination, management and accountability within the health sector, as well as behaviour/cultural influences (including lack of trust public services) that means health services are not always accessed by who might them most.

In order to achieve its mission in these respects, the MoH should address an overwhelming number of issues, of which at least five are of vital importance: establishing a regulatory framework, moving away from input-based financing to case based payment as well as to a separation between the funder and the provider of services which will enable it to orchestrate coordination and cooperation between the various public and private health services providers; assure the overall adequacy and appropriate distribution of financial means; enhance the capacity to train and further develop human resources for health in particular at PHC level; and foster the skills, systems, and environment conducive to good management.

The restructuring strategy proposed within the present master plan aims to address the range of issues described above and has the potential to:

- Improve the structure, capacity and quality of the healthcare system among the different regions of the country,
- Ensure the equity and accessibility of healthcare services through the development of a coherent and fair facilities network (PHC and hospitals) across the country,
- Achieve a better balance between primary and hospital care thanks to the strengthening of primary care capacity, which constitute a crucial issue to ensure healthcare effectiveness and efficiency, correlated with the overall sustainability of the healthcare system,
- Enable the MoH to rationalize the organisation and functioning of healthcare facilities.
- Support the development of contemporary models of services delivery (i.e. modern day practice clinic, day hospital, ambulatory surgery)
- Optimise hospital sector with a considerable reduction in the number of facilities and hospital beds associated with an increase in utilisation ratios and improved hospital performance indicators (occupancy rates, ALOS).
- Promote the shift from traditional inpatient admissions to ambulatory care,
- Increase operating efficiency.

5. Dushanbe

Current Situation

Basic Population and Demographics characteristics used for master planning

The total population of Dushanbe represented approximately 700 700 inhabitants in 2009, will amount to 758 579 inhabitants in 2015 and more than 821 000 in 2020 (with an annual growth rate estimated in 1,5% per year). Current demographic profile of the Dushanbe population is presented in the table below.

CURRENT AND FUTURE POPULATION DEMOGRAPHIC PROFILE FOR DUSHANBE, 2009, 2015, 2020

Categories	2009	2015	2020
Number of children under 15 years of age	212 400	229 945	248 938
Number of women of reproductive age	186 400	201 797	218 466
Annual number of births	17 685	20 785	20 859
Population over 15 years of age	488 300	529 134	572 062
Population over 50 years of age	To be confirmed	To be confirmed	To be confirmed

Source: Agency of Statistics of Tajikistan, 2010¹

The specific population groups in the table above were defined for planning of specific types of resources and services. The resources and services planned using the demographic groups are presented below:

- Obstetric: number of women of reproductive age (15 to 49 years) and annual number of deliveries/births,
Neonatology beds: annual number of births,
- Paediatricians at PHC level: Number of children under 15 years of age
- Medium term care/rehabilitative care beds: Population 15 years of age².
- Long term care: Population over 50 years of age³.

Current health care network and utilization of health services

By January 1, 2010 total of 18 PHC outpatient health facilities (among which 12 Urban Health Centre, 1 Republican Family medicine centre and 1 Oblast reproductive health centre) and 36 hospitals were reported functioning in Dushanbe. Total of 1577 doctors and 2 679 nurses and midwives were employed in these facilities⁴.

Primary care

Facilities

According to the survey findings conducted under the current master planning exercise, 18 outpatient health facilities providing services at PHC level were functioning by January 1, 2010 in Dushanbe. These outpatient health facilities are presented in the table below:

¹ 2010-2020 Population demographic projection estimates are based on the last ten year averages of year to year population changes per oblast – reported by the Agency of Statistics. The 2008-2009 live births rate at 26.9 per 1,000 population for the entire country is used for the years 2015 and 2020 projections

² The need for medium term rehabilitation beds for younger population is marginal

³ Ibid

⁴ Medstat, DPS2 database, Last Available (2006).

NUMBER OF PHC FACILITIES EXISTING IN DUSHANBE, 2009

Category	Number
Urban Health Centre	12
Republican Family Medicine Centre	1
Oblast Reproductive Health Center	1
Children Dental Polyclinic	1
Oblast Dental Polyclinic	1
Republican AIDS Centre	1
City TB center for DOTS	1
Khudjand Consultative Diagnostic Centre	1
IMCI centre for children	1
Sub-total without dental	18

Staff

According to the survey conducted for master planning exercise - the total of 147 General Practitioners/Family Doctors (GP), PHC Internists or Paediatricians and 346 nurses/feldshers/midwives were employed in PHC facilities in Dushanbe, representing 1 Family Doctor/4 766 population and 1 family nurse/ 2 025 population.

Utilization

According to the survey findings, the total of 806 097 patient visits was registered in Dushanbe PHC facilities during the year 2009. This represents a PHC services utilization rate of 1,15 visits per capita, which is considerably lower than the national average rate of 4 per capita.

Hospital network:

Facilities

30 public acute care hospital hospitals and 6 LTC facilities were providing inpatient services by January 1, 2009 in Dushanbe city⁵. Reported bed capacity was 5 609 beds with the following sharing: 4 719 acute care beds and 890 LTC beds. The ratio acute care bed per 1000 population represents a ratio of 6,67 in 2009. Nevertheless, this ratio must be mitigated taking into account the following considerations:

- Dushanbe hospitals encompass a high level of attractiveness for the population of surrounding oblasts and rayons, even for services that can be provided locally (secondary hospital care). A considerable number of patients (although it is not possible to quantify the actual number) are coming from the different rayons of the country without any referral procedure. Nevertheless, Dushanbe hospitals constitute a guarantee of quality and performance on both medical and clinical aspects and availability of the required diagnostic and treatment equipment.
- Dushanbe hospitals constitute also the tertiary hospital care level for the whole population of the country with specific services and high-tech equipment only available in the capital city.

The number and category of hospitals are presented in the table below.

⁵ Source: Survey findings conducted under the current master planning exercise

DUSHANBE CURRENT HOSPITAL NETWORK – 2009

Hospital	Total Beds	Admissions	Bed days	ALOS	Occupancy rate
ACUTE CARE HOSPITALS					
Reasearch Institute of Gastroenterology	100	0	0	-	70%
Republican Hospital # 1 (Dermatovenerology)	50	756	13785		76%
Children Hospital # 2	149	3070	42429	13,8	78%
City Scientific Center	29	1409	5063	3,6	48%
City Health Centre	442	17249	122005	7,1	76%
City Clinical Hospital # 5	190	4515	54058	12,0	78%
City Maternity Hospital # 2	130	8394	37136	4,4	78%
City Clinical Hospital of Emergency Care	174	6163	39837	6,5	63%
Children Infectious Diseases Hospital	184	4006	28529	7,1	42%
City Clinical Infectious Diseases Hospital	390	4848	86671	17,9	61%
Republican Clinical Center of Dermatovenerology	160	724	14338	19,8	25%
Maternity Hospital # 3	170	9036	56673	6,3	91%
City Center of Dermatovenerology	50	715	7180	10,0	39%
City Center of Coloproctology	20	654	4744	7,3	65%
Hospital of Nursing Care	80	1186	24511	20,7	84%
Clinical Hospital of Children Surgery	76	2358	26476	11,2	95%
City Clinical Hospital # 3	165	3785	55328	14,6	92%
Center for Treamtment of Bareness	10	1171	3047	2,6	83%
Republican Center of Vertebrology	25	468	11700	25,0	128%
Research Institute of Obstetrics and Gynecology	218	1379	18577	13,5	23%
Oncologic Center	235	3226	50841	15,8	59%
Republican Cardiologic Center	192	6071	57376	9,5	82%
National Center of Health	1085	24437	262874	10,8	66%
Republican Center of Cardiac Surgery	100	2443	23583	9,7	65%
Republican Clinical Center of Ophtalmology	80	4173	27200	6,5	93%
Republican Center of Narcology	100	1930	21953	11,4	60%
Republican Center of Urology	65	1296	10093	7,8	43%
Diagnostic Center	10	0	0	-	0%
Republican Center of Orthopedics and Traumatology	20	681	7269	10,7	100%
Scientific Rsearch Institute of Plastic Surgery	20	0	0	-	0%
TOTAL ACUTE CARE BEDS	4 719	116 404	1 107 475	9,5	64%
LONG TERM CARE FACILITIES					
Republican Clinical Psychiatric Hospital	700	1300	242000	186,2	95%
Specialized Center of Dermatovenerology	30	421	9016	21,4	82%
Republican Center of Mental Health	30	362	9484	26,2	87%
City Tuberculosis Hospital for Children	50	82	6927	84,5	38%
Republican Clinical Center of Psychiatry	30	288	10739	37,3	98%
Hospital for Occupational Diseases	50	1026	9694	9,4	53%
TOTAL LONG TERM CARE BEDS	890	3 218	293 661	91,3	90%
TOTAL BEDS	5 609	119 622	1 401 136	11,7	68%

Source: Survey findings conducted under the current master planning exercise

Staff

Up to 1 430 doctors and 2 300 nurses and midwives were employed in Dushanbe's inpatient health care facilities, as recapitulated in the table below.

NUMBER OF DOCTORS AND NURSES EMPLOYED IN DUSHANBE HOSPITALS

Hospital	Total Doctors	Total Nurses
Reasearch Institute of Gastroenterology	38	37
Republican Hospital # 1 (Dermatovenerology)	6	11
Children Hospital # 2	8	24
City Scientific Center	14	16
City Health Centre	63	175
City Clinical Hospital # 5	74	62
City Maternity Hospital # 2	53	96
City Clinical Hospital of Emergency Care	59	57
Children Infectious Diseases Hospital	21	48
City Clinical Infectious Diseases Hospital	55	210
Republican Clinical Center of Dermatovenerology	31	29
Maternity Hospital # 3	101	220
City Center of Dermatovenerology	48	97
City Center of Coloproctology	6	5
Hospital of Nursing Care	2	18
Clinical Hospital of Children Surgery	29	38
City Tuberculosis Hospital for Children	5	8
City Clinical Hospital # 3	40	54
Center for Treantment of Bareness	5	5
Republican Center of Vertebrology	5	14
Research Institute of Obstetrics and Gynecology	115	184
Republican Clinical Center of Psychiatry	9	34
Oncologic Center	85	120
Republican Cardiologic Center	42	68
National Center of Health	306	362
Republican Center of Cardiac Surgery	57	72
Republican Clinical Center of Ophtalmology	22	34
Republican Center of Narcology	28	59
Republican Center of Urology	30	45
Diagnostic Center	17	7
Republican Clinical Psychiatric Hospital	19	31
Republican Center of Orthopedics and Traumatology	14	20
Hospital for Occupational Diseases	6	11
Scientific Rsearch Institute of Plastic Surgery	6	5
Republican Center of Mental Health	5	6
Specialized Center of Dermatovenerology	6	18
Total number of doctors and nurses working in acute care facilities	1 390	2 203
Total number of doctors and nurses working in LTC Facilities	40	97
GRAN TOTAL	1 430	2 300

Source: Survey findings conducted under the current master planning exercise

Utilization

The hospital admission rate reported in 2009 for Dushanbe facilities is considerably high at 16,61 per 100 population compared to the rate of 11.2 admissions per 100 population nationwide. The reported average occupancy rate in Dushanbe's acute care hospitals is 64% for an ALOS of 9,5 days. Once more, when assessing the admission rate per population for Dushanbe, it should be taken into account that it is not possible to identify the origin of the patients and to determine precisely the catchment's population served by these hospitals (proportion of population living in Dushanbe and proportion of population coming from other rayons).

Breakdown of beds per discipline

The sharing of beds per specialty in Dushanbe's hospitals as well as their respective utilization rates are described in the table below:

BREAKDOWN OF BEDS PER SPECIALTY IN DUSHANBE HOSPITALS					
Specialty	Number of beds	Number of admissions	Number of bed days	ALOS (days)	Occupancy rate (%)
General medical specialties	1 170	22 125	280 442	12,7	65,66%
Surgical specialties	990	24 695	260 062	10,5	71,90%
ICU	113	2 326	12 145	5,22	29,50%
Pediatrics	571	12 801	116 467	9	55,90%
Gyne-Obs	616	26 548	139 604	5,26	62,10%
Other beds (including LTC beds)	2 021	26 586	529 022	19,9	71,70%
Sub-total	5 481	115 081	1 337 742	11,62	66,86
Day Beds	128				
TOTAL BEDS	5 609				

Source: Survey findings conducted under the current master planning exercise

The following comments are presented based on the data presented above:

GENERAL COMMENTS ON EXISTING BEDS PER SPECIALTY AND GUIDANCE FOR THE RESTRUCTURING STRATEGY		
SPECIALTY	GENERAL COMMENT	GUIDANCE PROVIDED FOR THE RESTRUCTURING STRATEGY
Medical specialties	With 20,85% of the total of beds, medical specialties have 65,66% occupancy rate for an extended ALOS of more than 12,5 days	Considerable downsizing of the number of beds in these specialties appears to be required taking into account current ratios and targeted admission rates, desirable rates of day hospital, future occupancy rates and ALOS.
Surgical specialties	Surgical specialties represent 17,65% of the total number of beds existing in Dushanbe and recorded in 2009 almost 72% of occupancy rate. The average length of stay is more than 10,5 days.	Reasonable downsizing of the number of beds in these specialties appears to be required taking into account current ratios and targeted admission rates, desirable rates of day hospital, future occupancy rates and ALOS.

ICU	Intensive care units totalize 113 beds. The occupancy rate is very low with less than 29,5% for a short ALOS of 5,26 days	<p>These ratios do not appear to be coherent taking into account the fact that Dushanbe's hospitals constitute the national reference level for high-tech specialties and equipment.</p> <p>As ICU services are not developed at required level (with the sufficient staff and equipment) in all the rayons of the country (e.g. Khatlon oblast and RPP rayons), the activity recorded in Dushanbe's hospitals for this discipline would be expected to be stronger.</p> <p>A specific analysis concerning this issue should be conducted in order to really identify the needs in this area and the required organization and resources (including for the referral of patients from other parts of the country).</p>
Pediatrics	Pediatrics have a total of 571 beds (i.e. 10,18% of the total of beds). The occupancy rate is less than 56% and the ALOS is 9 days	Downsizing of the number of beds in this specialty appears to be required taking into account current ratios and targeted admission rates, desirable rates of day hospital, future occupancy rates and ALOS.
Gyne-Obs	<p>Gyne-obs specialty represent 10,91% of the total number of beds existing in Dushanbe.</p> <p>The occupancy rate is 62,1% for an ALOS of 5,26 days.</p>	<p>Consequent downsizing of the number of beds in these specialties appears to be required taking into account current ratios and targeted admission rates (and number of deliveries), desirable rates of day hospital for gynecology, future occupancy rates and ALOS (in particular when considering that the ALOS for a normal delivery should not exceed a maximum of 3 days).</p> <p>As a rough estimation only, if we consider that a total of 20 859 deliveries will be performed in 2020, and that 95% of these deliveries will occur in Dushanbe hospitals (i.e. 19 816 deliveries/admissions), this means that 59 448 bed hospitals will be required which represents (for a targeted occupancy rate of 80%), a total of 204 beds.</p> <p>Obviously, additional bed capacity is required for other gyne-obs activities (with longer ALS) and also for the women transferred from the other oblasts and rayons. Nevertheless, the previous estimation confirms the general impression of overcapacity existing in Dushanbe for this discipline.</p>

Main findings

As regards to current healthcare network and services utilization in Dushanbe, the following main findings can be delineated:

- The number of facilities providing services at PHC level (not including specialized outpatient facilities) are in sufficient number (at least for 2009 population), but the number of family doctors and family nurses is not sufficient to really provide the adequate PHC services to Dushanbe's population.

- The number of PHC visits per capita in 2009 is relatively weak. This situation could be explained by at least two main factors:
 - Insufficient number of PHC staff,
 - Proximity of an extended and trusted hospital network which is preferred by the population (to the detriment of PHC services) inducing a predominance of services provided by specialized out-patient specialists and hospital care instead of family doctors.

- Workloads and performance indicators in Dushanbe hospitals vary from one institution to the other . The figure 1 below presents the breakdown of hospitals according to different rankings of occupancy rates. 7 hospitals have an occupancy rate inferior at 50%, and 21 facilities have an occupancy rate exceeding 70%. In the meantime, ALOS is relatively long in Dushanbe acute care hospitals, with more than 53% of hospitals reporting an average length of stay of more than 9 days and at least six hospitals with an ALOS exceeding 14 days (Cf. Figure 2).

FIGURE 1: SHARING OF DUSHANBE'S HOSPITALS ACCORDING TO THEIR OCCUPANCY LEVELS

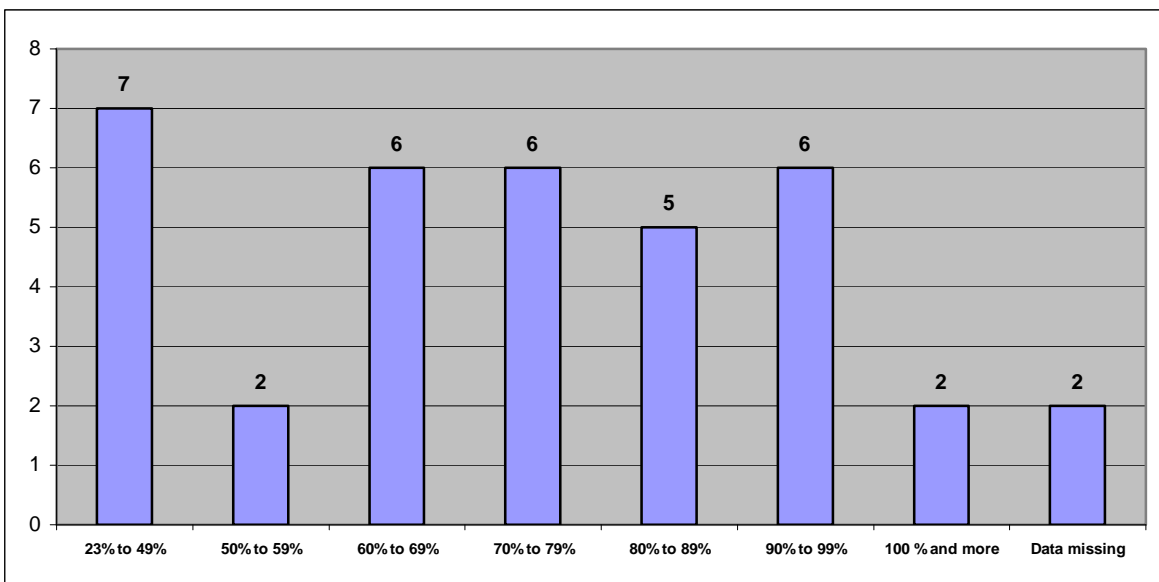
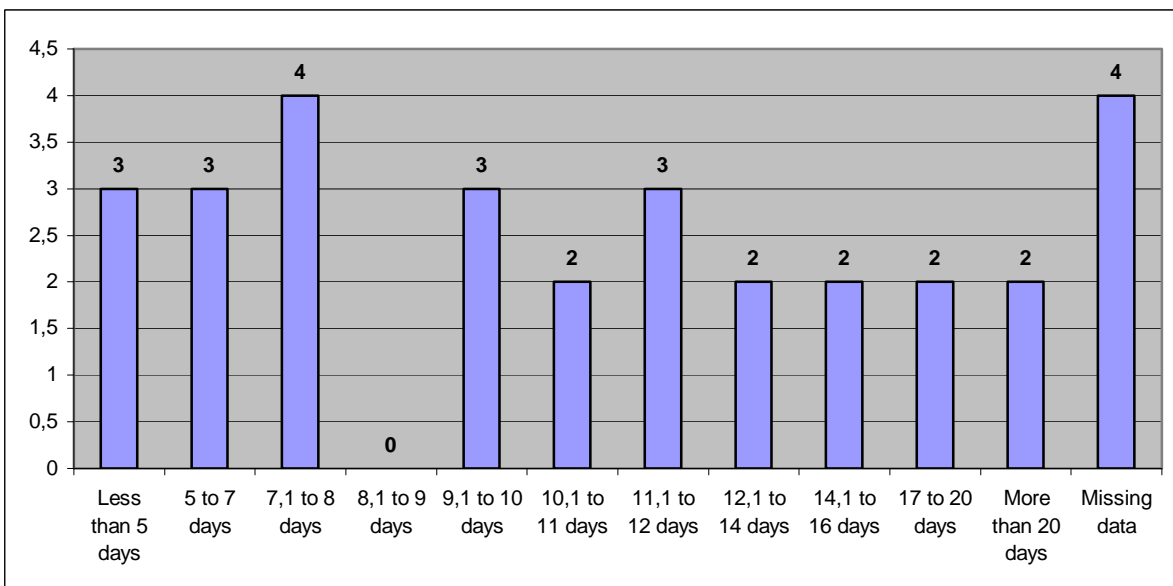


FIGURE 2: SHARING OF DUSHANBE'S ACUTE CARE HOSPITALS ACCORDING TO THEIR ALOS



The 5 609 acute care beds existing in Dushanbe, represents 16 % of the total number of beds in the country. The 26% of Dushanbe's acute care beds are located in scientific research institutes and university hospitals.

The current situation is characterized by:

- An oversupply of acute care beds,
- The existence of too many specialized hospitals
- An overlapping of activities and insufficient cooperation between facilities,
- The needs for enhancement of patients referrals procedures to tertiary care services (from Dushanbe and other rayons),
- The needs to strengthen academic capabilities of University teaching hospitals in order to improve the conditions for specialty training.
- Duplication of the clinical support services and of diagnostic and treatment equipment considering spatial organisation problems (inducing Lack of coordination and rationalization of diagnostic and treatment activities),
- Difficult management of human resources due to the scattering of medical services,
- High costs of maintenance
- Needs of large investments concerning the infrastructure of the buildings,
- Requirements for modernization of inpatient wards.

The maps below present the different facilities existing today in Dushanbe.

Proposed restructuring strategy

The proposed restructuring strategy for Dushanbe is based on the planning parameters presented in the Chapter 2, adjusted to the context of the capital city of the Republic of Tajikistan.

Future primary care network

Number of facilities

The restructuring strategy proposed for the strengthening of PHC facilities network in Dushanbe relies on the availability of one Comprehensive PHC Centre per 40,000 of the capital residents (versus 20 000 population in the other oblasts and rayons). The number of comprehensive PHC centres in 2020 can be estimated in 20.

NUMBER OF COMPREHENSIVE PHC CENTERS REQUIRED BY 2020 IN DUSHANBE CITY

Facilities	2010	Number of comprehensive PHC 2015	Number of comprehensive PHC 2020
Urban Health Centre	12	19	20
Republican Family Medicine Centre	1		
Oblast Reproductive Health Center	1		
Children Dental Polyclinic	1		
Oblast Dental Polyclinic	1		
Republican AIDS Centre	1		
City TB center for DOTS	1		
Khudjand Consultative Diagnostic Center	1		
IMCI centre for children	1		
Sub-total without dental	18	19	20

Staff projections

In compliance with the planning parameters, the targets to be reached in terms of PHC staff are recapitulated below:

Target 2015	1 GP per 2 000 pop	1 nurse per 1 000 pop
Target 2020	1 GP to 1 500 pop low bracket	1 nurse to 750 pop
	1 GP to 1 200 pop high bracket	1 nurse to 500 pop
	1 ob&gyn/5 000 women of reproductive age	
	1 paediatrician/7 500 population under 14 years old	

The required numbers of these four categories of the medical personnel were calculated based on population forecasts for the next decade. The summary result is presented in Table below.

**EXISTING AND FUTURE NUMBER OF GPs AND GP NURSES, SPECIALIST PAEDIATRICIANS AND GYNE-OBS
AT PHC LEVEL**

Categories	Number available in 2010	Target 2015	Target 2020 low bracket	Target 2020 high bracket
GP	147	379	547	684
Nurses and fedshers	346	759	1 095	1 095
Number of Paediatricians	1 (RHC)		33	33
Number of Gyne-Obs	1 (CDH)		44	44

The data presented shows the need for major increase in the number of family doctors or general practitioners (GPs) and GP nurses.

33 paediatricians and 44 ob&gyns are also required to work at PHC level in order to provide the adequate support to family doctors in the of antenatal and postnatal care and diagnostics and treatment of childhood illnesses and gynaecologic diseases.

Depending on the age structure of the current workforce (and predictable retirements) a detailed plan should be established for the next decade in order to match the real needs of the rayon. Recommendations for such plan will be provided through the on-going technical assistance on the development of the National Human Resources Strategy for Health Sector.

Assumptions concerning primary care utilization

The table below presents the current PHC activity, as well as the anticipated workloads for 2015 and 2020 based on the defined parameters described in the Chapter 2.

CURRENT AND PROJECTED NUMBER OF VISITS TO PHC FACILITIES IN DUSHANBE CITY 2009, 2015, 2020

	Office visits	Home visits	Total PHC	Number of visits/pop	PHC consultation with a GP	PHC consultation with a GP nurse
2009	682 119	123 978	806 097	1,15	N/A	N/A
Target 2015			2 920 528	3,85	1 752 317	1 168 211
Target 2020			4 024 068	4,9	2 414 441	1 609 627

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The target of 3.85 PHC visits per capita in 2015 and 4.9 in 2020 (as defined in the planning parameters) will mean that number primary care consultations are anticipated to increase by almost 5 times over the next ten years. Nevertheless, this increase in PHC activities (to the detriment of specialized outpatient services and hospital care) constitute a crucial issue to achieve a better balance in terms of healthcare efficacy, effectiveness and efficiency correlated with the overall sustainability of the system.

Hospital sector reconfiguration

The following general orientations can be proposed for the restructuring of Dushanbe hospital network :

- The first recommendation consists in setting up a “Hospital Holding” grouping the existing academic hospitals. This hospital holding should be managed by a single authority but the hospitals involved will remain autonomous entities with day-to-day management autonomy

Arguments in favour of this restructuring process :

- *A unique and comprehensive “Strategic Plan” for the new “Holding Hospital”,*
- *A unique and coherent investment plan,*
 - *An organisation led by a board with a clear focus and supported by robust and appropriate governance arrangements throughout the organisation*
 - *A board with a shared agenda,*
 - *A clear vision and strategy based on the engagement and involvement of key stakeholders,*
 - *A robust internal systems and processes relating to governance, funding, monitoring and delivery,*
 - *A good track record of delivering plans such as cost improvement and efficiency programmes,*
 - *A strong track record of financial performance supported by robust governance arrangements and internal controls.*
 - *This new hospital holding will also create capacity to tackle drugs management, to share certain support services, to obtain economies of scales, to set up an adequate and successful staff deployment, to improve the profitability of diagnosis and treatment equipment, etc.*
- The 6 general city hospitals should be modernized with a reduction of the number of beds and repositioned as first referral hospitals, in order to avoid auto-referral to the university hospitals :
 - Upgrading of its clinical support services,
 - Development of ambulatory care (one day surgery and day hospital)
 - Internal restructuring and new hospital governance.
- Strengthening of the children specialized academic hospital in order to substantiate its role as National reference institution for childhood including all required specialized services and technologies, with a triple mission : patient care, education and training, research.
- Strengthening of the University Specialized hospital in oncology to become the National Cancer Institute (with a comprehensive diagnostic and treatment technological platform). The National Cancer Institute in Dushanbe could play an important role in terms of coordination of the different providers working on oncological issues, definition of prevention strategies and information campaigns, organisation of screening programmes, coordination of clinical approaches, registration of patients and research activities.
- The future of psychiatric hospitals should be considered and planned in compliance with the National Mental Health plan to be elaborated in the next years (recommendation of the present master plan) in order to provide a coherent framework for the organisation of future psychiatric services and community based treatments.

- A National reference Institute for cardiology and cardiac surgery should be created thanks to the merger of the currently two separate institutions
- Transfer of activity from part of the existing specialized hospitals to the general hospitals of Dushanbe

Projected Inpatient Capacity and Utilization

Taking into account the forecast population growth and the targets in terms of admission rates, average length of stay and occupancy rate, significant decrease in the number of general or acute care beds should be planned in Dushanbe as illustrated in the table below:

NUMBER OF ACUTE CARE BEDS AND HOSPITAL UTILISATION RATES PROJECTIONS FOR DUSHANBE CITY			
	2009	Target 2015	Target 2020
Number of beds	4 719	3 034	2 874
Inpatient admissions	116 404	91 029	98 549
Number of admissions per 100 pop (for Dushanbe's population)	16,61	12	12
Number of tertiary care inpatient Admissions referred from other oblasts and rayons		50 400	54 000
% Day hospital admissions	0%	15%	20%
Number of day admissions	0	13 654	19 710
Number of surgical procedures/100	3,18	3,5	5
Number of surgical procedures (secondary care)	22 303	26 550	41 062
% Ambulatory surgeries	5%	15%	30%
Number of ambulatory surgeries (secondary care)	1 115	3 983	12 319
Number of inpatient surgeries (2nd care)	22 303	41 310	57 431
Number of inpatient admissions (2nd care)	115 289	73 393	66 520
Average length of stay	9,51	7	7
Number of bed days	1 107 475	866 548	843 642
Occupancy rate (%)	64,30	78,25	80,42
Number of deliveries	17 685	20 785	20 859

The number of patients referred from other rayons is estimated as follows:

Referral from other rayons

	Pop 2010	Pop 2015	Pop 2020
Rayons Total	4 000 000	4 200 000	4 500 000
Number of admissions		504 000	540 000
Number of referred admissions to tertiary care		50 400	54 000
Number of surgical procedures		147 000	225 000
Number of day surgeries		22 050	33 750
Inpatient surgeries		124 950	191 250
Number of surgeries referred to tertiary care		18 743	28 688

According to the targets defined, a maximum of **2,900** acute care beds are needed in Dushanbe by the year 2020, which implies up to 38,5% reduction of the existing capacity of general beds.

Up to 20,85 thousand deliveries per year can be expected by the year 2020 in the population of Dushanbe (with 95% performed at hospital level). If we consider that a total of 8 326 deliveries will be referred to Dushanbe's hospitals from other oblasts and rayons (as described in the table below), this means that a total of 29 185 deliveries will be performed in Dushanbe's hospitals.

ESTIMATION OF ANNUAL NUMBER OF PREGNANT WOMEN TRANSFERRED TO DUSHANBE HOSPITALS

Obalst	Annual number of births (2020)	% pregnant women transferred to Dushanbe hospitals	Number
Khatlon	92 529	4%	3 701
RPP	55 287	7%	3 870
Sogd	73 500	1%	735
Gbao	3 995	0,5%	20
TOTAL	225 311		8 326

Proposed restructuring plan per hospital

The table below presents the proposed restructuring strategy per hospital based on the orientations presented above:

Proposed restructuring Strategy for each of Dushanbe's hospitals						
Hospital	Total Beds	Admissions	Bed days	ALOS	Occupancy rate	Proposed restructuring strategy
Research Institute of Gastroenterology	100	0	0	-	70%	To be integrated within the hospital holding grouping the academic hospitals
Republican Hospital # 1 (Dermatovenerology)	50	756	13785		76%	To be integrated within the hospital holding grouping the academic hospitals
Children Hospital # 2	149	3070	42429	13,8	78%	To be merged within the "new" unified paediatric specialized hospital proposed to be created in Dushanbe (by merger of the various children facilities existing today).
City Scientific Centre	29	1409	5063	3,6	48%	Role and scope of this facility to be clarified before proposing a restructuring process
City Health Centre	442	17249	122005	7,1	76%	To be maintained with a reduction in the number of beds
City Clinical Hospital # 5	190	4515	54058	12,0	78%	To be maintained with a reduction in the number of beds, upgrading clinical support services, development of ambulatory care and internal restructuring (including new hospital governance model)
City Maternity Hospital # 2	130	8394	37136	4,4	78%	To be maintained with equivalent number of beds
City Clinical Hospital of Emergency Care	174	6163	39837	6,5	63%	To be maintained with a reduction in the number of beds
Children Infectious Diseases Hospital	184	4006	28529	7,1	42%	To be transferred to the "new" unified paediatric specialized hospital proposed to be created in Dushanbe (by merger of the various children facilities existing today).
City Clinical Infectious Diseases Hospital	390	4848	86671	17,9	61%	Number of beds to be reduced
Republican Clinical Centre of Dermatovenerology	160	724	14338	19,8	25%	To be integrated within the hospital holding grouping the academic hospitals
Maternity Hospital # 3	170	9036	56673	6,3	91%	To be maintained with equivalent number of beds
City Centre of Dermatovenerology	50	715	7180	10,0	39%	To be merged with general hospitals
City Centre of Coloproctology	20	654	4744	7,3	65%	To be merged with general hospitals
Hospital of Nursing Care	80	1186	24511	20,7	84%	Long Term Care facility
Clinical Hospital of Children Surgery	76	2358	26476	11,2	95%	To be merged within the "new" unified paediatric specialized hospital proposed to be created in Dushanbe (by merger of the various children facilities existing today).
City Tuberculosis Hospital for Children	50	82	6927	84,5	38%	To be transferred to the "new" unified paediatric specialized hospital proposed to be created in Dushanbe (by merger of the various children facilities existing today)
City Clinical Hospital # 3	165	3785	55328	14,6	92%	To be maintained with a reduction in the number of beds, upgrading clinical support services, development of ambulatory care and internal restructuring (including new hospital governance model)
Centre for Burn Treatment	10	1171	3047	2,6	83%	To be merged with general tertiary care hospitals
Republican Centre of Vertebrology	25	468	11700	25,0	128%	To be integrated within the hospital holding grouping the academic hospitals

Research Institute of Obstetrics and Gynaecology	218	1379	18577	13,5	23%	To be maintained as a separate institution taking into account the current location of this Institute
Republican Clinical Centre of Psychiatry	30	288	10739	37,3	98%	Requirement for a National Mental Health Plan in order to provide a coherent framework for the organization of future psychiatric services: reduction in the number of beds, transformation of part of the psychiatric hospitals into other facilities, development of community based treatments.
Oncology Centre	235	3226	50841	15,8	59%	To be strengthened in order to become the National Cancer Institute, reference for the whole country
Republican Cardiologic Centre	192	6071	57376	9,5	82%	To be merged with the cardiac surgery republican centre in order to become a National reference Institute for cardiology and cardiac surgery
National Centre of Health	1085	24437	262874	10,8	66%	To be integrated within the hospital holding grouping the academic hospitals
Republican Centre of Cardiac Surgery	100	2443	23583	9,7	65%	To be merged with the Republican Cardiology centre in order to become the National reference Institute for cardiology and cardiac surgery
Republican Clinical Centre of Ophthalmology	80	4173	27200	6,5	93%	To be integrated within the hospital holding grouping the academic hospitals
Republican Centre of Narcology	100	1930	21953	11,4	60%	To be maintained
Republican Centre of Urology	65	1296	10093	7,8	43%	To be integrated within the hospital holding grouping the academic hospitals
Diagnostic Centre	10	0	0	-	0%	To be maintained as outpatient specialized facility
Republican Clinical Psychiatric Hospital	700	1300	242000	186,2	95%	Requirement for a National Mental Health Plan in order to provide a coherent framework for the organization of future psychiatric services: reduction in the number of beds, transformation of part of the psychiatric hospitals into other facilities, development of community based treatments.
Republican Centre of Orthopaedics and Traumatology	20	681	7269	10,7	100%	To be integrated within the hospital holding grouping the academic hospitals
Hospital for Occupational Diseases	50	1026	9694	9,4	53%	LTC facility
Scientific Research Institute of Plastic Surgery	20	0	0	-	0%	To be integrated within the hospital holding grouping the academic hospitals
Republican Centre of Mental Health	30	362	9484	26,2	87%	To be integrated within the hospital holding grouping the academic hospitals (to be restructured in compliance with the National Mental Health Plan)
Specialized Centre of Dermatovenerology	30	421	9016	21,4	82%	To be merged with general hospitals
TOTAL ACUTE CARE	4 719	116 404	1 107 475	9,5	64%	Number of beds after the restructuring process: 2 900 acute care beds
TOTAL LONG TERM CARE	890	3 218	293 661	91,3	90%	
TOTAL BEDS	5 609	119 622	1 401 136	11,7	68%	

The list of hospitals proposed to be included in the hospital holding, as well as their future number of beds are presented in the table below. The bed capacity per hospital was calculated based on the current workloads and performance indicators, the targeted ALOS and desirable rates of day hospital.

LIST OF HOSPITALS PROPOSED TO BE INCLUDED IN THE HOSPITAL HOLDING

Hospital	Current number of beds	Number of beds proposed for 2020
Reasearch Institute of Gastroenterology	100	50
Republican clinical centre for dermatovenerology	160	50
Republican vertebrology Centre	25	25
National Centre of Health	1085	650
Republican Clinical Centre of Ophthalmology	80	40
Republican Centre of Urology	65	50
Republican Centre of Orthopaedics and Traumatology	20	20
Scientific Research Institute of Plastic Surgery	20	20
Republican centre of Mental Health	30	20
TOTAL ACUTE CARE	1 605	925

Staff projections

The projections for the medical and nursing staffing for hospital network is related to the bed capacity planned for Dushanbe. The proposed staff numbers have been calculated using the expected higher workload and occupancy rates as a result of the bed number optimization, which will require more intensive staff input and as a result higher than current total staff to bed ratio. A change in the current doctor to nurse ratio in general hospitals is also expected through addressing the current imbalance between the medical and nursing professions, so that human resources are less centred on physicians. The resulting ratios suggested in the planning parameters section (see Chapter 2), were applied to Dushanbe's Hospitals. The staff per bed ratios and derived estimates per staff category are presented in the table below.

CURRENT AND PROJECTED STAFF TO BED RATIOS AND STAFF NUMBERS PER CATEGORY FOR DUSHANBE (ESTIMATION FOR ACUTE CARE HOSPITALS ONLY)

	Current		Projected	
	Ratios	Numbers	Ratios ⁶	Numbers
Number of Beds		4 719		2 900
Doctors	0.29	1 390	0.50	1 450
Nurses	0.46	2 203	1.13	3 277
Administrative and other technical staff		N/A	0.88	2 552
Total staff			2.5	7 279

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Detailed inpatient staffing plans for each rayon should be elaborated

⁶ In compliance with the staffing ratios by hospital level presented in the planning parameters (Cf. Chapter 2), the figures applied to Dushanbe's hospitals correspond to the higher bracket (tertiary hospitals)

Hi-tech medical equipment proposed standards for Dushanbe City

The standards for high-tech medical equipment presented in the chapter 2 can not be applied within the same conditions and criteria in Dushanbe city where co-exists a high number of “Research Centres” and tertiary care hospitals. Furthermore, the population criterion can not be either applied, considering the fact that it is difficult to really apprehend the catchment’s population for high-tech medical equipment in Dushanbe, as a number of patients are coming from other rayons (with or without referral) for outpatient and inpatient medical procedures. Indeed, without any information on the current origin of patients and considering the fact that the needs for high-tech equipment utilisation can not be based on the number of admissions transferred to Dushanbe’s hospitals, the estimation of catchment’s population for future use of high-tech equipment in Dushanbe can only be determined by extrapolation.

In order to be able to delineate a global estimation on the number of units required in Dushanbe in the next decade, the following assumption is proposed:

- It is considered that 10% of Khatlon and Gbao population will come to Dushanbe (with or without any referral procedure) for a diagnostic and/or treatment procedure requiring high-tech,
- 5% of Sogd population considering the high medical and clinical levels available in this Oblast,
- The whole population of RPP rayons and Dushanbe city.

The table below presents the detailed sharing of population per oblast.

ESTIMATION OF THE CATCHMENT’S POPULATION FOR HIGH-TECH MEDICAL IN DUSHANBE

	2010	2015	2020	%on total population of Oblast and rayons
GBAO	19 416	20 101	20 918	10%
Khatlon	270 020	304 465	343 406	10%
Sogd	110 770	122 968	136 567	5%
RPP	1 591 748	1 792 149	2 017 780	100%
Dushanbe	700 700	758 579	821 000	100%
	2 692 654	2 998 262	3 339 671	

The parameters were also revised and sometimes increased considering the specific context of Dushanbe city and the existing number of academic and tertiary care hospital. These standards are presented in the table below:

HIGH TECH EQUIPMENT – INTERNATIONAL BENCHMARKS – PROPOSED STANDARD FOR TAJIKISTAN AND NUMBER OF UNITS PROPOSED FOR DUSHANBE

EQUIPMENT	OECD BENCHMARK (2009 OR LATEST YEAR AVAILABLE)	PROPOSED STANDARD FOR TAJIKISTAN	PROPOSED STANDARD FOR DUSHANBE	PROPOSED STANDARD OF EQUIPMENT FOR DUSHANBE IN 2015	PROPOSED STANDARD OF EQUIPMENT FOR DUSHANBE IN 2020
MRI	Between 5 and 10 units per million population	0,7 to 1.2 unit per million population	1.2 to 1.5 unit per million population	3	5
CT Scans	Between 10 and 19 units per million population	1,10 to 1,8 units per million population	1,5 to 2,5 units per million population	4	8

Mammograph units	Around 20 units per million population	3.5 to 4.5 units per million population	3.5 to 4.5 units per million population	10	15
Radiation therapy equipment	Between 4 and 5 units per million population	0,7 to 1,2 units per million population	0,7 to 1,2 units per million population	2	4
Angiography	Between 3 and 4 units per million population	0,7 to 1 unit per million population	1 to 1,5 unit per million population	3	5
Lithotripsy	Between 1 and 2 units per million population	0,5 to 0,8 unit per million population	0,8 to 1 unit per million population	2	3
Haemodialysis	Between 40 and 45 units per million population aged between 15 and 59 years Between 200 and 223 units per million population aged 60 years and over	50 to 60 units per million population	50 to 60 units ⁷ per million population	38	50
Neonatology beds (level 1)	French Benchmark: 3/1000 births	2/1000 births	2,5/1000 births ⁸	-	73
Neonatology beds (level 2 – Intensive Care)	French Benchmark 1,45/1000 births	1/1000 births	1,2/1000 births ⁹		35
Neonatology beds (level 3 – Resuscitation unit)	French Benchmark 0,65/1000 births	0,5/1000 births	0,65/1000 births ¹⁰		20
ICU beds adults	USA: 20 beds/100 000 population France: 9,3 beds/100 000 population UK: 3,5 beds/100 000 population Canada: 13,5 beds/100 000 population Belgium: 21,9 beds/100 000 population Germany: 24,6 beds/100 000	3,5 beds/100 000 population	4 beds/100 000 population	120	130

⁷ Estimation based on Dushanbe's population only considering that haemodialysis units will also be provided in the other oblast and rayons of the country

⁸ Based on the number of deliveries expected in Dushanbe by the year 2020

⁹ Idem

¹⁰ Idem

	population Netherlands: 8,4 beds/ 100 000 population Spain: 8,2 beds/100 000 population				
Angiography Ophthalmology		0,75 unit/100 000 population	0,75 unit/ 100 000 population	22	25
Echograph general purpose		5,50 unit/100 000 population	5,50 unit/100 000 population	165	185
Echograph Ophthalmology	OECD benchmark: 0,72	0.5 unit/100 000 population	0.5 unit/100 000 population	15	17
Defibrillator		5 unit/100 000 population	5 unit/100 000 population	150	167
Gamma Camera		0,10 per 100 000 population	0,15 per 100 000 population	4	5
Dental Unit		5 per 100 000 population	5 per 100 000 population Based only on Dushanbe population	38	41
X-ray unit		1 unit/100 000 population		Depending on the number of hospital remaining in the system	Depending on the number of hospital remaining in the system
X-ray unit mobile		3 unit/100 000 population			
X-ray hemodynamic unit		0,20 unit/100 000 population	0,20 unit/100 000 population	6	7
Extra corporeal unit		0,10 unit/100 000 population	0,10 unit/100 000 population	3	4
Emergency equipment and transportation means including one sanitary helicopter for patients transport and evacuation from and to Dushanbe hospitals					

TAJIKISTAN

WORLD BANK

COMMUNITY & BASIC HEALTH PROJECT

TECHNICAL ASSISTANCE
IN HEALTH SECTOR MASTER PLAN DEVELOPMENT

Grant # IDA – H4610

RFP # CBHP/H-4610/QCBS/009/002

DELIVERABLE 1
HEALTH CARE FACILITIES MASTER PLAN
AT OBLAST LEVEL

FINAL REPORT

NOVEMBRE 2010



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ABBREVIATIONS

ALOS	Average Length of Stay
BBP	Basic Benefit Package
BoD	Burden of diseases
CAR	Central Asia Republics
CHLP	Healthy Life Style Promotion Centre
CHST	National Health Strategy in Tajikistan
CIS	Commonwealth of Independent States
CRH	Central Rayon Hospital
CT Scan	Computerized Tomography
DOTS	Directly observed treatment, short course
EIU	Economist Intelligence Unit
EU	European Union
FD	Family Doctor
FM	Family Medicine
FN	Family Nurse
GDP	Gross Domestic Product
GBAO	Gorno-Badakhshan Autonomous Oblast
GIS	Geographical Information System
GP	General practitioner
Gyne-Obs	Gynaecology-Obstetrics
HALE	Healthy Average Life Expectancy
HIS	Health Information System
HIV/AIDS	Human immunodeficiency virus/acquired immunodeficiency syndrome
ICU	Intensive Care Unit
IMCI	Integrated Management of Childhood illnesses
LTC	Long Term Care
MoH	Ministry of Health
Ob&Gyns	Gynaecology-Obstetrics
MRI	Magnetic Resonance Imaging
OECD	Organisation for Economic Co-operation in Europe
PHC	Primary health centre

RTDC	Republican Tropical Diseases Centre
RPP	Rayons under direct Republican Jurisdiction
SES	Sanitary Epidemiology Stations
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infection
SUB	Rural District Hospitals
TA	Technical Assistance
TB	Tuberculosis
THE	Total Health Expenditure
ToR	Terms of reference
WHO	World Health Organisation

CHAPTER 1. GENERAL CONTEX, OBJECTIVES AND SCOPE OF TAJIK HEALTHCARE MASTERPLAN

1. INTRODUCTION

1.1. Objectives and scope of healthcare Master Plan

Tajikistan is undergoing a complex transition from a health system inherited from the Soviet period to new forms of management, financing and health care provision. One of the main challenges for the future will be to reorient the health system towards primary care and public health rather than hospital-based secondary and tertiary care.

The purpose of the Healthcare Facilities Master Plan is to propose a fair and efficient distribution of outpatient and inpatient services all over the country, with an adequate sharing between primary, secondary and tertiary care facilities. The main objective is also to restructure the healthcare system, in order to be in compliance with the best international practice and standards, and to reach the following targets:

- Improving the access of the population to healthcare services and increasing equity in the provision of services,
- Ensuring healthcare quality and safety,
- Rising efficacy, efficiency, productivity and cost-effectiveness,
- Setting-up of planning procedures and regulation rules,
- Implementation of alternative models for hospital services delivery (i.e. modern day practice clinic, ambulatory care, day surgery and outpatient services),
- Developing the coordination and complementary with other partners and with social sector,
- Reducing regional discrepancies in terms of primary care and hospital services available.

Another objective of the present master plan is to develop a long term vision and strategy for an efficient, sustainable and equitable healthcare network and should serve as the key conceptual document to direct future infrastructure investments in health sector.

The drawing-up of the Tajik healthcare facilities Master Plan has:

- Taken into consideration the actualities of the country in terms of affordability, socio-economic context and human resources constraints and opportunities.
- Been driven by the following criteria:
 - Answer to the healthcare needs of the population,
 - Enhancement of healthcare quality and safety,
 - Delivering of healthcare services in a more effective and efficient way.

The National Healthcare facilities Master Plan for Tajikistan is made up of three deliverables:

DELIVERABLE 1: Healthcare facilities master plan and restructuring strategy per Oblast

DELIVERABLE 2: Healthcare master plan per rayon

From the defined planning parameters agreed with the MoH and the working group, a matrix of analysis was developed for each rayon of the country combining both:

- On one hand, a presentation of existing facilities, current workloads and performance indicators, sharing of activity between primary and specialized care, workforce available at PHC and hospital levels,
- On other hand, the proposed restructuring strategy and facilities to be retained and strengthened within the system taking into account the agreed planning parameters.

For each rayon, the following indicators are presented:

- Number of needed comprehensive PHC according to the population and its anticipated growth for next decade,
- Staff projections at PHC level including number of family doctors, family nurses, gynaecologists-obstetricians, paediatricians.
- Assumptions concerning future utilisation ratios for PHC services,
- Overall hospital sector reconfiguration for the rayon,
- Number of acute care beds and hospitals for the rayon,
- Anticipated hospital workloads,
- Desirable rates and targeted ratios for modern day practice clinic,

For each rayon, a set of maps was developed illustrating the current existing facilities, population density and access-times, as well as the proposed scenario.

DELIVERABLE 3: Implementation plan including:

- Implementation strategy with a detailed delineation of key milestones, monitoring tools, committees to be implemented,
- Phasing of activities,
- Implementation plan matrix,
- Monitoring and evaluation indicators,
- Global estimation of investment costs induced by the master plan.

1.2. Methodology

1.2.1. Analysis of the current situation

The analysis of the current situation has constituted a crucial stage in the drawing-up of the present healthcare facilities master plan at macro and micro levels as described below:

Macro level analysis

A comprehensive analysis of the general context of the country, as well as of the current undergoing reforms was conducted in order to constitute the “referential” on the basis of which the restructuring strategy has been determined with in particular:

- The health policy, current health and financing reforms, approved National Health Strategy,
- The institutional organisation of the health sector at national and local levels,
- The main stakeholders involved (including the International Development Partners),
- The health financing system (including the capitation model for PHC and the proposed case-based payment for hospital sector)
- The demographic transition, morbidity and epidemiological profile and evolution of the last years,
- The geographical and socio-economic disparities,
- The hospital service restructuring concept for 2006-2010

Micro level analysis

Five survey questionnaires have been developed in order to collect the data from oblasts, rayons, hospitals, and PHC centres. A specific questionnaire was also elaborated for Dushanbe taking into account the specificities of the capital city.

A differentiated approach was developed depending on the number and categories of healthcare facilities:

- Full account survey for oblasts, rayons, cities, Republican hospitals, Scientific and research institutes, oblast hospitals, central rayon hospitals, specialized hospitals, dispensaries, maternity houses, urban health centres, rayon health centres, emergency health stations,
- Representative sample for rural district hospitals, rural health centres, specialized outpatient centres, health houses

The survey methodology and questionnaires structures were built in order to guarantee a minimum level of reliability of the data collected on both quantitative and qualitative aspects (e.g. cross check of the data using the different levels of questionnaires). Before generalisation in all oblasts and rayons, the questionnaires were tested in several rayons and facilities.

1.2.2. Data collection and compilation – Development of healthcare database

A total of 646 questionnaires were digitalised in the MS Access database developed within the Master Plan exercise:

- 4 questionnaires corresponding to the 4 oblasts of the country,
- 62 questionnaires related to the Rayons and main cities of the country,
- 190 hospital questionnaires,
- 390 primary health care centres and health houses.

The data collected was compiled and analysed from the following perspectives:

- Geographical disparities in terms of healthcare services available from both qualitative and quantitative aspects,
- Utilisation rates and workloads including performance indicators for the different categories of facilities,
- Resources available: staffing, equipment and financial,
- Population accessibility to the different levels of care,
- The main problems hindering the appropriate, effective and efficient functioning of the system.

The data collected constitutes the core information from which it has been possible to analyse the current situation, to identify sustainable possible options and to define, in close liaison with the MoH and the working group, the proposed reconfiguration strategy and future healthcare facilities network.

Furthermore, this database constitutes an important planning, management and monitoring tool, available for the MoH and chief doctors in oblasts and rayons, providing relevant information as regard facilities, workloads, physical status, level of equipment, staffing, etc.

1.2.3. Definition of planning parameters for decision making and benchmarking

The development of the Health Care Facilities Master Plan and Restructuring Strategy for the Republic of Tajikistan implies the definition of new planning standards to guide the future development of healthcare network. The establishment of these parameters proceeds from an analysis of the current situation and available resources compared with international trends and benchmarks, in order to determine the relevant standards and ratios for the Republic of Tajikistan. These parameters were displayed in the context of the dual epidemiological profile characterizing the Republic of Tajikistan: on one hand communicable diseases has returned as a major issue in Tajikistan population, on the other hand the main causes for death are similar to Western Europe and OECD countries with an increasing prevalence of non communicable diseases (Cf. Chapter 2 for the exhaustive presentation of these parameters).

1.2.4. Development of Geographical Information System (GIS)

More than 200 maps were developed for illustration of the master plan. All the healthcare facilities existing in the country were plotted in the Geographical Information System, representing a total of more than 3 000 facilities.

For the drawing-up of the present healthcare sector Master Plan, the access times were estimated based on reliable information and data, using the more adequate and efficient approach to assess this parameter.

1.2.5. Working group composition and meetings

A working group was established within the MoH (see annex).

1.2.6. Sites visits

A number of field visits were organised at facility level in order to complete the existing data and to visit the different categories of healthcare facilities: i.e. rayon and rural health centres, health houses, specialized outpatient centres, various categories of hospitals (Oblast reference hospitals, central rayon and rural hospitals, specialized facilities and dispensaries). These sites visits were also the occasion to conduct the relevant interviews and discussions with the local health authorities at oblast and rayon levels.

Several hospitals and outpatient facilities were also visited in Dushanbe (sample of Republican and research centres, general and city hospitals, emergency and maternity specialized facilities, etc.).

A number of meetings were organised with the main stakeholders at national level: Minister of Health, Deputy ministers, Directors of health departments under the Ministry of health, Representative of International Development Partners, etc.

1.2.7. Round tables for presentation of the draft master plan

A total of five round tables were organised in October 2010 with the representatives of the oblasts, rayons and facilities in order to present the draft master plan outputs and the proposed restructuring strategy per oblast and rayon.

Around 300 participants have attended these round tables.

The round tables were the occasion:

- To remind the main planning parameters defined for the development of the master plan,
- To present the outputs of the analysis of the current situation at oblasts and rayons levels,
- To expose the restructuring strategy proposed,
- To debate and clarify the issues raising from the previous.

1.2.8. Training activities

The master plan do not constitute an end in itself but rather marks the beginning of a new period which will embark on major transformations in the healthcare network organisation and configuration, healthcare delivery models, management of the structures.

Five training sessions were implemented between October and November 2010 in the four oblasts of the country and in Dushanbe city. The general goal of these interactive training sessions was to facilitate the development, implementation and appropriation of the master plan by the main stakeholders in order to ensure the modernization and consolidation of the health sector in the Republic of Tajikistan.

These training sessions were aimed to provide :

- A comprehensive understanding of the methodology used to elaborate the masterplan and of the different reconfiguration processes recommended in the final document,
- A good knowledge of the strategy to implement the Masterplan, for each reconfiguration process,
- An opportunity to develop skills and knowledge in terms of monitoring tools and mechanism to assess and measure the results of the reconfiguration strategy.

2. STRATEGIC AND SOCIO-ECONOMIC CONTEXT

2.1. Geographical characteristics and country background

Tajikistan is a country located in its southeast part of the Central Asia. In the west and the north it borders with **Uzbekistan and Kyrgyzstan**, in the south - with **Afghanistan**, and in the east, in its mountainous part, with **China**. The land mass of the country occupies **141,510 sq. km**. The terrain is mostly mountainous, with **mountains covering 93%** of the surface territory. **More than half of Tajikistan lies above an elevation of 3,000 meters**. Even the lowlands, which are located in the Fergana Valley in the far north and in Khatlon Oblast in the southwest, are well above sea level.

Because of the mountainous terrain most of the country is linked by road, not railways. The Tajik road network is nearly 30,000 km long, but roughly one-third of this is un-surfaced, requiring extensive maintenance and investments. On the whole, as a legacy from Soviet times, Tajikistan's road system is relatively well developed reaching most settlements within the country, although years of civil war and economic difficulties have degraded the system's quality. Roads in the mountainous areas are usually closed between early November and May due to the harsh weather conditions. During the last decade several major road infrastructure projects were implemented which contributed to the improved population and basic infrastructure accessibility and foreign external transport links. These projects included the construction of a road tunnel under the Chormaghzak pass and Ozodi (Liberty) tunnel south of Dushanbe, rehabilitation of the Dushanbe-Chanak road connecting Tajikistan with Uzbekistan and the trans-border bridge and road between Tajikistan and

Afghanistan.

The mountainous rugged terrain, climatic conditions and problems with road infrastructure presents specific and unique challenge for planning of the health infrastructure in the country and accentuates the importance of the population access times to health facilities as one of the key planning parameters.

The health infrastructure and human resources needs generally differ for urban and rural residents. Majority of the Tajikistan population lives in rural places. Out of the total 7,529.6 thousand population of the country, **73.6% resides in rural areas** and the share of the rural population is slowly increasing over the time due to the higher population growth rate (Agency of Statistics of Tajikistan, 2010).

There are four levels of governance and self-governance *Oblast* (province), *rayon* (district) and villages. At each level there is an executive body (*khukumat*) and an elected advisory body (*majlis*). There are oblast/city and *rayon* level administrations (*khukumats*), as well as village administrations (*jamoats*). The heads of oblasts and rayons are appointed by the president. The oblast khukumats are responsible for overall strategic direction of the health sector and resource allocation. Rayon administrations and jamoat councils organize actual financing and provision of health services to their inhabitants.

After numerous changes in territorial administrative divisions – there are now five main administrative-territorial units: the three oblasts are Khatlon (main city, Kurgan-Tyube), Sogd (main city, Khodjand) and the Gorno-Badakhshan Autonomous Oblast (GBAO; main city, Khorog). This latter region is distinguished with geographical access problems and has higher degree of self-governance. Dushanbe City also has oblast status. In addition, there are 13 special districts (RRP-rayons of republican subordination) that are independent from oblasts and report directly to the central state authorities. The country has **17 cities, 74 towns, 58 districts (rayons) and 367 jamoats**. **Under the current master plan the recommendations for oblast and rayon level health network modernization are provided. Elaboration of the detailed master plans and their implementation strategies will be the responsibility of the respective oblast and rayon health authorities.**

Tajikistan inherited considerable environmental problems. Polluted soil as a result of the narrow specialization in cotton production during the Soviet times is further contaminated with domestic waste both in rural areas and cities. The development of the irrigation network has led to water shortages and widespread salination of the soil (EIU, 2006). Radioactive waste in rural areas of Sogd and Khatlon and the widespread use of asbestos for roof constructions are other environmental challenges with as yet unknown consequences for population health. The country also experiences frequent floods, mudslides after heavy rains due to deforestation and soil erosion, which leads to water pollution (Khodjamurodov & Rechel, 2010).

Generally population has fairly high access rate to the safe water resources: up to 93% of household in urban areas and 61% in rural settings reports improved drinking water supply. However, attainments have not evenly benefited the nation. E.g. GBAO and Khatlon fair significantly lower than national average - only 51.4% and 54.7% of households respectively with safe drinking water. **Weak or non-existent water and sanitation infrastructure can lead to a myriad of health problems including parasitic infection, dysentery, typhoid, and viral infection.** In fact, the **water-borne diseases may account for up to 40% of the burden caused by the infectious diseases** (WHO, 2006) . **This increases the demand for health services in respective areas and justifies relatively higher than national average supply of facilities and beds.**

2.2. Socio-economic situation

Despite the impressive progress achieved in the last decade, Tajikistan is still the **lowest income country in Central Asia**. The estimated per capita GNI is estimated at \$700 (Atals Method, The World Bank, 2009). **Because of a lack of employment opportunities in Tajikistan, nearly half of the labour force works abroad, primarily in Russia and Kazakhstan, supporting families in Tajikistan through remittances.**

Before the onset of the global financial crisis in 2008, Tajikistan was the labour exporting country with the highest share of GDP (45 per cent) generated through remittances (Ratha & Mohapatra, 2010). **Less than 7% of the land area is arable.** Cotton is the most important crop, but this sector is burdened with debt and obsolete infrastructure. Mineral resources include silver, gold, uranium, and tungsten. Industry consists only of a large aluminium plant, hydropower facilities, and small obsolete factories mostly in light industry and food processing.

In the early 2000ies the country economic was recovering with a rapid pace after the severe damage to economic infrastructure and sharp decline in industrial and agricultural production caused by the civil war. Economic growth reached **12.7% in 2004**, but dropped below 9% in 2005-08, as the effects of higher oil prices and then the international financial crisis began to register - mainly in the form of lower prices for key export commodities and lower remittances from Tajiks working abroad, due to the global economic downturn. **In 2009 GDP growth dropped to below 3%** as a result of the world recession.

The outlook for 2011 is cautiously optimistic mainly due to stabilizing external environment and strong hydropower production. The GDP is expected to grow by 5.5% in 2010 as exports are picking up and the remittances rebounded by 25% compared with the first half of 2009 (The World Bank, 2010). The Tajikistan's economic situation remains fragile due to uneven implementation of structural reforms, widespread unemployment, seasonal power shortages, and the external debt burden. Poverty was widespread but as a result of economic growth during the last decade **poverty rates have fallen between 1999 and 2009 from 83% to 47%.** Yet, more than third of the population still lives in poverty. **Poverty status generally affects people's health and their ability to access healthcare.** Certain health conditions disproportionately affect the poor through lack of access to water and sanitation, proper nutrition, and adequate housing. Beyond exposures that increase the likelihood of disease, **poverty is linked to reduced access to healthcare through inability to pay for transportation, user fees, and medication.**

Existence of relatively large number of poor families that are susceptible to poor health and financial access problems in Tajikistan further aggravates the geographical access issues identified above and should be taken into account while planning the population proximity parameters of health infrastructure.

While infant and child mortality and other poverty and social indicators have improved in the last decade, following the post-independence decline due to the civil war and the disruption in public services, **social protection programs remain constrained by insufficient public spending and also by the population growth.** As a result, the **income disparities are yet large**—Tajikistan's Gini coefficient is 0.51—and they differ by region. For example, up to 70% of the population in Sogd was poor, compared with only 43% in Dushanbe in 2008. **Food insecurity is also high**, varying according to location and season. About 27% of children under-5 is stunted—the highest of any country in the Commonwealth of Independent States (CIS)—and up to one fourth of households reported inadequate access to food (The World Bank, 2009). **The health network planning should also reflect significant income and regional socio-economic inequalities currently observed in Tajikistan that are less likely to be completely eradicated during the next decade.**

2.3. Demographic and epidemiological context

Demographic factors are also of paramount importance for health sector master planning. During the Soviet era, Tajikistan had one of the highest birth rates compared to other republics. In the 1980s, the rate of natural population growth was about 3%, and although the next decade – the decade of civil war and economic crisis – saw a dramatic decline in the growth rate to 1.1% in 2002, population growth has picked up again since early years of transition to reach up to 2.1% in 2009. As a result, Tajikistan still has one of the highest figures for natural growth among the CIS countries, reflecting a relatively high birth rate and a low death rate. The population growth is partially offset by the considerable outmigration. This has major implications for the demographic structure of the population, with the average age being 24 years -Tajiks are among the youngest nations in the region. According to the latest official statistics (see *Table 1*), 35% of the population are children aged 0-14 years, out of which about 27% are children under 5 years of age. The working age population (15-59 years) comprises about 60% of the population, and only 3.8% are aged over 65 (Agency of Statistics, 2010).

Table 1 Population age structure as of 1 January 2010, in 100,000, Tajikistan

Age Group	Male	Female	Total
Under 1 years	100.2	95.4	195.6
1 to 4	381.7	363.7	745.4

5 to 9	424.6	403.4	828
10 to 14	440	426.1	866.1
15 to 19	441	428	869
20 to 24	419.8	413.3	833.1
25 to 29	324.3	321.6	645.9
30 to 34	250.5	256	506.5
35 to 39	217.4	226.4	443.8
40 to 44	192.4	201.3	393.7
45 to 49	179.7	186.6	366.3
50 to 54	133	137.3	270.3
55 to 59	87.9	91.5	179.4
60 to 64	49.5	50.8	100.3
65 to 69	38.1	34.6	72.7
70 to 74	39.7	42.9	82.6
75 to 79	28.4	34.1	62.5
80 to 84	21	22.2	43.2
85 to 89	6.4	12.4	18.8
90 to 94	0.5	3.5	4
95 to 99	0.2	1.6	1.8
over 100 years	0	0.6	0.6
	3776.3	3753.3	7529.6

Source: Agency of Statistics, Tajikistan 2010.

Generally children under 5 years and people over 65 years of age require and utilize more services on both primary and secondary care – they need more general and surgical bed days, more visits and more medications than the rest of the population. **While share of the aged population over 65 is relatively low compared to the OECD and the WHO European Region averages, at the same time the proportion of children and children under 5 years of age is relatively high. This will have implications for the master planning – with children care issues requiring special attention.**

The demographic profile also affects the epidemiologic picture in the country. Tajikistan, as many other countries in the region are in the process of the epidemiologic transition from high prevalence of communicable diseases to the situation where non-communicable diseases are becoming dominant cause of morbidity and mortality in the country. However, country still faces dual burden of diseases – high incidence of infectious and water-borne diseases, diseases related to the malnutrition and micronutrient deficiency is combined with rising prevalence and mortality associated with cerebrovascular diseases and neoplasms.

Life expectancy at birth in Tajikistan is estimated at 67 years (WHO, 2009) which is significantly lower compared to the EU (79), European Region (75) averages but in par with CIS (67) and CAR (69) figures. The differences with industrialized countries are more drastic when the Healthy Average Life Expectancy (HALE) at birth is considered. The People in Tajikistan can expect to have a shorter healthy life than their counterparts in other countries of the European Region. HALE at birth in the country is 57 years, or 10 years less than average total life expectancy, meaning that the average person in Tajikistan can expect to spend the last 10 years of his or her life with morbidity or disability (WHO, 2009).

Taking into account the experience of other countries in the region – it is likely that the relative share of communicable diseases in the overall disease burden in the country will decrease in favour of non-communicable diseases. With the increasing life expectancy over the time - the management of life style and chronic diseases will be eventually moved to the forefront of the health sector agenda. This should be taken into account when planning future utilization and demand for specific health

care services, for example infectious diseases specialized hospitals, home care, geriatric and end of life care.

2.4. Main contributors to the diseases burden

The Under-5, infant and maternal mortality rates despite significant improvements in the last decade – remain high if various household survey results are considered. The official statistics reported infant mortality at 14.5 per 1,000 live births in 2006 (MedStat, DPS2, 2010) implying a significant decrease from 1990 figure at 40 per 1,000 live births. However, based on the household survey findings, the WHO estimates both infant and Under-5 mortality at much higher level of respectively 54 and 64 per 1,000 live births (WHO, 2009). Similar situation is with maternal mortality ratios – country reported 43 maternal deaths per 100,000 live births in 2006, while WHO estimates for 2008 are around 64 per 100,000 live births (WHO, 2009).

Analysis of the infant and maternal death structure shows that perinatal conditions are one of the main contributing factors in high maternal and neonatal mortality. Limited access to quality antenatal and delivery services, lack of adequate system in place to offer timely referral and provision of an emergency obstetric care (Habibov & Fan, 2008), high share of home deliveries, poor nutritional status of pregnant, high share of pre-term babies (up to 15%), iron and micronutrient deficiency, low awareness of families and communities about adequate newborn care, high level of poverty are seen to be a major causes contributing to poor perinatal outcome. **The empirical evidence from Tajikistan emphasizes the need for quality antenatal care coverage at PHC level, upgraded maternal and child health delivery network, improved human resources and well-functioning obstetric and neonatal referral systems serving these specific groups of population.**

High morbidity and mortality of children under 5 years old is largely determined by high poverty levels and child malnutrition and micronutrient deficiency; poor quality drinking water that becomes major cause of diarrheal diseases, which accounts for 7% of the disease burden in Tajikistan; low educational attainment of parents and poor parenting skills for child care along with lack of community support for children. **This again emphasizes the need for quality paediatric care at PHC level.**

Cerebrovascular or cardiovascular diseases are leading causes of death in Tajikistan and account for 19% of disease burden in the country and are mostly represented by ischemic heart disease. These diseases are largely due to behavioural factors including tobacco and alcohol consumption, unhealthy diet and lifestyle, lack of timely access to health care services, and low public awareness about the risk factors. **Along with healthier lifestyles, many deaths from cardiovascular diseases can also be prevented by proper management of arterial hypertension at primary and secondary care levels and improved referral, diagnostic and curative capacities of the health delivery network in Tajikistan.**

The second leading cause of death in the country is Malignant Neoplasms: as noted above population in Tajikistan faces significant environmental risk, because of polluted soil with domestic waste both in rural areas and cities. Agricultural pollution caused by insecticides and fertilizers is significant. Some industrial areas are badly polluted in cities such as Tursunzade, Javan, Sarband, Isphara and Taboshar. Environmental factors certainly influence prevalence of certain cancer diseases, which are predominated by stomach and oesophagus cancer (26% of disease burden caused by malignant neoplasm) followed by leukaemia and trachea, bronchus, lung cancers contributing 10% and 7% of disease burden respectively.

Tuberculosis presents another major public health problem in Tajikistan – country has the highest TB incidence rate in the World Health Organization's (WHO's) European Region (WHO, 2009). Tuberculosis share in the disease burden caused by infectious diseases is 17% and occupies third place after diarrhoeal diseases and meningitis. High temporary labour migration and poor living conditions of migrant workers in the destination countries, high poverty levels and inadequate nutritional status, weak health system not completely equipped to serve the needs of public as well as creating high risk for those employed in the TB facilities, and financial access barriers to care, all contribute to deteriorating epidemiological situation. **This calls for significant modernization of the existing TB network in the country.**

As noted above, communicable diseases account for up to 40% of the national disease burden. Most of the population in Tajikistan lives in rural areas with poor living conditions due to contaminated drinking and ground water supply, lack of sewage and pollution from stockbreeding farms. Consequently, burden placed by water-borne diseases, and infectious and parasitic diseases is significant. Detection of epidemic outbreaks are delayed due to delayed access of population to health care providers, which results delayed anti-epidemic response and consequently outbreaks affect significant number of people in the communities. Respiratory infections, commonly seen in Tajikistan, are predominated by lower respiratory infections that account for 24% of disease burden caused by communicable diseases. **Provision of timely access to the**

quality and adequate level care will contribute to alleviation of the existing communicable diseases burden.

Significant part of the population in Tajikistan experience nutritional deficiencies. Recent studies show that animal protein intake as well as nutritional value of consumed products declined, primarily among school age children and pregnant women. Lack of adequate nutrition and inadequate micronutrient content, low quality of nutritional products produced locally or imported, increased oil and carbohydrate consumption, significant deficiencies (iodine, vitamin A, and iron-deficiency) all indicate the need for timely intervention by the government.

Prevalence of mental diseases has increased significantly over the course of recent years, most likely caused by difficult socio-economic transition, growing unemployment and poverty. Depressive disorders, alcohol and drug dependence have become prevalent and call for attention. **This challenge should be met by community based mental health services organized according to the modern international best practice.**

The HIV/AIDS is an emerging major public health threat in Tajikistan, while prevalence rates are still low, the number of newly detected cases is growing fast. Drug trafficking from Afghanistan, which increased after independence, contributes to growing rates of drug-use in the country. The predominant route of transmission is intravenous drug use coupled with unsafe injection practices and the epidemic is still concentrated within most at risk population groups (Khodjamurodov & Rechel, 2010). **Well organized HIV/AIDS care system fully integrated in the modernized PHC system will contribute to adequate response to this emerging challenge.**

Public health problems listed above are main contributors to existing and future diseases burden in the country and served as the basis for determining general approach and planning parameters for the current health network master planning exercise in Tajikistan.

3. HEALTHCARE SYSTEM

3.1. Network of service providers in Tajikistan

Health care service delivery in Tajikistan is organized on four administrative levels: national (republican), regional (oblast), district (rayon), village and provides following services:

Individual Health Care:

Specialized inpatient services – offered by scientific research institutes and specialized hospitals. High technology services at national level include cardiovascular surgery, development of renal transplantation, hip replacement, etc.

General inpatient services offered by oblast, city, rayon and rural hospitals and out of separately standing maternity houses. These facilities also offer outpatient and diagnostic services through women consultations.

Mental health services are provided by psychiatric hospitals and psycho neurological specialized centres.

Specialized outpatient services offered by TB (TB-DOTS), STI, Narcology, Endocrine diseases specialized centres, IMCI, RH, Immunization, Tropical disease centres. Some of these facilities also have small number of hospital beds and provide specialized inpatient care.

PHC services are offered by rayon or urban health centres (former policlinics) as well as by rural health centres (former rural ambulatories) and health houses. Some of these facilities include dental care services, but there are some separate dental clinics as well. With the development of the family medicine, 27 family medicine centres (republican and oblast level) have been established throughout the country.

Diagnostic services are primarily offered out of state-owned medical establishments, but over the course of recent years, some private diagnostic service providers have emerged, including ultrasound and high technology imaging. Private provision is mainly seen for dental services and pharmacies, though the state still retains a network of state-owned pharmacies;

Services of rehabilitative care is being offered out of sanatoriums, a legacy of the Soviet Union, but their legal status and funding arrangements now have a multiplicity of forms that have emerged since independence. Most of the rehabilitation care facilities are concentrated under sectoral ministries and large state organizations.

Long-term care for disabled and elderly people, as well as other groups with special needs such as psychiatric patients, people with learning difficulties and the physically disabled are divided between two departments: the Ministry of Health and the Ministry of Social Protection (and its local offices). Social care is

based mostly upon institutional care and community care services are poorly developed. In general, dependent people living in the community must rely upon their families. Hospitals, however, are used for long-term care, for perhaps several thousand dependent people. The Ministry of Social Protection has eight nursing homes for older or disabled people. There is also a special palliative care facility for leprosy patients. These homes are very dilapidated and lack sufficient operating funds.

Ambulance services are available at all rayon and oblast hospitals and in the cities. In rural places the ambulance services are integrated in rural health centres. Ambulances are operated for emergency care, though run down vehicles and poorly functioning call centres limit the ability of this service to be responsive to population's needs.

Public health or population based services:

Sanitary-Epidemiology Services (SES) exist in all rayons and major cities. The function of the SES is a vector control and surveillance; they are charged with responsibility to prevent, control and monitor infectious diseases, to safeguard occupational health, to ensure food safety, and to limit any adverse environmental health impacts. At the apex of the vertical SES structure is the Republican SES in Dushanbe and under it the oblast and rayon branches 74 in total. SES laboratories analyse patient samples, monitor industrial pollution and test the water supply; oblast level laboratories undertake bacteriological, parasitological, toxicological, viral and water analysis. The SES confirms cases of infectious disease outbreak, investigates the source and takes the necessary measures to prevent epidemic spread. Recently the responsibility to carry out surveillance for vaccine-preventable diseases has been shifted over to the Centres for Immunoprophylaxy or Immunization Centres; for malaria - to Centres for Tropical diseases, for HIV/AIDS to AIDS Centres.

AIDS Centres have emerged during soviet times, but have grown recently as a result of increasing donor financing, primarily from the Global Fund. As of 2009 Tajikistan has 26 AIDS centres (1 National, 1 regional, 3 Oblast level, 4 city centres and 17 rayon level centres). With the funds from the Global Fund, Tajikistan intends to equip these facilities as well as to fund recurrent costs, including staff salaries. These centres have responsibility for HIV/AIDS surveillance, as well as they provide methodological guidance for national response to HIV/AIDS and also offer curative services to HIV positive individuals.

Immunization Centres as a separately standing system emerged in response to failing national immunization program during 1993-1994 through separation of this function from SES. Currently beyond the Republic Immunization centre, there are six oblast level departments subordinated to the republican centre, which is directly accountable to the MoH. In addition there are 65 centres in each of the rayons integrated in the city or rayon hospitals. Responsibilities include: managing the national program for immunization; conducting vaccine-preventable disease surveillance; planning, purchasing and distributing vaccines and supplies; managing cold chain; responding to infectious outbreaks of vaccine-preventable diseases; collecting and analysing statistical reports from providers related to immunization services; providing methodological guidance around immunization. Responsibility for immunizing children and adults rests with the network of PHC facilities in the country.

Tropical Centres have also emerged recently in response to Malaria outbreak. There are *Republican Tropical Disease Centre* (RTDC) and sub-national centres established on oblast, rayon and city level, which are staffed and funded by the government. There are 14 centres in total, which bear responsibility for undertaking surveillance of the tropical diseases; collecting and analysing statistical data from providers; coordinating local and national response to tropical disease outbreaks and providing methodological guidance in their sphere of competence.

Healthy Life Style Promotion Centres (CHLP) were established in 1999 by the MoH and in 2000 oblast, rayon and city centres have emerged as independent legal entities. Currently there are 68 centres throughout the country with the primary function of increasing population awareness about nutrition, personal hygiene, healthy lifestyle promotion, etc. Services of these centres are funded by State and local budgets.

In addition to the abovementioned centers, there are other national institutions responsible for nutrition, and for work-related injuries and diseases. These institutions have national representation without oblast or rayon level presence. Government ministries also run health care facilities (hospitals and polyclinics) for their employees, including the Ministries of Internal Affairs, Security, Taxation, Railways, and Tajik Air.

These health facilities generally are better than the mainstream facilities and have more medical supplies and pharmaceuticals. Since these Ministries fund health care from their budgets, this expenditure does not appear in overall government health expenditure. These parallel health care services include five hospitals with a total of 530 beds. The previous Soviet model of workplace based health services is partially intact but suffering from lack of funds since production levels have dropped. Large factories and enterprises (still mainly state-owned) provide inpatient and outpatient services for their employees. They provide and maintain the facilities with the running costs supplemented by oblast or rayon administrations

(Khodjamurodov & Rechel, 2010). The medical education system is presented with the State Medical University, Institute for Postgraduate Medical Education and a network of medical nursing colleges. The National Medical Academy leads the scientific research work in health sciences.

Along with direct managerial responsibilities for republican level health institutions, the Ministry of Health provides overall policy and regulatory supervision for the health delivery network through the committees for state supervision of medical, pharmaceutical and sanitary-epidemiologic activities.

During recent years, the network of providers has become more complicated as a result of donor supported projects. In addition to the district hospitals, polyclinics, specialized centres for TB, STI, etc. that reflect the legacy of the Soviet system, brand new centres have emerged for *Integrated Management of Childhood Illnesses* (IMCI), for *Reproductive Health*, for *Immunization*, for *Tropical Diseases* (TD), *AIDS Centres*, *TB-DOTS Centres* and centres for *Healthy Lifestyle*. This plethora of specialized centres is contrary to the Government's reform priorities stated in the Health Strategy 2002-2010, which declared PHC based on the Family Medicine model to be the priority for the state. Many functions, which in theory, should be delivered by FM based PHC, are housed in these specialized centres and most state regulations do not allow newly trained family physicians and nurses to offer these services in the communities they work. **Therefore, the current structure of district-level PHC provision does not seem supportive of the reform priorities stated in government documents.**

Careful re-evaluation of the network of service providers is warranted to integrate services and achieve efficiency gains as well as better service provision to the public.

Furthermore, Tajikistan's Health Strategy 2002-2010 was explicit about reorganization and restructuring of service provider network through downsizing the hospital sector. In the last decade, Tajikistan managed to reduce its hospital bed capacity by 35%, though the country still has a high bed-to-population ratio for the CIS region. Patients in Tajik hospitals also stay much longer than their neighbours in Kazakhstan, Kyrgyz Republic or in Uzbekistan, representing relative inefficiency of utilizing hospital beds and weak penetration of new technologies in the system and/or adverse economic incentives that do not motivate providers to shorten patients' stay in the facility. Moreover, even with such lengthy stays, hospital occupancy rates are low: 60% for all types of hospitals and 61 % for acute care hospitals. This level of hospital capacity utilization indicates inefficiencies of the sector and provides significant room for downsizing. Even with current treatment practices (lengthy stays in the hospital) Tajikistan could reduce its bed capacity 40,344 by 33% and increase hospital occupancy rates up to 90%. If reductions in average length of stay are achieved to the levels seen in Uzbekistan, then Tajikistan could reduce current bed capacity by 49%. **Thus, the room for rationalizing existing hospital infrastructure is significant and not yet fully exploited by the Government.**

Staff internal and external migration is a major challenge for service delivery network in Tajikistan. Migration involves PHC staff doctors and nurses, lab technicians, epidemiologists, etc. who try to either migrate to Dushanbe in search for job, or leave the country in a search for better income. Migratory pressures create a dual problem: significant shortage of qualified staff in rural areas and its oversupply in Dushanbe. **Regional inequalities are significant and government is trying to address the problem, however results of enacted policies remain to be seen over the coming years.**

Shortage of qualified staff in the regions is also determined by underproduction of trained professionals by the education system. Balancing the country's immediate, medium and long-term needs with adequate production of doctors, nurses, lab technicians, epidemiologist, health care managers, etc. is essential for Tajikistan to address human resources challenges. Current re-training capacity, which is in place for FM doctor and nurse re-training, will only be able to meet the national needs in 6-8 years, assuming that the current model of FM (two nurses per one doctor for 1,200-1,500) is kept. However, if the model is revisited and the target nurse-to-doctor ratio increased, production of the required number of FM nurses may take more than 10 years. **Thus, better planning over the time for structural and capacity changes of the service delivery network and for human resources are warranted to improve the current situation.**

The shortage of trained staff is strongly felt in the public health system, which includes: a) SanEpid system; b) immunization; c) tropical diseases; d) AIDS and e) healthy lifestyle promotion.

There is a multiplicity of centres that carry out similar functions but for different diseases, for example disease surveillance is conducted by SaneEpid, Immunization, AIDS and tropical disease centres. This aggravates staff shortages by increasing demand for trained epidemiologists, qualified lab technicians, etc. that have to be hired and employed by each institution fulfilling a duplicative role. **This multiplicity and duplication creates a vicious cycle of staff and funding inadequacy, which leads to low quality of services and weak implementation of the surveillance function that fails to detect and avert epidemic outbreaks in a timely way, as is frequently seen in Tajikistan. Thus, thoughtful rationalization of**

public health institutions could help reduce human resources shortages and increase capabilities and efficiency of the system.

Finally, the private sector is in its nascent stage of development. At present, mainly dental facilities and pharmacies have become private and a small number of private diagnostic centres have emerged. The government prioritized private sector development under its Health Strategy for 2002-2010, but to date progress has been very limited. It is likely that the reasons underlying this are the plethora of health sector-specific rules along with restrictive state regulations that pose obstacles to private enterprises (Tajikistan is ranked 159 out of 181 economies on ease of doing business).

3.2. Health Financing

Tajikistan inherited its system of health service financing from the Soviet Union. State, oblast and local budgets fund service providers in their respective jurisdictions, using line item budgeting i.e. input-based financing. Therefore, the amount of public funds allocated to institutions is based on the number of beds, staff and historical utility costs. Economic downturn during transition significantly decreased public funding for health, which currently amounts to 16% of *Total Health Expenditure* (THE) and the remaining is born by donors and population. The national health strategy 2011-2020 calls for focusing service provision on population's needs and priority population groups through **funding output of providers and moving away from input-based financing**. As a result, the government mounted health care financing reforms and planned the introduction of case-based financing for hospital services and capitation for PHC. Progress on hospital financing reform has been very slow. Output based payments have not replaced input-based financing yet.

Therefore, economic incentives on a provider/hospital level yet do not facilitate hospital sector optimization, or reduction of excessive capacity and triggering efficiency and quality improvements. The deteriorating quality in Tajik hospitals concerns policy makers and consumers alike. Funding from the state budget is only sufficient to pay staff salaries and utilities and provides little for other inputs, which negatively affects the quality of care provided in hospitals.

Average monthly salary of the medical personnel of all levels in multi-specialty polyclinics was app. 192 Somoni according to the RT Poverty Assessment estimates the health workers average monthly wage is 119 Somoni (US\$ 35) for PHC staff and 78 Somoni (US\$ 20) for secondary health care staff (The World Bank, March, 2009, page 98 out of 141). However, the other sources report lower average salary: for doctors 51.8 Somoni and for nurses 42.7 Somoni (Dabalene & Wane, 2008 using Tajikistan PETS 2007 data). This official income for majority of health workers is supplemented by the informal payments received from patients. About 51% of health workers admit receiving informal payments in the country, with highest proportion observed in Dushanbe at 71.6% . The average income received from the informal sources is app. 22.8 Somoni per month for a health worker (or 60.4% of an average official salary), with doctors earning more than twice as much at 51.8 Somoni compared to 22.7 Somoni earned by nurses (Dabalene & Wane, 2008). *Perceived "fair wage" is at around 523 Samoni or 120 US\$* (The World Bank, April, 2007).

Private expenditures on health accounted for app. 72.4% of total health expenditures in the country in 2007 (The World Bank, March, 2009). Health care in Tajikistan is predominantly financed through the private, out of pocket expenditures on health. Majority of the patients pay formally or more frequently, informally for the medical services. According to the baseline survey conducted in 2007 in several rayons of Tajikistan, prior to introduction of the Basic Benefit Package (BBP) of services, the average expenses related to ambulatory visit ranged from 44 to 56 Somoni, out of which 18 to 24 Somoni were expended on pharmaceuticals. Average payment to General Practitioners amounted to 8.9 Somoni and to specialists 10.3 Somoni (Ministry of Health, "Panorama", 2007). According to the same survey, the average expense of the patients and their families in case of hospitalization is **130** Somoni. Patients undergoing surgery have paid in average 1.5 times more, than those patients that were hospitalized for other reasons. Average expenses of surgical patients were in the range of 190 to 288 Somoni, while for non-surgical patients the same range was between 131 through 174 Somoni. Almost the same difference is observed between the levels of care (Central District Hospital vs. Rural Hospital). Average sum paid by the inpatients for pharmaceuticals ranged from 32 to 87 Somoni, with average of 80 Somoni (Ministry of Health, "Panorama", 2007).

3.2.1. Health Financing Reform Initiatives

Capitation payments for PHC were piloted in several rayons with the help of donors (USAID, SDC). The number of pilot rayons has increased steadily, and the nationwide implementation is planned starting from January 1, 2011. Yet, initial results of capitation payments still fail to adequately motivate staff, attract qualified staff to under-served locations and improve the quality of care provided on a PHC level.

Inadequately low amounts paid by the state are insufficient to materialize the full potential of capitation financing. Therefore, improvements on PHC level are marginal and require more effort on the part of the government and donors alike.

Reforming financing for public health services has received insufficient attention from the government. Most services offered to the public are almost completely donor-dependant (e.g. Immunization, HIV/AIDS, malaria control, reproductive health and family planning). Most likely donor funding for this services triggered further verticalization on a rayon level, as described earlier. Donors are still a primary source of funds for necessary inputs, capital investments and sometimes even recurrent costs (e.g. The Global Fund provides recurrent funding for salaries and operations for the HIV/AIDS services). If the issues of public health financing are not addressed quickly on a policy level, if inefficiencies and duplication in the system are not gradually eliminated, if provision of public health interventions are not integrated into the PHC where possible and if management/monitoring functions are not gradually placed within the health sector's overall governance and management scheme, reducing donor dependency with public funds will become a daunting task.

Finally, the population currently covers up to 70% of the national health care bill and purchases services on their own. Direct out-of-pocket payment has become the most widespread form of patient-provider interaction. Such payments create adverse economic incentives on a provider level and triggers behaviour that undermines the continuum of care through referrals. Linkages between PHC, specialists and hospitals have broken down and providers try to keep patient attached to their facility in a hope of generating personal revenue through informal payments. Therefore, until the financing system creates sufficient incentives on a provider and/or consumer level, assuring continuum of care and service provision in a coordinated manner, becomes uncertain.

One other feature of the current health financing system severely limits any health delivery system optimization effort: with current input based rigid financing system, the budget for providers are largely dependent on their capacity and in case of capacity optimization (e.g. bed reduction) the overall funding will also may be reduced. Furthermore, the providers are unable to re-allocate funds from one budget line item to another, e.g. savings achieved through efficiency gains will be retained by financing authorities (national, oblast, rayon). These current financial provisions create major disincentive for providers to downsize and perform better and more efficiently.

The Government of Tajikistan has applied considerable efforts in the recent years to address the problems described. Public expenditures per capita on health have increased considerably from \$10 at Purchasing Power Parity (PPP) in 2002 to \$28 PPP in 2008 (National Health Accounts, 2009). The Constitutional revision introduced in 2003 had allowed defining the State Guaranteed Package of Free Services (SGPS) and introduction of formal co-payments for services not covered under the SGPS. Since 2007, piloting of SGPS on rayon level was ongoing in 8 rayons of the country and from February 2010 has been expanded to the entire Sogd Oblast. The SGPS supports the increased use of preventive and primary health care and improved equity by subsidizing outpatient drug benefit for socially vulnerable groups of the population. Preliminary results of the pilots show the trend in decreasing the informal payments. Clear delineation of the state responsibilities in financing health care services under the SGPS allowed introduction of fee schedule for other services not included in the SGPS. In December 2008, the government issued Decree No. 600, introducing a fee-for-service programme, which after the revisions in July 2009 includes 12 categories of copayments. The effect of these reforms on structure of the health expenditures in the country is yet to be seen.

The Health Sector Financing Strategy 2005-2015 has envisioned pooling (centralization) of funds for financing health services at the level of the oblasts. This progressive step in eliminating the fragmentation of health resources has not been completed yet. Experience of other countries in the region (Kazakhstan, Kyrgyzstan, Moldova, etc.) shows that this a necessary precondition for implementation of the active purchasing function and delegating autonomy to health providers. Concentrating purchasing function was one of the objectives for introduction of the health insurance system, which was planned from January 1, 2010. While feasibility and sustainability of employer based mandatory health insurance system for Tajikistan is questionable considering the modest size of the country's formal employment sector, pooling of funds minimum at oblast level still remains a high priority for improving the effectiveness of the national health financing system.

Along with centralization of financing, decentralization of financial decision making is gaining importance. If not full, at least partial autonomy in financial decision making to health providers of all

levels (oblast, rayon) should be granted and all savings achieved through the optimization of capacity or provider performance should be retained within the health sector and discretion given to providers for reallocation of these funds for staff salaries, facility or supply improvements. The experience of other countries in the region and globally shows that this issue is of paramount importance and successful resolution of which presents an unconditional prerequisite for implementation of the health delivery system restructuring of any scale or scope.

3.3. State of Infrastructure for Service Provision

Health care service delivery (personal care as well as public health services) are further challenged with the lack of adequate medical equipment and infrastructure. Most facilities were constructed and equipped during the 1970s and 1980s. Since then, very little has been invested in upgrades and new equipment purchase. Almost completely amortized capital imposes limitations on the abilities of health care staff and negatively affects the quality of services being offered. Furthermore, most facilities operate in the environment where municipal services cannot assure adequate water and electricity supply and sanitation system fails to meet current health and environmental standards.

Therefore, in its current shape hospitals and other health care facilities pose more public health risk rather than solve health problems of the nation. E.g. poor infection control in TB hospitals and lack of necessary systems/inputs leads to higher morbidity among medical staff⁸, deteriorated or non-existent sewage system along with absent or inadequate incinerators create environmental risk for infection spread in the communities where facilities are housed.

Most countries face shortages of capital funding and need to raise money for renovations or new construction or equipment purchase. These funds are never sufficient and neither will Tajikistan have sufficient funds to deal with infrastructural issues. Therefore, partial solutions should come by looking at the provider network and searching ways for to minimize investment needs.

Excessive infrastructure (high number of hospital beds and hospital buildings, large number of centres), duplicated functions on a district level are all areas that, if improved, could reduce the need for capital.

3.4. Governance and Management Issues

At the republic level, the Ministry of Health runs national-level health care services, while local authorities (oblast and rayon) administer most regional and local health care services. The organization of health services follows the administrative structure of the country with services divided into the four horizontal tiers of administration, and also into separate vertical pillars for national programs. The republican (Ministry of Health) and oblast health departments own and administer health care facilities. Facility managers have little discretion, because of being tied to detailed budget lines. The chief physician manages a hospital advised by a medical board of deputies and other senior specialists. The chief physician answers to the government administration (republican, oblast or rayon). The chief physician is appointed by the administration but must be approved by the Ministry of Health. The chief physician may terminate the employment of the deputies subject to approval by the administration. Rayon health departments answer to oblast health departments (with budgets handled by finance departments).

Up until recently rural health services were administered from the central rayon hospital. The situation has changed in 2009-2010 with introduction of the new administrative structures and positions. Newly established rayon health departments are now responsible for overall planning and coordination of rayon level health services. The heads of primary health care level urban and rural health services (rayon and urban health centres, rural health centres, and health houses) now all report to the Primary Health Care Manager of the rayon.

The complexity of provider network on an oblast and rayon level creates divergent responsibilities and reporting-accountability lines. In many contexts, it is challenging to identify the entity or unit that has “*de facto*” responsibility for the health of the rayon residents and is responsible for service provision planning and coordination. Rayon level providers have differing reporting requirements. On administrative financial matters, most of them report to the head of the rayon central hospital the person in charge of rayon health care system. However, on programmatic and/or service delivery matters, they are accountable to their respective oblast or national bodies/institutions (e.g., statistical reports for immunization coverage are submitted to regional Immunization Centres, for malaria to the Tropical Centres, for TB to TB Centres, etc.). Such reporting arrangements most frequently bypass district authorities and information about population’s

health and service coverage emerges only on a higher level, leaving rayons not fully aware of the existing or emerging problems.

Rayon level *Health Information System* (HIS) lack both human and technical resource capacity. Therefore, accurate and reliable information flows for planning, managing or monitoring population health status, service coverage levels, designing interventions, etc. is challenging..

Thus, on one hand rayon government – Khukumats are responsible to plan and budget for the services, using national level regulations and norms and on the other hand they do not possess the reliable information critical for such decision making. As a result quite frequently key health issues specific for the given rayon remain unattended. The recent creation of rayon health authorities (rayzdravs) may help to alleviate these problems. Albeit, the perpetuated capacity gaps on local level may constrain the ability of the newly formed structures to adequately perform their functions.

In order to improve service provision and deliver services focused on population’s needs, it becomes important to develop analytical and planning capacity as well as streamline governance and management responsibilities on local and subnational level along with changing the financing system and giving more freedom to health care managers on different levels.

3.5. Service Utilization

The rate of hospital admission in Tajikistan is 11.2 per 100 population, which is significantly lower than the CIS and Eur B+C¹ averages of 20.7 and 19.2 respectively and also less than average for Central Asian countries at 15.2 per 100 population. Tajik citizens utilize two times less outpatient services at 4 per person per year, than citizens of CIS and Euro B+C countries, - at 8.68 and 7.7 respectively, or residents of the Central Asian Countries at 6.95 per person per year (WHO Euro, 2010). Access to health care services is currently limited and well below the “real” need for health services. The access constrains, as in many countries in the region are likely to be caused by: a) financial access barriers due to out-of-pocket charges faced by population when seeking care that are not affordable for many particularly for poor; b) geographical access barriers primarily for rural residents and mainly in regions where population density is low; c) low quality of services available in the facilities. It is assumed that as a result health financing reforms and restructuring of the health service delivery system, both geographical and financial access to health services will improve, which in turn will lead to significant increases in utilization of these services. As a result, in the next ten years, most likely, the utilization levels will reach the levels observed in those countries of the C and wider CIS region, where the access barriers have been considerably reduced in the last decade. Respective assumptions are made in the planning parameters described in the next section.

3.6. The National Health Strategy

The last draft of the “National Health Strategy for Tajikistan 2010-2020” envisions results-oriented, system-complete, and well-resourced health care sector of the Republic of Tajikistan. Critical pathways through which this should be achieved are following:

a) Results - reduction of health risks and morbidity rates for key conditions, life stages, and population groups.

b) Systems - the strengthening of governance and day-to-day administration in the health care and services sector;

- **introduction of modern care and services delivery models;**
- **improvement of quality controls and incentives for increased quality of medical care and services;**
- licensing and attestation of the health care and services workforce;
- accreditation of health care, medical education and services facilities; and
- **assurance of equitable access to health sector resources.**

c) Resources:

- **modernized physical facilities and technology in health;**

¹ Twenty three countries of the WHO European Region with relatively high child and maternal mortality rates

- strengthened supply of vaccines, pharmaceuticals, and other health commodities;
- increased workforce output from updated programs of basic and continuing education and implementation of evidence based approaches;
- **steady inflow and efficient use of health financing resources.** “

Highlighted in the list above are those objectives achievement of which are directly linked to the development and implementation of the Health Restructuring Master Plan. The Strategy also identifies concrete priorities which should be taken account while elaborating the Master Plan and to accomplishment of which the implementation of the Master Plan will contribute. Namely:

Strengthening maternal, newborn, child and adolescent health:

“improved transportation networks support of rural providers; improved diagnostic and curative capacity of rayon-level health care facilities; and modernized oby/gyn and neonatal beds in rayon and city hospitals..” The latter envisions re-organization of the facility-based obstetric care into three levels:

“(1) normal deliveries will be managed in rural health centers and obstetric departments of local hospitals (or local maternities); (2) moderately-complicated deliveries will be managed in maternity wards of central rayon and urban rayon hospitals; (3) planned and emergency admission of women on specialty obstetrics and gynecology beds of general hospitals and second-level maternities will be managed by triage-based decisions with proper account of the maternal health risks, congenital pathology, and acute conditions at birth. Access to the three levels of obstetric care should be regulated by revised referral norms to be developed and implemented over the period up until 2015. General standards for the three levels of care, including pharmaceuticals and other means of medical care, will be defined.

This approach has been incorporated in planning parameters for the Master Plan.

Prevention and Control of Infectious Diseases:

“Conducting ARV therapy and treatment of opportunistic diseases will be performed in close collaboration with specialized facilities in PHC, in the framework of the current Health Care Reform. Starting in 2018 the treatment of HIV/AIDS patients will be incorporated into family medicine”

“The first several years of the Strategy’s implementation will include a preparatory stage of TB care reform. The reform’s main effort will focus on strengthening family medicine practice as the public health and clinical base for a new model of prevention, diagnosis, and treatment of TB”

Decreasing the Burden of Preventable Non-Communicable Diseases:

“Review of the functions and capacities of existing specialized hospitals and centres...”, creation-development of the day care centres and departments development of the palliative care.

“the disease management approach to the chronically ill will undergo a profound change. The professional mentality and daily activities of health care providers will shift from focus on acute care episodes, to the management of chronic illness, centered on the prevention and avoidance of complications and flare-ups. The family medicine practice will stand at the helm of this change”.

Strengthening Primary Health Care (PHC) based on Family Medicine Practice:

“Institutionalizing the Family Medicine model as a systemic foundation for integrated PHC will present a health sector change of formative importance for the Republic of Tajikistan”

All these statements from the Strategy document underscores the defining role of the new model of family medicine based integrated primary health services that will become the cornerstone of the future health delivery system in Tajikistan. The Master Plan embraces this approach as one of the main principles for planning future health delivery network.

Under the section “National Health Policy” the Strategy document makes explicit reference to the Master Plan and declares the master plan as the framework document for future capital investments in the health sector, particularly in rural health houses and health centres – “infrastructure hubs” of the family medicine and once again underlines the necessity for reduction of the hospital bed capacity (Minsistry of Health, 2010).

In summary, the National Health Strategy for Tajikistan 2010-2020” sets necessary framework for the master planning of the health delivery network by defining key principles and approaches that has been incorporated in planning parameters and future targets for the next 5 to 10 years in Tajikistan.

3.7. Human Resources for the health sector

The structural rationalization of the health delivery and public health sectors will have significant impact on the distribution of the medical personnel employed in relevant inpatient settings. *Currently* Tajikistan experiences overall deficit in the qualified medical personnel if compared with developed countries or countries in the region. The total number of doctors and paramedical workers in the country are 13909 and 30445 respectively. Availability of doctors per 10,000 population is 18.6 and for paramedical staff – 41.1. The corresponding figures in Central Asian countries on average are 28.2 and 75.5 respectively. This level of doctors and nurses is even lower when compared with indicators in the WHO European Region (33.9 and 72.7 respectively) and CIS (37.7 and 79.4) (Minsistry of Health, 2010). However, despite the overall shortage of the medial personnel, due to significant imbalances in distribution of the health human resources across regions and specialties, there is oversupply of physician cadre in certain geographical locations and in selected specialties. E.g. Dushanbe has highest physician to population ratio at 618 per 100,000 population, or more than two times higher than the national average of app. 269 per 100,000 population. Similarly there is excess number of obstetricians and gynecologists, while general practitioners (family doctors) are in short supply throughout the country. The shortage of other specialties had also been reported. There is also an obvious need in better trained professionals of public health and health care managers on the level of health provision and public management across the health sector (Strategy Development Task Force, 2009). While projecting detailed changes across geographical locations and specialties can only be done through a detailed plan on health human resources in Tajikistan, the work on which is undergoing, certain general assumptions can still be derived from already established targets set in different national documents. Specifically:

Overall national target for physician to nurse ratio in the health sector at 1 to 6, set by the “Implementation Plan for the Tajikistan Republic Population Health Protection Strategy up to the year 2010” (GoTR, 2004); current ratio is 1:2.5, which implies the need for more than doubling the current number of nurses. However, even if there is no standard ratio of nurse to doctor widely accepted internationally, the 1993 World Bank’s World Development Report advocated that nurses and midwives could deliver most of the minimum essential public health and clinical services, with doctors providing clinical supervision and direct care of complex issues and complications. It suggests, as a rule of thumb, that the ratio of doctors to nurses should exceed 1:2 as a minimum with 1:4 or higher considered more satisfactory for cost-effective and quality care (The World Bank, 1993). Considering this, the new target of 2.5-2.8 per 1 for nurse to doctor ratio proposed in the last draft of the “National Health Strategy for Tajikistan 2010-2020” is more feasible and in-line with international best practice, as almost no country in the European Region has similar ratio (see also the Human Resources Strategy for Tajikistan draft).

The master plan takes into account this target when providing estimates for staffing levels across rayons of the country.

national target for Family Doctor (FD) to population ratio at 1 FD per 1,200 – 1,500 population (depending on geographical location) and 1 PHC nurse (Family Nurse- FN, in future) per 750 population (MoH, 2003). This implies FD and FN ratio of app. 1 to 2 and total number of “needed” family doctors is 6,127 FD and 10,667 family nurses, out of which 1,654 FD and 1,721 FN were already retrained by the end of 2009 (Strategy Development Task Force, 2009), however, further major efforts (in terms of time and funds) are needed to achieve the target, given that target ratio’s will not be revised.

The staffing needs for the PHC facilities throughtout the country are estimated based on the national target, reaching of which is envisioned by the year 2020 (see further information in the section on Planning Parameters).

Conclusions: Current Challenges of Service Delivery

- In conclusion, current Tajikistan’s health care delivery system faces several challenges. One group of challenges emerge from the context in which they exists (water and electricity supply, municipal sanitation and sewage system, government-funding system) and the second group of challenges is characteristic to health sector itself and includes:
- Oversupply of inefficient facilities (hospitals, specialized outpatient centres, etc.) offering uncoordinated and low quality care to the population;
- Several (to a degree duplicated) public health institutions (SanEpid, Tropical Centre, Immunization Centre, AIDS Centre, etc.,) with some overlapping functions. Multiplicity of these centres significantly

increase demand on already undersupplied lab specialists and epidemiologists and make staff shortages even more pronounced;

- General lack of quality human resources – i.e. shortage of staff (doctors, nurses, lab technicians, health care managers, statisticians, etc.) caused by poor incentives created for those that work in rural or remote areas. Lack of such incentives facilitates out-migration processes from districts and aggravates staffing problems. Replacing lost staff becomes even more challenging due to inadequate production of the needed cadre within educational system;
- Deteriorating infrastructure (buildings and equipment) creates health risks to patients rather than offering them health safety and healing. Replacing the stock of out-dated buildings and equipment requires resources not currently available in Tajikistan.
- Limited public funding and strict state regulations contribute to growing informal payments. Such payments have emerged as a financial access barrier to the population and have contributed to worsening health status of the people.
- Finally, governance and management arrangements in the health sector on a district level are convoluted and unclear. Along with weak management capacity, such convoluted system of governance aggravates the magnitude of the challenges faced and requires creative and custom-tailored solutions.

CHAPTER 2. PLANNING PARAMETERS FOR DECISION MAKING AND BENCHMARKING

The development of the Health Care Facilities Master Plan and Restructuring Strategy for the Republic of Tajikistan implies the definition of new planning standards to guide the future development of healthcare network. The establishment of these parameters proceeds from an analysis of the current situation and available resources in terms of network of facilities, workforce, services provided and performance indicators, compared with international trends and benchmarks, in order to determine the relevant standards and ratios for the Republic of Tajikistan taking into account the actualities of the country in terms of resources available, socio-economic context, geographical features and healthcare needs of the population. These parameters were displayed in the context of the dual epidemiological profile characterizing the Republic of Tajikistan: on one hand communicable diseases has returned as a major issue in Tajikistan population, on the other hand the main causes for death are similar to Western European countries with an increasing prevalence of non communicable diseases.

The development of a health sector master plan provides the opportunity to introduce a number of innovations in the current model and organisation, based on international and European benchmarks, with in particular the decrease of the number of acute beds per population, the shift from inpatient to outpatient care, the development of new healthcare services delivery models (e.g. day hospital and ambulatory surgery). Indeed, new medical technologies and clinical practices had strongly impacted the organization of health systems from inpatient care and hospital-centric systems to outpatient practices and minimizing the need for hospital care.

The planning parameters developed in the present chapter constitute the basis for estimating the requirements in terms of facilities and resources at primary and hospital levels, combined with a population based approach. These planning parameters provide the route to develop the master plan in every oblast and rayon of the country and constitute the direction and the strategic choices to be followed at national and regional levels for planning of health sector restructuring, functions and standards of services, facilities and equipment, as well as performance indicators. Each parameter is analysed within the framework of the guidance and orientations provided in the approved National Health Strategy and/or other National strategic documents and concept papers. Benchmark examples and international trends are presented, concerning cost effective standards and models of services delivery. Obviously, these benchmarking references and examples, were adapted and adjusted to the Tajik context and constraints. For each parameters, the targets to be reached by 2015 and 2020 were defined with the working group and the MoH.

Nevertheless, it is important to underline the fact that these criteria and range of values were not used in a strict, stiff and arithmetical way. A specific analysis was developed rayon per rayon taking also into account accessibility conditions, geographical context, age structure of the population and epidemiological profile.

The distribution of population per region by the 1 January 2010 and population growth projections for the years 2015 and 2020 are recapitulated in the table below.

Current population and population projections for Tajikistan 2009, 2015 and 2020

	2009	2015	2020
GBAO	194 160	201 008	209 180
Khatlon	2 700 200	3 044 652	3 434 061
Sogd	2 215 400	2 459 350	2 731 342
RPP	1 591 748	1 792 149	2 017 780
Dushanbe	700 700	758 579	821 000
TOTAL	7 402 208	8 255 738	9 213 363

Source: Agency of Statistics of Tajikistan, 2010²

² 2010-2020 Population projection estimates are based on the last three year averages of year to year population changes per rayon – reported by the Agency of Statistics.

The overall population of Tajikistan will increase by 11,5% by 2015 and by 24,5% by 2020.

Population projections are used as essential parameter for planning future utilization of health services and capacity of primary, secondary and tertiary health care facilities for the Oblasts and rayons. The population growth per oblast and rayon was taken into account in the calculation of requirements as regards capacity, future workloads and resources.

1. ACCESS TIMES AND CATCHMENT'S AREAS/POPULATION

1.1. Guidance and orientations

Guidance and orientations provided in the National Health Strategy and/or other strategic documents and concept papers:

*"Improving Access to Health Care constitutes a main priority of the National Health Strategy. According to this strategy, spatial (geographic) equality of access will be improved including active development of health care provider networks in sparsely populated, remote areas."*³

1.2. Benchmark examples and international trends

Access times to the different levels of care constitute a main constituent for the planning of the system. The distances and access times to a primary care centre and an acute care hospital should be acceptable for most patients.

On the other hand, the catchment's area should not be too small, on geo-demographics aspects, in order to guarantee healthcare quality and safety and to justify the cost for 24/7 high-tech services.

In Western European and CIS countries, the access time to general hospitals varies from 30 to 60 minutes, into an average distance of 30-60 kms.

Concerning emergency care, an adequate organisation of ambulance transportation, including mobile intensive care units should be available in order to answer to population needs in due time and within the adequate referral system.

1.3. Target for Tajikistan

The targeted access times to the different levels of care are presented in the table below

Levels of care	Proposed access times	Transportation means
Health houses	From 15 to 30 minutes	By foot
Rural Primary care centres	From 15 to 30 minutes	By car
Comprehensive PHC Centre	From 30 to 45 minutes	By car
Hospital care	From 30 to 60 minutes	By car

In the locations with relatively small size populations (not justifying the placement of a hospital) but with geographical access problems the emergency and urgent care should be available within 60 to 90 minutes.

2. PLACE AND ROLE OF PRIMARY HEALTHCARE AND HOSPITAL RECONFIGURATION STRATEGY

2.1. Current situation in Tajikistan:

*"The effectiveness of health care and services system suffers from the predominance of services provided by specialized out-patient specialists and hospital care instead of general/family doctors and paramedical staff. 80% of patients are going to hospitals bypassing primary level health facilities"*⁴.

³ Source: Draft National Health Strategy for Tajikistan - 2010

⁴ Source : Tajikistan Hospital Service Restructuring Concept for 2006-2010

Integration of health services across levels of care and types of providers is the strategic priority under health care delivery policy of the next decade.

2.2. Guidance and orientations

Guidance and orientations provided in the National Health Strategy and/or other strategic documents and concept papers:

The strengthening of Primary Health Care (PHC) based on Family Medicine Practice constitutes a priority defined in the National Health Strategy. Primary healthcare will constitute the backbone of Tajikistan health system. Family medicine practice will constitute the public health and clinical base for new model of prevention, diagnostic and treatment of the population (antenatal and postnatal care, childhood, infectious diseases and TB, non communicable and chronic diseases).

2.3. Targets for Tajikistan:

2.3.1. Integration of all primary care services within the primary care centre

Current PHC system is highly disintegrated, with numerous structural units mainly corresponding to the vertical programs supported in the past and/or present by the development partners. The National Health Strategy for Tajikistan acknowledges disintegrated PHC system as one of the main structural problems and proposes to address this issue during the next decade of this strategy implementation. The prioritization of the implementation of the family medicine approach in all existing national strategic documents, would logically require *integration* of certain standalone structural units, such as the stand alone Family Medicine, Reproductive Health Promotion and Integrated Management of Childhood Illnesses (IMCI), 27 FM centres, 65 IMCI centres, 69 RH centres Immunization Posts (66 existing ones) and Health Life Style Promotion (66), - or total of 293 facilities and or/units centres into the PHC structural units such as – city, rayon and rural health centres. Assuming this occurs; such centres will become redundant and need to be abolished.

Upstream to the integration of these standalone structural units, family medicine approach should be implemented and the current network of PHC facilities should be strengthened and modernized as described in the National Health Strategy and in the present Master Plan. An action plan for the integration of these stand alone units should be prepared with a clear phasing of activities for short term, medium term and long term (transfer of activities, review and update of clinical protocols, implementation of continuous training activities when required, transfer of staff and resources, negotiations with the development partners and vertical programs, removal of premises to be dedicated to other activities).

2.3.2. PHC facility per population

- One comprehensive Rayon health centre per rayon
- One comprehensive rural primary health care centre providing full range of PHC services per 20 000 population,
- In remote areas: one extended PHC centre with emergency services and minor surgery per 20 000 inhabitants,
- Basic rural health centres deployed among the Tajik territory according to population number and density,
- Health houses and outreach PHC Centres, in particular in remote areas and when justified by population density and conditions of accessibility to other PHC facilities.
- Mobile teams attached to the comprehensive PHC centres.

The number of population per Rural Health Centre and Health House is differentiated taking into account the age structure of the population, the epidemiological profile, as well as the geographical features of the different rayons and settlements.

2.3.3. Utilisation ratios and benchmarks for PHC

International benchmarks⁵:

EU countries: 7 consultations per capita per year
WHO-Euro region: 7,95 consultations per capita per year
CIS Countries: 8,6 consultations per capita per year
CAR: 7 consultations per capita per year
Tajikistan: 4 consultations per capita per year

Target for Tajikistan for 2015: 5,5 to 6 consultations per capita per year

Target for Tajikistan for 2020: 7 consultations per capita per year

With the following assumptions:

- 70% of outpatient visits occurring at PHC level (currently 20%),
- 60% of the visits at PHC level managed by the GP,
- 40% by nurse general practitioner with translates into 12 visits per GP/day and 8 visits per GP nurse/day.

2.3.4. PHC doctors and nurses per population : Cf. § 6. Medical personnel

2.4. Assumptions for hospital sector reconfiguration

2.4.1. General overview

Current situation in Tajikistan

Hospital sector in Republic of Tajikistan is delivered by 449 hospitals with a total bed number of 38 000 beds approximately.

Critical physical conditions of hospitals and low hospital services standards hindered the adequate functioning of these facilities, as well as the effectiveness, quality and efficiency of the services provided to the population. 65% of buildings from the period 1938 to 1990 do not meet basic requirements⁶.

The current situation is characterized by:

- An oversupply of beds,
- Avoidable inpatient admissions. Researches have shown that each third hospital patient could receive treatment in outpatient polyclinic conditions⁷.
- Low occupancy rates (average of 40% for the country),
- Extended average length of stay.

Guidance and orientations provided in the National Health Strategy and/or other strategic documents and concept papers

Tajikistan Hospital Service Restructuring Concept for 2006-2010 provides the following orientations and guidance:

- Downsizing of the number of beds and hospitals,
- Development of guidelines for mapping and rationalization of hospital care facilities (based on population, access, infrastructure, transport, geography to ensure optimal locations of health facilities),

⁵ Source: WHO – European Health Database – 2009

⁶ Source : Tajikistan Hospital Service Restructuring Concept for 2006-2010

⁷Source : Tajikistan Hospital Service Restructuring Concept for 2006-2010

- Introduce hospital rationalization experience nationwide,
- Transformation of rural hospitals into rural health centres (expect in remote and difficult of access areas),
- Restructuring and/or merging and/or closing of facilities providing overlapping functions, e.g. oblast, city or rayon hospitals when they coexist,
- Restructuring of hospital sector with priority given to general hospitals.

Benchmark examples and international trends

During the last ten years, European countries reduced significantly the number of their acute care beds, including:

- Reduction in inpatient average length of stay,
- As the result, hospitals are operating at a much higher level of technology to treat the sicker patient load,
- Alternatives to inpatient care (which is expensive) are increasingly available including day surgery, pre-operative assessment to reduce time spent in hospital, day care for conditions like renal dialysis, cancer chemotherapy, etc.

2.4.2. Optimum size of hospitals

According to McKee and Healy⁸, the optimum size of an acute care hospital, functioning as a high-tech modern hospital (out patient, ambulatory care, day surgery), is about 300 to 650 beds. The complexity of an institution with more than 650 beds generates additional costs, and not savings, because of the complexity of new modern hospitals.

Target for Tajikistan:

Taking into account the specificity of Tajikistan, as a mountainous country, with significant share of population living in the remote areas with year round or seasonal geographical access problems, following gradation of optimum sizes of hospitals of different category is suggested:

- Small and limited number of rural community level hospitals in remote areas (30-50 beds)
- Rayon Hospital, more than 80 beds
- Oblast Multiprofile hospital (from 100 to 300 beds)
- Tertiary Hospitals (from 300 to 650 beds)

2.4.3. Number of acute care beds

GLOSSARY OF TERMS

Definition of acute care: Two definitions are presented providing from two different sources

1. Pattern of health care in which a patient is treated for a brief but severe episode of illness, for the sequel of an accident or other trauma, or during recovery from surgery. Acute care is usually given in a hospital by specialized personnel using complex and sophisticated technical equipment and materials, and it may involve intensive or emergency care. This pattern of care is often necessary for only a short time, unlike chronic care and long term care⁹.

2. Short-term medical treatment, usually in a hospital, for patients having an acute illness or injury or recovering from a surgery¹⁰.

⁸ McKee

, M., Healy, J., (2002) op. cit.

⁹ Source Mosby's medical dictionary 8th Edition. 2009

¹⁰ The American Heritage® Medical Dictionary Copyright © 2007

Definition of acute illness: A disease with an abrupt onset and usually a short course. any illness characterized by signs and symptoms of rapid onset and short duration. It may be severe and impair normal functioning¹¹.

Medium term and long term care: Cf. definition provided in the § 4.8.

Figures reported to the World Health Organisation show that, since 1990, hospital bed numbers in most countries have fallen dramatically.

Hospital bed numbers are frequently used as a measure of the capacity of a health care system, but a bed is merely an item of furniture on which a patient can stay. For a bed to make any meaningful contribution to a health care facility's ability to treat someone, it must be accompanied by an appropriate hospital infrastructure, including trained professional and managerial staff, equipment and pharmaceuticals¹². Indeed, bed numbers are very poor measures of health system capacity, as a bed only contributes to health care if it is supported by an appropriate mix of staff and equipment.

Furthermore, there are many different types of hospital bed, reflecting differences in the kind of patient they are designed to accommodate. A bed for a patient undergoing rehabilitation after a stroke is very different from a bed for a patient with multiple organ failure, who requires ventilation, dialysis and circulatory support¹³.

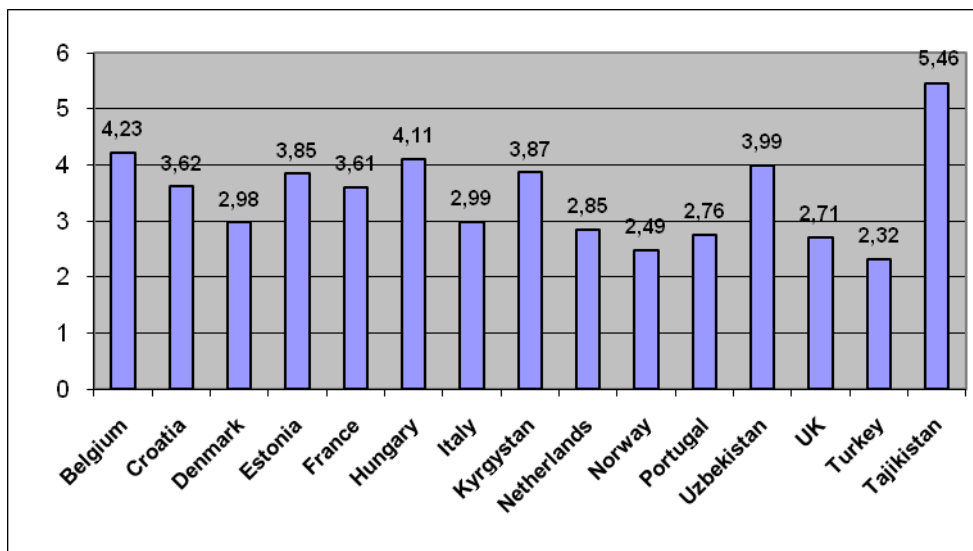
A strategy to reduce hospital bed capacity should include policies to reduce inappropriate admissions, make the provision of inpatient care more efficient and facilitate quicker discharges. It will often require the development of alternatives facilities and services.

The reduction of acute care beds should be closely correlated with the development of primary healthcare services, outpatient departments and ambulatory care, rehabilitative and long term care.

In Europe, it is considered that a four hundred acute beds hospital, in 2008, has the, same activity as eight hundred acute beds hospital fifteen years ago. This situation is explained by the development of outpatient activities, day care and ambulatory surgery.

The first figure below presents the number of acute care beds per 1000 population in a sample of countries in Europe and CIS regions. The second figure illustrates the general trend in the reduction of the number of acute care beds occurring in the last twenty years in all countries.

Acute care beds per 1000 population



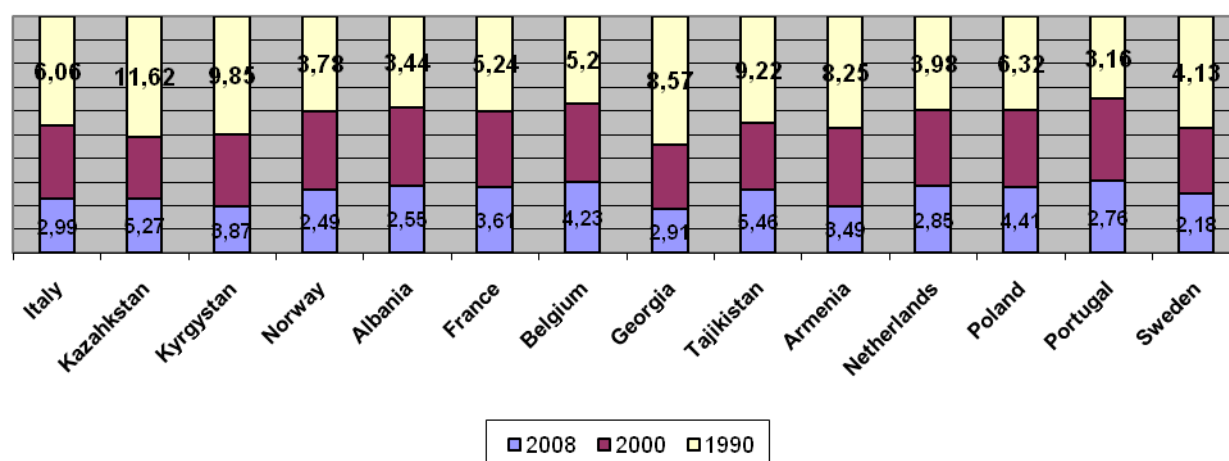
Source: WHO – European Health Database – 2009

¹¹ Mosby's Medical Dictionary, 8th edition. © 2009, Elsevier

¹² McKee, Reducing Hospital Beds. What are the lessons to be learned? European Observatory on Health Systems and Policies. N°6 - 2004

¹³ Reducing hospital beds. What are the lessons to be learned? European Observatory on Health System and Policies. Martin MacKee. 2004

Evolution in the number of acute care beds per 1000 population from 1990 to 2008



Source: WHO – European Health Database – 2009

Target for Tajikistan to be reached by 2020:

At present, important disparities exist between the different oblasts of the country as illustrated in the table below:

Oblast/region	Number of beds/1000 population
Khatlon	4 beds/1000 population
Gbao	9,88 beds/1000 population
Sogd	5,54 beds/1000 population
Rayon under Republican Subordination	2,97 beds/1000 population
Dushanbe	6,73 beds/1000 population ¹⁴

The ratio bed/population in Tajikistan should tend towards a ratio of:

- 3,5 beds/1 000 population (cancel the footnote included before).
- Nevertheless, this ratio will not be applied in a systematic and arithmetical way but will be displayed taking into account the current bed ratios and admissions rates recorded in the different oblasts and rayons of the country, as well as the anticipated population growth and forecast workloads.

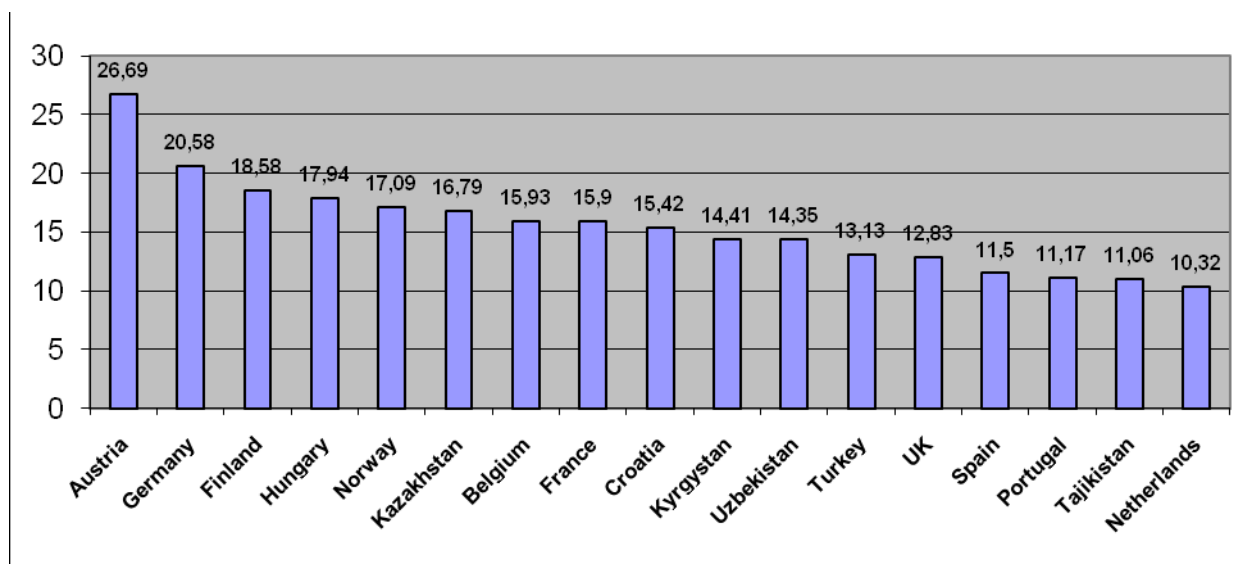
As noted in the previous section, the feasibility of such target depends strongly on the implementation of a new hospital funding: from a payment based on the number of beds to a case-based payment and delegation of autonomy in financial and staffing decision making to hospital managers This pre-condition constitutes a crucial issue for the concrete implementation of the master plan and a strong recommendation of the current document.

¹⁴ The ratio beds/1000 population for Dushanbe should be considered with caution taking into account the two following factors: the capital city hospital network constitutes the reference for the whole country, an important proportion of the population living in RSS is attended in Dushanbe's hospitals.

2.4.4. Acute care inpatient admission

Comparatively with its neighbouring countries, Tajikistan has a low ratio of admissions for 100 per population. On the other hand, this ratio is comparable with the quantities recorded in Spain, Portugal (where the healthcare system is also based on primary healthcare), while France and Germany are recognized to be hospital-centred countries.

Acute care inpatient admissions per 100 population



Source: WHO – European Health Database – 2008 (or latest year available)

According to the health strategy, the targeted transition to modern disease management strategies in such practice areas as TB, STI, drug-dependence, and psycho-behavioural disorders, will shift emphasis to outpatient care and social support. This, in turn, will reduce demand for inpatient services.

In compliance with the National Health Strategy, in the next 10 years, the disease management approach to the chronically ill will undergo a profound change. The professional daily activities of health care providers will shift from focus on acute care episodes, to the management of chronic illness, centred on the prevention and avoidance of complications and flare-ups.

The different targets and directions presented above works in favour of a decrease in hospital admission rates.

On the other end, in a near future, an increase in the number of hospital admissions for certain other specialties can be expected in Tajikistan as a consequence of observed trends an approximation to contemporary international standards in terms of education, population awareness concerning health issues future expected proliferation of the medical technologies and demographic indicators (higher proportion of elderly people, better purchasing power and associated behaviours, strengthening of hospital services standard and equipment available, population epidemiological profile as regard for example to cancer prevalence, cardiovascular diseases, etc..). Furthermore, as a matter of national priority, the number of neonatal beds (and consequently the number of admissions) will increase and will be allocated more evenly across the country, and properly equipped to ensure vital care for newborns over the first seven days of their lives. An increased percentage of childbirth in accredited maternity facilities is among the key programmatic goals of the Strategy. In 2020, at least 90% of deliveries will be supported with qualified inpatient obstetric care, compared to 75% in 2009.

In conclusion, the following trend could be expected as regard to hospital admissions:

- Reduction of avoidable and unjustified admissions,
- Shift from inpatient to outpatient services,
- Re-profiling of hospitals admissions which will operate at a much higher level of technology to treat the patients requiring such service.

Target for Tajikistan to be reached by 2020:

The inpatient admission rate will remain at the same level as today but with a re-profiling of patients patterns and clinical pathways.

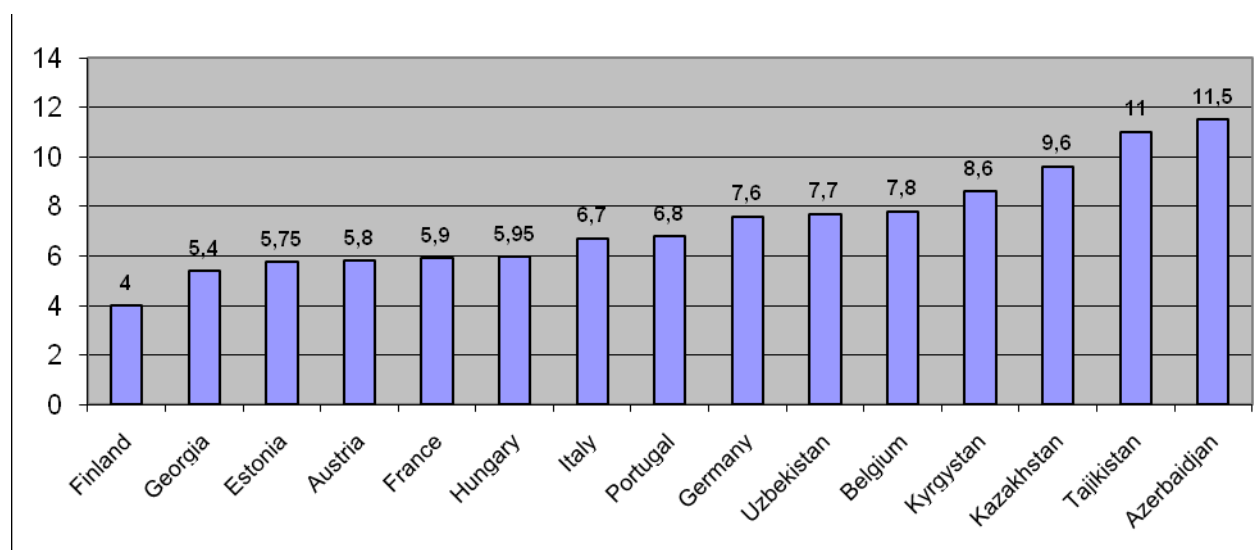
All European Union countries and CIS countries are trying to reduce the number of inpatient admissions. The efforts developed in these countries are considerable as the shift from inpatient to outpatient services involves changes in mentalities, cultural behaviours, professional practices and clinical pathways.

In this context, it would not be consistent and appropriate to foresee an increase of the inpatient admissions in Tajikistan taking into account the main strategic orientations presented in the National Health Strategy, the socio-economic context of the country and the general international trend consisting in a reduction of these services. In this context, the number of inpatient admissions will remain at 11 to 12 per 100 inhabitants.

2.4.5. Average length of stay

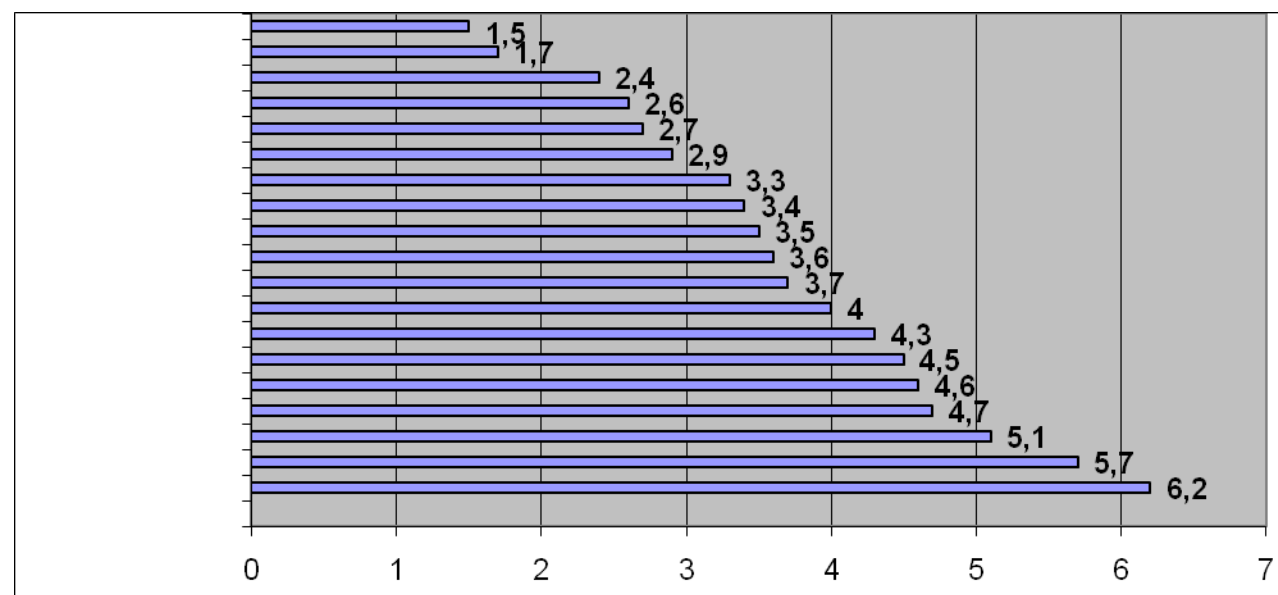
Average length of stay (at around 11/9 days overall) in Tajikistan is still high in comparison Western countries and even some former Soviet health care system countries, as demonstrated in the figure below.

International comparison - Average length of stay for acute care in 2008 (number of days)



Source: WHO – European Health Database – 2008 (or latest year available)

International comparison - Average length of stay for normal delivery in 2005 (Number of days)



Target for Tajikistan to be reached by 2020:

The average length of stay in acute care facilities will be reduced in order to be in compliance with international benchmarks i.e. from 9 to 7 days.

A condition to achieve this objective is related to the setting up of a real permanence and continuum of care, from prevention to post-care, including home care and rehabilitation, hospices, nursing homes and other long term care facilities, .

2.4.6. Development of outpatient and ambulatory care (day hospital, day surgery)

Current situation in Tajikistan:

Alternative models of healthcare delivery (day hospital and ambulatory surgery) are already developed in Oblast and rayon hospitals but in a limited way and without the sufficient organisation and framework to achieve a real shift from inpatient to outpatient activities. The number of ambulatory surgeries performed is often limited to minor interventions.

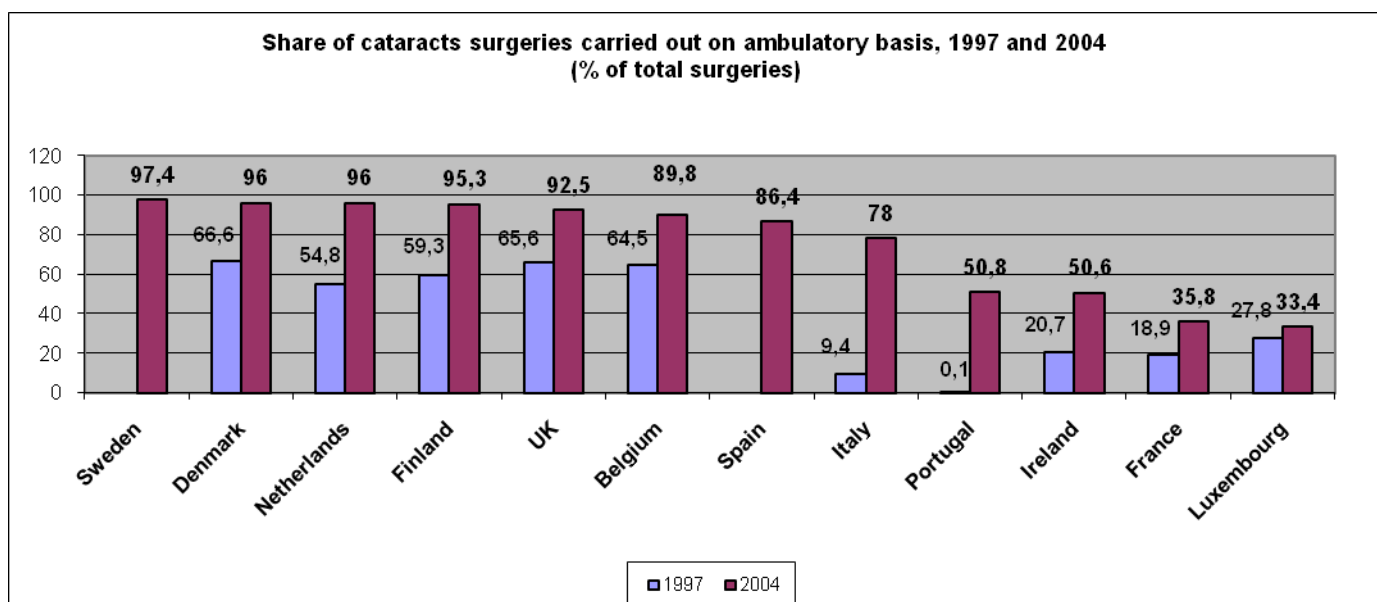
In this context, there is a real need to structure and “formalize” such activities within a clear definition and “nomenclature” of the procedures to be developed and reported as day cases sessions.

Benchmark examples and international trends:

Ambulatory care, that is, care not requiring over-night hospitalization, is becoming the predominant form of health care delivery in United States, Canada, Sweden and United Kingdom, for instance. The shift away from inpatient care has been made possible by the development of new medical and diagnostic procedures as well as other technological advances that allow for services to be delivered on an outpatient basis.

Driven by financial restraints and supported by the development of new technologies and new treatment methods, outpatient care and ambulatory care has proven an alternative for hospital admission without a loss in quality of care for selected health problems.

For this reason, the pressure to reduce hospital beds without depriving the population from the necessary treatment, has been accompanied in many countries by a concomitant increase in number of patients treated in ambulatory care.



Source: Health at a Glance 2007: OECD Indicators

Targets for Tajikistan to be reached by 2020:

Every hospital should develop the three components of hospital activity: inpatient admissions, outpatient departments, and ambulatory care (day hospital and ambulatory surgery).

The development of ambulatory care activities with a concurrent decrease in number of hospital beds should be sustained by financial and technical support for the administrative organisation of ambulatory activities.

The motivation to develop ambulatory care will depend on the financial incentives to be strengthened (rewarding providers for treating relevant patients on outpatient basis) and adoption of specific ambulatory clinical protocols.

These activities will be mainly developed in the existing hospital network, rationalized and optimized within the present master plan in order to avoid a duplication of clinical support services required for such activities (e.g. operating rooms, X-ray, Lab, recovery rooms, sterilization, staff, etc.).

A list of medical procedures to be developed as day cases (including surgical elective procedures) should be defined by/or in close relationship with the relevant stakeholders: e.g. the college of physicians and the association of nurses, etc.

The desirable rates of day hospital admissions and day surgery procedures will be adapted to the socio-geographic context of the considered oblast and rayon and will take into account the following criteria:

- Geographic features and road conditions,
- Access times
- Living standards of the population.

The clinical follow-up of a patient after a medical procedure performed on day basis (medical and surgical) constitutes a crucial issue in order to ensure healthcare quality and safety. In this context, the targeted rates should be adapted to the reality of each of the regions and districts.

The following targets are presented as a benchmark for the development of such activities:

	Targeted ratio for day hospital			Targeted ratio for ambulatory surgery		
	<i>Short Term</i>	<i>Medium term</i>	<i>Long term</i>	<i>Short term</i>	<i>Medium term</i>	<i>Long Term</i>
Oblast level	8% of the total of admissions	10% of the total of admissions	13% of the total of admissions	8% of total surgical procedures	12% of total surgical procedures	20% of total surgical procedures
Rayon level	10% of the total of admissions	15% of the total of admissions	20% of the total of admissions	10% of total surgical procedures	15% of total surgical procedures	30% of total surgical procedures

2.4.7. The future of specialized and rural hospitals

Current situation in Tajikistan:

Tajikistan is concerned with a high number of specialized hospitals. A high number of specialized hospitals and centres exist in the country in the following specialties:

- high-tech specialized hospitals (cardio-vascular, oncology centre, etc.)
- specialized TB hospitals
- infectious diseases for adults and children,
- Dermatology and venereal diseases,
- Endocrinology,
- Ophthalmology,

- Specialized psychiatric and neurological hospitals,
- There are still over 800 dermatology beds in the country – in most developed countries, Dermatology is almost exclusively an ambulatory service.
- Infectious diseases beds still number around 3800 nationwide. Internationally, the trend for infectious diseases is toward ambulatory care with only minimal provision for certain disease categories.
- Similarly, TB with the exemption of the sever MDR TB cases is considered treatable on mostly ambulatory bases, so the need for over 2000 TB inpatient beds (including specialist beds in TB clinics) can be questioned.
- From 17 functioning psychiatric hospitals only few work by due workload, the network requires bed reduction and transformation to hospital substituting facilities.
- Other specialties are moving towards minimal inpatient capacity in Western countries (for example, cataract interventions are done exclusively on a day basis) and Endocrinology where diabetes patients are managed almost entirely as ambulatory cases.

Activity of 90% of SUB's (Rural district hospitals") is inefficient and as a rule, patients neglect the given level and address directly to Central Rayon Hospital. Utilization indicators of such hospitals are low.

Buildings of many SUBs are in unsatisfactory condition or not subject to the further operation. Most of them practically do not conform to minimal conditions for patient's treatment, health personnel is represented by one doctor-internist. There are no medical products for patients' treatment. Moreover, at present activity of these hospitals is seasonal as during autumn and winter electricity supply is irregular¹⁵.

Guidance and orientations provided in the National Health Strategy and/or other strategic documents and concept papers:

According to the National Health Strategy, the targeted transition to modern disease management strategies in such practice areas as TB, STI, drug-dependence, and psycho-behavioural disorders, will shift emphasis to outpatient care and social support. This, in turn, will reduce demand for inpatient services. The treatment of HIV/AIDS patients will be incorporated into family medicine practice.

According to this strategy, the TB incidence rates will decline in Tajikistan from 125 cases per 100 000 inhabitants to 100 in 2020. The nation will part completely with the legacy of the past in managing this disease: invasive methods of TB diagnostics and treatment and common use of Long Term TB care will make away for the globally accepted "Directly Observed Therapy", short course (DOTs). Medications will be administrated in general practice facilities (the closest to the patient's daily location).

Within the framework of the TB reform, the MoH will lead effort of downsizing the network of TB specialized centres with beds and selection the most viable sites for hospital admission and "institutionalization" of TB patients when medically or socially appropriate.

Benchmarks and general trends:

In Western Europe, based on the territorial classification of hospitals (regional, district, community level), and thanks to the huge improvement of the population health status, TB specialized hospitals, sanatorium and preventorium have been progressively closed down or transformed (for a small proportion) into rehabilitation centres or long term care facilities.

Concerning psychiatry, various countries (Italy, England and Spain) have progressively closed down a significant number of their specialized hospitals, with a transfer of a part of inpatient care in acute care general hospitals and a concomitant development of community based services.

Concerning other specialized hospitals (infectious diseases, STD), the general trend in Western Europe and OECD countries is also to close down this kind of institutions.

The situation can be different concerning maternity houses and paediatrics hospitals, taking into account the fertility rate in the country and the number of children per woman.

Furthermore, as underlined in the report entitle "Tajikistan Hospital Service Restructuring Concept for 2006-2010), *"Experience in western countries has shown that simply reducing beds (through efficiencies and better practice) often does not result in significant savings. Reducing beds from say, 250 to 200 (a 20%*

¹⁵ Source : Tajikistan Hospital Service Restructuring Concept for 2006-2010

reduction) in one hospital is likely to produce only marginal savings. The fixed infrastructure and staff costs are still there. Real savings only come from reducing the number of facilities and sites – being able to target efficiencies on a much larger budget and redirecting the savings to other part of the health system”

Targets for Tajikistan to be reached by 2020:

As a general orientation, the specialized hospitals should be merged and integrated in general hospitals within a defined timeframe. This reorganisation with transfer or integration of specialized hospitals should be associated with the development of new delivery models and a shift to outpatient services.

A consequent number of the existing specialized hospitals in the field of TB, infectious diseases, dermatovenereology and the specialized centres (ex-dispensaries) with inpatient care should be merged with general hospitals or transformed in healthcare centres, rehabilitation or long-term facilities, depending on healthcare needs of the population.

SUBs transformation to Rural Health Centres except facilities functioning in remote and mountainous districts (and depending on population access times to hospital services, where they can be turned into the “urgent care points”) will contribute to improve:

- Healthcare quality and safety,
- Clinical effectiveness and efficiency.

The main orientations for hospital sector reconfiguration can be summarized as follows:

- 30% reduction bed capacity in general, acute care hospitals

Anticipated reduction in general and “other” hospital beds is 30% that roughly corresponds (a) to the number of beds installed in the rural hospitals - 7340 beds in 208 facilities (MoH, 2006) and (b) currently “excess” beds that are not utilized considering the current average occupancy rate at app. 40 to 50% of the total bed capacity, or 60% of the expected “optimal” occupancy rate established at 80%.

The same rate of reduction is anticipated for oncology and ophthalmology hospital beds considering their current occupancy rates and future anticipated reductions in the ALOS and technology and clinical practice improvements that more likely would lead to increased share of outpatient surgery and day care cases.

- 0% reduction in standalone maternity and gynecology bed capacity

No reductions in the maternity beds are expected. These facilities are currently fully utilized and even with anticipated shorter Average Length of Stay (ALOS) for these facilities, the need for maternity beds is likely to perpetuate at the same level, considering the current relatively high share of unattended births in Tajikistan at app. 17% of total number of births (World Health Organization, 2009). These home births are expected to occur in maternities in future, given that relevant policies for reducing such births will be successful.

- From 60% to 80% reduction in Sexually Transmitted Diseases (STD) and Dermatology inpatient bed capacity and from 20% to 40% reduction in standalone infectious diseases inpatient bed capacity.

As notes above, the National Health Strategy in Tajikistan (CHST) identifies the oversupply of such specialty beds as dermatology and infectious diseases and long term care hospitals for TB and psychiatry, as one of the most distinctive features for characterizing excess hospital infrastructure in the country. It is likely that these facilities will be downsized significantly as a result of the hospital sector rationalization. It is expected that most of the STD hospitals and infectious diseases hospitals will be integrated into general hospitals, with more radical 60% to 80% reduction of the existing bed numbers for STDs and relatively more moderate reduction for infectious diseases beds at 20% to 40%. These beds will not be eliminated from the system, but will be merged into general hospitals and services for STD and dermatology will be maintained, as sexually transmitted, skin, water borne and other infectious diseases are, and likely to remain in the near future, as one of the leading causes of morbidity in Tajikistan.

- From 30% to 50% reduction in inpatient bed capacity for long term care (TB and Psychiatry)

At least thirty to fifty percent reduction is expected for the psychiatric beds, as the country moves towards modern approaches in management of mental health diseases, which includes the focus on community based and outpatient care and decreased length of stay for psychiatric patients. Even with current outdated mental health practice, less than third of the psychiatric bed capacity is utilized. Same applies to the TB hospital beds, as most of these facilities are redundant and as a result of the comprehensive implementation of the Directly Observed Treatment Strategy (DOTS), are likely to be closed in future. Respectively, at least from 30% to 50% reduction in TB inpatient bed capacity is projected. As of the currently underutilized rehabilitation centres, it is expected that their use will increase in future, as many patients undergoing

rehabilitation in general, psychiatric, substance abuse and other specialty hospital settings currently, with appropriate changes in clinical practice will receive care in rehabilitation centres, given that appropriate investments will be made to upgrade and re-profile these centres according to the modern standards. Thus, no changes are expected in overall bed capacity for the rehabilitation facilities.

2.4.8. Developing standards for medium term (rehabilitative care) and Long Term care

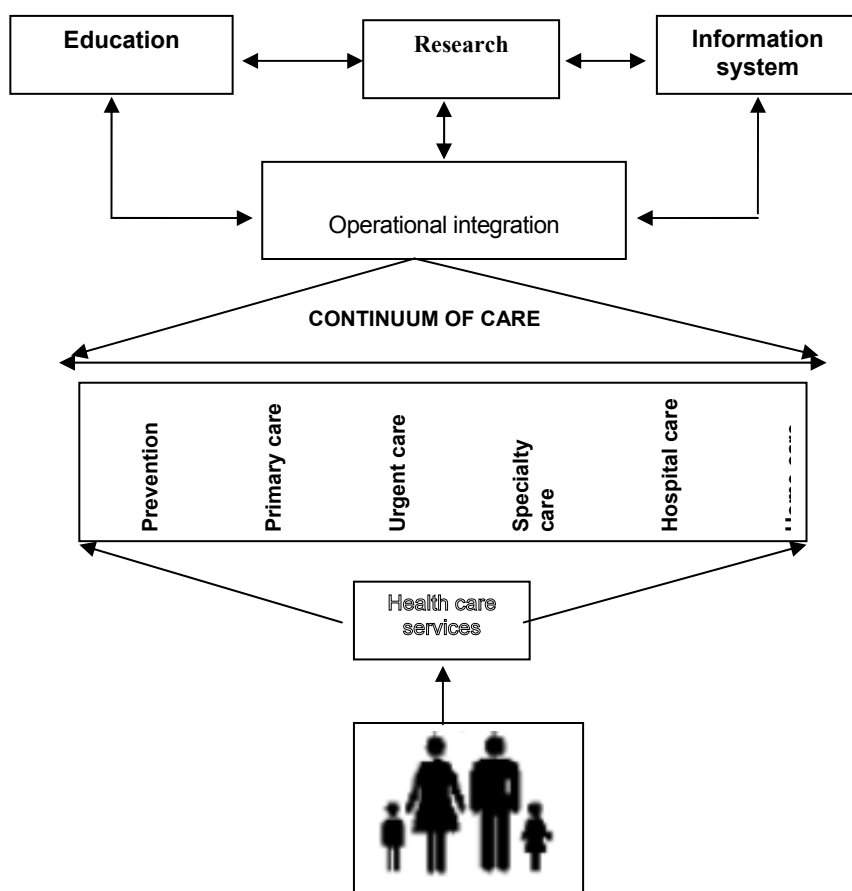
As mentioned in the § 4.3., a strategy the reduction of acute hospital bed capacity should be associated with the development of alternatives facilities and services, in particular as regards to rehabilitative and long term care.

An accurate review of current utilisation of inpatient services in Tajikistan hospitals permits to identify opportunities to improve the utilisation of these beds, such as:

- The implementation, all over the country, of a permanence of care at PHC level, is the first condition to avoid an inappropriate utilisation of hospital medical services, the second condition is to set up a real continuum of care, from prevention to 'post-care',
- The strengthening of an alternate level of care or medical recovery services, duly organised and structured, for patients who no longer require acute care, but can be transferred to other intermediary facilities (less costly and more appropriate for patient needs). The development of such services (rehabilitative and long term care) will permit to free an important number of acute care beds.

These two objectives permanence of care and continuum of care should be two key priorities of the health system.

Figure 10: Continuum of care¹⁶



¹⁶ Snyderman R., Developing an integrated healthcare system at <http://conferences.mc.duke.edu>.

2.4.9. Definition of long-term care and intermediary care:

Medium term/rehabilitative care: The purpose of rehabilitative care is to restore some or all of the patient's physical, sensory, and mental capabilities that were lost due to injury, illness, or disease. Rehabilitation includes assisting the patient to compensate for deficits that cannot be reversed medically. It is prescribed after many types of injury, illness, or disease (Source: Medical Dictionary).

Long Term Care: Long-term care (LTC) is a variety of services which help meet both the medical and non-medical need of people with a **chronic illness or disability** who cannot care for themselves for long periods of time (including leprosy). It is common for long-term care to provide custodial and non-skilled care, such as assisting with normal daily tasks. Increasingly, long term care involves providing a level of medical care that requires the expertise of skilled practitioners to address the often multiple chronic conditions associated with older populations. Long-term care can be provided at home, in the community, in assisted living or in nursing homes. Long-term care may be needed by people of any age, even though it is a common need for senior citizens (Source: Medicare.gov)

Target for Tajikistan:

Category	Ratio
Medium term care/rehabilitative care	0,5 beds per 1000 population aged 15 years and more
Long term care	2 beds per 1000 population aged 50 years and more

2.5. Healthcare quality and safety

2.5.1. Current situation in Tajikistan

A general diagnostic of hospital sector in Tajikistan shows that significant number of hospitals have low occupancy rates (with concomitantly long ALOS) and low volumes of activity (in particular as regards to number of surgical procedures).

2.5.2. Benchmarks and general trends

Internationally, the definition of healthcare quality and safety usually rests on criteria proposed by medical/scientific societies. A key benchmark is the minimum volume (baselines of activity) of specific clinical activities necessary for a medical department or a hospital to carry out within given time limits, so as to meet agreed standards. Sufficient volume of services rendered is necessary to expose medical personnel to appropriate case-mix and allow retaining professional skills. Principles and norms on minimum staff required to ensure the appropriate healthcare delivery services constitutes another key criteria.

For example in France, the new baselines of activity in oncology foresee a minimum of 80 patients followed to have a chemotherapy cancer activity. In radiotherapy (ambulatory), each unit with at least two equipments should treat a minimum of 500 patients per year¹⁷. In surgery, for each operating theatre (with five operating rooms), the baselines of activity vary from 1000 to 1200 surgical procedures per operating room. Concerning obstetrics, an average of 700 to 800 deliveries per year and per hospital constitutes an average standard in a number of European countries (600 in France ; 1 000 in Portugal).

¹⁷ Arrêté du 29 mars 2007 fixant les seuils d'activité minimale annuelle applicables à l'activité de soins de traitement de cancer. JO 30 mars 2007, Texte N°68 sur 172.

BENCHMARKS CONCERNING BASELINE OF ACTIVITY IN FRANCE

Number of deliveries	600 deliveries per year and per hospital in France (and 1 000 in Portugal)
Cardiac Surgery	400 adult surgical interventions/year/hospital 150 children surgical interventions/year/hospital
Angioplasty	400 interventions/cat-lab/year
General Surgery	1000 to 1200 surgical procedures per operating room or 4 000 interventions corresponding to an operating theatre, made up of 5 operating rooms representing 800 interventions per year and per operating room.

2.5.3. Target for Tajikistan:

In relation to healthcare quality and safety, MoH should foresee opposable standards and norms in terms of baseline of activity, for the different medical and surgical clinical activities, and first of all concerning the number of deliveries per obstetrical department and per year, and the number of surgical interventions per operating theatre and per year.

The minimum necessary volumes of activity should also be determined for other medical and surgical specialities (number of angioplasties and bypasses/cat-lab/year; number of cardiac surgery interventions, number of patients treated in oncology, etc.).

The determination of opposable guidelines of activity should be negotiated with the medical scientific societies and with the college of physicians.

The proposed targets to be reached by 2020 are presented in the table below:

Number of deliveries	400 deliveries per year and per department
General Surgery	700 to 800 per operating room

Nevertheless, it is important to underline the fact that these criteria and range of values as in case of other key parameters should not be used in a strict, stiff and arithmetical way. A multi-factor analysis should be developed facility per facility, taking also into account accessibility conditions and access times, geographical context and economic features.

2.6. Medical personnel

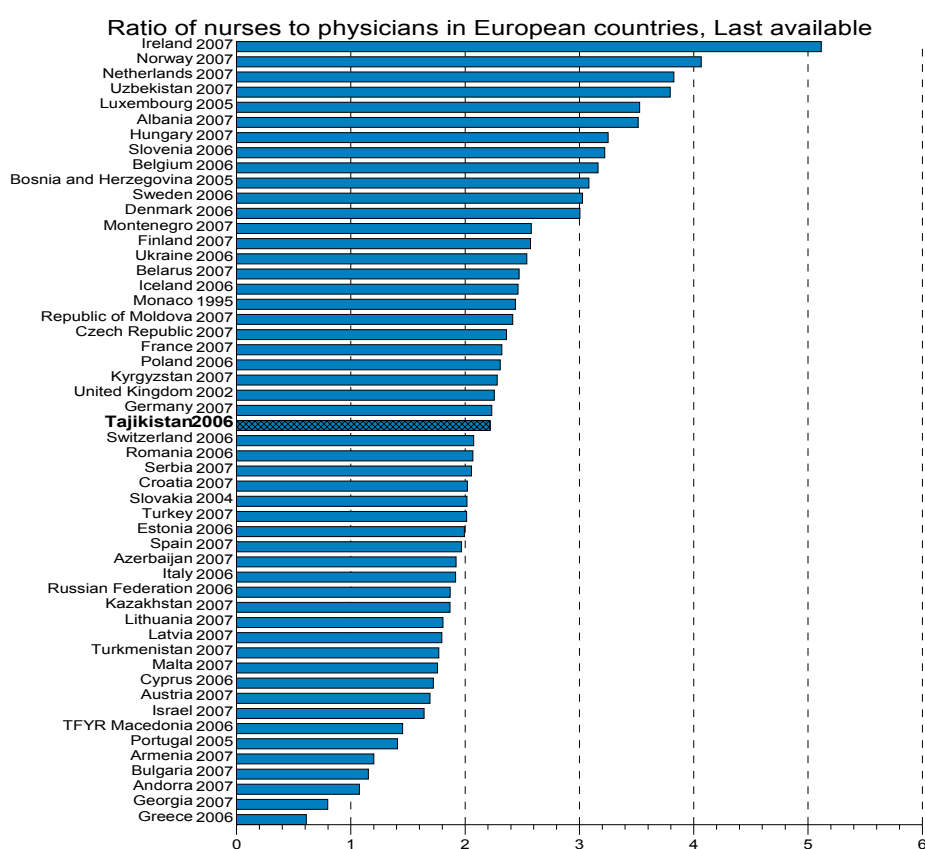
2.6.1. Current situation in Tajikistan

The structural rationalization of the health delivery and public health sectors will have significant impact on the distribution of the medical personnel employed in relevant inpatient settings. *Currently* Tajikistan experiences overall deficit in the qualified medical personnel, - the background documents of National Health Strategy assesses this deficit at about 4,000 physicians, or app. 1/3 of the current physician work force (reported officially at 14,281) and 7,500 nurses, or about 1/5 of the existing number of nurses (reported officially at 34,583). However, despite the overall shortage of the medical personnel, due to significant imbalances in distribution of the health human resources across regions and specialties, there is oversupply of physician cadre in certain geographical locations and in selected specialties. For example, Dushanbe has highest physician to population ratio at 618 per 100,000 population, or more than two times higher than the national average of app. 269 per 100,000 population. Similarly there is excess number of obstetricians and gynaecologists, while general practitioners (family doctors) are in short supply throughout the country. The shortage of oncologists, cardiologists and endocrinologists had recently been reported in more than 30 towns and rayons. The shortage of neurologists, TB doctors, ophthalmologists, urologists, and dermatovenerologists - in more than 20 towns and rayons of Tajikistan. There is also an obvious need in better trained professionals of public health and health care managers on the level of health provision and public management across the health sector (CHST, 2010).

2.6.2. Benchmarks and general trends

While projecting detailed changes across geographical locations and specialties can only be done through a detailed plan on health human resources in Tajikistan, currently under development through the World Bank technical assistance, certain general assumptions can still be derived from already established targets set in different national documents. Specifically:

Overall national target for physician to nurse ratio in the health sector at 1 to 6, set by the “Implementation Plan for the Tajikistan Republic Population Health Protection Strategy up to the year 2010” (GoTR, 2004); current ratio is 1:2.3, which implies the need for more than doubling the current number of nurses. However, even if there is no standard ratio of nurse to doctor widely accepted internationally, the 1993 World Bank’s World Development Report advocated that nurses and midwives could deliver most of the minimum essential public health and clinical services, with doctors providing clinical supervision and direct care of complex issues and complications. It suggests, as a rule of thumb, that the ratio of doctors to nurses should exceed 1:2 as a minimum with 1:4 or higher considered more satisfactory for cost-effective and quality care (The World Bank, 1993). Considering this, It is more likely that this target will be revised with the new strategy, as almost no country in the European Region has similar ratio (see also figure).



Source: WHO HFA Data Base 2010

National target for Family Doctor (FD) to population ratio at 1 FD per 1,200 – 1,500 population (depending on geographical location) and 1 PHC nurse (Family Nurse- FN, in future) per 400 to 750 population (MoH, 2003). This implies FD and FN ratio of app. 1 to 2,5 to 3 and total number of “needed” family doctors is 6,127 FD and 10,667 family nurses, out of which app. 1,900 FD and 2,000 FN were already retrained, however, further major efforts (in terms of time and funds) are needed to achieve the target, given that target ratio’s will not be revised This means that there is a need to attract, train and retrain additional app. retrain and train 4,473 family physicians and 8,946 family nurses.

2.6.3. Targets for Tajikistan:

Family doctors and Family nurses:

The National target and normative standard will be preserved within the present Master Plan as a final target:

- 1 Family Doctor per 1 200 to 1 500 population (depending on geographical location)
- 1 Family Nurse per 400 to 750 population,
- 1 ob&gyn/5 000 women of reproductive age,
- 1 paediatrician/7 500 population under 14 years old

These two last categories are also required to work at PHC level in order to provide the adequate support to family doctors in the of antenatal and postnatal care and diagnostics and treatment of childhood illnesses and gynecologic diseases.

Intermediate targets for FD to and FN ratios to population will also be suggested for master planning for the next 5 to 10 years.

Staffing ratios by hospital level:

The table below presents a benchmark of the most recent total staff and nursing staff ratios in OECD countries. These figures should be considered only as a benchmark concerning in particular the staff ratios per bed and the breakdown of staff per category.

	Staff to Bed Ratio	Nurse to Bed Ratio	% to total Staff	Physician to Bed ratio	% of Total Staff	Administrative and Other staff ratio	% of Total Staff
Germany	2,14	0,77	0,36	0,42	0,2	0,94	0,44
France	1,75	0,59	0,34	0,35	0,2	0,81	0,46
Italy	3,16	1,4	0,44	0,63	0,2	1,13	0,36
Canada	4,4	1,2	0,27	0,88	0,2	2,32	0,53
United Kindgom	9,2	3,1	0,34	1,84	0,2	4,26	0,46
OECD Median	2,1						
USA	5,6	1,6	0,29	1,23	0,22		0,49

Source: OECD 2009

Based on the current context of Tajikistan and as a general basis for the Master Plan exercise, the following ratios are proposed with a distinction between the different categories of hospitals, number of beds and level of complexity. Nevertheless, these ratios should be revised and adjusted based on the outputs of the “Human Resources Strategy for Health Sector in Tajikistan” currently under development within a World Bank Technical Assistance.

Staff Category	% of total staff	Average staff ratio/bed for All Hospitals	Rayon Hospital without Obstetrics (30-50 beds) Staff ratio per bed	Rayon Hospital without Obstetrics (30-50 beds) Staff ratio per bed	Rayon Hospital without Surgery and added 5,10,15 obstetrics beds (45-60) Staff ratio per bed	Rayon Facility with Surgery and added 5,10,15 obstetrics beds (45-60 beds) Staff ratio per bed	Rayon Multiprofile with Neonatology (in remote rayons) 80-100 beds Staff ratio per bed	Regional Multiprofile <300 beds Staff ratio per bed	Regional Multiprofile 300-650 Staff ratio per bed	Tertiary Hospital Staff ratio per bed
Doctors	0,2	0,30	0,20	0,24	0,26	0,28	0,36	0,46	0,48	0,50
Nurses	0,45	0,68	0,45	0,54	0,59	0,63	0,81	1,04	1,08	1,13
Administrative and other technical staff	0,35	0,53	0,35	0,42	0,46	0,49	0,63	0,81	0,84	0,88
Total staff	100%	1,5	1,00	1,20	1,30	1,40	1,80	2,30	2,40	2,50

2.7. Future health care services delivery model

2.7.1. Current situation in Tajikistan

Tajikistan has inherited the health services delivery system that is constructed according to principles underlying so called “Semashko” model. This model is characterized by blurred boundaries between primary and secondary health care, i.e. it is unclear where the PHC ends and SHC begins. Health sector modernization would imply not only the incremental changes and “fixes”, but considerable change in the overall configuration of the health care delivery system. The new integrated health care network should be able to ensure both holistic approach towards individuals accessing the care and continuum of care services through better coordination between levels of care. This may require significant changes in both the categorization of health care facilities and configuration of the health care network.

The health facility classification may be adopted eventually that will define health facility standards according to a type and level of a health facility and required minimum package of services to be provided by each type and at each facility level. This classification is also important for master planning of the health infrastructure and estimating the capital investment, equipment and human resources needs.

An outline of the new health care delivery model and simplified health facility classification (based on this model) proposed in this document (see 7.3. Proposed Model of Health Care and Table 1. Proposed Categories of Health Facilities for Master Planning), with range of services to be provided according to a type and a level of a facility, - is purely for master planning purposes and needs to be further developed and specified in future for use as a regulatory/planning tool. The health care delivery model and classification (categorization of the health facilities) draws on international experience and takes into account the country realities.

2.7.2. Proposed categories of health facilities

The proposed categories of health facilities are presented in the table below:

Proposed Categories of Health Facilities for Master Planning

Medical Facility Type	Characteristic
Health House	Most cases, No doctor, with FN and/or midwife
Rayon health centre	With full range of PHC services, FD teams and plus pediatrician and Ob&gyn and dentist
Comprehensive Rural Primary Health Centres	With full range of PHC services, FD teams and plus pediatrician and Ob&gyn
High Mountain Facility (Extended rural PHC Centre with Emergency Care)	The same as CPHC plus small intensive care unit with relevant staff
Basic rural PHC centres	Minimal range of PHC services provided to the population
Rural community level hospitals in remote areas	From 30 to 50 beds
Central Rayon Hospital (with or without surgery)	From 80 to 400 beds
Oblast Multiprofile hospital <300 beds	150-300 beds
Oblast Multiprofile profile hospital 300-650	300-650 beds
Tertiary Hospital	500-650 beds
Hospital Holding grouping part of the academic hospitals existing in Dushanbe	Managed by a single authority but the hospitals involved will remain autonomous entities with day-to-day management autonomy Unique and comprehensive “Strategic Plan” for the new hospital holding. Unique and coherent investment plan

	An organisation led by a board with a clear focus and supported by robust and appropriate governance arrangements throughout the organisation
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2.7.3. Proposed Model of Health Care Services by Level of Health Facilities

Categories of Services	Basic rural PHC Centres	Rayon Health Centres and Rural Comprehensive PHC Centres (City, Rayon and some of existing Rural health centres)	Extended Rural PHC Centres (existing rural health centres in mountainous areas)	Central Hospitals with or without obstetrics and surgery	Rayon Hospitals	Oblast Multiprofile Hospitals	Tertiary Centres
Primary Health Care Services (PHC)							
<ul style="list-style-type: none"> Public Information Services: communication and education on selected risk factors and health behaviours e.g., basic sanitation, nutrition and family planning, health life style promotion, drugs, tobacco and alcohol control programs 	<p>Individual and family advice and interventions as part of follow up visits</p> <p>Primary responsibility for health education programs/campaigns</p> <p>Home visits</p>	<p>Same as previous and also:</p> <p>supervisory responsibility of “subordinated” BPHCC for Programs/campaigns</p> <p>outreach clinics for “subordinated” BPHCC covered population</p>	Same as BPHCC	Providing professional backup/ Expertise in some areas to the PHC level activities			
<ul style="list-style-type: none"> Communicable Disease Control TB Control 	<p>Community visits</p> <p>Home Visits</p> <p>Notification to SES</p>	<p>Same as previous and also:</p> <p>Outreach visits and clinics</p>	Same as BPHCC	<p>Specific vaccines e.g., BCG</p> <p>Laboratory support services</p>		Referral Services	Lab

Categories of Services	Basic rural PHC Centres	Rayon Health Centres and Rural Comprehensive PHC Centres (City, Rayon and some of existing Rural health centres)	Extended Rural PHC Centres (existing rural health centres in mountainous areas)	Central Hospitals with or without obstetrics and surgery	Rayon or Multiprofile Hospitals	Tertiary Centres
<ul style="list-style-type: none"> Regulatory action, information and public investments to improve the household environment 	Health education on environmental health issues Reporting and notification	Same as previous and also: Vector control activity;	Same as BPHCC	Lab support		
<ul style="list-style-type: none"> HIV/AIDS prevention Control of STD's 	Health education Public info. Campaigns Follow up	Same as previous and also: Diagnosis and treatment	Same as previous	Lab support Health education Providing professional backup/expertise in some areas to the PHC level activities	Lab support Providing professional backup/expertise in some areas to the PHC and rayon hospital activities	
<ul style="list-style-type: none"> Immunization 	Immunization through Outreach and community programs Home Visits SES Notification	Same as previous and also: supervisory responsibility of "subordinated" BPHCC for programs/campaigns	Same as BPHCC	Specific vaccines e.g. TT SES Notification		
<ul style="list-style-type: none"> School-based services including deworming, micronutrient 	Assist school health program delivery	Same as above at school(s) in a	Same as BPHCC	May provide back-up/support for		

Categories of Services	Basic rural PHC Centres	Rayon Health Centres and Rural Comprehensive PHC Centres (City, Rayon and some of existing Rural health centres)	Extended Rural PHC Centres (existing rural health centres in mountainous areas)	Central Rayon Hospitals with or without obstetrics and surgery	Oblast Multiprofile Hospitals	Tertiary Centres
supplementation and health education	e.g., School Health Program: for delivery of health education, health assessments and maintaining Individual records; arranges for routine vaccinations, medical and dental check-ups at a school in catchment area	catchment area Counselling services for subordinated BPHCC		medical and dental services delivered as outreach services at schools		
<ul style="list-style-type: none"> Pregnancy related care, including prenatal childbirth and postpartum care Nutrition Supplementation Family Planning Services 	Prenatal visits and home visits follow-up of perinatal conditions Referral to hospital care/high risk care Home delivery for physiological low risk pregnancies Nutrition supplements, advice/teaching Health Education, Counselling, Family Planning	Same as previous and also: Consultation of obstetrician/gynaecologist for patients referred from BPHCC Diagnosis and treatment of perinatal conditions and pregnancy complications Family Planning device insertion	Same as previous	Providing professional backup/expertise in some areas to the PHC level activities, e.g., hospital delivery, Obstetrics & Gynaecology special clinics, high risk Obstetrics management Lab Support for the PHC Level (e.g., testing for anaemia, biochemistry)	Providing professional backup/expertise in some areas to the Level 2 activities, e.g., hospital delivery for high risk pregnancies, Obstetrics & Gynaecology special clinics, high risk Obstetrical management	Providing in and outpatient services and professional backup/expertise in some areas to other Levels activities, e.g., O&G special clinics, high risk Obstetrics management; cardiac institute; paediatric tertiary care

Categories of Services	Basic rural PHC Centres	Rayon Health Centres and Rural Comprehensive PHC Centres (City, Rayon and some of existing Rural health centres)	Extended Rural PHC Centres (existing rural health centres in mountainous areas)	Central Hospitals with or without obstetrics and surgery	Rayon Multiprofile Hospitals	Tertiary Centres
	supplies/methods;					
<ul style="list-style-type: none"> • Child health (prevention/promotion) • Nutrition supplementation 	Perinatal visits and other home visits Child care advice and Health education, Development Assess/ Advice Referral Nutrition supplements, advice, teaching	Same as previous and also: Consultation of a paediatrician for the patients referred from BPHCC	Same as previous	Lab support Providing professional backup/expertise in some areas to the PHC level activities	Lab support Providing professional backup/expertise in some areas to the rayon hospital level activities	
<ul style="list-style-type: none"> • Care for common serious illnesses of young children – diarrhoeal disease, acute respiratory infection, measles, malaria, and acute malnutrition 	Nurse level care and home visits Diagnosis, referral & follow-up Advice and teaching	Same as previous and also: Doctor level care and home visits Treatment and referral in case of need	Same as previous	Inpatient care Specialist care	Inpatient care	Inpatient care
<ul style="list-style-type: none"> • infection and trauma 	Nurse care and follow up Advice referral	Same as previous and also: Doctor treatment and care and home visits for diagnosis,		Providing professional backup/expertise in some areas to the PHC activities	Outpatient care for referrals Inpatient care	Outpatient care for referrals Inpatient care

Categories of Services	Basic rural PHC Centres	Rayon Health Centres and Rural Comprehensive PHC Centres (City, Rayon and some of existing Rural health centres)	Extended Rural PHC Centres (existing rural health centres in mountainous areas)	Central Hospitals with or without obstetrics and surgery	Rayon or Multiprofile Hospitals	Oblast Hospitals	Tertiary Centres
	Advice and teaching Scheduled clinics Alleviation of pain for health problems	referral & follow-up Advice and teaching Outreach clinics for subordinated BPHCC		Outpatient and inpatient care			
• Treatment and care of chronic disease, e.g., diabetes, hypertension, heart disease		Health education Doctor, Nurse treatment and care and Home visits Diagnosis, treatment & Follow up Scheduled clinics		Providing professional backup/expertise in some areas to the Level 1 activities Specialist OP Clinics Inpatient services	Lab support Providing professional backup/expertise in some areas to the Level 2 activities Specialist OP Clinics and Inpatient services	Lab support Providing professional backup/expertise in some areas to the Level 2 and 3 activities Specialist OP Clinics and Inpatient services	
• Other PHC comprehensive care not categorized above, including rehabilitation services, long term mental health and other social/community care	Maintenance care Screening and referral	Same as previous	Same as previous	Inpatient short term care and Outpatient services Referral	Outpatient services and referral to Institutional care	Inpatient	
Emergency Care							
• Emergency care	Referral	Provide limited urgent care or refer as necessary	Provide extended urgent care, observation and refer as	Emergency and intensive care Referral to higher levels	High level intensive care Referral to higher levels	Intensive and emergency care at highest level	

Categories of Services	Basic rural PHC Centres	Rayon Health Centres and Rural Comprehensive PHC Centres (City, Rayon and some of existing Rural health centres)	Extended Rural PHC Centres (existing rural health centres in mountainous areas)	Central Hospitals with or without obstetrics and surgery	Rayon Multiprofile Hospitals	Tertiary Centres
			necessary/feasible			
Secondary Health Care Services/Inpatient Care						
• General inpatient care for non-surgical conditions				General medicine and basic intensive care Referral to higher levels	Same as previous and also: Diagnostic, treatment and intensive care for referred patients	Same as previous and also: Multi organ failure, infectious diseases caused by especially dangerous pathogens, etc.
• Surgery			Minor surgical procedures Limited outpatient surgery	General surgery, minor surgery, ENT, traumatology Basic outpatient surgery (Surgeries currently conducted as inpatient interventions (e.g. Cataracts, hernia, cholecystectomy, etc.)	Same as previous and also: Basic cardiac surgery, neurosurgery and paediatric surgery Visceral, orthopaedics	Same as previous and also: Referral centre for cardiac surgery and neurosurgery; Paediatric and plastic surgery Advanced Outpatient surgery (e.g. ophthalmic surgery with high technologies)
• Maternal and Child inpatient care			Physiological deliveries and observation	family planning paediatric services, physiological and	Same as previous and also: Advanced	Referral centres for high risk deliveries and associated

Categories of Services	Basic rural PHC Centres	Rayon Health Centres and Rural Comprehensive PHC Centres (City, Rayon and some of existing Rural health centres)	Extended Rural PHC Centres (existing rural health centres in mountainous areas)	Central Hospitals with or without obstetrics and surgery	Rayon Multiprofile Hospitals	Oblast Hospitals	Tertiary Centres
				low risk deliveries, basic gynaecology	gynaecology, neonatal intensive care		complications and neonatology
• Specialized Inpatient Care				Orthopaedic, dental services, dermatology, cardiology, urology	Same as previous and also: gastroenterology, oncology and endocrinology, psychiatry, pneumology,		Same as previous and also: Referral for all specialities
• Lab services				Clinical pathology, basic biochemistry, blood collection point	Same as previous and also: blood bank, microbiology, pathology, haematology, toxicology, basic forensic		Same as previous and also: Advanced forensic, Virusology (e.g. PSR),
• Diagnostic/high tech equipment				X-ray, cardiograph, and possibly endoscopy	Same as previous and also: endoscopy, ultrasound, CT scanner, radiology machine, dialysis machine		Same as previous and also: MRI scanner Radiotherapy units Cath-lab

2.8. Proposed standards for technology

The diffusion of medical technology is an important contributor to improve the health status of the population, but it's also one main driver of rising health expenditures.

Both aspects - financial sustainability and medical care implications (effectiveness, quality, safety, efficacy, equity, etc.) make necessary to choose knowledgeably the healthcare technologies to be made available and the conditions of availability. It is previously important to define a strategy and organisation for setting priorities.

National income and total health spending are important factors influencing the diffusion of medical technologies. Very concretely, the norm or standard concerning high-tech equipment diffusion depends on:

- Epidemiological profile of the population;
- Public health priorities;
- Geographical features and conditions of accessibility (e.g. remote areas),
- Healthcare programming in terms of standard of services to be provided at each level of the system, which directly impact on the sharing of medical activities and high-tech equipment across the country,
- Financial resources available for investment but also for the future operating costs implications (consumables, maintenance, etc.);
- Medical and clinical staff 'demography' as regard to the medical specialty considered;
- Minimum levels of activity defined per equipment to guarantee the rentability of the equipment, as well as the quality and the safety of the service provided.

The table below presents the standards for high-tech medical equipment for the next decade taking into account the current levels of equipment, the available specialized staff and reasonable patterns that it will be possible to attain, the implications in terms of investment, operational and maintenance costs in the specific economic context of Tajikistan.

International Benchmarks and proposed standard for Tajikistan

EQUIPMENT	OECD BENCHMARK (2009 OR LATEST YEAR AVAILABLE)	PROPOSED STANDARD FOR TAJIKISTAN
MRI	Between 5 and 10 units per million population	0,7 to 1.2 unit per million population
CT Scans	Between 10 and 19 units per million population	1,10 to 1,8 units per million population
Mammograph units	Around 20 units per million population	3.5 to 4.5 units per million population
Radiation therapy equipment	Between 4 and 5 units per million population	0,7 to 1,2 units per million population
Angiography	Between 3 and 4 units per million population	0,7 to 1 unit per million population
Lithotripsy	Between 1 and 2 units per million population	0,5 to 0,8 unit per million population
Haemodialysis	Between 40 and 45 units per million population aged between 15 and 59 years Between 200 and 223 units per million population aged 60 years and over	50 to 60 units per million population
Neonatology beds	French Benchmark: 3/1000 births	2/1000 births

(level 1)		
Neonatology beds (level 2 – Intensive Care)	French Benchmark 1,45/1000 births	1/1000 births
Neonatology beds (level 3 – Resuscitation unit)	French Benchmark 0,65/1000 births	0,5/1000 births
ICU beds adults	USA: 20 beds/100 000 population France: 9,3 beds/100 000 population UK: 3,5 beds/100 000 population Canada: 13,5 beds/100 000 population Belgium: 21,9 beds/100 000 population Germany: 24,6 beds/100 000 population Netherlands: 8,4 beds/100 000 population Spain: 8,2 beds/100 000 population	3,5 beds/1000 population
Angiography Ophthalmology		0,75 unit/100 000 population
Echograph general purpose		5,50 unit/100 000 population
Echograph Ophthalmology	OECD benchmark: 0,72	0.5 unit/100 000 population
Defibrillator		5 unit/100 000 population
Gamma Camera		0,10 per 100 000 population
Dental Unit		5 per 100 000 population
X-ray unit		1 unit/100 000 population
X-ray unit mobile		3 unit/100 000 population
X-ray hemodynamic unit		0,20 unit/100 000 population
Extra corporeal unit		0,10 unit/100 000 population
Laparascopy unit		1,10 unit/100 000 population
Endoscopy flexible		3,50 unit/100 000 population
Endoscopic Unit		0,95 unit/100 000 population
Endoscopy video system		0,50 unit/100 000 population

CHAPTER 3. HEALTHCARE MASTER PLAN PER OBLAST

1. GORNO-BADAKHSHAN AUTONOMOUS REGION (GBO)

1.1. Basic Population and Demographics characteristics used for master planning

GBO covers all the eastern part of the country and borders in the East – the Xinjiang Province of China, in the West and South - the Badakhshan Province of Afghanistan, and in the North - the Osh Province of Kyrgyzstan. Within Tajikistan the province's western border is with the Region of Republican Subordination (RRP) and the tip of its south-western finger (Darvoz district) borders on Khatlon Province. The territory of the Oblast is 63,93 thousand sq.km or 44,7% of the country territory and consists of 7 districts.

As of January 1, 2010 Population of the Gbo Oblast was 194 160 inhabitants, or 2,6% of the total population of Tajikistan. Out of this number, 14,7% were urban residents. The average population density across the Oblast is 3 residents per sq.km, versus national average of 52.6 residents per sq. km¹⁸. The administrative centre is the city of Khorog. The distribution of the Oblast population by the 1 January 2010 and population growth projections for the years 2015 and 2020 per rayon are presented in the *Table 2*.

Table 2. Current population and population projections for Gbo Oblast 2010, 2015 and 2020

Name of the rayon	Pop 2009	Population 2015	Population 2020
Vanch	28 740	29 908	31 124
Rushan	26 631	27 713	28 840
Murgab	26 337	27 407	28 521
Rosthtakala	24 435	24 386	25 378
Iskhashim	26 337	27 407	28 521
Darvaz	23 569	24 527	25 524
Shugnan	38 111	39 660	41 272
TOTAL	194 160	201 008	209 180

Source: Agency of Statistics of Tajikistan, 2010¹⁹

The projections for the total populations for the Oblasts and rayons are used as essential parameter for planning future utilization of health services and capacity of primary, secondary and tertiary health care facilities. Current demographic profile of the Oblast population is presented in the *Table 3*.

Table 3. Current and future population demographic profile for the Gbo Oblast, 2009, 2015, 2020.

Categories	2009	2015	2020
Number of children under 15 years of age	54 765	56 991	59 307
Number of women of reproductive age	48 959	50 949	53 020
Annual number of births	3 689	3 839	3 995
Population over 15 years of age	139 395	145 061	150 957
Population over 50 years of age	34 017	35 400	36 838

¹⁸ Agency of Statistics of Tajikistan 2010.

¹⁹ 2010-2020 Population projection estimates are based on the last three year averages of year to year population changes per rayon – reported by the Agency of Statistics.

The specific population groups in the table above were defined for planning of specific types of resources and services. The resources and services planned using the demographic groups are presented below:

- Obstetric: number of women of reproductive age (15 to 49 years) and annual number of deliveries/births,
Neonatology beds: annual number of births,
- Paediatricians at PHC level: Number of children under 15 years of age
- Medium term care/rehabilitative care beds: Population 15 years of age²¹.
- Long term care: Population over 50 years of age²².

1.2. Current health care network, physical access to and utilization of health services

By January 1, 2010 total of 287 outpatient health facilities and 32 hospitals were reported functioning throughout the Gbao Oblast. Total of 237 doctors, 981 nurses and feldshers, 38 midwives, 123 auxilliary nurses and 6 pharmacists were employed in these facilities²³.

1.2.1. Primary care

Facilities

According to the survey findings conducted under the current master planning exercise, 287 outpatient health facilities providing services at PHC level were functioning by January 1, 2010 in Gbao Oblast. These outpatient health facilities included:

- 7 Urban and Rayon Health Centres and Family Medicine Centres,
- 38 Rural Health Centres,
- 2 specialized outpatient centres,
- 240 health houses

The breakdown of the PHC health facilities per rayon is presented in the Table 3.

Table3. Urban, Rayon and Rural Health Centres, Health Houses and specialized health centres per rayon, Gbao Oblast 2009

Name of the rayon	Current number of rayon health centre and urban health centre 2009	Current number of rural health centres 2009	Current number of health houses 2009	Specialized outpatient centres 2009
Vanch	1	7	22	1
Rushan	1	5	30	
Murgab	1	4	88	
Rosthtakala	1	4	25	
Iskhashim	1	7	18	

²⁰ 2010-2020 Population demographic projection estimates are based on the last ten year averages of year to year population changes per oblast – reported by the Agency of Statistics. The 2008-2009 live births rate at 26.9 per 1,000 population for the entire country is used for the years 2015 and 2020 projections

²¹ The need for medium term rehabilitation beds for younger population is marginal

²² Ibid

²³ Medstat, DPS2 database, Last Available (2006).

Darvaz	1	4	22	
Shugnan	1	7	35	1
TOTAL	7	38	240	2

Source: Survey conducted within the framework of the health sector master plan - 2010

Staff

According to the survey conducted for master planning exercise - the total of 29 General Practitioners/Family Doctors (GP), PHC Internists or Paediatricians and 421 nurses/feldshers/midwives were employed in PHC facilities of the Oblast in 2009, representing 1 Family Doctor/6.700 population and 1 family nurse/461 population.

Physical Access to Primary Health Care

Population access to the facilities was determined based on the travel times estimated on the population density, distance, availability and conditions of roads and specificities of the terrain using the Geographical Information System (GIS) database developed for the master planning. Five intervals for population access times by vehicle to PHC facilities were delineated: (1) from 0 to 15 minutes; (2) from 15 to 30 minutes, (3) from 30 to 45 minutes, (4) from 45 to 60 minutes, and (5) over 60 minutes. From 30 to 45 minutes was considered an optimal time interval for accessing the PHC centres (urban, rayon and rural) by vehicle.

The results of the GIS mapping revealed that up to 31% of the Gbao Oblast population can access the nearest PHC centre²⁴ in less than 15 minutes, the 49% can access in less than 30 minutes, 65% in less than 45 minutes, and 35% of the population is located in the areas requiring more than 45 minutes for accessing the nearest PHC centre. Population access times per rayon are presented in the *Table 4*

Table 4 : Distribution of population across access time zones to nearest PHC centre per rayon, Gbao Oblast 2009

Rayon	0-15 min	15-30 min	30-45 min	45-60 min	60 min+	Total
Darvaz	33%	17%	18%	15%	17%	100%
Vanch	27%	19%	18%	13%	23%	100%
Rushan	19%	29%	18%	4%	30%	100%
Shugnan	20%	25%	12%	17%	26%	100%
Rostakala	30%	21%	9%	19%	21%	100%
Iskhashim	38%	16%	11%	18%	17%	100%
Murgab	28%	15%	15%	12%	30%	100%
Total	31%	18%	16%	14%	21%	100%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

The proportion of population with an access to PHC centre in the optimal time interval is smaller than in the other oblasts of the country. Such situation is explained by the geographical features of the region: mountainous region with difficult accessibility in particular during the winter and low population density scattered in a number of small villages.

²⁴ Regardless to which rayon this PHC centre belongs.

Utilization

According to the survey findings, the total of 426 000 patient visits was registered at PHC level in Gbao Oblast during the year 2009. This represents a PHC services utilization rate of 2,2 visits per capita, which is lower than the national average rate.

1.2.2. Hospital network

Facilities

According to the survey findings conducted under the current master planning exercise, 32 public hospitals were providing inpatient services by January 1, 2009. Reported bed capacity for general/acute care hospitals was 1.919, or 9,88 general beds per 1000 population. The number of hospitals per rayon and categories are presented in the table 5.

Table 5: Number of hospitals per rayon and category

Name of the rayon	Current number of hospitals	Central Rayon Hospitals and Oblast reference hospitals	Rural Hospitals	TB specialized hospital	Ophtalmology specialized hospital	Psychiatric hospital	Dermatology specialized hospital	Infectious diseases	Maternity
Vanch	7	1	2					1	3
Rushan	4	1	3						
Murgab	5	1	4						
Rosthtakala	3	1	1	1					
Iskhashim	3	1	2						
Darvaz	2	1	1						
Shugnan	8	2	2	1	1	1	1		
TOTAL	32	8	15	2	1	1	1	1	3

The three maternities in Vanch rayon correspond to small facilities with 5 beds each.

Staff

Up to 208 doctors and 721 nurses/midwives/auxiliary nurses were employed in inpatient health care facilities of the Gbao Oblast²⁵.

Physical Access to hospital care

For inpatient facilities, access times to the nearest Central Rayon Hospital were estimated²⁶. Four intervals for population access times by vehicle to inpatient facilities were delineated: (1) from 0 to 30 minutes; (2) from 30 to 45 minutes, (3) from 45 to 60 minutes, and (5) over 60 minutes. From 45 to 60 minutes was considered as an optimal time interval for accessing the CRH by vehicle.

The results of the GIS mapping revealed that up to 62% of the Gbao Oblast population can access the nearest CRH in less than 60 minutes, while about 38% of the population is located in the areas requiring more than 1 hour for accessing the nearest CRH. Population access times per rayon are presented in the

²⁵ Source : Estimation based on Human Resources data available for the Gbao Oblast minus personnel employed at PHC and in SES system (sanitary Epidemiologic)

²⁶ Access times to existing rural and rayon numbered hospitals were not considered due to the limited scope of inpatient services predominantly provided in these facilities.

Table 6. The highest shares of population residing in the localities with longer the optimal access times to CRH are observed in Darvaz, Shugnan, Rostakala and Murgab. As for PHC centres, the proportion of population with an access to CRH in the optimal time interval is lower than in the other oblasts of the country for the reasons evoked above (low density, extended geographical areas, scattering of the population).

Table 6: Distribution of population across access time zones to nearest Central Rayon Hospital per rayon, Gbao Oblast 2009

Rayon	0-30 min	30-45 min	45-60 min	60 + min	
Darvaz	18%	18%	28%	38%	100%
Vanch	28%	18%	8%	48%	100%
Rushan	16%	20%	18%	46%	100%
Shugnan	20%	10%	40%	30%	100%
Rostakaka	15%	25%	29%	31%	100%
Murgab	17%	20%	18%	45%	100%
Ishakim	18%	18%	18%	46%	100%
Total	19%	19%	24%	38%	100%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Utilization

The admission rate for general hospitals in Gbao reported for 2009 is 9,80 per 100 population compared to the rate of 11.2 admissions per 100 population nationwide. The reported average occupancy rate for Gbao Oblast hospitals is 48% for an ALOS of 10 days.

The detailed bed capacity and utilization indicators for the general hospitals in the public domain of the Gbao Oblast are presented in the *Table 7*.

Table 7. Public general hospital network and current utilization rates for Gbao Oblast, 2009

Name of the rayon	# of beds	# of hospitalizations	# of bed-days	ALOS	Occupancy Rate (%)
Vanch	223	3 615	46 528	12,87	57,16
Rushan	180	2 924	28 172	9,63	42,88
Murgab	165	2 624	25 442	9	42
Rosthtakala	102	1 105	11 128	10,07	29,89
Iskhashim	135	2 478	24 277	9,8	49,27
Darvaz	150	2 500	25 000	9	45
Shugnan	949	3 500	35 000	9	50
TOTAL	1 919	19 046	198 277	10	48

Source: Survey conducted within the framework of the health sector master plan - 2010

1.3. Proposed restructuring strategy

Gbao Oblast can not be assimilated with the other regions of the country taking into account its specific geo-demographic characteristics.

A number of issues raised from the previous:

- How to guarantee population accessibility and equity to the adequate level of healthcare services,
- In the context of small number of inhabitants and low population density, how to ensure healthcare quality and safety standards,
- How to plan and organise the system taking into account these geographical and demographic characteristics and the financial possibilities of the country.

In this context, the planning parameters described in the Chapter 2 were revised and adjusted to the specific environment of Gbao. The reconfiguration approach was revised as follows:

- Extended PHC centres will be developed in the remote areas. These extended PHC Centres will provide the same scope of services as a Comprehensive PHC Centre but with additional categories of services:
 - Extended urgent care, observation and reference of patients as necessary,
 - Minor surgical procedures and limited outpatient surgery,
- In the seven rayons, the number of comprehensive and/or extended PHC centres are planned in order to ensure a reasonable access-time for the whole population. In the approach developed, the prime criterion is not the number of population per centre but land settlement planning criteria to improved access to the adequate healthcare services. The proposed target is one Extended/Comprehensive PHC Centre per 6 400 inhabitants.
- One general hospital per rayon with specialized inpatient care (medicine and surgery) and maternal and child services, with the adequate clinical support services (medical equipment),
- The oblast reference hospital comprising high tech services and equipment including: trauma and maternal child care, oncology services, etc.

Concerning hospital care, the planning parameters and targets to be reached were revised in order to take into consideration the local context:

- The average length of stay proposed for Gbao is 9 days (instead of 7 in other oblasts) in order to avoid early discharges of patients who will meet difficulties to come back to the hospital in the context of mountainous and remote areas,
- The desirable rates of day hospital and day surgeries were also reduced comparatively with the other oblasts (respectively 8% and 5% versus 15% to 30% in other oblasts). Indeed, the clinical follow-up of patients after a medical procedure performed on day basis (medical and surgical) constitutes a crucial issue in order to ensure healthcare quality and safety. Such pre-requisites justify the alteration of desirable rates in Gbao,
- The ratio bed/population is 3,5 beds/1 000 population
- The minimum volume of activity for general surgery as defined in the planning parameters (700 to 800 per operating room) is not totally applicable in the context of Gbao, as all Central Rayon hospitals should have surgical activities, independently of their volumes as consequence of the geographical features and population accessibility criteria.

1.3.1. Future primary care network

Number of facilities

According to the overall approach proposed for the restructuring strategy, the Gbao Oblast should have at least one strengthened and integrated Urban, Rayon or Rural Health Centre – i.e. an “Extended” or “Comprehensive” PHC Centre - per 6.400 of the Oblast residents. The actual number of such facilities was determined for each of the rayons of the Oblast using this overall approach, however adjusted to the concrete specificities of the respective localities, including physical access time parameters. The remaining Rural Health Centres providing minimally acceptable range of PHC services will be retained in the system as “Basic PHC Centres”.

Table 8 Number and type of existing and future PHC facilities per rayon, Gbao Oblast 2009, 2020

Name of the rayon	Current number of rayon health centre and urban health centre 2009	Current number of rural health centres 2009	Current number of health houses 2009	Current number of outpatient specialized centres 2009	Comprehensive Rayon Health centres (2020)	Comprehensive rural PHC Centres (2020)	Basic rural PHC Centres 2020	Specialized outpatient centres 2020	Number of health houses 2020
Vanch	1	7	22	1	1	4	3	-	17
Rushan	1	5	30		1	3	2	-	24
Murgab	1	4	88		1	4	0	-	70
Rosthtakala	1	4	25		1	3	1	-	20
Iskhashim	1	7	18		1	4	3	-	14
Darvaz	1	4	22		1	4	0	-	17
Shugnan	1	7	35	1	1	4	3	-	28
TOTAL	7	38	240	2	7	26	12		190

Source: For current situation - survey conducted within the framework of the health sector master plan - 2010

The Table 8 above presents the number of outpatient facilities existing currently and the number of Comprehensive or Extended PHC centres needed in the year 2020 for each of the rayons of the Gbao Oblast, taking into account the population growth projections presented in the previous section.

All 7 Urban and Rayon Health Centres and 26 Rural Health Centres are proposed to be transformed into Comprehensive or Extended PHC Centres. The remaining 12 Rural Health Centres are proposed to be retained as Basic PHC centres with minimal investments in infrastructure and human resources. It also should be noted that existing 15 rural and rayon numbered hospitals essentially providing services that should be provided at PHC level, will either be merged with extended PHC centres or abolished (with some exceptions in remote areas Cf. Table 12)

The number of health houses retained as outreach PHC centres will be determined in every rayon based on population density and conditions of accessibility to the closest PHC Centre. Taking into account the specific geographical context of Gbao and the difficulties of population accessibility to PHC facilities network, it is recommended to maintain 80% of the current health houses existing in the Oblast, as illustrated in the table 8 above. The 20% proposed to be removed correspond to the facilities located in the same settlement as a PHC centre and which role is then questionable.

The detailed description as well as the maps illustrating the current situation and the proposed scenario for PHC services are presented in the deliverable 2, rayon per rayon.

Staff projections

The targets to be reached in terms of PHC staff are recapitulated below:

Target 2015	1 Family Doctor per 2 000 pop	1 nurse per 800 pop 2,5 nurses per FD
Target 2020	1 Family Doctor per 1 500 pop (low bracket)	1 nurse per 600 pop 2,5 nurses per FD

1 Family Doctor per 1 200 pop (high bracket)	1 nurse per 400 pop 3 nurses/FD
1 gyne-obs/5 000 women of reproductive age	
1 paediatrician/7 500 population under 14 years old	

The required numbers of these four categories of the medical personnel were calculated for each of the rayons of the Gbao Oblast. The summary result is presented in Table 9.

Table 9. Existing and future numbers of GPs and GP nurses, Specialist Paediatricians and Ob&gyns at PHC level, Gbao Oblast, 2009

Name of the rayon	Current number of GPS 2009	Number of family doctors (low bracket) 2020	Number of family doctors (high bracket) 2020	Current number of GP nurses 2009	Future number of GPs Nurses (low bracket) 2020	Future number of GPs Nurses (high bracket) 2020	Future number of paediatricians working at PHC Level 2020	Future number of Gyne-obs working at PHC Level 2020
Vanch	6	20	25	75	50	75	1	1
Rushan	4	19	24	100	48	72	1	1
Murgab	10	19	24	59	48	72	1	2
Rosthtakala	1	17	21	50	43	63	1	1
Iskhashim	3	19	24	39	48	72	1	2
Darvaz	0	17	21	58	43	63	1	1
Shugnan	5	28	34	40	70	102	1	3
TOTAL	29	139	173	421	348	519	8	11

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The data presented shows the need for major increase in the number of family doctors or general practitioners (GPs). Over the next decade, the number of GPs should be increased more than 4,8 times even if the lower bracket of targeted number of the GPs is considered and by more than 5,9 times if the higher bracket target has to be achieved by the year 2020. These targets are challenging to achieve even if all the specialists working at the PHC level currently will be retrained into GPs. The need for attracting significant number of GPs to the Gbao Oblast is obvious.

The outlook for GP nurses appears to be better, as 23,3% of more nurses are required to be trained/retrained to accomplish the target of 519 (high bracket).

8 paediatricians and 11 ob&gyns are also required to work at PHC level in order to provide the adequate support to family doctors in antenatal and postnatal care and diagnostics and treatment of childhood illnesses and gynecologic diseases.

Depending on the age structure of the current workforce (and predictable retirements) a detailed plan should be established for the next decade in order to match the real needs of the rayon. Recommendations for such plan will be provided through the on-going technical assistance on the development of the National Human Resources Strategy for Health Sector.

Physical Access to PHC services after the restructuring process

Physical access to the basic level of PHC services will remain the same as described above (up to 31% of the Gbao Oblast population can access the nearest PHC centre²⁷ in less than 15 minutes, the 49% can access in less than 30 minutes, 65% in less than 45 minutes).

Furthermore, after the restructuring process, 25% of the Gbao population will be able to reach an extended or comprehensive PHC Centre (with full range of services and equipment) in less than 15 minutes and 62% in less than 45 minutes, as described in the table below, which appears to be a reasonable target in the specific geo-demographic context of Gbao.

Table 10 :Distribution of population across access time zones to nearest comprehensive PHC centre per rayon, Gbao Oblast 2009

Rayon	0-15 min	15-30 min	30-45 min	45-60 min	60 min+	Total
Darvaz	33%	17%	18%	15%	17%	100%
Vanch	21%	17%	24%	14%	24%	100%
Rushan	16%	26%	24%	4%	30%	100%
Shugnan	15%	21%	17%	19%	29%	100%
Rostakala	24%	17%	10%	26%	23%	100%
Iskhashim	31%	16%	13%	20%	20%	100%
Murgab	28%	15%	15%	12%	30%	100%
Total	25%	18%	19%	14%	24%	100%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Assumptions concerning primary care utilization

The table below (Table 11) presents the current PHC activity, as well as the anticipated workloads for 2015 and 2020 based on the defined parameters described in the Chapter 2:

Table 11: Current and projected number of visits to PHC facilities per rayon, Gbao Oblast, 2009, 2015, 2020

Name of the rayon	Current number of PHC visits (2009)	Future number of PHC visits (2015)	Future number of PHC visits (2020)
Vanch	146 484	115 146	152 508
Rushan	44 088	106 695	141 316
Murgab	66 058	105 510	139 753
Rosthtakala	30 740	93 886	124 352
Iskhashim	40 828	105 517	139 753

²⁷ Regardless to which rayon this PHC centre belongs.

Darvaz	49 502	94 429	125 068
Shugnan	49 000	152 691	202 233
TOTAL	426 700	775 889	1 024 983

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The target of 3.85 PHC visits per capita in 2015 and 4.9 in 2020 (as defined in the planning parameters) will mean that number primary care consultations are anticipated to increase by almost 2,4 times over the next ten years.

1.3.2. Hospital sector reconfiguration

Projected Inpatient Capacity and Utilization

As noted above, Gbao Oblast has presently general hospital capacity of 9,88 beds per 1000 population.

Taking into account the forecast population growth and the targets in terms of admission rate per population, average length of stay and occupancy rate, significant decrease in the number of general or acute care beds should be planned, as illustrated in the tables 12 and 13.

According to the targets defined, a maximum of **800** acute care beds are needed in the Oblast by the year 2020, which implies up to 58,3% reduction of the existing capacity of general beds.

Considering the current workloads and healthcare quality and safety standards, it is generally recommended to maintain only one hospital from 90 to 200 beds per rayon. However, in rayons with constrained access for the population (Murgab, Rushan and Iskhashim) three additional community level hospitals may also be considered with up to 30 beds. This implies reduction of number of general hospitals in the Gbao oblast to 11 secondary care and Oblast reference hospitals. The central rayon hospitals should be strengthened and modernized in order to become the secondary care hospital for the whole population of respective rayon with all the adequate services as described in the “Proposed model of health care services by level of health facilities” (Chapter 2. Planning parameters section).

Table 12: Current and projected number of hospitals per rayon, Gbao Oblast, 2009, 2020

Name of the rayon	Current number of hospitals 2009	Number of central rayon hospital and reference oblast hospitals (2020)	Community level rural hospitals (2020)	Total Number of acute care hospital in 2020	LTC TB Facilities (2020)
Vanch	7 (including three small maternities with 5 beds each)	1	0	1	1 (infectious diseases)
Rushan	4	1	1	2	0
Murgab	5	1	1	2	0
Rostakala	3	1	0	1	0
Ishashim	3	1	1	2	0
Darvaz	2	1	0	1	0
Shugnan	8	2	0	2	2 (TB and psychiatry)
TOTAL	32	8	3	11	3

As noted above the rural and rayon numbered hospitals should be transformed into comprehensive PHC facilities and/or abolished. Elimination of the beds in the rural hospitals will allow achieve about 70% of required reduction in beds across the Oblast. The three maternities with 5 beds existing in Vanch rayon should be merged with the closest extended PHC Centre.

The Table 13 below presents the resulting numbers of acute care beds and utilization rates projections based on the targets defined in terms admission rates, average length of stay, desirable rates of ambulatory care (day hospital and ambulatory surgery), and expected occupancy rates – taking into account the Oblast population growth forecasts.

The detailed description as well as the maps illustrating the current situation and the proposed scenario for hospital sector are presented in the deliverable 2, rayon per rayon.

Table 13: Projected number of acute care (general) hospital beds, admissions and bed days per rayon, Gbao Oblast, 2009, 2020

Name of the rayon	Projected # of beds by 2020	Projected # of hospitalizations 2020 (low bracket)	Projected # of bed-days 2020 (low bracket)	Projected # of hospitalizations 2020 (High bracket)	Projected # of bed-days 2020 (high bracket)	Surgical Activity in CRH by 2020 (yes/no)
Vanch	109	3 589	27 811	3 735	28 810	Y
Rushan	101	3 326	27 282	3 461	28 266	Y
Murgab	100	2 741	22 446	3 423	27 953	Y
Rosthtakala	90	2 439	19 972	3 045	24 873	Y
Iskhashim	100	2 741	22 446	3 423	27 953	Y
Darvaz	90	2 943	24 149	3 063	25 016	Y
Shugnan	210	8 377	52 685	8 718	54 778	Y
TOTAL	800	26 156	196 791	28 868	217 649	

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Up to 4 000 deliveries per year can be expected by the year 2020. The mother and child network in the rayon should rely on the comprehensive PHC centres for normal deliveries with low risk, the central rayon hospital for the level 2 (managing low and moderate risk pregnancies and with level 2 neonatal beds), and the Oblast reference hospital for the level 3 (high obstetric risk with neonatal intensive care and resuscitation unit).

According to the planning parameters defined and considering the specific population groups, the medium term care (or rehabilitative care) and long term care beds for Gbao Oblast were estimated as follows:

Table 14: Number of medium term care beds and LTC beds, 2015 and 2020

Category	Ratio	Number of beds 2015	Number of beds 2020
Medium term care/rehabilitative care	0,5 beds per 1000 population aged 15 years and more	73	76
Long term care	2 beds per 1000 population aged 50 years and more	71	74

Staff projections

The projections for the medical and nursing staffing for hospital network is related to the bed capacity planned for the Gbao Oblast. The proposed staff numbers have been calculated using the expected higher workload and occupancy rates as a result of the bed number optimization, which will require more intensive staff input and as a result higher than current total staff to bed ratio. A change in the current doctor to nurse ratio in general hospitals is also expected through addressing the current imbalance between the medical and nursing professions, so that human resources are less centred on physicians. The resulting ratios suggested in the planning parameters section (see Chapter 2), were applied to the Gbao Hospitals. The staff per bed ratios and derived estimates per staff category are presented in the Table 15

Table 15: Current and projected staff to bed ratios and staff numbers per category for Gbao Oblast, 2009, 2020

	Current 2009		Projected 2020	
	<i>Ratios</i>	<i>Numbers</i>	<i>Ratios</i>	<i>Numbers</i>
Number of Beds		1 919		800
Doctors	0.10	208	0.30	240
Nurses	0.37	721	0.68	544
Administrative and other technical staff		N/A	0.53	424
Total staff			1.5	1 208

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Detailed inpatient staffing plans for each rayon should be elaborated

Physical Access to hospital services after the restructuring process

Physical access to the CRH will remain the same; with more than 62% of the Oblast population gaining access to upgraded hospital services/emergency care within 60 minutes of access time by vehicle (see the table 6).

1.3.3. Hi-tech medical equipment proposed standards for Gbao Oblast

The chapter 2 (Planning Parameters) presents the standards for high-tech medical equipment to be reached in Tajikistan during the next decade taking into account the current levels of equipment, the available specialized staff and reasonable patterns that it will be possible to attain, the implications in terms of investment, operational and maintenance costs in the specific economic context of Tajikistan.

Nevertheless, taking again into account the specific geo-demographic context of Gbao oblast, these parameters can not be applied systematically and within the same conditions. The proposed high-tech equipment standard for Gbao oblast are presented in the table below:

Table 16: High tech equipment – International Benchmarks – Proposed standard for Tajikistan and Number of units proposed for Gbao Oblast

EQUIPMENT	OECD BENCHMARK (2009 OR LATEST YEAR AVAILABLE)	PROPOSED STANDARD FOR TAJIKISTAN	PROPOSED TARGET FOR GBAO	NUMBER OF UNITS REQUIRED IN 2015 IN GBAO OBLAST	NUMBER OF UNITS REQUIRED IN 2020 IN GBAO OBLAST
MRI	Between 5 and 10 units per million population	1 to 1.5 unit per million population	1 unit for the whole oblast	1	1
CT Scans	Between 10 and 19 units per million population	2 to 2.5 units per million population	1 unit for the whole oblast	1	1
Mammograph units	Around 20 units per million population	4 to 5 units per million population	1 to 2 units for the whole oblast	1	2
Radiation therapy equipment	Between 4 and 5 units per million population	0,7 to 1,2 units per million population	No unit to be installed in the oblast considering the small volume of activity and the fact that healthcare quality and safety standards can not be ensured (small catchment's area)	0	0
Angiography	Between 3 and 4 units per million population	0,7 to 1 unit per million population	No unit to be installed in the oblast considering the small volume of activity and the fact that healthcare quality and safety standards can not be ensured (small catchment's area)	0	0
Lithotripsy	Between 1 and 2 units per million population	0,5 to 0,8 unit per million population	No unit to be installed in the oblast considering the small volume of activity and the fact that healthcare quality and safety standards can not be ensured (small catchment's area)	0	0

Haemodialysis	Between 40 and 45 units per million population aged between 15 and 59 years Between 200 and 223 units per million population aged 60 years and over	50 to 60 units per million population	10 units per 100 000 population	20	20
Neonatology beds (level 1)	French Benchmark: 3/1000 births	2/1000 births	Idem National target	8	8
Neonatology beds (level 2 – Intensive Care)	French Benchmark 1,45/1000 births	1/1000 births	Idem National target	4	4
Neonatology beds (level 3 – Resuscitation unit)	French Benchmark 0,65/1000 births	0,5/1000 births	No unit to be installed in the oblast considering the small volume of activity and the fact that healthcare quality and safety standards can not be ensured (small catchment's area)	4	4
ICU beds adults	USA: 20 beds/100 000 population France: 9,3 beds/100 000 population UK: 3,5 beds/100 000 population Canada: 13,5 beds/100 000 population Belgium: 21,9 beds/100 000 population Germany: 24,6 beds/100 000 population Netherlands: 8,4 beds/100 000 population Spain: 8,2 beds/100 000 population	3,5 beds/100 000 population	Idem National target	8	8
Angiography Ophthalmology		0,75 unit/100 000 population	Idem National target	1	2
Echograph general purpose		5,50 unit/100 000 population	7 units/100 000 population	14	14
Echograph Ophthalmology	OECD benchmark: 0,72	0,5 unit/100 000 population	1 unit/100 000 population	2	2
Defibrillator		5 unit/100 000 population	Idem National target	10	10
Gamma Camera		0,10 per 100 000 population	No unit to be installed in the oblast	0	0

			considering the small volume of activity and the fact that healthcare quality and safety standards can not be ensured (small catchment's area)		
Dental Unit		5 per 100 000 population	Idem National target	10	10
X-ray unit		1 unit/100 000 population	1 per rayon	7	7
X-ray unit mobile		3 unit/100 000 population	2 per rayon	14	14
X-ray hemodynamic unit		0,20 unit/100 000 population	No unit to be installed in the oblast considering the small volume of activity and the fact that healthcare quality and safety standards can not be ensured (small catchment's area)	0	0
Extra corporeal unit		0,10 unit/100 000 population	No unit to be installed in the oblast considering the small volume of activity and the fact that healthcare quality and safety standards can not be ensured (small catchment's area)	0	0
Laparascopy unit		1,10 unit/100 000 population	1 per rayon	7	7
Endoscopy flexible		3,50 unit/100 000 population	1 per rayon	7	7

1.3.4. Emergency network in Gbao Oblast

Four distinct levels of emergency services will be implemented in Gbao Oblast :

- Proximity emergency services in comprehensive PHC Centres and community hospitals (primary emergency care providing basic services).

- Medium level emergency services in Central Rayon Hospitals,
- High level emergency service in Oblast multiprofile hospitals and in Rayon Multiprofile hospitals with a catchment's population justifying such services,
- A central communication centre to be located in Khorog to coordinate the Emergency services of the region and a range of core specialties- Surgery, Medicine, Neonatology, Obstetrics and Gynecology, etc.

The detailed maps per rayon depicting the existing and future health care network (PHC and hospital) are presented in the deliverable 2.

2. KHATLON

2.1. Basic Population and Demographics characteristics used for master planning

Khatlon Oblast encompasses the southwest part of Tajikistan between the Hisor (Gissar) in the north and the Panj River in the south and borders on Afghanistan in the southeast and on Uzbekistan in the west. The territory of the Oblast is 24,68 thousand sq.km or 17.2% of the country territory and consists of 24 districts. As of January 1, 2010 Population of the Khatlon Oblast was 2,700 thousand, or 35,8% of the total population of Tajikistan. Out of this number, 17,2% were urban residents. The average population density across the Oblast is 109,4 residents per sq.km, which is higher than national average of 52.6 residents per sq. km²⁸. The administrative centre is the city of Kurban-Tyube with 72,900 thousand residents and located in approximately 100 kms from the capital of Dushanbe. The distribution of the Oblast population by the 1 January 2010 and population growth projections for the years 2015 and 2020 per rayon are presented in the *Table 2*.

Table 5. Current population and population projections for Khatlon Oblast 2010, 2015 and 2020

Name of the rayon	Pop 2009	Pop 2015	Population 2020
A Jomi	136 100	153 985	174 220
Baldzhuvan	26 700	30 209	34 178
Bokthar	220 500	255 620	296 334
Kurgan-Tyube	72 900	78 534	84 603
Vaskh	154 300	171 196	189 943
Vose	180 600	198 421	218 002
Dangara	120 800	134 686	150 167
Yavan	176 100	199 241	225 423
Rumi J	159 900	180 912	204 686
Kubodiyon	145 900	164 269	184 950
Kulyab rayon	89 400	101 642	115 561
Kulyab city	97 500	110 312	124 808
Kumsangir	106 800	120 834	136 713
Muminabad	77 500	87 257	98 243
Khusrav	29 600	34 315	39 780
Nurek	51 100	57 896	65 625
Pyandz	99 700	113 353	128 875

²⁸ Agency of Statistics of Tajikistan 2010.

Sarband	39 300	46 149	54 192
Temurmalik	59 900	67 113	75 194
Farkhor	138 300	153 444	170 247
Khovaling	48 500	53 286	58 544
Khurasan	90 400	102 279	115 720
Khamadoni	128 900	143 717	160 237
Dzilikul	93 900	106 758	121 378
Shakritus	103 400	118 710	136 286
Shuoabad	52 200	60 514	70 152
TOTAL	2 700 200	3 044 652	3 434 061

Source: Agency of Statistics of Tajikistan, 2010²⁹

The projections for the total populations for the Oblasts and rayons are used as essential parameter for planning future utilization of health services and capacity of primary, secondary and tertiary health care facilities for the Oblast and rayons. Current demographic profile of the Oblast population is presented in the *Table 3*

Table 6. Current and future population demographic profile for the Khatlon Oblast, 2009, 2015, 2020.

Categories	2009	2015	2020
Number of children under 15 years of age	920 786	1 040 246	1 175 620
Number of women of reproductive age	681 399	769 845	871 972
Annual number of births	72 583	81 958	92 529
Population over 15 years of age	1 779 414	2 004 406	2 258 441
Population over 50 years of age	446 283	504 630	574 601

Source: Agency of Statistics of Tajikistan, 2010³⁰

The specific population groups in the table above were defined for planning of specific types of resources and services. The resources and services planned using the demographic groups are presented below:

- Obstetric: number of women of reproductive age (15 to 49 years) and annual number of deliveries/births,
Neonatology beds: annual number of births,
- Paediatricians at PHC level: Number of children under 15 years of age
- Medium term care/rehabilitative care beds: Population 15 years of age³¹.
- Long term care: Population over 50 years of age³².

²⁹ 2010-2020 Population projection estimates are based on the last three year averages of year to year population changes per rayon – reported by the Agency of Statistics.

³⁰ 2010-2020 Population demographic projection estimates are based on the last ten year averages of year to year population changes per oblast – reported by the Agency of Statistics. The 2008-2009 live births rate at 26.9 per 1,000 population for the entire country is used for the years 2015 and 2020 projections

³¹ The need for medium term rehabilitation beds for younger population is marginal

³² Ibid

2.2. Current health care network, physical access to and utilization of health services

By January 1, 2010 total of 1,060 outpatient health facilities and 135 hospitals were reported functioning throughout the Khatlon Oblast. Total of 2285 doctors, 5172 nurses, 1113 midwives and 404 feldshers were employed in this facilities³³.

2.2.1. Primary care

Facilities

According to the survey findings conducted under the current master planning exercise, 1 060 outpatient health facilities providing services at PHC level were functioning by January 1, 2010 in Khatlon Oblast. These outpatient health facilities included:

- 38 Urban and Rayon Health Centres and Family Medicine Centres,
- 293 Rural Health Centres,
- 10 TB centres for DOTS (outpatient), 2 IMCI centres (outpatient); 1 Healthy Lifestyle centres (outpatient); 2 AIDS centre (outpatient); 3 reproductive health; 1 Immunization centres (outpatient)
- 12 other specialized outpatient centres (dermatology, tropical diseases, psychiatry, etc.)
- 698 health houses

The breakdown of the PHC health facilities per rayon is presented in the Table 3.

³³ Medstat, DPS2 database, Last Available (2006).

Table 7. Urban, Rayon and Rural Health Centres, Health Houses and specialized health centres per rayon, Khatlon Oblast 2009

PHC FACILITIES				SPECIALIZED OUTPATIENT CENTRES										
Name of the rayon	Rayon health centres, urban health centre and family medicine centre	Rural health centres	Health Houses	IMCI	Healthy life style	Reproductive health	TB Dots	HIV	Immunization centre	<i>Cardio</i>	Dermatology	Tropical diseases	Psychiatry	Ophthalmology
A Jomi	2	5	47			1		1						
Baldzhuvan	1	10	15	-	-	-	-	-	-	-				
Bokthar	1	21	40											
Kurban-Tyube	6			1	1	1		1	1	1	1	1		
Vaskh	1	12	49				1				1			
Vose	1	33	22				1				1			
Dangara	1	19	33											
Yavan	1	21	49				1				1		1	
Rumi J	1	14	40				1				1			1
Kubodiyon	1	14	41				1				1			
Kulyab	1	6	34											
Kulyab city	1	3		1		1								
Kumsangir	1	8	37											
Muminabad	1	12	25											
Khusrav	1	4	13											
Nurek	1	2	14											
Pyandz	1	12	32				1							
Sarband	2	3	7											
Temurmalik	1	5	29											
Farkhor	3	19	26				1				1			

Khovaling	1	9	13											
Khurasan	1	11	23											
Khamadoni	1	17	28				1				1			
Dzilikul	2	14	30											
Shakritus	1	10	32				1							
Shuoabad	1	9	19				1							
TOTAL	38	293	698	2	1	3	10	2	1	1	8	1	1	1

Source: Survey conducted within the framework of the health sector master plan - 2010

Staff

According to the survey conducted for master planning exercise - the total of 1.061 General Practitioners/Family Doctors (GP), PHC Internists or Paediatricians and 3.475 nurses/feldshers/midwives were employed in PHC facilities of the Oblast in 2009, representing 1 Family Doctor/2 550 population and 1 family nurse/777 population.

Physical Access to Primary Health Care

Population access to the facilities was determined based on the travel times estimated on the population density, distance, availability and conditions of roads and specificities of the terrain using the Geographical Information System (GIS) database developed for the master planning. Five intervals for population access times by vehicle to PHC facilities were delineated: (1) from 0 to 15 minutes; (2) from 15 to 30 minutes, (3) from 30 to 45 minutes, (4) from 45 to 60 minutes, and (5) over 60 minutes. From 30 to 45 minutes was considered an optimal time interval for accessing the PHC centres (urban, rayon and rural) by vehicle.

The results of the GIS mapping revealed that up to 66% of the Kathlon Oblast population can access the nearest PHC centre³⁴ in less than 15 minutes, the 91% can access in less than 30 minutes, 96% in less than 45 minutes, and 5% of the population is located in the areas requiring more than 45 minutes for accessing the nearest PHC centre. Population access times per rayon are presented in the *Table 4*

Table 8 :Distribution of population across access time zones to nearest PHC centre per rayon, Kathlon Oblast 2009

Share of population per zone						
Rayon	0-15 min	15-30 min	30-45 min	45-60 min	60 min+	
Khusrav	50%	29%	6%	6%	5%	100%
Shakritus	67%	23%	5%	3%	2%	100%
Kubodiyon	67%	21%	5%	5%	2%	100%
Dzilikul	78%	12%	6%	1%	3%	100%
Kumsangir	70%	20%	5%	2%	3%	100%
Rumi. J.	66%	31%	2%	1%	0%	100%
Vakhsh	64%	30%	3%	2%	1%	100%
Bokthar	72%	27%	1%	0%	0%	100%
Kurban Tuybe	90%	10%				100%
Sarband	57%	34%	7%	1%	1%	100%
Pyanz	70%	27%	1%	1%	1%	100%
Farkhor	63%	27%	6%	2%	2%	100%
Khurasan	52%	26%	13%	4%	5%	100%
A Jomi	58%	37%	5%	0%	0%	100%
Yavan	72%	23%	3%	1%	1%	100%
Dangara	56%	28%	9%	4%	3%	100%
Temur Malik	60%	22%	8%	4%	6%	100%
Boce	66%	26%	5%	2%	1%	100%
Khamadoni	64%	25%	6%	3%	2%	100%

³⁴ Regardless to which rayon this PHC centre belongs.

Kulab rayon	75%	24%	1%	0%	0%	100%
Kulab city	90%	10%				100%
Nurek	58%	23%	8%	7%	4%	100%
Baldzhuvan	57%	33%	6%			100%
Khovaling	44%	28%	15%	8%	5%	100%
Muminabad	71%	14%	8%	4%	3%	100%
Shuroabad	44%	31%	9%	6%	10%	100%
Total	66%	25%	5%	2%	3%	100%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Utilization

According to the survey findings, the total of 6,807 634 patient visits was registered at PHC level in Kathlon Oblast during the year 2009. This represents a PHC services utilization rate of 2,5 visits per capita, which is lower than the national average rate of 4 per capita.

2.2.2. Hospital network:

Facilities

According to the survey findings conducted under the current master planning exercise, 135 public hospitals were providing inpatient services by January 1, 2009. Reported bed capacity for general/acute care hospitals was 10.801, or 4 general beds per 1000 population. The number of hospitals per rayon and category is presented in the table 5.

Table 5: Number of hospitals per rayon and category (2009)

Name of the rayon	Current number of hospitals	Central Rayon Hospitals	Current number of Rural Hospitals	Multiprofile city centre hospitals	Multiprofile Oblast reference hospital	Current number of specialized hospitals	TB specialized hospital	Ophta	Endocrinology	Oncology	Dermatology	Narco.	Psy.	Surgery	Cardiolo	Maternity	Children
A Jomi	5	1	3			1	1										
Baldzhuvan	3	1	2			0											
Bokthar	6	1	5														
Kurban Tyube	10	-	-	1	1	8	1	1	1	1	1	1	1	1			
Vaskh	5	1	4			0											
Vose	6	1	3			2	1				1						
Dangara	5	1	3			1	1										
Yavan	5	1	3			1					1						
Rumi J	8	1	4			3	1	1			1						
Kubodiyon	4	1	3			0											
Kulyab rayon	2	1	1														
Kulyab city	11				1	10	1	1		1	1	1	1		1	2	1
Kumsangir	7	1	5			1	1										
Muminabad	2	1	1			0											
Khusrav	2	1	1			0											
Nurek	1	1	0			0											
Pyandz	6	1	4			1	1										
Sarband	2	1	1			0											
Temurmalik	2	1	2			0											
Farkhor	9	1	6			2	1				1						
Khovaling	2	1	1			0											
Khurasan	6	1	5			0											
Khamadoni	7	1	4			2	1				1						
Dzilikul	6	1	5			0											
Shakritus	6	1	3			2	1									1	

Shuoabad	7	1	5			1	1										
TOTAL	135	24	74	1	2	35	12	3	1	2	7	2	2	1	1	3	1

Staff

Up to 1 174 doctors and 3074 nurses/midwives/feldshers were employed in inpatient health care facilities of the Khatlon Oblast³⁵.

Physical Access to hospital care

For inpatient facilities, access times to the nearest Central Rayon Hospital were estimated³⁶. Four intervals for population access times by vehicle to inpatient facilities were delineated: (1) from 0 to 30 minutes; (2) from 30 to 45 minutes, (3) from 45 to 60 minutes, and (5) over 60 minutes. From 45 to 60 minutes was considered as an optimal time interval for accessing the CRH by vehicle.

The results of the GIS mapping revealed that up to 92% of the Khatlon Oblast population can access the nearest CRH in less than 60 minutes, while about 8% of the population is located in the areas requiring more than 1 hour for accessing the nearest CRH. Population access times per rayon are presented in the Table 6. The highest shares of population residing in the localities with longer the optimal access times to CRH are observed in Shuroabad, Khovaling, Temur Malik and Dangara rayons.

Table 6: Distribution of population across access time zones to nearest Central Rayon Hospital per rayon, Kathlon Oblast 2009

Rayon	0-30 min	30-45 min	45-60 min	60 + min	
Khamadoni	35%	33%	22%	10%	100%
Shuroabad	41%	27%	16%	16%	100%
Muminabad	61%	26%	8%	5%	100%
Kulab rayon	65%	21%	13%	1%	100%
Kulab city	100%				
Khovaling	47%	19%	16%	18%	100%
Baldzhuvan	65%	26%	7%	2%	100%
Vose	48%	24%	21%	7%	100%
Temur Malik	32%	32%	17%	19%	100%
Pyanz	83%	14%	2%	1%	100%
Farkhor	52%	23%	16%	9%	100%
Rumi. J.	66%	24%	9%	1%	100%
Kumsangir	59%	29%	5%	7%	100%
Vakhsh	67%	24%	4%	5%	100%
Dangara	46%	23%	13%	18%	100%
Nurek	77%	9%	7%	8%	100%
Yavan	52%	25%	18%	5%	100%
A Jomi	77%	16%	5%	2%	100%
Khurasan	32%	47%	13%	8%	100%
Dzilikul	73%	10%	10%	7%	100%
Kubodiyon	61%	19%	10%	10%	100%
Shakritus	83%	15%	2%	14%	100%
Sarband	74%	16%	3%	7%	100%
Bokhtar	73%	19%	8%	0%	100%
Kurban Tuybe	100%				

³⁵ Source : Estimation based on Human Resources data available for the Khatlon Oblast minus personnel employed at PHC and in SES system (sanitary Epidemiologic)

³⁶ Access times to existing rural and rayon numbered hospitals were not considered due to the limited scope of inpatient services predominantly provided in these facilities.

Khusrav	47%	26%	16%	11%	100%
Total	60%	21%	11%	8%	100%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Utilization

The admission rate for general hospitals in Khatlon reported for 2009 is relatively low at 6,57 per 100 population compared to the rate of 11.2 admissions per 100 population nationwide. As a result, the reported average occupancy rate for Khatlon Oblast hospitals is 41% for an ALOS of 9 days.

The detailed bed capacity and utilization indicators for the general hospitals in the public domain of the Khatlon Oblast are presented in the *Table 7*.

Table 7. Public general hospital network and current utilization rates for Khatlon Oblast, 2009

Name of the rayon	# of beds	# of hospitalizations	# of bed-days	ALOS	Occupancy Rate (%)
A Jomi	311	7 134	45 658	6,4	40,22
Baldzhuvan	175	1 688	16 931	10,03	26,51
Bokthar	445	6 214	47 270	7,61	29,10
Kurban Tuybe	1 150	17 906	162 815	9,10	38,82
Vaskh	385	7 447	54 438	7,31	38,74
Vose	346	7 204	71 103	9,87	56,3
Dangara	445	5 085	40 782	8,02	25,11
Yavan	666	17 160	145 860	8,5	60
Rumi J	525	11 067	90 971	8,22	47,47
Kubodiyon	290	10 025	72 280	7,21	68,29
Kulyab rayon	253	4 927	45 720	9,28	49,51
Kulyab city	1 003	13 181	196 020	15,10	58,06
Kumsangir	480	8 967	65 907	7,35	37,62
Muminabad	212	2 950	26 344	8,93	34,04
Khusrav	155	828	8 504	10,27	15
Nurek	221	3 494	27 393	7,84	33,96
Pyandz	505	7 472	68 075	9,11	36,93
Sarband	300	2 311	19 158	8,29	17,5
Temurmalik	200	3 893	35 271	9,06	48,32
Farkhor	561	7 958	80 694	10,14	39,41
Khovaling	150	1 091	6 448	5,91	11,78
Khurasan	300	6 201	56 739	9,15	51,82
Khamadoni	625	6 779	81 755	12,06	35,84
Dzilikul	450	6 132	71 867	11,72	43,75
Shakritus	450	8 113	45 433	5,6	27,66
Shuoabad	198	2 429	23 391	9,63	32,37
TOTAL	10 801	177 455	1 606 827	9	41

Source: Survey conducted within the framework of the health sector master plan - 2010

2.3. Proposed restructuring strategy

The proposed restructuring strategy for Khatlon Oblast is based on the planning parameters presented in the Chapter 2 adjusted to the context of each of the rayons of the Oblast.

2.3.1. Future primary care network

Number of facilities

According to the overall approach proposed for the restructuring strategy, the Khatlon Oblast should have at least one strengthened and integrated Urban, Rayon or Rural Health Centre – i.e. a “Comprehensive” PHC Centre - per 20,000 of the Oblast residents. The actual number of such facilities was determined for each of the rayons of the Khatlon Oblast using this overall approach, however adjusted to the concrete specificities of the respective localities, including physical access time parameters. The remaining Rural Health Centres providing minimally acceptable range of PHC services will be retained in the system as “Basic PHC Centres”.

Table 8 Number and type of existing and future PHC facilities per rayon, Khatlon Oblast 2009, 2020

Name of the rayon	Number of rayon health centre and urban health centre 2009	Number of rural health centres 2009	Number of specialized outpatient centres 2009	Health Houses 2009	Comprehensive Rayon Health centres and Urban health centres 2020	Comprehensive rural PHC centres (2020)	Rural Basic PHC Centres (2020)	Health houses 2020
A Jomi	2	5	2	47	1	8		19
Baldzhuvan	1	10		15	1	1	9	6
Bokthar	1	21		40	1	14	7	16
Kurban Tuybe	2		8	0	4	0	0	0
Vaskh	1	12	2	49	1	8	4	20
Vose	1	33	2	22	1	10	23	9
Dangara	1	19		33	1	7	12	13
Yavan	1	21	3	49	1	10	11	20
Rumi J	1	14	3	40	1	9	5	16
Kubodiyon	1	14	2	41	1	8	6	16
Kulyab rayon	1	9		34	1	5	1	14
Kulyab city	1		2		6	0	0	0
Kumsangir	1	8		37	1	6	2	15
Muminabad	1	12		25	1	4	8	10
Khusrav	1	4		13	1	1	3	6
Nurek	1	2		14	1	2	0	6
Pyandz	1	12	1	32	1	5	7	13
Sarband	2	3		7	1	2	2	3
Temurmalik	1	5		29	1	3	2	12
Farkhor	3	19	2	26	1	8	13	10
Khovaling	1	9		13	1	2	7	5
Khurasan	1	11		23	1	5	6	9
Khamadoni	1	17	2	28	1	7	10	11
Dzilikul	2	14		30	1	7	8	12

Shakritus	1	10	1	32	1	6	4	13
Shuroabad	1	9	1	19	1	4	5	8
TOTAL	32	293	31	698	34	142	157	282

Source: For current situation - survey conducted within the framework of the health sector master plan - 2010

The Table 8 above presents the number of outpatient facilities existing currently and the number of comprehensive PHC centres needed in the year 2020 for each of the rayons of the Khatlon Oblast, taking into account the population growth projections presented in the previous section.

All 32 Urban and Rayon Health Centres and 138 Rural Health Centres are proposed to be transformed into Comprehensive PHC Centres. The remaining 157 Rural Health Centres are proposed to be retained as Rural Basic PHC centres with minimal investments in infrastructure and human resources. It also should be noted that existing 74 rural and rayon numbered hospitals essentially providing services that should be provided at PHC level, will either be merged with comprehensive PHC centres or abolished (with some exceptions in remote areas Cf. Table 12)

The number of health houses retained as outreach PHC centres will be determined in every rayon based on population density and conditions of accessibility to the closest PHC Centre. As a general parameter, health houses should be maintained in the settlements with at least 300 inhabitants and located at more than 45 minutes from a PHC centre. As a global estimation for Khatlon rayons, approximately 40% of the existing health houses should be retained as illustrated in the table above.

The detailed description as well as the maps illustrating the current situation and the proposed scenario for PHC services are presented in the deliverable 2, rayon per rayon.

Staff projections

The targets to be reached in terms of PHC staff are recapitulated below:

Target 2015	1 Family Doctor per 2 000 pop	1 nurse per 800 pop 2,5 nurses per FD
	1 Family Doctor per 1 500 pop (low bracket)	1 nurse per 600 pop 2,5 nurses per FD
Target 2020	1 Family Doctor per 1 200 pop (high bracket)	1 nurse per 400 pop 3 nurses/FD
	1 gyne-obs/5 000 women of reproductive age	
	1 peadiatrician/7 500 population under 14 years old	

The required numbers of these four categories of the medical personnel were calculated for each of the rayons of the Khatlon Oblast. The summary result is presented in Table 9.

Table 9 Existing and future numbers of GPs and GP nurses, Specialist Paediatricians and Ob&gyns at PHC level, Khatlon Oblast

Name of the rayon	Current number of Family Doctors 2009	Future number of Family Doctors (Low Bracket) 2020	Future number of Family Doctors (High Bracket) 2020	Current number of GP nurses 2009	Future number of GPs Nurses (low bracket) 2020	Future Number of GP Nurses (high bracket) 2020	Future number of paediatricians working at PHC Level 2020	Future number of Gyne-obs working at PHC Level 2020

A Jomi	55	116	145	137	290	435	8	8
Baldzhuvan	5	23	28	50	58	84	2	2
Bokthar	67	202	247	147	530	804	13	14
Kurban Tuybe	22	52	70	49	105	147	4	5
Vaskh	37	127	158	194	318	474	9	10
Vose	117	145	182	323	363	546	10	12
Dangara	67	100	125	193	250	375	7	8
Yavan	50	150	188	225	375	564	9	9
Rumi J	60	136	171	115	340	513	11	10
Kubodiyon	53	123	154	166	308	462	9	10
Kulyab rayon	22	87	96	101	253	270	5	6
Kulyab City	25	73	104	110	140	330	6	6
Kumsangir	37	91	114	81	228	342	7	7
Muminabad	29	65	82	204	163	246	4	5
Khusrav	6	25	31	52	63	93	2	1
Nurek	30	44	55	147	110	165	3	3
Pyandz	39	86	107	115	215	321	6	6
Sarband	25	36	45	99	90	135	3	3
Temurmaliq	17	50	63	69	125	189	3	4
Farkhor	50	113	142	164	283	426	8	9
Khovaling	22	39	49	74	98	147	1	1
Khurasan	42	77	96	94	193	288	5	5
Khamadoni	56	107	134	192	268	402	7	8
Dzililikul	52	81	101	115	203	303	5	6
Shakritus	36	91	114	120	228	342	9	7
Shuroabad	40	47	58	139	118	174	3	4
TOTAL	1 061	2 286	2 859	3 475	5 715	8 577	159	169

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The data presented shows the need for major increase in the number of family doctors or general practitioners (GPs). Over the next decade, the number of GPs should be increased more than twofold even if the lower bracket of targeted number of the GPs is considered and by more than 2.6 times if the higher bracket target has to be achieved by the year 2020. These targets are challenging to achieve even if all the specialists working at the PHC level currently will be retrained into GPs. The need for attracting significant number of GPs to the Kathlon Oblast is obvious.

The outlook for GP nurses appears to be similar. 64,4% of more nurses are required to be trained/retrained to accomplish the target of 5,715 (low bracket). The current number of nurses should be increased by 2,46 times if the higher bracket target has to be achieved by the year 2020.

159 paediatricians and 169 ob&gyns are also required to work at PHC level in order to provide the adequate support to family doctors in the of antenatal and postnatal care and diagnostics and treatment of childhood illnesses and gynaecologic diseases.

Depending on the age structure of the current workforce (and predictable retirements) a detailed plan should be established for the next decade in order to match the real needs of the rayon. Recommendations for such plan will be provided through the on-going technical assistance on the development of the National Human Resources Strategy for Health Sector.

Physical Access to PHC services after the restructuring process

Physical access to the basic level of PHC services will remain the same as described above (up to 66% of the Khatlon Oblast population can access the nearest PHC centre³⁷ in less than 15 minutes, the 91% can access in less than 30 minutes, 96% in less than 45 minutes).

Furthermore, after the restructuring process, 56% of the Khatlon population will be able to reach a comprehensive PHC Centre (with full range of services and equipment) in less than 15 minutes and 87% in less than 30 minutes, as described in the table below.

Table 10 : Distribution of population across access time zones to nearest comprehensive PHC centre per rayon, Khatlon Oblast 2009

Share of population per zone						
Rayon	0-15 min	15-30 min	30-45 min	45-60 min	60 min+	
Khusrav	43%	22%	14%	12%	9%	100%
Shakritus	58%	29%	8%	3%	4%	100%
Kubodiyon	61%	26%	5%	2%	6%	100%
Dzilikul	67%	21%	7%	3%	2%	100%
Kumsangir	63%	25%	5%	3%	4%	100%
Rumi. J.	54%	41%	5%			100%
Vakhsh	60%	33%	4%	2%	1%	100%
Bokthar Rayon	71%	26%	3%	0%	0%	100%
Kurban Tuybe	85%	15%				
Sarband	56%	32%	10%	1%	1%	100%
Pyanz	67%	21%	7%	3%	2%	100%
Farkhor	51%	36%	8%	2%	3%	100%
Khurasan	52%	26%	13%	4%	5%	100%
A Jomi	56%	39%	5%	0%	0%	100%
Yavan	62%	31%	5%	1%	1%	100%
Dangara	41%	37%	13%	4%	5%	100%
Temur Malik	41%	25%	19%	8%	7%	100%
Vose	48%	42%	8%	2%	2%	100%
Khamadoni	51%	27%	12%	5%	5%	100%
Kulab rayon	67%	21%	7%	3%	2%	100%
Kulab city	87%	13%				
Nurek	50%	25%	10%	3%	6%	100%
Baldzhuvan	48%	36%	10%	2%	4%	100%
Khovaling	39%	40%	10%	2%	3%	100%
Muminabad	39%	43%	9%	2%	7%	100%
Shuroabad	37%	27%	14%	12%	10%	100%

³⁷ Regardless to which rayon this PHC centre belongs.

Total	56%	31%	7%	2%	4%	100%
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Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Assumptions concerning primary care utilization

The table below (Table 11) presents the current PHC activity, as well as the anticipated workloads for 2015 and 2020 based on the defined parameters described in the Chapter 2:

Table 11: Current and projected number of visits to PHC facilities per rayon, Khatlon Oblast, 2009, 2015, 2020

Name of the rayon	Current number of PHC visits 2009	Future number of PHC visits (2015)	Future number of PHC visits (2020)
A Jomi	389 195	592 842	853 678
Baldzhuvan	37 273	116 305	167 472
Bokthar	342 034	984 133	1 452 007
Kurban Tuybe	145 800	302 360	414 584
Vaskh	374 632	659 105	930 721
Vose	485 363	763 921	1 068 210
Dangara	689 253	518 541	735 818
Yavan	421 983	767 078	1 104 573
Rumi J	481 110	696 511	1 002 961
Kubodiyon	495 105	632 436	906 255
Kulyab rayon	133 372	389 782	566 248
Kulyab city	145 272	424 701	611 560
Kumsangir	184 067	465 211	669 894
Muminabad	156 211	335 939	481 391
Khusrav	33 517	128 309	183 858
Nurek	111 941	222 900	321 563
Pyandz	481 110	436 409	631 488
Sarband	159 262	177 674	265 541
Temurmaliq	136 653	258 385	368 451
Farkhor	489 534	590 759	834 210
Khovaling	64 971	205 151	286 376
Khurasan	163 135	393 774	567 028
Khamadoni	227 336	553 310	785 161
Dzilikul	37 273	411 018	594 752
Shakritus	234 559	457 034	667 801
Shuoabad	187 673	232 979	343 745
TOTAL	6 807 634	11 716 567	16 815 346

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The target of 3.85 PHC visits per capita in 2015 and 4.9 in 2020 (as defined in the planning parameters) will mean that number primary care consultations are anticipated to increase by almost 2,47 times over the next ten years.

2.3.2. Hospital sector reconfiguration

Projected Inpatient Capacity and Utilization

As noted above, Khatlon Oblast has presently general hospital capacity of 4 beds per 1000 population.

Taking into account the forecast population growth and the targets in terms of admission rate per population, average length of stay and occupancy rate, significant decrease in the number of general or acute care beds should be planned, as illustrated in the table 12.

According to the targets defined, a maximum of **7,808** acute care beds are needed in the Oblast by the year 2020, which implies up to 27,7% reduction of the existing capacity of general beds.

Considering the current workloads and healthcare quality and safety standards, it is generally recommended to maintain only one hospital from 100 to 500 beds per rayon. However, in rayons with constrained access for the population (A. Jomi, Rumi J., Farkhor, Dzilikul, Shuroabad and Shakritus) six additional community level hospitals may also be considered with up to 50 beds. This implies reduction of number of general hospitals in the Kathlon oblast to 37 secondary care and Oblast reference hospitals. The central rayon hospitals should be strengthened and modernized in order to become the secondary care hospital for the whole population of respective rayon with all the adequate services as described in the “*Proposed model of health care services by level of health facilities*” (Chapter 2. Planning parameters section).

Table 12: Current and projected number of hospitals per rayon, Kathlon Oblast, 2009, 2020

Name of the rayon	Current number of hospitals 2009	Number of central rayon hospital and reference oblast hospitals (2020)	Rural community level hospitals (2020)	Total Number of acute care hospital in 2020	LTC TB Facilities (2020)
A Jomi	5	1		1	1
Baldzhuvan	3	1	1	2	
Bokthar	6	1		1	
Kurban Tuybe	10	3		3	
Vaskh	5	1		1	
Vose	6	1		1	1
Dangara	5	1		1	
Yavan	5	1		1	
Rumi J	8	1	1	2	1
Kubodiyon	4	1		1	
Kulyab rayon	2	1		1	
Kulyab city	11	4		4	
Kumsangir	7	1		1	1
Muminabad	2	1		1	
Khusrav	2	1		1	
Nurek	1	1		1	
Pyandz	6	1		1	1
Sarband	2	1		1	
Temurmalik	2	1		1	
Farkhor	9	1	1	2	2
Khovaling	2	1		1	
Khurasan	6	1		1	
Khamadoni	7	1		1	1

Dzilikul	6	1	1	2	
Shakritus	6	1	1	2	
Shuroabad	7	1	1	2	
TOTAL	135	31	6	37	8

As noted above the rural and rayon numbered hospitals should be transformed into comprehensive PHC facilities and/or abolished. Elimination of the beds in the rural hospitals will allow achieve about 70% of required reduction in beds across the Oblast.

The Table 13 below presents the resulting numbers of acute care beds and utilization rates projections based on the targets defined in terms admission rates, average length of stay, desirable rates of ambulatory care (day hospital and ambulatory surgery), and expected occupancy rates – taking into account the Oblast population growth forecasts.

The detailed description as well as the maps illustrating the current situation and the proposed scenario for hospital sector are presented in the deliverable 2, rayon per rayon.

Table 13: Projected number of acute care (general) hospital beds, admissions and bed days per rayon, Khatlon Oblast, 2009, 2020

Name of the rayon	Projected # of beds by 2020	Projected # of hospitalizations 2020 (low bracket)	Projected # of bed-days 2020 (low bracket)	Projected # of hospitalizations 2020 (High bracket)	Projected # of bed-days 2020 (high bracket)	Surgical Activity in CRH by 2020 (yes/no)
A Jomi	348	15 399	88 387	19 164	96 341	Y
Baldzhuvan	70	2 417	14 379	3 418	19 140	N
Bokhtar	250	10 300	72 100	11 860	83 020	Y
Kurban Tuybe	1 100	48 716	283 416	55 235	303 867	Y
Vaskh	380	17 120	98 267	20 894	116 998	Y
Vose	430	19 842	113 894	23 980	134 288	Y
Dangara	300	13 469	77 310	16 518	92 500	Y
Yavan	450	21 917	126 219	24 797	138 863	Y
Rumi J	410	18 091	103 843	22 515	126 084	Y
Kubodiyon	350	16 427	94 290	20 345	113 932	Y
Kulyab rayon	100	4 100	28 500	4 700	32 900	y
Kulyab city	800	34 785	205 164	39 155	214 516	Y
Kumsangir	290	12 083	69 359	16 406	83 258	y
Muminabad	170	8 726	50 086	9 824	55 014	Y
Khusrav	60	2 666	15 864	3 002	16 811	N
Nurek	125	5 790	33 232	7 219	40 426	Y
Pyandz	260	11 335	65 065	14 176	79 385	Y
Sarband	110	4 615	26 490	5 961	33 381	Y
Temurmalik	140	6 711	38 523	8 271	46 317	Y
Farkhor	340	15 344	88 077	18 727	104 871	Y
Khovaling	115	5 329	30 586	6 429	36 002	Y
Khurasan	230	10 228	58 708	12 729	71 282	Y
Khamadoni	320	14 372	82 494	17 626	98 705	Y
Dzilikul	250	10 676	71 867	13 352	74 771	Y

Shakritus	270	11 871	68 140	14 991	83 950	Y
Shuoabad	140	6 051	34 735	7 717	43 215	y
TOTAL	7 808	348 380	2 038 995	419 011	2 339 837	

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Up to 91,09 thousand deliveries per year can be expected by the year 2020. The mother and child network in the rayon should rely on the comprehensive PHC centres for normal deliveries with low risk, the central rayon hospital for the level 2 (managing low and moderate risk pregnancies and with level 2 neonatal beds), and the Oblast reference hospital for the level 3 (high obstetric risk with neonatal intensive care and resuscitation unit).

If we consider that 60% of the total deliveries will be performed in the central rayon hospitals and 7% in the Oblast reference hospitals, the balance of 30,06 thousand deliveries will be carried out in the PHC centres (and at home under the supervision of the qualified medical personnel for a small part). In compliance with the agreed planning parameters, the minimum number of deliveries per ward should not be lower than 400 deliveries/ per year, meaning that a maximum of 75 delivery wards (level 1) should be deployed in 176 Comprehensive PHC Centres of the Oblast.

According to the planning parameters defined and considering the specific population groups, the medium term care (or rehabilitative care) and long term care beds for Khatlon Oblast were estimated as follows:

Table 14: Number of medium term care beds and LTC beds, 2015 and 2020

Category	Ratio	Number of beds 2015	Number of beds 2020
Medium term care/rehabilitative care	0,5 beds per 1000 population aged 15 years and more	1 000	1 130
Long term care	2 beds per 1000 population aged 50 years and more	1 009	1 150

Staff projections

The projections for the medical and nursing staffing for hospital network is related to the bed capacity planned for the Khatlon Oblast. The proposed staff numbers have been calculated using the expected higher workload and occupancy rates as a result of the bed number optimization, which will require more intensive staff input and as a result higher than current total staff to bed ratio. A change in the current doctor to nurse ratio in general hospitals is also expected through addressing the current imbalance between the medical and nursing professions, so that human resources are less centered on physicians. The resulting ratios suggested in the planning parameters section (see Chapter 2), were applied to the Khatlon Oblast Hospitals. The staff per bed ratios and derived estimates per staff category are presented in the Table 15

Table 15: Current and projected staff to bed ratios and staff numbers per category for Khatlon Oblast, 2009, 2020

	Current 2009		Projected 2020	
	Ratios	Numbers	Ratios	Numbers
Number of Beds		10 801		7 808
Doctors	0.10	1 174	0.30	2,342
Nurses	0.28	3 074	0.68	5,309
Administrative and other technical staff		N/A	0.53	4,138
Total staff			1.5	11,789

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Detailed inpatient staffing plans for each rayon should be elaborated

Physical Access to hospital services after the restructuring process

Physical access to the CRH will remain the same; with more than 92% of the Oblast population gaining access to upgraded hospital services/emergency care within 60 minutes of access time by vehicle (see the table 6).

2.3.3. Hi-tech medical equipment proposed standards for Khatlon Oblast

The chapter 2 (Planning Parameters) presents the standards for high-tech medical equipment to be reached in Tajikistan during the next decade taking into account the current levels of equipment, the available specialized staff and reasonable patterns that it will be possible to attain, the implications in terms of investment, operational and maintenance costs in the specific economic context of Tajikistan.

The application of these standards in Khatlon Oblast results in the following numbers:

Table 16: High tech equipment – International Benchmarks – Proposed standard for Tajikistan and Number of units proposed for Khatlon Oblast

EQUIPMENT	OECD BENCHMARK (2009 OR LATEST YEAR AVAILABLE)	PROPOSED STANDARD FOR TAJIKISTAN	NUMBER OF UNITS REQUIRED IN 2015 IN KATHLON OBLAST	NUMBER OF UNITS REQUIRED IN 2020 IN KATHLON OBLAST
MRI	Between 5 and 10 units per million population	0,7 to 1.2 unit per million population	2	4
CT Scans	Between 10 and 19 units per million population	1,10 to 1,8 units per million population	3	5
Mammograph units	Around 20 units per million population	3.5 to 4.5 units per million population	11	15
Radiation therapy equipment	Between 4 and 5 units per million population	0,7 to 1,2 units per million population	2	4
Angiography	Between 3 and 4 units per million population	0,7 to 1 unit per million population	2	3
Lithotripsy	Between 1 and 2 units per million population	0,5 to 0,8 unit per million population	2	3
Haemodialysis	Between 40 and 45 units per million population aged between 15 and 59 years Between 200 and 223 units per million population aged 60 years and over	50 to 60 units per million population	152	206
Neonatology beds (level 1)	French Benchmark: 3/1000 births	2/1000 births	164	185
Neonatology beds (level 2 – Intensive Care)	French Benchmark 1,45/1000 births	1/1000 births	82	93
Neonatology beds (level 3 – Resuscitation unit)	French Benchmark 0,65/1000 births	0,5/1000 births	41	47
ICU beds adults	USA: 20 beds/100 000 population France: 9,3 beds/100 000 population UK: 3,5 beds/100 000 population Canada: 13,5 beds/100 000 population Belgium: 21,9 beds/100 000 population Germany: 24,6 beds/100 000 population Netherlands: 8,4 beds/	3,5 beds/1000 population	107	120

	100 000 population Spain: 8,2 beds/100 000 population			
Angiography Ophthalmology		0,75 unit/100 000 population	23	26
Echograph general purpose		5,50 unit/100 000 population	167	189
Echograph Ophthalmology	OECD benchmark: 0,72	0.5 unit/100 000 population	15	17
Defibrillator		5 unit/100 000 population	152	172
Gamma Camera		0,10 per 100 000 population	3	3
Dental Unit		5 per 100 000 population	152	172
X-ray unit		1 unit/100 000 population	30	34
X-ray unit mobile		3 unit/100 000 population	91	103
X-ray hemodynamic unit		0,20 unit/100 000 population	6	7
Extra corporeal unit		0,10 unit/100 000 population	3	3
Laparascopy unit		1,10 unit/100 000 population	33	38
Endoscopy flexible		3,50 unit/100 000 population	107	120
Endoscopic Unit		0,95 unit/100 000 population	29	33
Endoscopy video system		0,50 unit/100 000 population	15	17

2.3.4. Emergency network in Khatlon Oblast

Four distinct levels of emergency services will be implemented in Khatlon Oblast :

- Proximity emergency services in comprehensive PHC Centres and community hospitals (primary emergency care providing basic services).
- Medium level emergency services in Central Rayon Hospitals,
- High level emergency service in regional multiprofile hospitals and in Rayon Multiprofile hospitals with a catchment's population justifying such services,
- A central communication centre to be located in Kurban Tuybe to coordinate the Emergency services of the region and a range of core specialties- Surgery, Medicine, Neonatology, Obstetrics and Gynecology, etc.

The detailed maps per rayon depicting the existing and future health care network (PHC and hospital) are presented in the deliverable 2.

3. SOGD

3.1. Basic Population and Demographics characteristics used for master planning

Sogd Oblast encompasses the northern part of Tajikistan. The territory of the Oblast is 25.4 thousand sq.km or 17.7% of the country territory. The terrain is mostly mountainous. As of January 1, 2010 Population of the Sogd Oblast was 2,216.9 thousand, or 29.4% of the total population of Tajikistan. Out of this number, 29.4% were urban residents. The average population density across the Oblast was 87.3 residents per sq.km, which is higher than national average of 52.6 residents per sq. km, but lower than in Khatlon Oblast with 108.9 residents per sq. km³⁸. The population of the Sogd Oblast is concentrated in 10 cities, 20 towns and 94 jamoats. The administrative centre is the city of Khodzand, with 158.2 thousand residents and located in 340 kms from the capital of Dushanbe. The distribution of the Oblast population by the 1 January 2010 and population growth projections for the years 2015 and 2020 per rayon are presented in the *Table 2*.

Table 9. Current population and population projections for Sogd Oblast 2010, 2015 and 2020

City/Rayon	Population 2009	Population 2015	Population 2020
Khudzand City	158,200	166,270	174,751
Isfara City	42,000	45,919	50,203
Isfara Rayon	189,000	209,696	232,659
Kayrokkum	40,400	44,387	48,767
Kanibadam city	47,900	50,593	53,438
Kanibadam rayon	133,000	146,124	160,544
Pendjinkent City	36,500	37,984	39,527
Pendjinkent Rayon	203,600	227,003	253,097
Istaravshan City	62,800	65,353	68,009
Istaravshan Rayon	160,400	180,594	203,331
Taboshar City	13,500	14,832	16,296
Ayni	71,700	82,717	95,427
Chkalovsk City	24,000	26,368	28,970
Chkalovsk rayon	3,700	4,166	4,690
Asht	133,000	149,745	168,598
Ganchi	138,500	155,937	175,570
Zafarabad	59,800	66,674	74,338
Match	101,800	114,617	129,047
Spitamen	116,800	130,864	146,622
Dj. Rasulov	115,600	128,888	143,703
B. Gafurov	307,600	348,021	393,754
Shakhriston	34,500	39,416	45,032
Kukhistoni-Mastchokh	21,100	23,182	25,470
Total	2,215,400	2,459,350	2,731,842

Source: Agency of Statistics of Tajikistan, 2010³⁹

The projections for the total populations for the Oblasts and rayons are used as essential parameter for planning future utilization of health services and capacity of primary, secondary and tertiary health care facilities for the Oblast and rayons.

Current demographic profile of the Oblast population is presented in the *Table 3*

³⁸ Agency of Statistics of Tajikistan 2010.

³⁹ 2010-2020 Population projection estimates are based on the last three year averages of year to year population changes per rayon – reported by the Agency of Statistics.

Table 10. Current and future population demographic profile for the Sogd Oblast, 2009, 2015, 2020.

Categories	2009	2015	2020
Number of children under 15 years of age	718.2	781.7	850.9
Number of women of reproductive age	609.4	663.3	722.0
Annual number of births	59.2	66.2	73.5
Population over 15 years of age	1,498.2	1,630.8	1,775.0
Population over 50 years of age	281.9	306.8	334.0

Source: Agency of Statistics of Tajikistan, 2010⁴⁰

The specific population groups in the table above were defined for planning of specific types of resources and services. The resources and services planned using the demographic groups and specific groups used as planning parameters are presented below:

- Obstetric: number of women of reproductive age (15 to 49 years) and annual number of deliveries/births,
Neonatology beds: annual number of births,
- Paediatricians at PHC level: Number of children under 15 years of age
- Medium term care/rehabilitative care beds: Population 15 years of age⁴¹.
- Long term care: Population over 50 years of age⁴².

3.2. Current health care network, physical access to and utilization of health services

Total of 676 outpatient health facilities and 113 hospitals were reported functioning throughout the Sogd Oblast. Total of 3,953 doctors and 8,273 nurses/feldshers/midwives and 6,696 junior medical and technical personnel were employed in the health sector of the Sogd Oblast by January 1, 2010.

3.2.1. Primary care

Facilities

According to the survey findings conducted under the current master planning exercise, 676 outpatient health facilities providing services at PHC level were functioning by January 1, 2010 in Sogd Oblast, compared to 699 facilities functioning in 2005⁴³.

These outpatient health facilities included:

- 28 Urban and Rayon Health Centres and Family Medicine Centres,
- 218 Rural Health Centres,
- 17 TB centres for DOTS (outpatient)
- 16 IMCI centres (outpatient)
- 17 Healthy Lifestyle centres (outpatient)
- 8 AIDS centre (outpatient)
- 17 Immunization centres (outpatient)
- 355 health houses

The breakdown of the PHC health facilities per rayon is presented in the *Table*

⁴⁰ 2010-2020 Population demographic projection estimates are based on the last ten year averages of year to year population changes per oblast – reported by the Agency of Statistics. The 2008-2009 live births rate at 26.9 per 1,000 population for the entire country is used for the years 2015 and 2020 projections

⁴¹ The need for medium term rehabilitation beds for younger population is marginal

⁴² Ibid

⁴³ Medstat. Data Presentation System, version 2. DPS2. Accessed in September 2010.

Table 11. Urban, Rayon and Rural Health Centres, Health Houses and specialized health centres per rayon, Sogd Oblast 2009

City/Rayon	Urban and Rayon Health Centres and Family Medicine Centres	Rural Health Centres	Health Houses	Specialized Outpatient Centres				
				IMCI	Healthy Life Style	Reproductive Health	TB-DOTS	HIV/AIDS
Khodjand City	7	-	-	1	1	1	1	1
Isfara City	1	-	-	1	1	1	1	1
Isfara Rayon	-	17	23	-	-	-	-	-
Kayrokkum	1	5	4	1	1	1	1	1
Kanibodim city	2	-	-	1	1	1	1	-
Kanibodim rayon	-	16	18	-	-	-	-	-
Pendjinkent City	1	-	-	1	1	1	1	1
Pendjinkent Rayon	-	40	63	-	-	-	-	-
Istaravshan City	2	-	-	1	1	1	1	1
Istaravshan Rayon	-	15	29	-	-	-	-	-
Taboshar City	1	-	-	1	1	1	1	-
Ayni	1	19	27	1	1	1	1	-
Chkalovsk City	1	-	-	1	1	1	1	-
Chkalovsk rayon	-	1	-	-	-	-	-	-
Asht	1	16	37	1	1	1	1	-
Ganchi	2	16	22	1	1	1	1	1
Zafarabad	1	8	10	1	1	1	1	-
Match	1	7	21	1	1	1	1	1
Spitamen	2	9	8	-	1	1	1	-
Dj. Rasulov	1	13	18	1	1	1	1	-
B. Gafurov	1	30	52	1	1	1	1	1
Shakhriston	1	2	11	1	1	1	1	-
Kukhistoni-Mastchokh	1	4	12	-	-	-	-	-
Total	28	218	355	16	17	17	17	8

Staff

According to the survey conducted for master planning exercise - the total of 874 General Practitioners/Family Doctors (GP), PHC Internists or Paediatricians and 3.328 nurses/feldshers/midwives were employed in PHC facilities of the Oblast in 2009.

Physical Access

Population access to the facilities was determined based on the travel times estimated based on the population density, distance, availability and conditions of roads and specificities of the terrain using the Geographical Information System (GIS) database developed for the master planning.

Five intervals for population access times by vehicle to PHC facilities were delineated: (1) from 0 to 15 minutes; (2) from 15 to 30 minutes, (3) from 30 to 45 minutes, (4) from 45 to 60 minutes, and (5) over 60 minutes. From 30 to 45 minutes was considered an optimal time interval for accessing the PHC centres (urban, rayon and rural) by vehicle.

The results of the GIS mapping revealed that up to 82% of the Sogd Oblast population can access the nearest PHC centre⁴⁴ in less than 15 minutes, the 14% can access in less than 30 minutes, 2% in less than 45 minutes, and only 2% in less of the population is located in the areas requiring more than 45 minutes for accessing the nearest PHC centre. Population access times per rayon are presented in the *Table 4*

Table 12 Distribution of population across access time zones to nearest PHC centre per rayon, Sogd Oblast 2009

City/Rayon	Share of Population Per Zone				
	0-15 min	15-30 min	30-45 min	45-60 min	60 min+
Kudzhand City	78%	11%	1%	0%	0%
Chkalovsk	80%	18%	2%	0%	0%
Pendjinkent	59%	28%	6%	3%	4%
Ayni	34%	20%	10%	7%	30%
Kukhistoni-Mastchokh	20%	15%	15%	14%	36%
Shakhriston	55%	28%	7%	2%	8%
Ganchi	69%	23%	4%	1%	3%
Istaravshan	83%	14%	2%	0%	0%
Zafarabad	65%	27%	6%	0%	3%
Spitamen	83%	15%	1%	0%	1%
J. Rasulov	84%	13%	0%	0%	3%
B. Gafurov	87%	10%	1%	0%	2%
Match	56%	27%	12%	2%	4%
Asht	62%	26%	6%	3%	4%
Kanibadam	89%	10%	1%	0%	0%
Isfara	69%	20%	5%	1%	6%
Total	82%	14%	2%	1%	1%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Utilization

⁴⁴ Regardless to which rayon this PHC centre belongs.

According to the survey findings, the total of 8,381,382 patient visits was registered at PHC level in Sogd Oblast during the year 2009. This represents a PHC services utilization rate of 3.78 per capita, which is slightly lower than the national average rate of 4 per capita.

3.2.2. Hospital network:

Facilities

According to the survey findings conducted under the current master planning exercise, 108 public hospitals and 5 private hospitals were providing inpatient services by January 1, 2009 compared to 143 inpatient facilities functioning in 2005⁴⁵. Reported bed capacity for general/acute care hospitals was 12,284, or 5.54 general beds per 1000 population.

Staff

Up to 11,718 total staff was employed in the inpatient facilities of the Sogd Oblast in 2009. Out of this number 2,854 were doctors (including 294 Surgeons, 450 Paediatricians and 430 Ob&gyns), up to 4,445 were nurses and midwives and the remaining 4419 were administrative and other technical staff. This represents the ratios of 0.95 total staff; 0.23 doctors and 0.36 nurses per 1 general bed.

Physical Access

For inpatient facilities, access times to the nearest Central Rayon Hospital were estimated⁴⁶. Four intervals for population access times by vehicle to inpatient facilities were delineated: (1) from 0 to 30 minutes; (2) from 30 to 45 minutes, (3) from 45 to 60 minutes, and (5) over 60 minutes.

From 45 to 60 minutes was considered as an optimal time interval for accessing the CRH by vehicle. The results of the GIS mapping revealed that up to 88% of the Sogd Oblast population can access the nearest CRH in less than 60 minutes, while about 12% of the population is located in the areas requiring more than 1 hour for accessing the nearest CRH. Population access times per rayon are presented in the *Table*. The highest shares of population residing in the localities with longer the optimal access times to CRH are observed in Ayni, Kukhistoni-Mastchokh and Pendjinkent rayons.

Table 13 Distribution of population across access time zones to nearest Central Rayon Hospital per rayon, Sogd Oblast 2009

City/Rayon	Share of Population Per Zone			
	0-30 min	30-45 min	45-60 min	60 + min
Kudzhand City	78%	11%	1%	0%
Chkalovsk	80%	18%	2%	0%
Pendjinkent	5%	20%	41%	34%
Ayni	22%	25%	34%	19%
Kukhistoni-Mastchokh	3%	2%	4%	92%
Shakhriston	39%	18%	19%	24%
Ganchi	64%	19%	7%	9%
Istaravshan	73%	20%	5%	2%
Zafarabad	54%	27%	14%	5%
Spitamen	89%	8%	1%	3%
J. Rasulov	84%	7%	7%	3%
B. Gafurov	74%	12%	5%	9%

⁴⁵ Medstat. Data Presentation System, version 2. DPS2. Accessed in September 2010.

⁴⁶ Access times to existing rural and rayon numbered hospitals were not considered due to the limited scope of inpatient services predominantly provided in these facilities.

Match	61%	19%	12%	8%
Asht	37%	23%	11%	29%
Kanibadam	84%	11%	3%	2%
Isfara	34%	42%	7%	17%
Total	60%	17%	11%	12%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Utilization

The admission rate for general hospitals in Sogd reported for 2009 is considerably high at 16.5 per 100 population compared to the rate of 11.2 admissions per 100 population nationwide and exceeds admission rates of every other region in Tajikistan including Dushanbe. Sogd is also distinguished by reported high admission rates to rural and rayon numbered hospitals. As a result, the reported average occupancy rate for Sogd Oblast hospitals is 80% for an ALOS of 9.8 days. Both of these utilization indicators appear to be highly satisfactory when compared to the national averages respectively 60% and 9.3 days. However, concerns remain regarding the insufficient justification and “over-registration” of hospitalizations, particularly in the rural and rayon numbered hospitals.

The detailed bed capacity and utilization indicators for the general hospitals in the public domain of the Sogd Oblast are presented in the *Table* :

Table 14. Public general hospital network and current utilization rates for Sogd Oblast, 2009

City/Rayon	# of beds	# of hospitalizations	# of bed-days	ALOS	Occupancy Rate (%)
Khujand City	3,330	116,663	1,238,630	10.6	102%
Isfara City	1,005	32,970	326,482	9.9	89%
Isfara Rayon					
Kayrokum	385	6,885	67,535	9.8	48%
Konibodom city	835	20,769	234,515	11.3	77%
Konibodom rayon					
Pendjinkent City	985	29,288	273,095	9.3	76%
Pendjinkent Rayon					
Istaravshan City	808	31,197	270,089	8.7	92%
Istaravshan Rayon					
Taboshar City	120	1,966	17,340	8.8	40%
Ayni	410	6,028	74,065	12.3	49%
Chkalovsk City	335	7,168	78,806	11.0	64%
Chkalovsk rayon					
Asht	515	16,428	151,395	9.2	81%
Ganchi	640	15,443	162,920	10.5	70%
Zafarabad	350	7,241	74,600	10.3	58%
Match	375	10,375	90,740	8.7	66%
Spitamen	435	10,872	91,290	8.4	57%
Dj. Rasulov	475	12,714	97,155	7.6	56%
B. Gafurov	1,016	33,870	306,657	9.1	83%
Shakhriston	165	4,722	39,105	8.3	65%
Kukhistoni-Mastchokh	100	935	7,900	8.4	22%
Total	12,284	365,534	3,594,419	9.8	80%

Source: Survey conducted within the framework of the health sector master plan - 2010

3.3. Proposed restructuring strategy

The proposed restructuring strategy for Sogd Oblast is based on the planning parameters presented in the Chapter 2 adjusted to the context of each of the rayons of the Oblast.

3.3.1. Future primary care network

Number of facilities

According to the overall approach proposed for the restructuring strategy, the Sogd Oblast should have at least one strengthened and integrated Urban, Rayon or Rural Health Centre – a “Comprehensive” PHC Centre per 20,000 of the Oblast residents. The actual number of such facilities was determined for each of the rayons of the Sogd Oblast using this overall approach, however adjusted to the concrete specificities of the respective localities, including physical access time parameters. The remaining Rural Health Centres providing minimally acceptable range of PHC services will be retained in the system as “Basic PHC Centres”.

Table 15 Number and type of existing and future PHC facilities per rayon, Sogd Oblast 2009, 2015, 2020

City/Rayon	UHC/RHC/FMC	RHC	HH	Specialized Outpatient Centres					Comprehensive PHC Centres - 2020	Basic PHC Centres 2020	Specialized Outpatient Centres 2020
				IMCI	HLS	RH	TB-DOTS	HIV/AIDS			
Khudjand City	7	-	-	1	1	1	1	1	9	-	-
Isfara City	1	-	-	1	1	1	1	1	2	-	-
Isfara Rayon	-	17	23	-	-	-	-	-	12	5	-
Kayrokum	1	5	4	1	1	1	1	1	2	4	-
Konibodom city	2	-	-	1	1	1	1	-	2	-	-
Konibodom rayon	-	16	18	-	-	-	-	-	10	6	-
Pendjinkent City	1	-	-	1	1	1	1	1	2	-	-
Pendjinkent Rayon	-	40	63	-	-	-	-	-	13	27	-
Istaravshan City	2	-	-	1	1	1	1	1	3	-	-
Istaravshan Rayon	-	15	29	-	-	-	-	-	11	4	-
Taboshar City	1	-	-	1	1	1	1	-	1	-	-
Ayni	1	19	27	1	1	1	1	-	5	15	-
Chkalovsk City	1	-	-	1	1	1	1	-	1	-	-
Chkalovsk rayon	-	1	-	-	-	-	-	-	-	1	-
Asht	1	16	37	1	1	1	1	-	8	9	-
Ganchi	2	16	22	1	1	1	1	1	9	9	-
Zafarabad	1	8	10	1	1	1	1	-	4	5	-
Match	1	7	21	1	1	1	1	1	6	2	-
Spitamen	2	9	8	-	1	1	1	-	7	4	-
Dj. Rasulov	1	13	18	1	1	1	1	-	7	7	-
B. Gafurov	1	30	52	1	1	1	1	1	20	11	-
Shakhriston	1	2	11	1	1	1	1	-	2	1	-
Kukhistoni-Mastchokh	1	4	12	-	-	-	-	-	1	4	-
Total	28	218	355	16	17	17	17	8	137	114	-

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The *Table* above presents the number of outpatient facilities existing currently and the number of comprehensive PHC centres needed in the years 2015 and 2020 for each of the rayons of the Sogd Oblast, taking into account the population growth projections presented in the previous section.

All 28 Urban and Rayon Health Centres and 109 Rural Health Centres are proposed to be transformed into Comprehensive PHC Centres. Out of this number, at least 5 Comprehensive PHC Centres in the rayons with physical access problems (Ayni, Kukhistoni-Mastchokh and Pendjinkent) should be equipped to provide “extended” services that include emergency and urgent care. The remaining 114 Rural Health Centres are proposed to be retained as Basic PHC centres with minimal investments in infrastructure and human resources. It also should be noted that existing 65 rural and rayon numbered hospitals essentially providing services that should be provided at PHC level, will either be merged with comprehensive PHC centres or abolished.

Staff projections

The targets to be reached in terms of PHC staff are recapitulated below:

Target 2015	1 GP per 2 000 pop	1 nurse per 1 000 pop
	1 GP to 1 500 pop low bracket	1 nurse to 750 pop
Target 2020	1 GP to 1 200 pop high bracket	1 nurse to 500 pop
	1 ob&gyn/5 000 women of reproductive age	
	1 paediatrician/7 500 population under 14 years old	

The required numbers of for each of these four categories of the medical personnel were calculated for each of the rayons of the Sogd Oblast. The summary result is presented in *Table 9*:

Table 16 Existing and future numbers of GPs and GP nurses (high bracket), Specialist Paediatricians and Ob&gyns at PHC level, Sogd Oblast, 2009

City/Rayon	GPs/ general internists/ paediatricians	Future Number of GPs (low bracket)	Future Number of GPs (high bracket)	Existing Number of Nurses/Midwives	Future Number of Nurses/ Midwives (low bracket)	Future Number of Nurses/ Midwives (high Bracket)	Future Number of Paediatricians at PHC level	Future Number of Ob&gyn at PHC level
Khodjand City	147	117	146	346	233	350	7	9
Isfara City	32	33	42	72	67	100	2	3
Isfara Rayon	0	155	194	223	310	465	8	9
Kayrokkum	17	33	41	180	65	98	2	2
Kanibodim city	30	36	45	76	71	107	2	3
Kanibodim rayon	9	107	134	139	214	321	6	8
Pendjinkent City	20	26	33	84	53	79	2	3

Pendjinkent Rayon	94	169	211	298	337	506	11	11
Istaravshan City	35	45	57	70	91	136	4	5
Istaravshan Rayon	40	136	169	137	271	407	9	9
Taboshar City	2	11	14	38	22	33	1	1
Ayni	27	64	83	72	124	191	4	5
Chkalovsk City	20	19	24	65	39	58	2	2
Chkalovsk rayon	2	3	4	6	6	9	0	0
Asht	37	112	140	150	225	337	7	8
Ganchi	53	117	146	125	234	351	8	8
Zafarabad	36	50	62	118	99	149	3	2
Match	25	86	108	114	172	258	6	6
Spitamen	52	98	122	162	195	293	5	8
J. Rasulov	55	96	120	193	192	287	6	8
B. Gafurov	121	263	328	519	525	788	15	18
Shakhriston	14	30	38	94	60	90	2	2
Kukhistoni-Mastchokh	6	17	21	47	34	51	1	1
Total	874	1823	2282	3328	3639	5464	113	131

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The data presented shows the need for major increase in the number of family doctors or general practitioners (GPs) over the next decade, the number of GPs should be increased more than twofold even if the lower bracket of targeted number of the GPs is considered (from 873 to 1823) and by more than 2.6 times if the higher bracket target has to be achieved by the year 2020. These targets are challenging to achieve even if all the specialists working at the PHC level currently (657) will be retrained into GPs. The need for attracting significant number of GPs to the Sogd Oblast is obvious.

The outlook for GP nurses appears to be better, as only respectively 9% or 40% of more nurses are required to be trained/retrained to accomplish the target of 3,639 (low bracket) or 5,464 (high bracket) GP nurses by the year 2020.

113 paediatricians and 131 ob&gyns are also required to work at PHC level in order to provide the adequate support to family doctors in the of antenatal and postnatal care and diagnostics and treatment of childhood illnesses and gynaecologic diseases.

Depending on the age structure of the current workforce (and predictable retirements) a detailed plan should be established for the next decade in order to match the real needs of the rayon. Recommendations for such plan will be provided through the on-going technical assistance on the development of the National Human Resources Strategy for Health Sector.

Physical Access

Physical access to the basic level of PHC services provided in Basic PHC centres will remain the same, with more than XX% of the Oblast population gaining access to full range of comprehensive PHC services within 45 minutes of access time by vehicle (see the table)

Assumptions concerning primary care utilization

The table below (

Table) presents the current PHC activity, as well as the anticipated workloads for 2015 and 2020 based on the defined parameters described in the Chapter 1:

Table 17 Current and projected number of visits to PHC facilities per rayon, Sogd Oblast, 2009, 2015, 2020

City/Rayon	Current number of visits to PHC facilities	Targeted number for visits to PHC facilities in 2015	Targeted number for visits to PHC facilities in 2020

Khodzand City	806,097	820,300	856,281
Isfara City	865,944	984,119	1,386,024
Isfara Rayon			
Kayrokkum	104,371	170,889	238,957
Kanibodim city	836,763	757,360	1,048,509
Kanibodim rayon			
Pendjinkent City	1,320,175	1,020,200	1,433,858
Pendjinkent Rayon			
Istaravshan City	499,022	946,915	1,329,566
Istaravshan Rayon			
Taboshar City	46,463	57,103	79,850
Ayni	161,794	318,460	454,416
Chkalovsk City	243,779	117,556	161,749
Chkalovsk rayon			
Asht	300,957	576,518	826,130
Ganchi	450,373	600,358	860,291
Zafarabad	191,689	256,694	364,256
Match	348,583	439,123	626,181
Spitamen	358,675	503,827	718,448
J. Rasulov	367,876	500,850	710,719
B. Gafurov	1,294,516	1,336,837	1,920,817
Shakhriston	153,172	151,751	220,658
Kukhistoni-Mastchokh	31,133	89,674	125,393
Total	8,381,382	9,648,537	13,362,103

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The target of 3.85 PHC visits per capita in 2015 and 4.9 in 2020 (as defined in the planning parameters) will mean that number primary care consultations are anticipated to increase by almost 40% over the next ten years.

3.3.2. Hospital sector reconfiguration

Projected Inpatient Capacity and Utilization

As noted above, Sogd Oblast has presently general hospital capacity of 5.54 beds per 1000 population. Taking into account the forecast population growth and the target of 2.2 beds per population in 2020, significant decrease in the number of general or acute care beds should be planned, as illustrated in the

Table

According to the targets defined, a maximum of **8,120** acute care beds are needed in the Oblast by the year 2020, which implies up to 40% reduction of the existing capacity of general beds.

Considering the current workloads and healthcare quality and safety standards, it is generally recommended to maintain only one hospital from 100 to 500 beds per rayon. However, in rayons with constrained access for the population (Ayni, Kukhistoni-Mastchokh and Pendjinkent) three additional community level hospitals may also be considered with up to 50 beds. This implies reduction of number of general hospitals in the Sogd oblast to 23 secondary care hospitals (18 Central Rayon Hospitals) and 7 tertiary care Oblast level hospitals. The central rayon hospitals should be strengthened and modernized in order to become the secondary care hospital for the whole population of respective rayon with all the adequate services as described in the "Proposed model of health care services by level of health facilities" (Chapter 2. Planning parameters section).

As noted above the rural and rayon numbered hospitals should be transformed into comprehensive PHC facilities and/or abolished. Elimination of the beds in the rural hospitals will allow achieve about 70% of required reduction in beds across the Oblast.

The

Table below presents the resulting numbers of acute care beds and utilization rates projections based on the targets defined in terms admission rates, average length of stay, desirable rates of ambulatory care (day hospital and ambulatory surgery), and expected occupancy rates – taking into account the Oblast population growth forecasts.

Table 18 Projected number of acute care (general) hospital beds, admissions and bed days per rayon, Sogd Oblast, 2009, 2020

City/Rayon	Projected # of beds by 2020	Projected # of hospitalizations 2020	Projected # of bed-days 2020	Surgical Activity in CRH by 2020 (yes/no)
Khodjand City	2,500	104,350	730,453	yes
Isfara City	620	22,912	160,383	yes
Isfara Rayon				
Kayrokkum	110	3,950	27,651	yes
Kanibadam city	470	17,332	121,327	yes
Kanibadam rayon				
Pendjinkent City	650	23,073	165,918	yes
Pendjinkent Rayon				
Istaravshan City	600	21,979	153,850	yes
Istaravshan Rayon				
Taboshar City	40	1,320	9,240	no
Ayni	200	7,512	52,582	yes
Chkalovsk City	75	2,674	18,717	yes
Chkalovsk rayon				
Asht	370	13,656	95,595	yes
Ganchi	385	14,221	99,548	yes
Zafarabad	165	6,021	42,150	yes
Match	280	10,351	72,458	yes
Spitamen	320	11,876	83,135	yes
J. Rasulov	320	11,749	82,240	yes
B. Gafurov	860	31,572	222,266	yes
Shakhriston	100	3,648	25,533	yes
Kukhistoni-Mastchokh	55	2,073	14,510	no
Total	8,120	310,270	2,177,555	

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Up to 73.5 thousand deliveries per year can be expected by the year 2020. The mother and child network in the rayon should rely on the comprehensive PHC centres for normal deliveries with low risk, the central rayon hospital for the level 2 (managing low and moderate risk pregnancies and with level 2 neonatal beds), and the Oblast reference hospital for the level 3 (high obstetric risk with neonatal intensive care and resuscitation unit).

If we consider that 60% of the total deliveries will be performed in the central rayon hospital and 7% in the Oblast reference hospital, the balance of 24.3 thousand will be carried out in the PHC centres (and at home under the supervision of the qualified medical personnel for a small part). In compliance with the agreed

planning parameters, the minimum number of deliveries per ward should not be lower than 400 deliveries/ per year, meaning that a maximum of 60 delivery wards (level 1) should be deployed in 137 Comprehensive PHC Centres of the Oblast, or in average 1 delivery ward in every second Comprehensive PHC centre, depending on the specificity of each rayon.

According to the planning parameters defined and considering the specific population groups, the medium term care (or rehabilitative care) and long term care beds for Sogd Oblasts was estimated as follows:

Category	Ratio	Number of beds 2015	Number of beds 2020
Medium term care/rehabilitative care	0,5 beds per 1000 population aged 15 years and more	815	887
Long term care	2 beds per 1000 population aged 50 years and more	612	668

Staff projections

The projections for the medical and nursing staffing for hospital network is related to the bed capacity planned for the Sogd Oblast. The proposed staff numbers have been calculated using the expected higher workload and occupancy rates as a result of the bed number optimization, which will require more intensive staff input and as a result higher than current total staff to bed ratio. A change in the current doctor to nurse ratio in general hospitals is also expected through addressing the current imbalance between the medical and nursing professions, so that human resources are less centred on physicians. The resulting ratios suggested in the planning parameters section (see Chapter 1), were applied to the Sogd Oblast Hospitals. The staff per bed ratios and derived estimates per staff category are presented in the *Table*

Table 19 Current and projected staff to bed ratios and staff numbers per category for Sogd Oblast, 2009, 2020

	Current		Projected	
	Ratios	Numbers	Ratios	Numbers
Number of Beds		12,284		8,120
Doctors	0.23	2,854	0.30	2,436
Nurses	0.36	4,445	0.68	5,481
Administrative and other technical staff	0.36	4,419	0.53	4,263
Total staff	0.95	11,718	1.5	12,180

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Detailed inpatient staffing plans for each rayon should be elaborated

Physical Access

Physical access to the CRH will remain the same; with more than XX% of the Oblast population gaining access to upgraded hospital services/emergency care within 60 minutes of access time by vehicle (see the table)

3.3.3. Hi-tech medical equipment proposed standards for Sogd Oblast

The chapter 2 (Planning Parameters) presents the standards for high-tech medical equipment to be reached in Tajikistan during the next decade taking into account the current levels of equipment, the available specialized staff and reasonable patterns that it will be possible to attain, the implications in terms of investment, operational and maintenance costs in the specific economic context of Tajikistan.

The application of these standards in Sogd Oblast results in the following numbers:

Table 12: High tech equipment – International Benchmarks – Proposed standard for Tajikistan and Number of units proposed for Sogd Oblast

EQUIPMENT	OECD BENCHMARK (2009 OR LATEST YEAR AVAILABLE)	PROPOSED STANDARD FOR TAJIKISTAN	NUMBER OF UNITS REQUIRED IN 2015 IN SOGD OBLAST	NUMBER OF UNITS REQUIRED IN 2020 IN SOGD OBLAST
MRI	Between 5 and 10 units per million population	0,7 to 1.2 unit per million population	2	3
CT Scans	Between 10 and 19 units per million population	1,10 to 2.1,8 units per million population	3	5
Mammograph units	Around 20 units per million population	3.5 to 4.5 units per million population	10	12
Radiation therapy equipment	Between 4 and 5 units per million population	0,7 to 1,2 units per million population	2	3
Angiography	Between 3 and 4 units per million population	0,7 to 1 unit per million population	2	3
Lithotripsy	Between 1 and 2 units per million population	0,5 to 0,8 unit per million population	1	2
Haemodialysis	Between 40 and 45 units per million population aged between 15 and 59 years Between 200 and 223 units per million population aged 60 years and over	50 to 60 units per million population	137	164
Neonatology beds (level 1)	French Benchmark: 3/1000 births	2/1000 births	132	147
Neonatology beds (level 2 – Intensive Care)	French Benchmark 1,45/1000 births	1/1000 births	66	74
Neonatology beds (level 3 Resuscitation unit)	French Benchmark 0,65/1000 births	0,5/1000 births	33	37

ICU beds adults	USA: 20 beds/100 000 population France: 9,3 beds/100 000 population UK: 3,5 beds/100 000 population Canada: 13,5 beds/100 000 population Belgium: 21,9 beds/100 000 population Germany: 24,6 beds/100 000 population Netherlands: 8,4 beds/100 000 population Spain: 8,2 beds/100 000 population	3,5 beds/1000 population	86	96
Angiography Ophthalmology		0,75 unit/100 000 population	18	20
Echograph general purpose		5,50 unit/100 000 population	135	150
Echograph Ophthalmology	OECD benchmark: 0,72	0,5 unit/100 000 population	12	14
Defibrillator		5 unit/100 000 population	123	137
Gamma Camera		0,10 per 100 000 population	2	3
Dental Unit		5 per 100 000 population	123	137
X-ray unit		1 unit/100 000 population	25	27
X-ray unit mobile		3 unit/100 000 population	74	82
X-ray hemodynamic unit		0,20 unit/100 000 population	5	5
Extra corporeal unit		0,10 unit/100 000 population	2	3
Laparascopy unit		1,10 unit/100 000 population	27	30
Endoscopy flexible		3,50 unit/100 000 population	86	96
Endoscopic Unit		0,95 unit/100 000 population	23	26

Endoscopy system	video	0,50 unit/100 000 population	12	14
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3.3.4. Emergency network in Sogd Oblast

Four distinct levels of emergency services will be implemented in Sogd Oblast :

- Proximity emergency services in comprehensive PHC Centres and community hospitals (primary emergency care providing basic services).
- Medium level emergency services in Central Rayon Hospitals,
- High level emergency service in regional multiprofile hospitals and in Rayon Multiprofile hospitals with a catchment's population justifying such services,
- A central communication centre to to coordinate the Emergency services of the region and a range of core specialties- Surgery, Medicine, Neonatology, Obstetrics and Gynecology, etc.

The detailed maps per rayon depicting the existing and future health care network (PHC and hospital) are presented in the deliverable 2.

4. RAYONS UNDER DIRECT REPUBLICAN JURISDICTION (RPP)

4.1. Basic Population and Demographics characteristics used for master planning

The 13 rayons under direct Republican Jurisdiction have a total territory of 28,02 thousand sq.km or 19,6% of the country territory. As of January 1, 2010 Population of the RPP was 1,591 thousand, or 21,1% of the total population of Tajikistan. Out of this number, 13,5% were urban residents. The average population density across the 13 rayons is 56,8 residents per sq.km, which is higher than national average of 52.6 residents per sq. km⁴⁷. The distribution of the population by the 1 January 2010 and population growth projections for the years 2015 and 2020 per rayon are presented in the *Table 2*.

Table 20. Current population and population projections for RPP 2010, 2015 and 2020

Name of the rayon	Total population 2009	Pop. 2015	Pop. 2020
Vahdat	277 000	311 874	351 139
Rasht	106 300	119 683	134 751
Roghun	32 747	36 870	41 512
Rudaki	305 000	343 399	386 633
Tojikobod	37 869	42 637	48 005
Turzunzoda	244 565	275 356	310 023
Fayzobod	81 915	92 228	103 840
Jirgital	38 951	43 855	49 376
Sharinav	98 635	111 053	125 035

⁴⁷ Agency of Statistics of Tajikistan 2010.

Varzob	66 829	75 243	84 716
Nurobad	61 000	68 680	77 327
Tavildara	16 537	18 619	20 963
Hissar	224 400	252 652	284 461
TOTAL	1 591 748	1 792 149	2 017 780

Source: Agency of Statistics of Tajikistan, 2010⁴⁸

The projections for the total populations for the rayons are used as essential parameter for planning future utilization of health services and capacity of primary, secondary and tertiary health care facilities. Current demographic profile of the rayons population is presented in the *Table 3*

Table 21. Current and future population demographic profile for RPP, 2009, 2015, 2020.

Categories	2009	2015	2020
Number of children under 15 years of age	439 335	494 647	556 923
Number of women of reproductive age	362 458	408 091	459 470
Annual number of births	43 613	49 100	55 287
Population over 15 years of age	1 152 413	1 297 502	1 460 857
Population over 50 years of age	197 745	222 641	250 672

Source: Agency of Statistics of Tajikistan, 2010⁴⁹

The specific population groups in the table above were defined for planning of specific types of resources and services. The resources and services planned using the demographic groups are presented below:

- Obstetric: number of women of reproductive age (15 to 49 years) and annual number of deliveries/births,
Neonatology beds: annual number of births,
- Paediatricians at PHC level: Number of children under 15 years of age
- Medium term care/rehabilitative care beds: Population 15 years of age⁵⁰.
- Long term care: Population over 50 years of age⁵¹.

4.2. Current health care network, physical access to and utilization of health services

By January 1, 2010 total of 608 outpatient health facilities and 54 hospitals were reported functioning throughout RPP rayons. Total of 1 900 doctors, 4 504 nurses and feldshers, 362 midwives⁵² were employed in these facilities.

4.2.1. Primary care

Facilities

According to the survey findings conducted under the current master planning exercise, 608 outpatient health facilities providing services at PHC level were functioning by January 1, 2010 in the RPP. These outpatient health facilities included:

- 13 Urban and Rayon Health Centres,

⁴⁸ 2010-2020 Population projection estimates are based on the last three year averages of year to year population changes per rayon – reported by the Agency of Statistics.

⁴⁹ 2010-2020 Population demographic projection estimates are based on the last ten year averages of year to year population changes per oblast – reported by the Agency of Statistics. The 2008-2009 live births rate at 26.9 per 1,000 population for the entire country is used for the years 2015 and 2020 projections

⁵⁰ The need for medium term rehabilitation beds for younger population is marginal

⁵¹ Ibid

⁵² Medstat, DPS2 database, Last Available (2006).

- 166 Rural Health Centres,
- 429 health houses

The breakdown of the PHC health facilities per rayon is presented in the Table 3.

Table 22. Urban, Rayon and Rural Health Centres, Health Houses and specialized health centres per rayon, RPP 2009

Name of the rayon	Number of rayon health centre and urban health centre 2009	Number of rural health centres 2009	Number of health houses 2009
Vahdat	1	28	75
Rasht	1	18	40
Roghun	1	3	11
Rudaki	1	29	78
Tojikobod	1	1	19
Tursunzoda	1	25	49
Fayzobod	1	8	27
Jirgital	1	3	38
Sharinav	1	2	6
Tavildara	1	4	21
Gissar	1	30	38
Nurobad	1	8	20
Varzob	1	9	22
TOTAL	13	168	444

Source: Survey conducted within the framework of the health sector master plan - 2010

Staff

According to the survey conducted for master planning exercise - the total of 570 General Practitioners/Family Doctors (GP), PHC Internists or Paediatricians and 1 896 nurses/feldshers/midwives were employed in PHC facilities of the Rayons in 2009, representing 1 Family Doctor/2 792 population and 1 family nurse/840 population.

Physical Access to Primary Health Care

Population access to the facilities was determined based on the travel times estimated on the population density, distance, availability and conditions of roads and specificities of the terrain using the Geographical Information System (GIS) database developed for the master planning. Five intervals for population access times by vehicle to PHC facilities were delineated: (1) from 0 to 15 minutes; (2) from 15 to 30 minutes, (3) from 30 to 45 minutes, (4) from 45 to 60 minutes, and (5) over 60 minutes. From 30 to 45 minutes was considered an optimal time interval for accessing the PHC centres (urban, rayon and rural) by vehicle.

The results of the GIS mapping revealed that up to 61% of the RPP population can access the nearest PHC centre⁵³ in less than 15 minutes, the 80% can access in less than 30 minutes, 88% in less than 45 minutes, and 12% of the population is located in the areas requiring more than 45 minutes for accessing the nearest PHC centre. Population access times per rayon are presented in the *Table 4*

Table 23 :Distribution of population across access time zones to nearest PHC centre per rayon, RPP 2009

Rayon	0-15 min	15-30 min	30-45 min	45-60 min	60 min+

⁵³ Regardless to which rayon this PHC centre belongs.

Rudaki	91%	7%	1%	0%	1%	100%
Tursunzoda	88%	8%	2%	1%	1%	100%
Hisor	88%	8%	2%	1%	0%	100%
Varzob	61%	25%	7%	2%	5%	100%
Vahdat	85%	10%	2%	1%	2%	100%
Sharinav	45%	16%	4%	2%	33%	100%
Fayzobod	50%	35%	7%	2%	5%	100%
Roghun	13%	40%	22%	12%	13%	100%
Nurobod	43%	27%	19%	7%	4%	100%
Rasht	46%	28%	11%	5%	10%	100%
Jirgatal	42%	19%	15%	13%	11%	100%
Tavildara	19%	28%	13%	7%	33%	100%
Tojikobod	36%	16%	11%	10%	27%	100%
Total	61%	19%	8%	6%	6%	100%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landscan 2007

Utilization

According to the survey findings, the total of 5,589,738 patient visits was registered at PHC level in RPP rayons during the year 2009. This represents a PHC services utilization rate of 3,5 visits per capita, which is lower than the national average rate of 4 per capita.

4.2.2. Hospital network:

Facilities

According to the survey findings conducted under the current master planning exercise, 54 public hospitals were providing inpatient services by January 1, 2009. Reported bed capacity for general/acute care hospitals was 4 730, or 2,97 general beds per 1000 population. The number of hospitals per rayon and category is presented in the table 5.

Table 5: Number of hospitals per rayon and category (2009)

Name of the rayon	Total number of hospitals	Central Rayon Hospital	Current number of specialized hospitas	Current number of Rural Hospitals
Vahdat	9	1	2 (1 surgery hospital + 1 TB)	6
Rasht	6	1	0	5
Roghun	1	1	0	0
Rudaki	6	1	1 (TB hospital)	4

Tojikobod	4	1	0	3
Tursunzoda	5	1	3 (1 TB, 1 surgery, 1 to be confirmed)	1
Fayzobod	3	1	0	2
Jirgital	6	1	2 (1 mother and child + 1 TB hospital)	3
Sharinav	6	1	1 (TB hospital)	4
Tavildara	3	1	1 (TB hospital)	1
Gissar	1	1	0	0
Nurobad	1	1	0	
Varzob	3	1	0	2
TOTAL	54	13	10	31

Staff

Up to 1 328 doctors and 2 970 nurses/midwives/feldshers were employed in inpatient health care facilities in RPP⁵⁴.

Physical Access to hospital care

For inpatient facilities, access times to the nearest Central Rayon Hospital were estimated⁵⁵. Four intervals for population access times by vehicle to inpatient facilities were delineated: (1) from 0 to 30 minutes; (2) from 30 to 45 minutes, (3) from 45 to 60 minutes, and (5) over 60 minutes. From 45 to 60 minutes was considered as an optimal time interval for accessing the CRH by vehicle.

The results of the GIS mapping revealed that up to 93% of RPP population can access the nearest CRH in less than 60 minutes, while about 7% of the population is located in the areas requiring more than 1 hour for accessing the nearest CRH. Population access times per rayon are presented in the Table 6.

Table 6: Distribution of population across access time zones to nearest Central Rayon Hospital per rayon, RPP Rayons 2009

Rayon	0-30 min	30-45 min	45-60 min	60 + min	
Рудаки	30%	56%	12%	2%	100%
Турсунзоде	64%	10%	23%	3%	100%
Шахринав	33%	23%	26%	18%	100%
Хисор	32%	47%	13%	8%	100%
Варзоб	41%	34%	11%	14%	100%
Вахдат	72%	19%	4%	5%	100%
Рашт	57%	19%	14%	10%	100%

⁵⁴ Source : Estimation based on the survey conducted under the current master planning.

⁵⁵ Access times to existing rural and rayon numbered hospitals were not considered due to the limited scope of inpatient services predominantly provided in these facilities.

Файзабод	36%	28%	14%	22%	100%
Рогун	36%	37%	14%	13%	100%
Нуробод	44%	15%	27%	14%	100%
Тавильдара	25%	25%	14%	38%	100%
Таджикабад	31%	25%	24%	20%	100%
Джиргиталь	35%	27%	26%	12%	100%
Total	46%	35%	12%	7%	100%

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landsan 2007

Utilization

The admission rate for general hospitals of RPP rayons reported for 2009 is relatively low at 5 per 100 population compared to the rate of 11.2 admissions per 100 population nationwide. As a result, the reported average occupancy rate for RPP hospitals is 41,2% for an ALOS of 8,91 days. This situation is explained by the geographical proximity of Dushanbe and by the fact that part of the population is attended directly in the hospitals of the capital city.

The detailed bed capacity and utilization indicators for the general hospitals in the public domain of the RPP rayons are presented in the *Table 7*.

Table 7. Public general hospital network and current utilization rates for RPP, 2009

Name of the rayon	# of beds	# of hospitalizations	# of bed-days	ALOS	Occupancy Rate (%)
Vahdat	1 757	18 631	165 798	8,9	42,97
Rasht	296	2 813	34 869	12,4	32,27
Roghun	175	2 065	10 236	4,94	16,03
Rudaki	361	14 118	105 084	7,44	79,75
Tojikobod	175	4 000	50 617	12,64	79
Tursunzoda	770	15 464	165 223	10,68	58,79
Fayzobod	200	6 914	50 495	7,30	69,17
Jirgital	195	3 625	35 797	9,79	50,29
Sharinav	226	4 267	22 395	5,25	27,15
Tavildara	120	911	7 898	8,67	18,03
Gissar	250	4 000	36 000	9,00	40,00
Nurobad	100	1 500	13 500	9,00	37,00
Varzob	105	1 500	13 500	9,00	35,00
TOTAL	4 730	79 808	711 412	8,91	41,21

Source: Survey conducted within the framework of the health sector master plan - 2010

4.3. Proposed restructuring strategy

The proposed restructuring strategy for RPP rayons is based on the planning parameters presented in the Chapter 2 adjusted to the context of each of the rayons.

4.3.1. Future primary care network

Number of facilities

According to the overall approach proposed for the restructuring strategy, the RPP rayons should have at least one strengthened and integrated Urban, Rayon or Rural Health Centre – i.e. a “Comprehensive” PHC

Centre - per 20,000 residents. The actual number of such facilities was determined for each of the rayons using this overall approach, however adjusted to the concrete specificities of the respective localities, including physical access time parameters. The remaining Rural Health Centres providing minimally acceptable range of PHC services will be retained in the system as “Basic PHC Centres”.

Table 8 Number and type of existing and future PHC facilities per rayon, RPP 2009, 2020

Name of the rayon	Number of rayon health centre and urban health center 2009	Number of rural health centers 2009	Number of health houses 2009	Comprehensive Rayon Health Centres (2020)	Rural Comprehensive PHC Centres (2020)	Rural Basic PHC centres (2020)	Health Houses 2020
Vahdat	1	28	75	1	17	11	30
Rasht	1	18	40	1	6	12	16
Roghun	1	3	11	1	1	2	5
Rudaki	1	29	78	1	18	11	31
Tojikobod	1	1	19	1	2	2	8
Tursunzoda	1	25	49	1	15	10	20
Fayzobod	1	8	27	1	4	2	11
Jirgital	1	3	38	1	2	1	15
Sharinav	1	2	6	1	5	0	2
Tavildara	1	4	21	1	2	2	8
Gissar	1	30	38	1	13	17	15
Nurobad	1	8	20	1	3	5	8
Varzob	1	9	22	1	3	6	9
TOTAL	13	168	444	13	91	81	178

Source: For current situation - survey conducted within the framework of the health sector master plan - 2010

The Table 8 above presents the number of outpatient facilities existing currently and the number of comprehensive PHC centres needed in the year 2020 for each of the rayons, taking into account the population growth projections presented in the previous section.

All 13 Rayon Health Centres and 91 Rural Health Centres are proposed to be transformed into Comprehensive PHC Centres. The remaining 79 Rural Health Centres are proposed to be retained as Basic PHC centres with minimal investments in infrastructure and human resources. It also should be noted that existing 31 rural and rayon numbered hospitals essentially providing services that should be provided at PHC level, will either be merged with comprehensive PHC centres or abolished (with some exceptions in remote areas Cf. Table 12)

The number of health houses retained as outreach PHC centres will be determined in every rayon based on population density and conditions of accessibility to the closest PHC Centre. As a general parameter, health houses should be maintained in the settlements with at least 300 inhabitants and located at more than 45 minutes from a PHC centre. As a global estimation for RPP, approximately 40% of the existing health houses should be retained as illustrated in the table above.

The detailed description as well as the maps illustrating the current situation and the proposed scenario for PHC services are presented in the deliverable 2, rayon per rayon.

Staff projections

The targets to be reached in terms of PHC staff are recapitulated below:

Target 2015	1 Family Doctor per 2 000 pop	1 nurse per 800 pop 2,5 nurses per FD
	1 Family Doctor per 1 500 pop (low bracket)	1 nurse per 600 pop 2,5 nurses per FD
Target 2020	1 Family Doctor per 1 200 pop (high bracket)	1 nurse per 400 pop 3 nurses/FD
	1 gyne-obs/5 000 women of reproductive age	
	1 paediatrician/7 500 population under 14 years old	

The required numbers of these four categories of the medical personnel were calculated for each of the rayons. The summary result is presented in Table 9.

Table 9 Existing and future numbers of GPs and GP nurses, Specialist Paediatricians and Ob&gyns at PHC level, RPP rayons, 2009

Name of the rayon	Current number of GPS 2009	Future number of family doctors (low bracket) 2020	Future number of family doctors (high bracket) 2020	Current number of GP nurses 2009	Future number of GPs Nurses (low bracket) 2020	Future number of GPs Nurses (high bracket) 2020	Future number of paediatricians working at PHC Level 2020	Future number of Gyne-obs working at PHC Level 2020
Vahdat	94	234	293	340	468	878	16	18
Rasht	19	90	112	87	180	337	7	7
Roghun	11	28	35	34	55	104	2	2
Rudaki	191	258	322	441	516	967	0	0
Tojikobod	10	32	40	45	64	120	2	3
Tursunzoda	38	207	258	197	413	775	14	16
Fayzobod	16	69	87	133	138	260	5	5
Jirgital	3	33	41	108	66	123	2	3
Sharinav	6	83	104	51	167	313	6	7
Tavildara	3	14	17	30	28	52	1	1
Gissar	100	190	237	290	379	711	15	16
Nurobad	40	52	64	70	103	193	2	4
Varzob	40	56	71	70	113	212	2	5
TOTAL	571	1 345	1 681	1 896	2 690	5 044	74	87

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The data presented shows the need for major increase in the number of family doctors or general practitioners (GPs). Over the next decade, the number of GPs should be increased more than 2,3 even if the lower bracket of targeted number of the GPs is considered and by more than 2,9 times if the higher bracket target has to be achieved by the year 2020. These targets are challenging to achieve even if all the specialists working at the PHC level currently will be retrained into GPs. The need for attracting significant number of GPs to the RPP rayons.

The outlook for GP nurses appears to be similar. 41,9% of more nurses are required to be trained/retrained to accomplish the target of 2 690 (low bracket). The current number of nurses should be increased by 2,66 times if the higher bracket target has to be achieved by the year 2020.

74 paediatricians and 87 ob&gyns are also required to work at PHC level in order to provide the adequate support to family doctors in the of antenatal and postnatal care and diagnostics and treatment of childhood illnesses and gynaecologic diseases.

Depending on the age structure of the current workforce (and predictable retirements) a detailed plan should be established for the next decade in order to match the real needs of the rayon. Recommendations for such plan will be provided through the on-going technical assistance on the development of the National Human Resources Strategy for Health Sector.

Physical Access to PHC services after the restructuring process

Physical access to the basic level of PHC services will remain the same as described above (up to 80% of the RPP population can access the nearest PHC centre⁵⁶ in less than 15 minutes, the 91% can access in less than 30 minutes, 94% in less than 45 minutes).

Table 10 :Distribution of population across access time zones to nearest comprehensive PHC centre per rayon, RPP 2009

Share of population per zone (to be completed)						
Rayon	0-15 min	15-30 min	30-45 min	45-60 min	60 min+	
Total						

Source: Survey conducted within the framework of the health sector master plan – 2010 and Population Landskan 2007

Assumptions concerning primary care utilization

The table below (Table 11) presents the current PHC activity, as well as the anticipated workloads for 2015 and 2020 based on the defined parameters described in the Chapter 2:

⁵⁶ Regardless to which rayon this PHC centre belongs.

Table 11: Current and projected number of visits to PHC facilities per rayon, RPP, 2009, 2015, 2020

Name of the rayon	Current number of PHC visits 2009	Future number of PHC visits (2015)	Future number of PHC visits (2020)
Vahdat	862 045	1 351 885	1 720 581
Rasht	334 572	518 791	660 280
Roghun	31 964	159 821	203 409
Rudaki	1 613 498	1 488 537	1 894 502
Tojikobod	335 599	184 819	235 225
Tursunzoda	651 606	1 193 589	1 519 113
Fayzobod	111 114	399 784	508 816
Jirgital	185 809	190 098	241 942
Sharinav	210 984	481 385	612 672
Tavildara	23 330	80 708	102 719
Gissar	673 200	1 095 175	1 393 859
Nurobad	183 000	297 709	378 902
Varzob	373 017	326 157	415 108
TOTAL	5 589 738	7 768 457	9 887 128

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

The target of 3.85 PHC visits per capita in 2015 and 4.9 in 2020 (as defined in the planning parameters) will mean that number primary care consultations are anticipated to increase by almost 1,76 times over the next ten years.

4.3.2. Hospital sector reconfiguration

Projected Inpatient Capacity and Utilization

As noted above, RPP rayons have presently general hospital capacity of 2,97 beds per 1000 population.

Taking into account the forecast population growth and the targets in terms of admission rate per population, average length of stay and occupancy rate, significant decrease in the number of general or acute care beds should be planned, as illustrated in the table 12.

The 13 Rayons under Direct Republican Jurisdiction are, for most of them, at a reasonable distance and access-time from Dushanbe. The hospitals of the capital city will continue to boast a high attractiveness on the population. In this context and in order to avoid an overcapacity in terms of facilities and number of beds, the admission rates per 100 population were revised for RPP rayons with the specific following targets:

- Low bracket: 9 admissions per 100 population
- High bracket: 10 admissions per 100 population.

According to the targets defined, a maximum of **3,816** acute care beds are needed in RPP rayons by the year 2020, which implies up to 19,2% reduction of the existing capacity of general beds.

Considering the current workloads and healthcare quality and safety standards, it is generally recommended to maintain only one hospital from 100 to 500 beds per rayon. However, in rayons with constrained access for the population (Jirgital, Rasht and Tavildara) three additional community level hospitals may also be considered with up to 30/50 beds. This implies reduction of number of general hospitals in the RPP rayons to 16 secondary care hospitals (+ 1 TB specialized hospital currently under rehabilitation including a decrease in the number of beds). The central rayon hospitals should be strengthened and modernized in TB order to become the secondary care hospital for the whole population of respective rayon with all the adequate services as described in the “Proposed model of health care services by level of health facilities” (Chapter 2. Planning parameters section).

Table 12: Current and projected number of hospitals per rayon, RPP, 2009, 2020

Name of the rayon	Current number of hospitals 2009	Number of central rayon hospitals (2020)	Community level hospitals (2020)	Specialized acute care hospital	Total number of acute care hospital in 2020	LTC facilities (2020)
Vahdat	9	1		1	2	
Rasht	6	1	1		1	
Roghun	1	1			1	
Rudaki	6	1			2	1
Tojikobod	4	1			1	
Tursunzoda	5	1			1	1
Fayzobod	3	1			1	
Jirgital	6	1	1		1	
Sharinav	6	1			1	1
Tavildara	3	1	1		2	
Gissar	1	1			1	
Nurobad	1	1			1	
Varzob	3	1			1	
TOTAL	54	13	3	1	17	3

As noted above most of the rural and rayon numbered hospitals should be transformed into comprehensive PHC facilities and/or abolished. Elimination of the beds in the rural hospitals will allow achieve about 70% of required reduction in beds across the 13 rayons.

The Table 13 below presents the resulting numbers of acute care beds and utilization rates projections based on the targets defined in terms admission rates, average length of stay, desirable rates of ambulatory care (day hospital and ambulatory surgery), and expected occupancy rates – taking into account the Oblast population growth forecasts.

The detailed description as well as the maps illustrating the current situation and the proposed scenario for hospital sector are presented in the deliverable 2, rayon per rayon.

Table 13: Projected number of acute care (general) hospital beds, admissions and bed days per rayon, RPP 2009, 2020

Name of the rayon	Projected # of beds by 2020	Projected # of hospitalizations 2020 (low bracket)	Projected # of bed-days 2020 (low bracket)	Projected # of hospitalizations 2020 (High bracket)	Projected # of bed-days 2020 (high bracket)	Surgical Activity in CRH by 2020 (yes/no)
Vahdat ⁵⁷	650	28 091	157 310	35 113	196 638	Y
Vahdat	450					

⁵⁷ Not including TB specialized hospital

Rasht	270	10 780	60 368	13 475	75 463	Y
Roghun	80	3 321	18 597	4 151	23 245	N
Rudaki	387	20 604	117 185	23 198	119 083	Y
Tojikobod	80	3 837	21 937	4 801	23 858	Y
Tursunzoda	551	24 802	138 890	27 902	156 252	Y
Fayzobod	180	8 301	47 451	10 384	51 608	Y
Jirgital	90	3 947	22 563	4 938	24 540	Y
Sharinav	230	9 995	57 137	12 504	62 142	Y
Tavildara	50	1 677	9 391	2 100	11 760	N
Gissar	512	22 757	127 439	25 601	143 368	Y
Nurobad	116	6 186	34 642	6 959	38 973	Y
Varzob	170	6 777	37 953	8 471	47 439	Y
TOTAL	3 816	151 075	850 863	179 597	974 369	

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Up to 55.28 thousand deliveries per year can be expected by the year 2020. The mother and child network in the rayon should rely on the comprehensive PHC centres for normal deliveries with low risk, the central rayon hospital for the level 2 (managing low and moderate risk pregnancies and with level 2 neonatal beds), and the Oblast reference hospital for the level 3 (high obstetric risk with neonatal intensive care and resuscitation unit).

If we consider that 60% of the total deliveries will be performed in the central rayon hospitals and 7% in the reference hospitals in Dushanbe, the balance of 18,24 thousand deliveries will be carried out in the PHC centres (and at home under the supervision of the qualified medical personnel for a small part). In compliance with the agreed planning parameters, the minimum number of deliveries per ward should not be lower than 400 deliveries/ per year, meaning that a maximum of 45 delivery wards (level 1) should be deployed in 104 Comprehensive PHC Centres of the RPP rayons.

According to the planning parameters defined and considering the specific population groups, the medium term care (or rehabilitative care) and long term care beds for RPP Rayons were estimated as follows:

Table 14: Number of medium term care beds and LTC beds, 2015 and 2020

Category	Ratio	Number of beds	
		2015	2020
Medium term care/rehabilitative care	0,5 beds per 1000 population aged 15 years and more	650	730
Long term care	2 beds per 1000 population aged 50 years and more	445	500

Staff projections

The projections for the medical and nursing staffing for hospital network is related to the bed capacity planned for RPP Rayons. The proposed staff numbers have been calculated using the expected higher workload and occupancy rates as a result of the bed number optimization, which will require more intensive staff input and as a result higher than current total staff to bed ratio. A change in the current doctor to nurse ratio in general hospitals is also expected through addressing the current imbalance between the medical and nursing professions, so that human resources are less centred on physicians. The resulting ratios suggested in the planning parameters section (see Chapter 2), were applied to the RPP Hospitals. The staff per bed ratios and derived estimates per staff category are presented in the Table 15

Table 15: Current and projected staff to bed ratios and staff numbers per category for RPP, 2009, 2020

	Current		Projected	
	Ratios	Numbers	Ratios	Numbers
Number of Beds		4 730		3 816
Doctors	0.28	1 328	0.30	1,144
Nurses	0.63	2 970	0.68	2,595
Administrative and other technical staff			0.53	2,022
Total staff			1.5	5,761

Source: for current situation - survey conducted within the framework of the health sector master plan - 2010

Detailed inpatient staffing plans for each rayon should be elaborated.

Physical Access to hospital services after the restructuring process

Physical access to the CRH will remain the same; with more than 93% of the RPP population gaining access to upgraded hospital services/emergency care within 60 minutes of access time by vehicle (see the table 6).

4.3.3. Hi-tech medical equipment proposed standards for RPP

The chapter 2 (Planning Parameters) presents the standards for high-tech medical equipment to be reached in Tajikistan during the next decade taking into account the current levels of equipment, the available specialized staff and reasonable patterns that it will be possible to attain, the implications in terms of investment, operational and maintenance costs in the specific economic context of Tajikistan.

Nevertheless taking into account the specificity of RPP rayons and their proximity with Dushanbe, these standards were revised and adjusted as described in the table below:

Table 16: High tech equipment – International Benchmarks – Proposed standard for Tajikistan and Number of units proposed for RPP Rayons

EQUIPMENT	OECD BENCHMARK (2009 OR LATEST YEAR AVAILABLE)	PROPOSED STANDARD FOR TAJIKISTAN	NUMBER OF UNITS REQUIRED IN 2015 IN RPP	NUMBER OF UNITS REQUIRED IN 2020 IN RPP
MRI	Between 5 and 10 units per million population	0,7 to 1.2 unit per million population	0 (Referral of patients to Dushanbe hospitals)	0 (Referral of patients to Dushanbe hospitals)
CT Scans	Between 10 and 19 units per million population	1,10 to 1,8 units per million population	2	4
Mammograph units	Around 20 units per million population	3.5 to 4.5 units per million population	7	9
Radiation therapy equipment	Between 4 and 5 units per million population	0,7 to 1,2 units per million population	0 (Referral of patients to Dushanbe hospitals)	0 (Referral of patients to Dushanbe hospitals)
Angiography	Between 3 and 4 units per million	0,7 to 1 unit per	0	0

	population	million population	(Referral of patients to Dushanbe hospitals)	(Referral of patients to Dushanbe hospitals)
Lithotripsy	Between 1 and 2 units per million population	0,5 to 0,8 unit per million population	0 (Referral of patients to Dushanbe hospitals)	0 (Referral of patients to Dushanbe hospitals)
Haemodialysis	Between 40 and 45 units per million population aged between 15 and 59 years Between 200 and 223 units per million population aged 60 years and over	50 to 60 units per million population	89	121
Neonatology beds (level 1)	French Benchmark: 3/1000 births	2/1000 births	98	110
Neonatology beds (level 2 – Intensive Care)	French Benchmark 1,45/1000 births	1/1000 births	49	55
Neonatology beds (level 3 – Resuscitation unit)	French Benchmark 0,65/1000 births	0,5/1000 births	0 (Referral of patients to Dushanbe hospitals)	0 (Referral of patients to Dushanbe hospitals)
ICU beds adults	USA: 20 beds/100 000 population France: 9,3 beds/100 000 population UK: 3,5 beds/100 000 population Canada: 13,5 beds/100 000 population Belgium: 21,9 beds/100 000 population Germany: 24,6 beds/100 000 population Netherlands: 8,4 beds/ 100 000 population Spain: 8,2 beds/100 000 population	3,5 beds/100 000 population	63	70
Angiography Ophthalmology		0,75 unit/100 000 population	13	15
Echograph general purpose		5,50 unit/100 000 population	98	111
Echograph Ophthalmology	OECD benchmark: 0,72	0.5 unit/100 000 population	9	10
Defibrillator		5 unit/100 000 population	90	100
Gamma Camera		0,10 per 100 000 population	0 (Referral of patients to Dushanbe hospitals)	0 (Referral of patients to Dushanbe hospitals)
Dental Unit		5 per 100 000 population	90	100
X-ray unit		1 unit/100 000 population	18	20
X-ray unit mobile		3 unit/100 000 population	54	60

X-ray hemodynamic unit		0,20 unit/100 000 population	0 (Referral of patients to Dushanbe hospitals)	0 (Referral of patients to Dushanbe hospitals)
Extra corporeal unit		0,10 unit/100 000 population	0 (Referral of patients to Dushanbe hospitals)	0 (Referral of patients to Dushanbe hospitals)
Laparascopy unit		1,10 unit/100 000 population	20	22
Endoscopy flexible		3,50 unit/100 000 population	63	70
Endoscopic Unit		0,95 unit/100 000 population	17	19
Endoscopy video system		0,50 unit/100 000 population	9	10

The equipment list and quantities presented above should be distributed among the different rayons based on population criteria, future hospital capacity, anticipated volumes of activity, diagnostic related groups and case-mix index (for high tech equipment). Furthermore, The equipment presented in the list above should be installed in the hospitals with a sufficient catchment's area to justify the incorporation of such technology and to ensure the sufficient workloads and economic return. The number of medical and clinical staff available for the appropriate functioning of these equipment must also constitute a main driver for the selection of these hospitals.

4.3.4. Emergency network in RPP

Three distinct levels of emergency services will be implemented in RPP Rayons:

- Proximity emergency services in comprehensive PHC Centres and community hospitals (primary emergency care providing basic services).
- Medium level emergency services in Central Rayon Hospitals,
- High level emergency service transferred to Dushanbe hospitals.

The detailed maps per rayon depicting the existing and future health care network (PHC and hospital) are presented in the deliverable 2.

Program on Obesity Prevention and Promotion of Healthy Eating Habits in
Tajikistan 2019-2024

(English translated version is not official)

Approved by .
government decree
Republic of Tajikistan
of _____ 2019, No. _

1. GENERAL PROVISIONS

1. The Programme for the Prevention of Obesity and Promotion of Healthy Nutrition in Tajikistan for 2019-2024 (hereinafter referred to as the Programme) is designed to improve the population's health through the promotion of healthy eating habits, obesity prevention and healthy lifestyles.

2. The following basic concepts are used in the programme:

- **Excess body weight** - a condition that exceeds the norm of body fat by determining the body mass index (kg/height in m²). Body mass index indicator from 25-30% is estimated as excess body weight;

- **healthy nutrition** - interrelated processes of all foodstuffs taking into account the quantity, quality and factor not worked out in the body, satisfying physiological needs of the body related to sex, age, labor and others; - **insulin-resistant** - is a violation of glucose use in bone muscles, fatty tissues and liver, in which pathophysiological changes are related to the nature of insulin exposure; - **physiological norms of food and energy consumption** - the number of scientifically substantiated food products, etc;

- **Foodstuffs** - chemical substances contained in foodstuffs used by the body to build, repair and modify organs and tissues, and to produce energy. Food products are divided into macro nutrients (proteins, fats, carbohydrates) and micronutrients, which include vitamins and minerals;

- **metabolic syndromes** - the combined exacerbation of several diseases and unnatural conditions of the human body, manifested in changes and pathology of metabolic, hormonal and clinical processes; - **obesity** - a disease that is evaluated by determining the body mass index. The indicator over 30 body mass index is recognized as obesity;

- **physical activity** - a process aimed at the development of physical quality, ability of a person taking into account the type of activity and socio-demographic character;

Obesity and the components of its diseases since the end of the twentieth century and the beginning of the twenty-first century has been a thorny cross-cutting issue in most countries

of the world. The World Health Organization has declared obesity a global epidemic.

4. Nutrition is a primary factor in ensuring human health. Food security and the provision of adequate nutrition are an important foundation of public health. The activities of cells and tissues in the human body, including health and longevity, human labour and the level of further development of society associated with this factor.

5. Consumption of various food products, taking into account their quality and safety, is a basic condition for a healthy diet. Records on healthy eating for segments of the population of the Republic of Tajikistan, approved by Decree No. 247 of the Ministry of Health and Social Protection of 28 April 2014, will be presented.

6. Modern science on nutrition has determined that nutritional disorders (especially gluttony) and low levels of physical activity are the main factors in the development of the world's most common non-communicable diseases, such as obesity, cardiovascular disease, type 2 diabetes, certain cancers and others.

7. Currently, obesity prevention is a priority issue in the health sector in most countries of the world and refers to diseases of medical and social importance. It is known that excess body weight and obesity contribute to the development of cardiovascular diseases, breast cancer, diabetes mellitus type 2 and reduce production, economic burden in the health sector and the family and weaken the economy as a whole.

8. According to scientific and practical data, gluttony (consumption of foods with a high content of fat, confectionery products, sweet carbonated beverages, table salt, spices and minor consumption of dietary fiber, etc.) is the main cause of overweight and obesity.

9. One of the main causes of overweight and obesity, along with gluttony, is sedentary. Increasing physical and sports activities among the population, especially children and youth, will protect not only from social but also from economic and political aggravations. In general, the more the population will be covered by physical activity and sports, the better their health condition will be and favourable conditions and opportunities will be created for the development of various sectors of the economy, security of the state and society.

10. The metabolic syndrome plays a significant role in the development of obesity. At the present time, it is noteworthy that the metabolic syndrome plays a significant role in the

development of obesity

11. Addressing the issues of prevention of overweight and obesity at the intersectoral level contributes to reducing the growth of non-communicable diseases (hypertension, coronary heart disease, type 2 diabetes mellitus, etc.) and improves the health, longevity, standard of living and quality of life.

2. SITUATION ANALYSIS

12. In recent years, Tajikistan has experienced an increase in non-communicable diseases, including obesity, which has a notable place in terms of mortality and disability. The study, prevention and treatment of obesity in the framework of the Strategy on Diet and Physical Activity in Tajikistan for 2015-2024, approved by Government Decision No. 808 of 31 December 2014, have been identified as priority cross-cutting issues.

13. The process of urbanization and globalization of the food industry and economic development in recent years has introduced significant changes in the diet of the population, which have contributed to a reduction in the consumption of dietary fiber and an increase in the consumption of fast-moving fatty foods, sweet carbonated beverages, regular sugar and salt, leading to the development of chronic non-communicable diseases.

14. Statistics show that non-communicable diseases have tended to increase in the country's population in recent years. The early incidence of hypertension per 100,000 population was 285.3 in 2007 and 586.1 in 2017. This figure for coronary heart disease in 2010 was 185.5 and in 2016 it was 253.1, while diabetes mellitus in these years was 52.6 and 56.5 respectively. This trend is also observed in cancer diseases.

15. Data from the World Health Organization show that:

- Over 1 billion 971 million people worldwide are overweight and 671 million are obese;
- 2.8 million people die annually from obesity, in addition to 44% from diabetes mellitus, 23% from coronary heart disease, 7-21% from cancer, and 4-6% from steato-hepatitis associated with overweight and obesity;
- of the total number of overweight and obese people listed above, 340 million (18% girls and 19% boys) are children over the age of 5 years;
- over the past 10 years, there has been an increasing trend of obesity in all countries, including Tajikistan. According to the World Health Organization, the Republic of Tajikistan ranks 128th on the world list of obesity proliferation.

16. The results of research work by the Ministry of Health and Social Protection show that 17 per cent of the population is overweight and 11.3 per cent (10.3 per cent women and 12.5 per cent men) are obese. According to World Health Organization research indicators, 13.6 per cent of the country's population is overweight.

17. The prevalence of obesity among children is a matter of concern. Overweight and obesity in children is known to lead to non-communicable diseases, including obesity in adulthood. Research by the Ministry of Health and Social Protection has shown that the prevalence of obesity among children aged 6-17 is 4.7 per cent. At the same time, according to a study conducted by the World Health Organization, the prevalence of obesity among children aged 6-7 is 1.5 per cent. It was also found out that 43 per cent of children consume irrational food and 84 per cent are not covered by physical activity.

18. A study of the actual diet of the population has determined that the consumption of animal fats (the main source of fatty acids), mono and disaccharides (which are dangerous nutritional factors in the development of obesity) is above the norm. The study and analysis of scientific literature shows that obesity is the main criterion of metabolic syndrome and is considered as the basis for the development of hypertension, diabetes mellitus and others.

19. The basis for the development and course of metabolic syndrome is insulin resistance, which is more based on various genetic abnormalities. The development of the metabolic syndrome depends on the presence of one or more individual genes of the international system (further - HLA) of 50 species of the syndrome and 8 species of obesity unicogens associated with each other.

20. The presence of the metabolic syndrome in obese children will further cause premature disability and contribute to adverse living conditions.

21. The results of research work of the Ministry of Health and Social Protection of the Republic of Tajikistan on antigens of the international HLA system revealed the presence of HLA-B27 antigens in adults and HLA-B5 antigens in children, which indicates a propensity for obesity and diabetes.

22. The role of the syndrome in the development of cardiovascular diseases is the most important fact of the presence and need to strengthen the study of metabolic syndrome.

Persons suffering from metabolism.

23. The development of metabolic syndrome is associated with endogenous and exogenous environment, along with social and immunogenic factors, which play a separate role. Regardless of the scientific and practical studies available in the country, the question of studying the causes of overweight and obesity (metabolic syndrome, etc.) remains one of the thorny issues in the medical sphere.

24. Increasing the level of physical activity and sport is the main means of health promotion, prevention and treatment of diseases, increasing work capacity and longevity.

25. During physical activity, a large number of fat and carbohydrate acids are broken down, and vice versa, in case of immobility, fat and carbohydrate acids are converted into fats.

26. In order to prevent and treat obesity, exercise and sporting activities not only improve the functioning of the central nervous system, but also have a positive effect on the metabolic process of food and energy.

27. By reducing the amount of energy in a nutritious diet without prescribing an increase in physical and athletic exercise, it is extremely difficult to achieve the ultimate goal, that is, the prevention and treatment of obesity. Through physical and athletic activity 300 kilocalories are consumed daily for 4 months, which reduces the body weight to 4.5 kilograms.

28. In order to keep body weight normal, it is necessary to organize physical activity 30-35% of the daily energy saving. This level of physical activity corresponds to doing not so hard work (walking, light activity, etc.).

29. The risks of obesity include:

- Overweight and obesity, contributing to the development of various diseases that shorten life;
- susceptibility to cardiovascular diseases (hypertension, coronary heart disease), gout, type 2 diabetes mellitus, certain types of cancer (breast, gastrointestinal cancer, etc.);
- the occurrence of gallstone disease and chronic pancreatitis.
- 30. The programme covers all segments of the population through the improvement of food and physical activity, prevention of overweight and obesity levels and contributes to the health of the population.

3. OBJECTIVES

31. This Programme, as a means of supporting compliance, consistency and coordination, is an integral part of national socio-economic development policy.

32. The objective of the Programme is to address, at the inter-institutional level, the problems associated with reducing body overweight and obesity in order to promote and maintain public health, reduce the risk of premature death and disability and improve the standard and quality of life of the population.

33. The process of preventing overweight and obesity includes such activities: - limitation of animal fat consumption in the diet (meat and fatty meat products, milk and dairy products with high fat content, etc.); - low consumption of sugar (confectionery products, etc.); - limitation of table salt consumption; - low consumption of spices and food additives in preparation of food; - wide use of fresh fruits and vegetables, food prepared from cereals and legumes; - observance of a mode of consumption of food; - increase in a level of physical activity; - carrying out of research works on studying of the reasons (factors of a food, mobility, a heritage, a metabolism, etc.) of development of obesity for working out of scientifically proved actions of prevention of obesity and others.

34. The objectives of the Programme consist of: - strengthening of the instructive and regulatory legal framework in the field of prevention of obesity and overweight; - strengthening of the scientific and experimental basis for studying the causes of obesity development in order to develop measures to eliminate them; - improving the quantity and quality of training in the direction of obesity prevention and increase the level of physical activity for a wide coverage of the population, especially primary, secondary and higher vocational education, general education and pre-school institutions; - creating a permanent basis for the prevention of obesity. To strengthen the issues of raising the level of knowledge of different layers of the population, workers in public spheres (medicine, education, industry, agriculture, transport, etc.) on prevention of overweight and obesity; - To conduct monitoring and evaluation of the Program in accordance with the current normative legal acts of the Republic;

35. Development of measures to prevent overweight and obesity at the interdepartmental level to improve the health and longevity of the population, as well as taking timely measures to eliminate shortcomings that are important for the state medical, social and economic significance.

4. PROGRAMME INDICATORS

36. The main goal of the Programme is to reduce excess body weight to 20% (to 10% among children) and obesity to 30% (to 30% among children) among the population of the Republic.

37. To use economically advantageous cooperation (cross-sectorial) to reduce excess body weight and obesity through consumption:

- simple carbohydrates (no more than 10% of the energy consumed in the diet);
- animal fats in the diet (no more than 50%);
- table salt (not more than 6 g/day);
- fruits and vegetables not less than 400 g/day.

38. In physical terms:

- a person shall devote at least 30 minutes/day to physical activity (performance of physical activity is equal to 30-35% of the daily savings of physical energy);
- at least two hours per week in primary, secondary, higher professional educational and general educational institutions to increase the teaching hours for physical education, sports and mobile activities;
- In general education institutions, assign a healthy lifestyle lesson with a healthy eating programme to the teachers of the biology subject, who are currently responsible for the subject of labour training.

5. PROGRAMME GUIDELINES

39. This Programme consists of the following basic principles:

- Mutual cooperation of authorized state bodies with other ministries, departments and local executive bodies of state power to ensure the health, level and quality of life of the population;
- protection and promotion of public health through measures to prevent overweight and obesity;
- public access to means (physical activity and sports facilities, including walking and cycling paths, etc.) to reduce overweight and obesity;
- the use and unity of innovative measures.

6. TARGETED MEASURES

40. The strengthening of the legal and regulatory framework is one of the Programme's targeted measures. At the interdepartmental level, normative legal acts and methodological instructions will be developed and approved to prevent overweight and obesity, organize

healthy eating habits and increase physical activity.

41. In view of the fact that research work on the study of metabolism is being carried out at the national level. Taking into account the fact that research works on the study of metabolic syndrome, genetic propensity to obesity and others are almost non-existent in the country, projects of research works on the causes of obesity development will be developed and implemented in the sphere of science development. Special attention will be paid to involving international organizations in equipping laboratories with modern equipment.

42. Due to the lack of teachers and teaching hours on the subject of physical education in general education, primary and secondary professional institutions, no special attention is paid to the allocation of teaching hours, training of physical education and sports teachers in these institutions.

43. Improvement of the material and technical conditions of State institutions (especially in the case of technical support for the medical supervision of children, adolescents, university students, etc.). The authorized State bodies in the spheres of education, health care, physical education and sport create favorable conditions taking into account the real possibilities of the institutions related to the involvement of international organizations to provide the material and technical basis.

44. The establishment of a permanent information system on obesity prevention and health improvement through the mass media, in cooperation with the relevant sectors, through obesity prevention programmes and the promotion of healthy diet, physical activity and sport among the population, is conducive to raising the level of physical activity. (prevention of obesity), increases the interest and commitment of the population to the health sector, promotes the universal dissemination of physical exercise and involves government organizations and society in these issues.

45. One of the other activities of the Programme is to strengthen inter-institutional cooperation in the timely and effective implementation of measures to address existing issues related to overweight and obesity. In order to implement these measures and monitor the implementation of the Programme, by order of the Ministry of Health and Social Protection of the Republic of Tajikistan, an Inter-Ministerial Council consisting of highly qualified specialists from relevant ministries and agencies will be established (by agreement). The Inter-Ministerial Council's activities will be carried out based on the regulation approved by

the Ministry of Health and Social Protection of the Republic of Tajikistan. Representatives of international organizations can also be members of the Inter-Ministerial Council.

46. Another measure is evaluation of the Program indicators. This measure will be implemented through the computer program after approval and state registration (information resources) by the National Patent Information Center of the Ministry of Economic Development and Trade of the Republic of Tajikistan.

47. The authorized state bodies in the spheres of health care, physical education and sport, education and science, local executive bodies of state power, settlement and infantry self-government bodies, as well as mass media define interdepartmental measures on health improvement (prevention of excessive body weight and obesity), improvement of the level and quality of physical education and sport among different layers of population (from the point of view of age, profession, etc.) explaining and implementing the social significance of this issue in the sphere of health care and education.

7. COOPERATION WITH MINISTRIES AND DEPARTMENTS

48. The Ministry of Public Health and Social Protection of the Republic of Tajikistan together with the Committee on Youth and Sports Affairs under the Government of the Republic of Tajikistan, Committee on Food Security under the Government of the Republic of Tajikistan, Agency for Standardization, Metrology, Certification and Trade Inspection under the Government of the Republic of Tajikistan, Committee on Television and Radio Broadcasting under the Government of the Republic of Tajikistan, Ministry of Education and Science of the Republic of Tajikistan, Ministry of Economic Development of the Republic of Tajikistan.

8. INTERNATIONAL COOPERATION

49. Taking into account the current situation of material, technical and financial support, the Ministry of Health and Social Protection of the Republic of Tajikistan (together with relevant government ministries and agencies) is implementing beneficial cooperation with international organizations in order to implement the Programme.

9. PROGRAMME MONITORING AND EVALUATION

50. Monitoring and evaluation of the Programme in accordance with the normative requirements of the Rules for monitoring and evaluation of implementation of strategic documents of the national level, sectoral and regional development programs in the Republic of Tajikistan, approved by the Government Decree of the Republic of Tajikistan of October

29, 2018, No. 615, will be implemented by the Interagency Council of the Programme.

51. Monitoring and evaluation of the Programme is the responsibility of the Ministry of Health and Social Protection of the Republic of Tajikistan:

- requires the necessary information from the relevant ministries and agencies in the process of implementation of the Programme activities;
- discusses the results of monitoring and evaluation of the Programme at the meeting of the Inter-Ministerial Council and together with the relevant ministries and agencies considers ways of eliminating the existing issues.

10. PROGRAMME FUNDING

52. The programme for the prevention of obesity and the promotion of healthy eating habits in Tajikistan for 2019-2024 is being implemented within the framework of the State budget and the attraction of investment (grant) funds from domestic and foreign organizations and other sources not prohibited by law.

**STRATEGY FOR
SUSTAINABLE DEVELOPMENT OF SCHOOL MEALS
IN THE REPUBLIC OF TAJIKISTAN
FOR THE PERIOD UNTIL 2027**

2017

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1. Introduction

1. The Strategy for Sustainable Development of School Meals in the Republic of Tajikistan (hereinafter referred to as the Strategy) was developed by the Coordination Council on School Meals Programme in the Republic of Tajikistan.

2. Development of School meals aimed at helping the most vulnerable segments of the population is the main activity of the UN WFP in the Republic of Tajikistan. At present, within the framework of its Country Programme 200813 for 2016-2020, the UN WFP provides food to more than 370,000 primary school students in 2,000 schools in 52 districts that are most vulnerable to food insecurity.

3. The "Concept for School Meals Improvement in Educational Institutions of the Republic of Tajikistan" determines the main goals, directions, objectives and mechanisms for implementing the state policy of the Republic of Tajikistan in the field of school meals development. Its implementation became the basis for an overall assessment of the situation and development of further steps to provide students with healthy food, develop educational potential, ensure food security, improve the well-being of the population and ensure the country's socio-economic development.

4. The Strategy for Sustainable Development of School Meals is developed on the basis of the Provisions of the Constitution of the Republic of Tajikistan, the Law of the Republic of Tajikistan "On state projections, concepts, strategies and programs of social and economic development of the Republic of Tajikistan", in accordance with the goals and objectives of the School Meals Improvement Concept and on the basis of paragraph 10 of Decree of the Government of the Republic of Tajikistan No. 531 dated December 30, 2016 "On the results of socio-economic development of the Republic of Tajikistan in 2016 and the tasks for 2017".

5. The Strategy is based on a general analysis of the current situation in the field of school meals. It defines goals, objectives, main directions of the further development of school meals system, main stages of the implementation, planned results and indicators, as well as procedures for monitoring and evaluation of the achievement of expected results.

6. The Strategy envisages a gradual expansion of school meals coverage, depending on economic opportunities, social and demographic development of the Republic of Tajikistan and individual regions.

7. The Strategy is developed taking into account the possibility of providing free meals to children from economically disadvantaged families and partial co-financing of school meals for low-income families.

8. The Strategy and the National School Meals Programme based on its provisions should eventually result to the formation of a modern school meals industry in the Republic of Tajikistan.

9. The provisions of the Strategy will be taken into account in the development and implementation of the state programs in the field of education, social development, health, development of agro-industrial complex and improvement of the people's well-being.

2. General Analysis of the Situation

10. As of January 01, 2017, the population of the Republic of Tajikistan was estimated to be 8.74 million people, 74% of which live in rural areas and 34% of the population are children under 14 years.

Remarks: At the time of developing the Strategy, the data of the Statistical Agency under the President of the Republic of Tajikistan (<http://www.stat.tj/>) was used.

11. About a third of the able-bodied citizens work abroad, mainly in the Russian Federation.

12. The Republic of Tajikistan imports more than a half of the required amount of foodstuffs, which makes the country's population dependent on global price fluctuations.

13. Food security level in the Republic of Tajikistan is gradually increasing in terms of physical and economic accessibility of food products. But this accessibility remains low due to the economic crisis and frequent natural disasters, which necessitates the development of food production and distribution systems.

14. Improving the nutritional status of the population remains a burning issue. Chronic malnutrition still affects 26% of children under 5 years old, and acute malnutrition (hypotrophy) affects 10% of children under 5. Many women and children also suffer from micronutrient deficiencies, which is reflected in high levels of anemia and iodine deficiency. The burden of undernutrition on Tajikistan is a critical economic cause, that require US\$ 41 million annually due to the loss of performance efficiency and productivity.

Remarks: The data is extracted from the National Development Strategy of the Republic of Tajikistan for the period until 2030.

15. About 40% of school-aged children diseases occur due to malnutrition, resulting, in particular, from inefficient organization of school meals, inadequate dietary intake, lack of motivation to live a healthy lifestyle in families, failure to comply with hygiene standards.

16. According to the Ministry of Health and Social Protection of Population of the Republic of Tajikistan, the most widespread diseases among school-aged children are alimentary-dependent diseases, including inflammatory diseases of the upper gastrointestinal tract, stomach and duodenum: chronic gastritis, chronic gastroduodenitis, gastroduodenal ulcer.

17. As of the beginning of the 2016/2017 academic year, there are 3,874 general education institutions in Tajikistan, including 3,865 day schools and 9 evening schools. 1,837,762 children study in general education institutions. The public spending from the state budget on education in 2016 amounted to 5.4% of GDP or 18% of expenditure part of the state budget. As of the beginning of the 2016/2017 academic year, the coverage of educational institutions for grades 1-11 is 94%, for general primary school (grades 1-4) - 100%. Thus, the development of school meals in the Republic of Tajikistan will underpin

conditions for increase in coverage of general education institutions, improvement in schoolchildren performance, reduction of chronic diseases, as well as promotion of healthy lifestyle.

18. The country has considerable resources and potential for the development of a diversified agricultural sector based on the production of grain, cotton, fruits, vegetables and livestock products. Agriculture provides 21% of GDP and 43% of employment.

19. In order to minimize the production and market risks, farmers cultivate relatively small plots of land and grow a limited number of crops. A large part of the arable land is not used due to deterioration of the irrigation and drainage infrastructure, waterlogging and soil salinization. There is a lack of permanent pastures in the country, as well as lack of fodder production in the volumes required for the development of livestock breeding.

20. In order to ensure the formation and sustainable development of school meals system, it is required to solve a set of problems related to the enhancement of production, transport and processing infrastructure, private sector, expansion of access to land resources, development of irrigation systems, electricity, heat and water supply systems. It is also necessary to improve the sphere of education, health and social protection, taking into account the significant differences in the development of certain regions of the Republic of Tajikistan, to expand parental involvement and ensure growth of the living standards of the population.

21. The Government of Tajikistan takes all necessary measures for sustainable development of the education sector as a priority area of social policy. In light of this, with the view of the sector development 3.2 billion Somoni (in 2014 - 2.5 billion Somoni, in 2015 - 3 billion Somoni) was allocated in 2016.

22. As part of the implementation of the Strategy for Improving the Welfare of Population of the Republic of Tajikistan for 2013 - 2015 the following measures have been implemented: public administration reform, private sector development and attraction of investment, successfully resolved the issues related to undernutrition, improving the food security situation and population's diet, support to sustainable agriculture development.

23. The National Development Strategy of the Republic of Tajikistan for the period until 2030 (Resolution of the Government of Republic of Tajikistan dated 1 October 2016, ref. no.392) should provide further improvement of the efficient use of national resources, human development and strengthening the institutional development of the country.

24. The medium-term Tajikistan's Mid-Term Development Programme for 2016 - 2020 provides envisages improving the welfare of the population through sustainable economic and social development, as well as achieving such strategic goals as ensuring energy independence, development of communication system, further promotion of food security.

25. As a result of the undertaken measures, the following outcomes have been achieved: sustainable socio-economic development, growth in GDP, incomes of the population, reducing inflation

and poverty, population and life expectancy growth, reducing child mortality. New power plants and power transmission lines have been launched, road reconstruction, railway construction, modernization and construction of international and regional highways have been carried out, projects to provide the population with quality drinking water have been implemented.

26. Large-scale financing of the key economic sectors of school meals is provided. During 2010-2014 1.7 billion Somoni was allocated from the state budget for the development of the sector of agricultural-industrial complex, it is planned to allocate 1 billion Somoni for 2015-2017. 1 billion Somoni was allocated to provide the population of cities and districts of the Republic of Tajikistan with clean drinking water in 2010-2018.

27. Thus far, the necessary preconditions for the successful resolving the issues of sustainable school meals development in the Republic of Tajikistan have been created.

3. Goals and Objectives of the Strategy

28. Implementation of the Strategy will be carried out in accordance with the goals, objectives and main directions of the development of the school meals system, as defined in the Concept of School Meals Improvement in general education institutions.

29. The goal of the Strategy is to provide conditions for preservation and promotion of health and improvement of student learning outcomes through sustainable school meals development in the Republic of Tajikistan.

30. In order to provide sustainable school meals development in the Republic of Tajikistan it is required to address the following tasks:

- Improving the state policy and regulatory framework necessary to meet the challenges of sustainable school meals development in the Republic of Tajikistan;
- Organizational support and coordination of the activities of public authorities, stakeholders and organizations;
- Ensuring stable funding and planning;
- Development and implementation of the state school meals development program;
- Community involvement in the development of school meals and related economy sectors.

31. The objectives of the Strategy are met through the development and implementation of short, medium- and long-term programs, pilot projects and other activities in various areas of implementation of the Strategy.

4. Directions for the Strategy Implementation

4.1. Improvement of State Policy and Regulatory Framework

32. The main directions of actions to improve the state policy and regulatory framework necessary to address the challenges of sustainable school meals development in the Republic of Tajikistan are:

- Development and approval of the procedure for school meals financing, defining the categories of students eligible to receive school meal allowance, as well as free or partially subsidized school meals and the procedure for their provision;
- Development and approval of the rules for procurement by general educational institutions of products and services for school meals, including the determination of procedures for procurement notices, terms for their implementation, circle of participants, registration and control procedures;
- Development and approval of the regulations for granting subsidies for partial reimbursement of the costs of construction, reconstruction, modernization and establishment of new enterprises, production and logistics centers and social catering facilities, as well as compensation of logistics costs caused by the supplies of goods of local manufacturers;

4.2. Organizational Support and Coordination

33. The main directions of actions for improving organizational support and coordination of the activities of the state authorities, stakeholders and organizations to meet the challenges of sustainable school meals development in the Republic of Tajikistan are:

- Strengthening the coordination of the activities of the state and local authorities in developing and implementing measures aimed at the implementation of this Strategy;
- Coordination of the development and implementation of short-, medium- and long-term programs, pilot projects and other measures aimed at the implementation of this Strategy;
- Preparation and submission of annual reports on the implementation of this Strategy and the results achieved to the Government of the Republic of Tajikistan.
- Dissemination of the experience in solving problems related to the organization of school meals accumulated in the Republic of Tajikistan and foreign countries;
- Formation of the system of training and retraining of professionals working in the field of school meals, conducting training workshops for government officials, local authorities, managers and employees of educational institutions, parents and other categories of persons, as well as preparation of information materials and trainers to conduct such workshops;

4.3. Ensuring Stable Funding

34. The main directions of actions for ensuring stable funding to meet the challenges of sustainable school meals development in the Republic of Tajikistan are:

- Determination of the amount of funds allocated from the budget for the implementation of activities related to the school meals development, monitoring the effectiveness of their expenditure;

- Approval and annual indexation of the standards for financing school meals programs from the state budget;
- Determination of the amount of subsidies allocated for partial or full compensation for the cost of school meals for the purpose of providing targeted support to children from low-income families in accordance with the categories of need;
- Ensuring the consolidation of budgets of different levels, financial aid and funds from parents and other sources for co-financing school meals programs;
- Establishing the procedure for attracting, accounting and using funds provided by parents of students or obtained from other sources of funding;
- Development of a system of tax and other mechanisms to provide the school meals system with sustainable supplies of locally produced food products;
- Establishing a unified system for the procurement of food products and services for school meals, including consolidation of the sources of products' supply and funds for their purchase;
- Provision of medium and long-term planning of public procurement for school meals and the formation of a state order by types, volume of production and supply of agricultural products (food commodities) for school meals for a period of up to five years.

4.4. Development and Implementation of the National School Meals Development Programme

35. The main instrument of the Strategy implementation and the achievement of the goals set out in the School Meals Improvement Concept will be the development and implementation of the National Programme for Sustainable Development of School Meals in the Republic of Tajikistan. The Programme will be developed based on the analysis of the achieved outcomes, it will determine amounts of financing, territories and models of school meals, the list of targets and indicators, as well as the procedure for its monitoring and evaluation.

36. The main directions of actions for ensuring effective development and implementation of the National Programme for Sustainable Development of School Meals in the Republic of Tajikistan are:

- Identifying and implementing the most promising school meals models for certain categories of schools, communities and regions, and taking measures for their dissemination;
- Development of food rations based on the ongoing scientific studies in view of the need to meet the physiological needs of students for key nutrients and energy;
- Development of menus necessary for the organization of school meals in accordance with the recommended key food ingredients and taking into account regional and age-specific characteristics of nutrition, as well as students' health status;

- Development of sanitary and epidemiological requirements for catering students of general education institutions, as well as recommendations for the creation of conditions to ensure the preservation and strengthening of students' health;
- Development of measures aimed at developing the systems of production, processing, supply and sale of products for school meals;
- Development of measures to support local producers of agricultural products used in school meals, including identification of types of such products and requirements for them;
- Development and implementation of pilot projects, testing various models of production development and product processing at local level, compilation and dissemination of the most valuable experience.

4.5. Parents and Public Participation

37. The main directions of actions for increasing the involvement of parents and public in accomplishing the tasks of the school meals development are:

- Conducting advocacy and awareness-raising activities, promoting principles of healthy eating, including through mass media.
- Involvement of undergraduate and graduate students of agricultural sciences from higher education institutions into the work on local production development in order to assist in the arrangement of school gardens, conducting scientific researches, optimization of production and processing of agricultural products and implementation of research projects related to the development of agriculture;
- Providing administrative staff, teachers and other employees of general education institutions with advanced knowledge of the negative impact of malnutrition on learning ability and profession mastery;
- Introducing changes into the curricula in order to develop students' knowledge about the importance of adequate nutrition, ability to assess their own diet correctness, skills of cooking healthy food within the framework of courses for home crafts; skills of crop cultivation using local resources within the framework of labor education and biology lessons;
- Participation of general education institutions in the activities related to the selection of school meals models and monitoring their quality;
- Providing parents with information about the range of food for students, including names of dishes and volumes of portions in daily menus, as well as the information on replacement of dishes for children with food allergies and diabetes.
- Conducting refresher trainings for junior-level medical personnel of educational institutions, including for the purpose of early detection of underweight children, conducting survey of living conditions of schoolchildren families;

- Ensuring participation of medical personnel in the work with parents (families), including the measures for dissemination of skills in the field of healthy eating and hygiene;
- Ensuring dissemination of knowledge about the consequences of inadequate or poor nutrition, development of skills for organizing healthy diet, spreading the knowledge on possible ways to improve nutrition, including by changing the ration and enhancing access to the resources that enable food production.
- Participation of parents, local executive bodies of public administration and other stakeholders in co-financing of school meals programs;
- Carrying out public control over the implementation of school meals programs and food quality improvement.

5. Monitoring and Evaluation of the Strategy Implementation

38. Monitoring and evaluation of the Strategy implementation shall be carried using the following key targets and indicators:

- Level of achievement of the established rational norms of food consumption for students of general education institutions, including on quality, caloric value, diversity, the number of proteins, fats, carbohydrates, vitamins, macro- and micronutrients consumed by students, taking into account school meals;
- Level of coverage of general education institutions with school meals, conforming to the established requirements;
- Number of students provided with school meals, conforming to the established requirements, including partially subsidized and free school meals;
- Increase in food production for school meals system, including foods for special purposes (baby foods and therapeutic nourishment), semi-finished products, fortified foods;
- Amount of the state and local procurement of food products and services for school meals, including from local producers;
- Cost reduction in the production and processing of food products for school meals, as well as in catering students.

39. When developing the programmes, pilot and other projects, as well as designing specific activities aimed at the implementation of the Strategy, additional targets and indicators can be adopted.

40. Development of the methods for determination of the targets and indicators is carried out by the Ministry of Health and Social Protection of the Republic of Tajikistan in cooperation with other ministries and agencies.

44. In order to organize and monitor the implementation of the Strategy, the Ministry of Health and Social Protection of Population, in cooperation with the Ministry of Economic Development and Trade of the Republic of Tajikistan:

- Develop a comprehensive system of targets and indicators, reflecting the state and dynamics of school meals development in the Republic of Tajikistan;
- Organize monitoring of the Strategy implementation on the basis of performance evaluation of the activities provided for in the approved plans, and comprehensive assessment of the achievement of target values and indicators;
- Establish the content, terms and procedure of the submission by executive authorities of the reports on the implementation of approved plans and achieving the intended targets and indicators, as well as other information needed for monitoring;
- Based on the analysis of information obtained from monitoring, carry out a comprehensive assessment of the target achievement for the analyzed periods, develop proposals aimed at solving the tasks specified in the Strategy;
- Carry out control over the food hygiene.

42. The Ministry of Education and Science of the Republic of Tajikistan in cooperation with the Ministry of Health and Social Protection of the Republic of Tajikistan monitor compliance with the established standards, provide quality control of food products and services for school meals.

43. The Agency on Standardization, Metrology, Certification and Trade Inspection under the Government of the Republic of Tajikistan carries out state supervision over the observance of technical regulations, standards, technical specifications in the field of nutrition, as well as metrological supervision and examination of food processing equipment.

44. Local executive authorities of public administration, in accordance with the delegations given to them:

- a) Organize the collection and compilation of data required for monitoring;
- b) Submit to the Ministry of Health and Social Protection of the Republic of Tajikistan reports on the implementation of the approved plans and the achievement of the intended targets and indicators, as well as other information required for monitoring.

6. Implementation Stages of the Strategy

45. The objectives specified in the Strategy of Sustainable Development of School Meals in the Republic of Tajikistan for the period until 2027 shall be implemented in the following stages (enclosed):

46. During the first stage (2017-2018), establishing basic conditions required for school meals development in the Republic of Tajikistan and solving the tasks specified in this Strategy will be performed, namely:

- Development of legal and regulatory framework for the organization of school meals;
- Establishment of effective organizational and management infrastructure;
- Development of pilot projects to implement school meals models, determination of the conditions and cost for their implementation;
- Human resource development;
- Development of monitoring system, methods for determining targets and indicators, conducting scientific researches.

47. During the second stage (2019-2020) the following activities will be performed:

- Implementation of school meals models within the developed pilot projects with specification of their cost;
- Monitoring and analysis of the results achieved;
- Selection of the most promising school meals models and related solutions.

48. Following the results of the Second Stage implementation, the development of the National School Meals Programme for the Republic of Tajikistan shall be carried out based on the analysis of the achieved results and specifying amounts of financing, territories and models of school meals, the list of targets and indicators, as well as the procedure for collecting the information needed to identify them.

49. During the third stage (2021-2026), the following activities will be performed:

- Implementation of the activities of the National School Meals Programme in accordance with the approved work schedules;
- Extension of the school meals system to all regions of the Republic of Tajikistan;
- Gradual transition to independent implementation of the school meals programs funded by the state budget and other sources.

7. Expected Outcomes of the Strategy Implementation

53. School meals development in the Republic of Tajikistan will ensure:

- Improvement of student nutrition and growth of living standards of families in Tajikistan, especially those with an inadequate income level;
- Increase in attendance rates, teaching quality and student performance achievements;
- Decline in morbidity among students, including from chronic diseases, improving public health in the Republic of Tajikistan, including through the formation of healthy food culture;
- Establishment of a guaranteed sales market for agricultural products, including locally produced food products, increasing productivity and income levels in agriculture sector;
- Technological modernization and restructuring of the industry, enhancement of the modern production and logistics infrastructure;

- Formation of stable, long-term economic relations between the producers of agricultural products and school meals organizations;
- Accelerated development of the industries related to processing, transportation, storage and sale of food products;
- Increase in levels of protection against internal and external threats to food security.

**Attachment to the Resolution
of the Government of Republic of Tajikistan
29 September 2017, ref.no. 456**

**Action Plan on Implementation of the Strategy for Sustainable Development of School Meals in the Republic of Tajikistan
for the period until 2027**

No.	Name of activity	Responsible agency	Terms of work performance	Source of funding
FIRST STAGE (2017 - 2018)				
Improvement of Regulatory Framework				
1.	Development and approval of the Procedure for providing school meals in the Republic of Tajikistan	The Ministry of Economic Development and Trade	2017	Financial expenses are not required
2.	Development and approval of the procedure for funding for catering students of general education institutions	Ministry of Finance	2018	Financial expenses are not required
3.	Development and approval of the rules for procurement of products and services for school meals by general education institutions	Agency on Public Procurement of Goods, Works and Services under the Government of the Republic of Tajikistan. Ministry of Education and Science	2018	Financial expenses are not required

4.	Development and approval of food rations taking into account the need to meet the physiological needs of students for key nutrients and energy;	Ministry of Health and Social Protection;	2018	Financial expenses are not required
5.	Development and approval of sanitary-epidemiological requirements for the organization of school meals	Ministry of Health and Social Protection;	2018	Financial expenses are not required
6.	Development and approval of unified quality standards and certification system for school meals products	Ministry of Health and Social Protection; Agency on Standardization, Metrology, Certification and Trade Inspection under the Government of the Republic of Tajikistan	2018	Financial expenses are not required
7.	Preparation of proposals on determining the categories of students who are eligible to receive school meal allowance, as well as free or partially subsidized school meals, and the procedure for their provision	Ministry of Health and Social Protection Ministry of Education and Science Local executive authorities	2018	Financial expenses are not required

Organizational Support and Coordination				
8.	Establishment of an interdepartmental body for coordinating the implementation of the School Meals Development Strategy	Ministry of Health and Social Protection	2017	Financial expenses are not required
9.	Development and implementation of pilot projects in Khatlon, Roghun and Rasht districts: - Project on the re-equipment of kitchen units in educational institutions; - Project on the establishment of interschool bakeries in educational institutions; - Project on the establishment of school based canteens; - Project on the establishment of school gardens.	Ministry of Health and Social Protection Ministry of Education and Science Local executive authorities	2017-2018	Attracted extrabudgetary funds (UN WFP)
10.	Development and approval of students' food rations in accordance with the recommended assortment of basic food products and taking into account regional and age-specific characteristics of nutrition, as well as students' health status	Ministry of Health and Social Protection;	2017-2018	Financial expenses are not required
11.	Development and implementation of educational programs on the formation of a healthy food culture	Ministry of Education and Science	2017-2018	Attraction of funds of the development partners

12.	Conducting training workshops on the organization of school meals for school meals professionals, preparation of information materials	Ministry of Education and Science Ministry of Health and Social Protection	2017-2018	Attracted extrabudgetary funds
13.	Development of proposals on the development of local production of raw materials and food products, supply and sale of products required for the sustainable development of school meals	Ministry of Agriculture Ministry of Industry and New Technologies	2017-2018	Financial expenses are not required
Ensuring Stable Funding and Planning				
14.	Development of proposals on the procedure for planning and placement of consolidated state order for the purchase of food and services for school meals	Ministry of Education and Science Agency on Public Procurement of Goods, Works and Services under the Government of the Republic of Tajikistan.	2017-2018	Financial expenses are not required
15.	Development of proposals to support the producers of agricultural products used in school meals, including identification of types of the products and requirements for them.	Ministry of Agriculture	2017-2018	Financial expenses are not required
Involvement of Parents and Local Community				
16.	Organization and conducting of advocacy and awareness-raising activities to promote principles of healthy eating, including	Ministry of Health and Social Protection; Ministry of Education and	2017-2018	Financial expenses are not required

	through the media.	Science Committee on Television and Radio Broadcasting under the Government of the Republic of Tajikistan		
Monitoring and Evaluation				
17.	Development of a comprehensive system of targets and indicators for monitoring the development of school meals in the Republic of Tajikistan	Ministry of Health and Social Protection Ministry of Education and Science	2017-2018	Financial expenses are not required
18.	Development of instructions on the procedure, content and terms of the submission of reports and other information required for monitoring school meals	Ministry of Health and Social Protection; Ministry of Education and Science	2017-2018	Financial expenses are not required

SECOND STAGE (2019 - 2020)				
19.	Evaluation of the effectiveness of the pilot school meals projects' implementation in Khatlon region, Rogun city and Rasht district	Ministry of Health and Social Protection	2019	Attracted extra-budgetary funds
20.	Implementation of school meals models within the developed pilot projects, specifying their cost.	Ministry of Health and Social Protection;	2019-2020	Attracted extra-budgetary funds
21.	Evaluation of the costs of school meals in the Republic of Tajikistan	The Ministry of Economic Development and Trade Ministry of Health and Social Protection	2019	Attracted extra-budgetary funds
22.	Development of proposals on the standards for financing school meals programs from the state budget and their annual indexation	Ministry of Finance Ministry of Education and Science	2019-2020	Financial expenses are not required
23.	Determination of the required volume of investments in the development of school meals infrastructure	Ministry of Economic Development and Trade Ministry of Finance State Committee on Investments and State Property Management	2019-2020	Attracted extra-budgetary funds

24.	Organization and conducting of the Strategy implementation monitoring	Ministry of Health and Social Protection; Ministry of Education and Science	2019-2020	Financial expenses are not required
25.	Development and submission for approval by the Government of the RT of the National Programme for Sustainable School meals Development in the Republic of Tajikistan for 2021-2027	Inter-ministerial Coordination Council on School meals Ministry of Health and Social Protection Ministry of Education and Science	2020	Financial expenses are not required

**Strategy for prevention and control of non-communicable
diseases and injuries in the Republic of Tajikistan for the
period of 2013-2023**

1. Key Concepts

The nearest (interim) results - products, services, and other developments (e.g., guidelines for the prevention, regulations, tax provisions) that are the direct outcome of the program or organization's activity.

Invested resources - financial and material resources, as well as the skills of staff and volunteers used in the specific program or process.

Evidence-based medicine - a conscious and consistent application in clinical practice of interventions, which usefulness has been strongly proven.

Healthy lifestyle - the way of life, aimed at disease prevention and health promotion.

Infection - this is a biological phenomenon, the essence of which is the intrusion and multiplication of microorganisms in macro organism with subsequent development of their various forms of interaction from the agents' carriage to manifested disease.

Infectious diseases - a group of diseases caused by penetration into the body of pathogenic (disease-causing) microorganisms (bacteria, viruses, fungi, protozoa, etc.) characterized by presence of the incubation period, some reaction of the infected organism on insertion and reproduction of an agent and having a cycling disease course, the result of which is the formation of post-infection immunity.

Clinical guidelines are the systematically developed regulations that help the practitioner and patient in making the right decisions concerning the patient's health, in particular clinical situations.

The end results (outcomes) – a caused by the interference change in the current or future state of health or health-related behavior.

Cross-sectoral (intersectoral) actions - joint efforts of the health sector and other sectors in order to achieve a common goal.

Multifactor (adjective) - a term that is based on the concept that disease or other outcome may have more than one reason.

Capacity building - the accumulation of knowledge and experience in planning, implementation and evaluation of interventions aimed at the prevention and control of NCDs in different settings.

Nasvay - type of smokeless tobacco product, that is traditional namely for Central Asia.

Non-communicable diseases (NCD) - chronic non-communicable diseases of non-infectious (viral, bacterial, fungal or parasitic) nature. As a rule, they can not be communicable, air-, water- or foodborne.

Non-drug therapy - actions to change the patient's lifestyle (lifestyle interventions), which help to reduce the influence of disease risk factors on their further development.

Accidents - injuries due to domestic, traffic or industrial casualties.

Life style – a combination/the aggregate of made by man decisions that affect their health. In addition, the way of life can characterize life in general, based on the interaction of living conditions in the broad sense and traits of individual behavior determined by socio-cultural factors and personal attributes.

Public places - buildings, facilities, territories, natural objects or space of potential location of people who can communicate freely; they include places of work, leisure, recreation and sports, as well as health, educational and preschool institutions, enterprises of culture, catering, trade, transport and their surroundings.

Public Health - it is a science, and specific activities to promote and improve public health, extend life through social mobilization and execution of the organizational activities at various levels, and provide health management as one of the major social systems, where medicine is one of the components along with economics, sociology, political science, industry and agriculture.

Oncological diseases - chronic, long-term current illnesses with the emergence and abnormal growth of typical or atypical cells of a tissue or organ.

Target-organs - those undergoing pathological changes, which are due to the influence of a factor (e.g., hypertension)

Primary health care- its definition was given in the Declaration adopted at the WHO conference in 1978 in Alma-Ata: "PHC is an essential part of health care that is based on practical, scientifically sound and socially acceptable methods and technology that have become universally available both to individuals and families in the field, thanks to their full participation in the work at a cost justified for community and for the country at every stage of development, to ensure their self-determination and independence in these matters. It is an integral part of the national health system, the core of which it is, and at the same time serves as a major component of the overall social and economic development of society. It is the first step in the contact between individuals, family, community and national health authorities, making health care as close as possible to the place of residence and work and constituting the first element of continued health care process".

Implementation plan - a list of activities to be organized in a certain way and implemented in accordance with the timetable for achieving the set goal. The plan specifies who does what and when, and may include data on the cost of each phase of work. Implementation also means transforming program objectives into real actions (e.g., through changing the policy, regulation and institution).

Planning - the process of identifying needs, setting priorities, determining the causes of problems, assessing resources and constraints, and the allocation of resources to achieve goals.

Accountability means that the decision-makers at all levels fulfill their responsibilities and are accountable for their actions.

Politics - a general guide to actions and decision-making, which facilitates the attainment of goals.

Advocacy -the actions taken by health professionals and other opinion leaders in order to influence the decision-making process in the community and governments.

Prevention – it covers approaches and interventions aimed at reducing the probability of occurrence of a disease or disorder of an individual, stopping or slowing the progression of the disease and reducing disability. Primary prevention reduces the chance of the disease or disorder occurrence while secondary prevention interrupts, prevents or minimizes the progression of the disease or disorder at an early stage and tertiary prevention inhibits progression of the disease that has already led to significant damage.

Profile - a set of data, often presented graphically and representing the most significant features of a situation, for example, the frequency of occurrence of a distinctive trait in individuals and in groups.

Leadership - a mechanism that directs the efforts of the collective or individual to perform common tasks. It encourages people to achieve this goal through an effect on their needs.

Diabetes - an endocrine and metabolic disease, which due to a combination of genetic and environmental etiological factors develops absolute or relative insulin deficiency, leading to disruption of carbohydrate, fat, protein metabolism and profound disruption of intracellular metabolism.

Cardiovascular diseases - diseases which are based on cardiac and vascular affection, which development reduces the quality of life of the patient, and can lead to death, including sudden death.

Screening – a strategy for healthcare organization aimed at identifying the disease in clinically asymptomatic individuals in a population, the purpose of which is the early detection of diseases, thus allowing for early treatment, based on relief of the patient's condition and reducing mortality.

NCD prevention strategy - a document containing a general guiding line, guidelines or basic statements necessary for the preparation and implementation of NCD prevention.

Risk factor – it is any human property or trait or any effect on them, increasing the risk of illness or injury.

Network - number and the nature of social relationships and connections between individuals (and institutions), which can provide access to social support of health or mobilize such support.

The evaluation system is a description of how the program should be evaluated.

A coalition – establishing a temporary alliance of factions, parties, individuals and groups with a specific purpose (in the case of a program - for its support and joint development).

Community - a group characterized by common value systems and care for the development and well-being of their group or geographical area.

Social marketing - this is a direction, using a tool to influence the people's notion through technologies and approaches to improve the lives of individuals and society as a whole.

Mass media - the means of conveying information (verbal, audio and visual) on a broadcast channel, covering a large (mass) audience and acting on a constant basis.

The strategy is an action plan designed to achieve long-term goals and taking into account the available resources and the obstacles and opportunities for cooperation between the relevant stakeholders.

Injuries - mechanical, chemical, radiation or thermal ones damaging living organism, leading to the loss or limitation of its functions

Health promotion involves a combination of educational and environmental support activities promoting health and living conditions. Such actions can be taken by individuals, groups, communities, policy makers, employers, teachers and all those who are able to influence the tractors determining health. The aim of health promotion is to allow people to better control the determinants of their own health.

Participants/actors and stakeholders - all those who have a common interest in implementing the project and can agree in principle to support it by providing for this, depending on their capacity, technical, material, financial and human resources.

Epidemiological surveillance – it is gathering information and dynamic risk assessment, assessment of quality of life and morbidity in specific territory, providing a rational in carrying out the necessary preventive measures.

2. Introduction

The Ministry of Health of the Republic of Tajikistan having read the letter from the European Regional Bureau of the World Health Organization (WHO EURO) supplemented with World Health Assembly Resolution (WHA64.11) and a list of information resources on the Program of Integrated Prevention of Non-communicable diseases (NCDs) and injuries (CINDI/WHO program), has drafted a strategy of prevention and control of non-communicable diseases and injuries in Tajikistan for the period of 2012-2023 years (hereinafter Strategy). The urgency of formulating this strategy, its effective implementation is an urgent task for developing countries, including Tajikistan, as in the long term it will allow to reduce the burden of non-communicable diseases (NCDs) and injuries by curtailing mortality and disability caused by them, and making additional resources available for poverty reduction, and undoubtedly will really makes its contribution to improving the welfare of the people of Tajikistan.

3. The relevance of non-communicable diseases and injuries in the Republic of Tajikistan

1. In Tajikistan, as in most countries of the world, priorities in health are prevention and organization of effective care to patients with cardiovascular and endocrine diseases, cancer and broncho-pulmonary diseases and injuries and poisoning, as the most essential causes of high disability and premature death in the modern urbanized population.

2. The heaviest burden on the society from these diseases due to premature death, as well as a high level of temporary and permanent disability is increasing with its significant controversial impact on the quality of life. All this is creating new economic problems impeding measures to strengthen the well-being of the people, especially on the part of the fight against poverty, slowing the process of improving the welfare of the people.

3. Despite the efforts of health care, the projected disease burden tends to be extremely alarming, and chronic non-communicable diseases remain a leading pathology. In the post-Soviet countries rates of non-communicable disease morbidity and mortality are particularly high and increasing.

4. One of integrative indicators measuring both physical and psychological state of the population is **Human Development Index (HDI)** published annually by the United Nations and its trends over time. Tajikistan in this ranking is slowly but surely moving forward, albeit behind a number of post-Soviet states (United Nations Development Program: Human Development Index 2011). Below is a list of countries at different levels of the index.

Countries with very high Human Development Index (top five, out of a sample of 187 countries)

Rank	Country	HDI
1	Norway	0.943
2	Australia	0.929
3	Netherlands	0.910
4	U.S.	0,910
5	New Zealand	0.908

Countries with high Human Development Index (7 of 187)

Rank	Country	HDI
65	Belarus	0.756
66	Russia	0.755

68	Kazakhstan	0.745
76	Ukraine	0.729
88	Iran	0.707

Middle-Human Development Index

Rank	Country	HDI
101	China	0.687
102	Turkmenistan	0.686
115	Uzbekistan	0.641
126	Kyrgyzstan	0.615
127	Tajikistan	0.607

Countries with low Human Development Index (5 out of 187 countries)

Rank	Country	HDI
143	Kenya	0.509
145	Pakistan	0.504
146	Bangladesh	0.500
172	Afghanistan	0.398
187	Congo, Dem. Resp.	0.286

5. As can be seen from the list of the United Nations Development Program: Human Development Index-2011, out of 187 countries analyzed, Tajikistan takes the 127th place with index 0.607. Among CIS countries, it is the ultimate bottom position.

Also an important indicator of the population's health is: "Life expectancy at birth (years)". Below is the "List" according to the UN (2005-2011), composed of 194 countries reviewed. Tajikistan is on the list of 131st position, ahead of Kyrgyzstan, Turkmenistan and Afghanistan.

Ranking	Country	Life expectancy at birth (years)	Male	Female
1	Japan	82.6	78.0	86.1

2	Hong Kong	82.2	79.4	85.1
3	Switzerland	82.1	80.0	84.2
108	Georgia	71.0	67.1	74.8
108	Iran	71.0	69.4	72.6
112	Russia	70.3	65.5	75.3
124	Ukraine	69.0	62.1	73.8
125	Azerbaijan	67.5	63.8	71.2
127	Uzbekistan	67.2	64.0	70.4
128	Kazakhstan	67.0	61.6	72.4
131	Tajikistan	66.7	64.1	69.4
133	Kyrgyzstan	65.9	62.0	67.7
145	Turkmenistan	63.2	59.0	67.5
188	Afghanistan	43.8	43.9	43.8
194	Swaziland	39.6	39.8	39.4

6. Quality health indicators largely depend on the economic components of the country where the GDP per capita has a crucial role to play. Below is the (optional) list of countries, divided by income, which was published by the World Bank: World Development Indicators, 2011. Gross National Income per Capita 2010.

Place	Economy / income	
High level	Country	Income per capita (In U.S. dollars))
1	Monaco	183,150
2	Liechtenstein	137,070
4	Norway	84,290
7	Switzerland	71,530
17	USA	47,390
Middle	income	per capita

67	Russia	9,900
78	Kazakhstan	7,590
91	Belarus	5,950
103	Iran	4,520
107	China	4,270
114	Turkmenistan	3,790
149	Uzbekistan	1,280
Low	income	per capita
167	Kyrgyzstan	840
168	Tajikistan	800
184	Zimbabwe	460
189	Afghanistan	410
198	Burundi	170

7. As can be seen from the table, Tajikistan by its population income is one of the poorest countries in the region (CIS), but its population income is two-fold higher than in neighboring Afghanistan (\$ 840 vs. \$ 410), but by 12.4, 9.2 and 5.3 times lower than in the Russian Federation, Kazakhstan and neighboring China, respectively. Naturally, with such economic indicators it's much more challenging for Tajikistan to carry out preventive measures. However, these preventive interventions are considered to be more crucial for the country as they allow reducing the burden of the most common and significant by their damage diseases and, ultimately, benefiting to the people and the whole country.

8. Features of the demographic situation in the country are conditioned by global political, social and economic changes after the experienced civil war, deteriorated living conditions, accelerated transition to market relations, partial disturbance of sex and age structure of the population, weakened social protection of families with many children, alteration of the national structure of the population and a decrease in the share of its part, which focused on few children. Thus, as at January 01, 2011, the resident population of the country was 7,616,764 people with 50.4% and 49.6% of male and female, proportionally. At the end of 2010, the share of the working population in the country was about 60%.

9. According to the general census of the population of Tajikistan, implemented in 2010, the overall demographic situation is characterized by a high birth rate (29.3 per 1,000 population) and the relatively low death rate (4.2 per 1,000). In this case, there is still reported high child

(20.9 per 1,000 live births) and maternal mortality rates (45.0 per 100 thousand live births) against the background of the relatively low level of urbanization and large-scale external labor migration. In 2010, a natural population increase was 25.1 per 1,000 population that dropped by 28.3% compared to 1991 (32.2 per 1,000 population).

10. As the current statistics show, the total mortality rate in Tajikistan over the past decade has remained relatively high. It is higher than the mortality in the developed countries of Europe and the world. However, it stays at a somewhat lower level than in the CIS as a whole. Thus, according to the latest global statistics published by UNDP in 2010, the standardized death rate from non-communicable diseases (NCDs) in Tajikistan is 884 per 100,000 population that is somewhat lower than that of Russia (904) or Kazakhstan (1145), and much lower than in neighboring Afghanistan (1309). However, the death rate is almost 2 times higher than in Western Europe and the United States (450), 1.4 times higher than in China (627) and 1.3 times higher than in Iran (687).

11. Out of the total mortality in Tajikistan coronary heart disease is a leader, which, according to the UNDP -2010, made 194.4 per 100 thousand men aged 25-64 years. This figure is 2.8 times higher than in the UK, 3.5 times higher than in Germany and 6.8 times higher than in France. However, it is 2 times lower than that for Russia (406.3), more than 1.5 times below that for Kazakhstan (305.5) and slightly lower than that of Tajikistan's immediate neighbors in the CIS - Uzbekistan (203) and Kyrgyzstan (243.1).

12. When considering the structure of the primary disease incidence in Tajikistan, the leading position is occupied by respiratory diseases (11399.6 per 100 thousand population), diseases of the digestive system (3419.2) and diseases of the circulatory system (1094.1). Endocrine diseases and cancer are respectively 1214.7 and 37.8 per 100 thousand population.

13. Among the causes of death among the population cardiovascular diseases are in the first place with the indicator of 206.0 per 100 thousand people (2010), cancer is in second place (33.7) and respiratory diseases are in third place with index of 29.0. Injury and poisoning as the cause of death of the population was 20.0 per 100 thousand population.

14. It is known that many of the indicators of health and quality of life depend on a number of objective and subjective factors, including those that are genetic, geographic, socio-political and economic ones, having an essential impact on health of the population. Tajikistan, prior to gaining independence, was a backward agrarian outskirts of the Soviet Union.

15. After the collapse of the Soviet Union, Tajikistan was in a difficult economic situation relating to unexpected problems or concerns of energy, communication and information isolation. All this quite seriously affected the main health indicators of the people of Tajikistan. Economic situation was further aggravated during the Civil War. In the early postwar period, the Government of Tajikistan could not allocate enough resources to health.

16. However, by 2012, compared with 2001, health expenditure rose from 0.9% to 2.0% of gross domestic product (GDP) and 2.2-fold increased in the last decade.

17. "Evidence based medicine" has been introduced in the medical practice resulted in bringing the national guidelines for the diagnosis and treatment in compliance with international standards, improving the quality of the introduced in clinical practice of medical care guidelines in order to facilitate the work of practitioners. We clearly understand that the spiritual and physical health of the people is a national treasure, and the vital capacity, which conditions further progress of society on its path to economic, social and cultural development.

18. The results of the latest research and their analysis found that cardiovascular diseases in all regions of Tajikistan in the common structure of morbidity and by their prevalence compared to other pathologies are a leader. At the same time, in the structure of total mortality in Tajikistan, cardiovascular diseases since 1986 keep being in the first place. This is due to the high prevalence of major risk factors for cardiovascular diseases.

19. Implementation of the WHO program aims at reducing the burden of non-communicable diseases to society by addressing the major risk factors for NCDs progression. The SINDI's main and ultimate purpose is to improve health by reducing the mortality and morbidity associated with the main, the most common and therefore the most important by their relevance NCD, through integrated, based on close co-operation of the prevention and health promotion program.

20. The main immediate goal is the simultaneous reduction in the prevalence of common risk factors of major NCD, such as smoking, poor diet, excessive alcohol consumption, lack of physical activity and psychosocial stress. To achieve these targets, the CINDI participating countries worked out effective mechanisms of cooperation and gained some experience of integrated cross-sectoral prevention and control of NCDs.

21. SINDI main policy objectives can be formulated as follows: to achieve an integrated approach, development of inter-sectoral collaboration, building bridges between science and practice and international cooperation. Through long-term cooperation between the participating in the program countries, which number now has increased to 24, a huge amount of knowledge and expertise to prevent non-communicable diseases has been accumulated through applying integrated approaches at the community level. This approach has been tested by time and gave very positive results. Thus, the most impressive results have been achieved in one of the provinces of Finland, where for 25 years it became possible to reduce mortality from coronary heart disease by 73%! Tajikistan can and should join this experience through effective cooperation in the prevention of NCDs.

4. The Strategy's goal and objectives

22. The aim of this strategy is the development and implementation of effective actively interactional intersectoral system aimed at enhancing the role of prevention and control of non-communicable diseases (NCDs) and injuries in the Republic of Tajikistan to address the political and social issues, given its importance in strengthening and maintaining the health of

the population, the potential labor force , promoting the fight against poverty, building the national economic potential and improving the quality of life for all.

23. To do this, the available experience of NCD prevention and control in the RT is gathered, the provisions of the European NCD strategy, agreed by European countries - members of the WHO in 2006, are used taken into account the successful case studies in this field around the world. In the study "The global disease burden", initiated by the World Bank in 1992 and held in conjunction with the WHO, an attempt was made to quantify the burden of premature death and disability globally, using such indicators as disability adjusted life years, which is a composite measure of health-related problems, computed with the premature deaths and disability.

24. The top five causes of the burden of disease since 1990 and projections up to 2020 are shown in Table 1. (WHO, 2006)

Table 1. The leading five causes of high burden of disease (in % in 1990, with a forecast for 2020)

		% of the total burden	
		1990	2020
1.	Coronary heart disease	9,9	10,2
2.	Cerebrovascular diseases	5,9	6,2
3.	Road traffic accidents	4,4	4,3
4.	Cancer of the trachea, bronchus and lung	2,9	4,5
5.	Congenital abnormalities /anomalies	2,2	1,0

25. Analysis of the situation in Tajikistan showed that cardiovascular diseases remain the main cause of death in the tajik population. In the structure of total mortality of population of Tajikistan since 1986 they have been taking the first place followed by tumors (the second major cause of death), broncho- pulmonary diseases and violent deaths from injury and poisoning (the third and fourth places, respectively). Endocrine diseases are also in the top five leading causes of death among the population of Tajikistan (see Table 2).

Table 2. Number of deaths from non-communicable diseases in the Republic of Tajikistan, 2008-2010

Causes of death	2008	2009	2010
Diabetes, endemic goiter	769	907	1064

Diseases of the circulatory system	15645	15347	15750
Tumors	2343	2509	2518
Broncho-pulmonary diseases	2556	2157	2319
Injuries, poisoning and wounds	1488	1490	1623

24. Studying the dynamics of the number of deaths per 1,000 urban and rural populations in 2000-2010 showed that the urban population is more susceptible to death from these diseases and conditions than in rural areas (see Table 3).

Table 3 Dynamics of the number of deaths per 1000 population

	Persons			Per 1,000 population		
	Total population	Urban population	Rural population	Total population	Urban population	Rural population
2000	29387	9320	20067	4,7	5,7	4,4
2005	31520	9697	21823	4,6	5,4	4,3
2006	31990	9203	22787	4,6	5,0	4,4
2007	33686	9488	24198	4,7	5,1	4,6
2008	31996	9492	22504	4,4	4,9	4,2
2009	32322	9171	23151	4,3	4,7	4,2
2010	33327	9920	23407	4,4	5,0	4,2
M	32032,6±1399,9	9470,1±270,2	22562,4±1326,8	4,5±0,16	5,1±0,33	4,3±0,14
Δ,%	4,4	2,9	5,9	3,9	6,5	3,5

25. Cardiovascular disease is also the major cause of disability in the population. Thus, in 2010, the number of patients who, because of cardiovascular disease was first recognized as disabled exceeded 1,928 people and was by 6.2% higher than that of such cases registered in 2008. The second major cause of disability in Tajikistan are endocrine diseases, due to which increase in people for the first time recognized disabled outpaces all other causes of disability of the population of Tajikistan, showing growth over the past three years at 55.7% (see Table 4) followed by tumor and broncho-pulmonary diseases (the third and fourth positions).

Table 4 Number of persons newly registered disabled

	2008	2009	2010
Total #	12,322	12,805	12,899
Endocrine diseases and diabetes	564	615	878
Diseases of the circulatory system	1815	1769	1928
Tumors	558	371	562
Broncho-pulmonary diseases	324	382	320

26. Based on the above and to achieve the ultimate set out goal the main project objectives were formulated.

5. The Strategy's main objectives

This strategy is aimed at achieving the following objectives:

- Increase the priority of NCD prevention and control in the National action program to improve the public health;
- Strengthen inter-agency cooperation on health promotion and disease prevention;
- Make proposals for the establishment of an effective infrastructure for the NCDs prevention;
- Offer ways to increase the resources devoted to the NCDs prevention and control in strictly controlled target use and transparency to achieve intermediate (annual) and final outcomes for the whole society;
- Develop proffers for integration of the proposed strategy with the NCD existing and newly elaborated and launched national programs.

6. AREAS OF INTERVENTION

27. In line with the implementation of the tasks the following applicable laws, regulations of the Government and National Programs will be primarily used (through the active integration):

- The Law of the Republic of Tajikistan "On public health protection ";
- The Law of the Republic of Tajikistan "On compulsory treatment of alcohol and drug abuse";
- The Law of the Republic of Tajikistan "On Psychiatric Care";
- The Law of the Republic of Tajikistan "On radiation safety";

- The Law of the Republic of Tajikistan "On the medical and social protection of people with diabetes" (Decree of the Government of the Republic of Tajikistan № 647 dated from 08.05.2009)
- National program for prevention, diagnosis and treatment of diabetes in RT for 2012-2017- (Resolution of the Government of RT, № 130 as of 04.03.2012);
- The Law "On the restriction of the use of tobacco products" (Enactment of Government of Tajikistan as at December 29, 2010, № 649);
- The Law of the Republic of Tajikistan "On iodized salt";
- National Strategy on Public Health of the Republic of Tajikistan for the period of 2010-2020, approved by the Decree of Government of the Republic of Tajikistan on August 2, 2010, № 368;
- Strategic Plan for the restructuring of medical institutions of the Republic of Tajikistan for the period of 2011-2012, approved by Decision of the Government of Tajikistan on March 30, 2010;
- Reproductive Health Strategic Plan of the Republic of Tajikistan until 2014, endorsed by Enactment of Government of the Republic Tajikistan on August 31, 2004, № 348;
- National Action Plan for Maternal Health Protection in the Republic of Tajikistan for the period up to 2014, approved by Decision of Government of Tajikistan on August 1, 2008, № 370;
- National Strategy for Child and Adolescent Health f in the Republic of Tajikistan for the period of 2015, approved by Decision of Government of the Republic of Tajikistan on August 1, 2008, № 370;
- National program of diagnosis, treatment and prevention of coronary heart disease in Tajikistan for the period of 2007 - 2015 years. (Resolution of Government of Tajikistan № 334 as of 30 June 2007).
- National program for prevention, diagnosis and treatment of cancer in the Republic of Tajikistan for 2010-2015 (adopted by Decree of the Government of the Republic of Tajikistan № 587 dated from 31.10.2009).
- National program for prevention of occupational diseases in the Republic of Tajikistan for the period 2010-2015, which is approved by the Government of Tajikistan on March 30, 2010, № 165;
- National program: "Prevention, diagnosis and treatment of injuries and their consequences in Tajikistan for 2010-2015"
- National Program for prevention, diagnosis and treatment of patients with congenital and rheumatic heart disease in the Republic of Tajikistan for 2011-2015 (enacted by Governmental Resolution № 154 as of 01.04.2011)

- National program for prevention, diagnosis and treatment of gastrointestinal diseases in the Republic of Tajikistan for the period of 2012-2016, adopted and approved by Resolution of Government of the Republic of Tajikistan on December 30, 2011, № 639;

- National program for prevention, diagnosis and treatment of diabetes in the Republic of Tajikistan for 2012 - 2017, approved by Governmental Enactment of the Republic of Tajikistan on April 1, 2012, № 130;

- National program to prevent drug abuse and improving drug treatment in the Republic of Tajikistan for 2013 – 2017, adopted and approved by Decision of the Government of Tajikistan dated from April 30, 2012, № 183.

28. Organized by the Association of Cardiologists of Tajikistan screening epidemiological studies among adults carried out in Tajikistan under the CINDI/WHO program in 2005 and subsequent years, have given an opportunity to clarify the prevalence in the Tajik population of individual risk factors for coronary heart disease, which takes away the greatest number of lives in our population.

29. As part of these studies have found a high prevalence of tobacco use, including the use of smokeless tobacco-nasvai by adult men (in some regions it reached to 71, 95 ± 1 , 56%). Following the carried out preventive interventions in implementation of the main provisions of the "National Program for diagnosis, treatment and prevention of coronary heart disease in Tajikistan for the period of 2007 - 2015 years" in 5 years, these figures fell to levels of $57,5 \pm 2,14$, that is 1,3 times.

30. Also the studies revealed high prevalence of hypertension in men ($21.2 + 0.4\%$) and women ($24.8 \pm 0.6\%$). In the general population hypertension was found in more than 22% of the adult population.

31. Prevalence rates of such risk factors as overweight (16%), obesity (3.5%) and excessive total cholesterol (about 15%) turned out to be lower in the adult population.

32. Given the identified problems in the health status of the Tajik population, the acute problem of cardiovascular diseases and significant prevalence of risk factors, in 2007 the country adopted a "National program of diagnosis, treatment and prevention of coronary heart disease in Tajikistan for the period of 2007 - 2015". Since 2007 implementation of the main objectives of this program has allowed not only to attracting investment in the national cardiac care service, but also to large-scope modernization of a cardiology service of Tajikistan. Thus, the budget of cardiology and cardiac surgery services, thanks to the government expenditure and other types of investments for the past 10 years has increased from 642,368 TJS in 2000 to 4, 439,704 TJS in 2010 or by 12.8 times. Given the investment in health made by international organizations, the budget of cardiology and cardiac surgery service increased in the same period by another 14,245,888 TJS, and total investment in the last decade rose by over 100 times! This has indeed reduced the growth rate of cardiovascular morbidity and mortality, introduced new technologies of diagnosis (coronary angiography, radionuclide scintigraphy of the heart and other organs, MRI, etc.) and treatment (use of stem cell implantation into the

damaged myocardium, coronary artery bypass surgery without stopping heart, stenting of coronary and other arteries).

33. Allocation of extra funding resulted in more efficiently addressing the health care-related challenges. So, the cardiovascular disease mortality rate decreased from 215.2 in 2005 to 206.0 in 2010, i.e. by 4.5%, with simultaneous reducing the growth rate of morbidity in acute forms of coronary heart disease (unstable angina, acute coronary syndrome, myocardial infarction): in the period of 2007-2010, the coronary heart disease incidence rate per 100 thousand population fell from 452.5 to 422.8 (or by 6.6%).

34. Given the persistence of problems of congenital heart defects and not sagging tension associated with rheumatic diseases Tajikistan adopted the "National Program for prevention, diagnosis and treatment of patients with congenital and rheumatic heart disease in the Republic of Tajikistan for 2011-2015" (01.04.2011, № 154), which implementation is currently underway.

35. Taking into account the high prevalence of smoking in Tajikistan, the "Law on the restriction of use of tobacco products" (Resolution of Government of the Republic of Tajikistan as of December 29, 2010, № 649) was enacted that is already yielding positive results. Also, in order to prevent physical inactivity (sedentary lifestyle), as one of the risk factors for coronary heart disease, and health promotion Government of Tajikistan passed Presidential Decree on April 26, 2006 (№ 1740) "On the National Racing Day", annually publicly held in May 20 on the initiative of the Government and the personal involvement of the President of RT. In this framework, massive sports, promoting healthy society, has acquired special status in Tajikistan. In this regard, additional hours devoted to physical education and sport were incorporated in school syllabus and university curriculum. We believe that the personal example of heads of the State, government officials, and respected parliamentarians is an additional and effective incentive for improving the health of each population.

36. This endeavor is also promoted by organized and effectively operating under the Ministry of Health of the Republic of Tajikistan

1. National Healthy Lifestyle Centre, established in 1999 (17.09.1999, № 355/2) with its regional, city and district health promotion centers created in 2000.
2. National Nutrition Centre, established in 2001, which regulates and develops the scientific basis of national nutrition and food quality control.

37. We also attach great importance to metabolic diseases and endocrine diseases, which are also quite common and make its quite big adverse contribution to population disability and mortality patterns. These major diseases in Tajikistan include diabetes mellitus (DM) and iodine deficiency disorders (IDD).

38. Tajikistan has a commitment in terms of diabetes care.

39. Currently, implementation of the "Program to combat diabetes in Tajikistan for 2012 - 2017 years" and the Law "On health and social protection of patients with diabetes mellitus "(Government Resolution № 647 as of 08.05.2009) is underway.

40. These normative documents underpin the importance of a national system for diabetes drug supply and provision of social protection for citizens, patients with diabetes, the issues of early diagnosis of diabetes, prevention of serious complications of diabetes, training of staff and creation of the state register of patients with diabetes.

41. In this regard, study of the heritage of unsurpassed genius of world level, the great son of the Tajik people, Abu Ali Ibn Sina, better known in the scientific world as the great Avicenna (980-1037 years.) is also regarded crucial. He was the first medical scientist, who predicted the most important elements of diabetes of type II-and, in fact, developed the doctrine of pre-diabetes and metabolic syndrome, its diagnosis and the basic principles of its treatment. Herbal medicine for diabetes, according to Avicenna, has not lost its importance to the present. The rich heritage of Avicenna nowadays is widely studied in the "International Institute for the study of heritage of Ibn Sina (Avicenna)" in Dushanbe.

42. Patients with diabetes are provided with insulin and anti-diabetic drugs due to humanitarian assistance and support of the Government of Tajikistan. Annually the country is delivered with around 20-38 thousand bottles of insulin (annual requirement 36-38 thousand bottles) worth 5.7 million U.S. dollars. According to the program, all endocrine centers have established the "School for diabetes", which for a five-year period of operation trained about 10,000 patients.

43. In Tajikistan there is a healthy lifestyle center, created in 2000. This center does coordinate all health-related public education campaigns conducted by regional cardiac, pulmonological oncology, endocrinology and other centers on their own, and in cooperation with the National Healthy Lifestyle Center on a permanent basis. It provides educational seminars for doctors and the public on the prevention of risk factors for most problematic diseases such as hypertension, coronary heart disease, diabetes and cancer in various media. Since 2006 Tajikistan regularly holds the "World Day against diabetes" with the support of government agencies, pharmaceutical companies, international organizations and NGOs.

44. Another major problem in health care in Tajikistan is malignant neoplasms. It is known that every year all over the world more than 9 million cancer cases are registered and 5 million people die from cancer. In developed countries it is the second leading cause of death. Epidemiological studies in recent years show similar trends and in developing countries. The main factors contributing to such spread of cancer are an increasing proportion of the older age groups in all populations, increased incidence of some cancers, particularly lung cancer from smoking tobacco.

45. According to the WHO, it is likely that in the next 25 years there will be 300 million new cancer cases and 200 million deaths from cancer, and nearly 2/3 of them will be in developing

countries. Therefore, the problems of cancer are on the list of priority health problems of our country.

46. In Tajikistan, as in all developing countries, cancer tends to increase. According to the National Center for Health Statistics and Information, about 3,000 new cases are annually registered in the country and in 2010 the incidence rate of this group of diseases reached 37.8 per 100 thousand population. Naturally, they are a serious problem, both for the state and for society as a whole.

47. In the period of 2005-2010, the primary incidence rate in Tajikistan rose from 28.7 to 37.8 per 100 thousand population with the reported higher incidence rate in women compared to men (43.1 vs. 34.6 per 100 thousand population in 2010). In the last decade, malignant breast cancer and cervical cancer occupy the first place in the structure of the malignant tumor incidence of female population. Each year over 300 new cases of breast cancer and 250 cases of cervical cancer are reported.

48. Of particular concern today is rejuvenation of the contingent that gets sick and negative trend of increasing rare and more aggressive forms of cancer. Newly diagnosed cancer patients make up the vast majority of people in rural areas (65.4%).

49. As part of the "National Program on the diagnosis and treatment of cancer in the Republic of Tajikistan for 2010 - 2015 years" (adopted on October 31, 2009, № 587), the structure of cancer services has undergone fundamental changes aimed at organizing and modernization of regional cancer centers. Thus, in the two major cities in Khatlon, Kulyab and Kurgan-Tube, well-equipped regional cancer centers have been commissioned with mammography equipment first installed for detection and early diagnosis of breast cancer in Kulob Cancer Center. Training of personnel and equipment for these centers have enabled these institutions to improve access and quality of provision of specialized cancer care to the people of the region

50. The level and quality of provision of specialist-cancer care is directly related to material investments, the state of the material - technical base of institutions and training. Over the past 10 years, the state budget allocations were thirty-fold increased for development of cancer services in the country. Thus, the funds received by the Cancer Research Center totaled 62,700 TJS in 2000 vs. 2,196,978 TJS in 2010.

51. In the period of 2005-2010, the installed equipment for external beam radiation therapy (TERAGAM production of Czech Republic), the planning system and simulator for radiation treatment (manufactured in the USA), beam equipment for intracavitary radiotherapy (braeotherapeutic device made in Germany) enabled receiving proper radical radiotherapy in the country without having to travel abroad.

52. Another major problem in Tajikistan is respiratory diseases. By primary incidence rates, they take the first place. Over the last 10 years, registration of respiratory diseases in primary uptake has almost two-fold increased (from 5,200 to 11,672 per 100,000 population).

53. Analysis of the primary incidence rates of respiratory diseases for the period of 2000-2010, shows its doubled growth from 5262.0 to 11399.6 per 100 thousand population.

54. Comparative analysis of the number of reported cases of asthma has indicated its steady increase: from 138 and 140 cases in men and women in 2000 to 3,375 and 3,391 cases in men and women in 2009, respectively. There is no statistically significant difference by gender observed. The same trends are reported for bronchiectasis and chronic obstructive pulmonary disease.

55. In terms of chronic bronchitis incidence rates, they also tend to increase by registered cases. In addition, the gender differentiation is noted: in men this diagnosis was detected significantly more often than in women (17 488 male cases against 16,106 female cases in 2009). At the same time it should be noted that the mortality rate of this group of diseases has two-fold declined from 58.2 (2000) to 29.0 (2010).

56. Hospital mortality rates from respiratory diseases in recent years seem to be relatively stable in numbers with no significant variability both by year and region and range from 0.1 to 0.3 per 100 patients of relevant age.

57. In Tajikistan, the injury has traditionally been one of the major causes in the structure of overall morbidity, mortality and disability, and, until recently, tended to a steady progression due to socio-economic changes, relatively weak material and technical conditions of trauma care service, increased risk of injuries in employment of the general population in the works with the primary use of manual labor in the countryside with a high degree of risk, the leading role of vehicles in movement of people in mountainous terrain and transportation of national economic goods, along with climatic and geographical characteristics of Tajikistan, and the relatively poor road infrastructure, worsening living conditions and other factors. In Tajikistan up to 138,200 different kinds of injuries are annually registered nationwide. In the total incidence structure injuries are in fourth place, they go the fourth in the causes of death, the second in temporary disability and the third in primary disability. Growth and qualitative change of the injury is currently of particular concern. Today, in Tajikistan is marked the increase in the proportion of multiple and associated injuries, open fractures and complications of injuries, as well as the increased proportion of household (from 18.4 to 31.8%), street (from 17.1 to 29.6%), road transport (from 19.6 to 22.9%) and fire (from 0.1 to 2.6%) injuries. Meanwhile there is a decrease in job-related (occupational) accidents from 35.0 to 4.6% but increased traumatism of children. Injury analysis showed that in its structure males prevail (70.2%), especially of working age. In general, in recent years, the share of injuries in the morbidity pattern was 5.6%. Of the above number of injured people, 65.0% and 12.3-43.8% of cases constitute temporary and persistent disability, respectively.

58. The steady progression of the traumatism rate, the lack of clear mechanisms for inter-sectoral collaboration on this issue, the exceptional complexity of the rehabilitation of the victims with a relatively weak material and technical support, as well as adoption of the "Concept of Healthcare Reform of the Republic of Tajikistan" directed on ensuring equal access

to health services that meet the needs and requirements of the poor by strengthening primary health care necessitated taking urgent national scale actions.

59. Given the above, in 2010 the Government of RT enacted National program "Injury prevention, diagnosis and treatment of injuries and their consequences in the Republic of Tajikistan for 2010 - 2015". The main objectives of this program are to prevent and reduce the proportion of deaths and disability from injuries by reducing or minimizing the impact of risk factors for injuries, educate doctors – traumatologists with modern technologies and principles of treatment of injuries and provide trauma and orthopedic departments with modern equipment for treatment of the musculoskeletal system injuries, promoting medical knowledge on injury prevention and public awareness on first aid in case of injuries and integrating the program into the NCDs prevention and control strategy.

7. Prospective actions of relevant ministries and agencies

60. In order to achieve the objectives of this Strategy, the ministries and departments take the following appropriate steps.

61. Ministry of Agriculture: provision of eco-friendly meat and dairy products, grain legumes, vegetables and fruits produced domestically.

62. Research Nutrition Institute of the Ministry of Energy and Industry of the Republic of Tajikistan and the Ministry of Health: develop and provide informational materials on the diet of children and adults in the Republic of Tajikistan.

63. The Ministry of Internal Affairs: monitoring the implementation of the law on restricted use of tobacco and tobacco products, ensuring traffic safety and control the degree of meeting by vehicles the environment-friendly requirements or standards.

64. The Ministry of Health within the state budget allocations shall ensure earmarked funding for prevention programs for the control of NCDs and injuries.

65. The Ministry of Trade and Economic Development: providing network expansion and increase the availability of dietary nutrition; planning elaboration of investment projects aimed at the NCDs prevention.

66. Ministry of Education: adaptation and implementation of educational programs on healthy lifestyles and combat NCD risk factors in educational and training programs of preschool institutions, schools, universities and technical colleges.

67. Ministry of Labor and Social Security jointly with the Tajik Institute of disability expertise and medical rehabilitation of the Ministry of Labor and Social Security: develop and provide measures for sustainable reduction of NCDs-resulted disability and effective rehabilitation of handicapped.

68. The Ministry of Transport and Communications: reduce road traffic injuries by improving road safety and transport communications (timely road maintenance and repair, their lighting, allocation of sectors for bicyclist trafficking (tracks), etc.), provide appropriate assistance to the infrastructure of emergency medical care in case of accidents, ensuring the comfort and safety of movement of disabled people.

69. Statistics agency under the Office of the President of the Republic of Tajikistan and the National Center for Health Statistics: ensuring availability of reliable statistical information on the dynamics of morbidity, mortality and disability in the population of cities and regions of Tajikistan, integration in statistical reporting the most significant factors of NCDs; opening sites for the dissemination of basic statistical information except for the legally established restrictions;

70. Todzhikstandart Agency jointly with the State epidemiological surveillance service and customs authorities of the Government of the Republic of Tajikistan: ensuring quality control of the domestic market and import of food products for carcinogenicity, non-market of genetically modified and counterfeit, substandard products.

71. State Financial Control and Anti-corruption Agency: exercising control of targeted funding allocated for prevention of NCDs and injuries.

72. The Committee for Environment Protection under the Government of the Republic of Tajikistan: ensure environmental security and control of technical facilities and vehicles, industrial, agricultural enterprises and private businesses/entrepreneurs.

73. Youth and Sports Committee together with the Committee on Women's Affairs: inculcating the public, especially the young, healthy living habits, arrangements of permanent recreational sports activities.

74. Committee for Television and Radio Broadcasting, in conjunction with other media (newspapers, magazines, Internet): coverage and promotion of healthy lifestyles to combat risk factors for non-communicable diseases, through the creation of programs and public service announcements.

75. Committee for Religious Affairs of the Government of the Republic of Tajikistan: increased participation of religious organizations in promoting the implementation of healthy lifestyles, and disseminate public hygiene practices necessary for NCD and injury prevention (cessation of smoking, alcoholism, physical inactivity, obesity and unhealthy food, exclusion of violence against women and children).

76. Communications Agency under the Government of Tajikistan: ensure continuous and quality communication over the Internet reaching population with current and accessible information on healthy lifestyles, NCDs and reducing injuries.

77. Tadzhiqpotrebooyuz together with the local authorities of cities and districts: organizing network of invalid food or clinical nutrition services.

8. Indicators - the Strategy's final goal

Table 5

№	Control indicator	Year of achievement
1.	Reduction in the prevalence of individual risk factors for coronary heart disease (CHD) ✓ Reduce smoking and use of tobacco products (nasvay) by 5% by 10% by 20% ✓ Inactivity factor by 15% ✓ Factor of overweight and obesity by 10%	2013 2017 2023 2017 2023
2.	Reducing the prevalence rate of hypertension in Tajikistan by 3-5%	2017-2023 continuously
3.	2% reduction of hospital mortality from acute myocardial infarction	2015-2023
4.	Reduced the rate of disability in CHD by 5-7%	2020 continuously
5.	The decline in mortality rate from broncho-pulmonary diseases by 0,5-1%	2017 continuously
6.	Improving the detection of COPD by 4-5%	2020 continuously
7.	Improving primary detection of the initial stages (I-II degrees) of cancer by 8%.	2015-2023 continuously
8.	Improvement of coefficients of one- and five -year survival of patients with malignant tumors.	2023 continuously
9.	Reducing economic costs of treating patients in the early stages of the disease	2020 continuously
10.	Decline in temporary and permanent disability of persons injured by 5%	2020 continuously
11.	Reduce temporary and permanent disability of persons injured by 7%	2020

		continuously
12.	Reduced mortality in traumatic injuries by 0,5-1,0%	2020 continuously

9. Plan of development and implementation of the Program on integrated prevention of non-communicable diseases and injuries in the regions of the Republic of Tajikistan

78. The Program for Integrated Prevention of Non-communicable Diseases and Injuries in the RT (province, city and district) (hereinafter the Program) will be developed and approved by local authority with appointed responsible persons for the program implementation plan along with nominated regional leaders and program audits.

79. The aim of the project with the defined proposed outcomes for the improvement of specific health indicators, leading to disability and mortality in the working age. For example: reducing the number of amputations of the lower limbs in result of occlusive disease, or a decrease in the number of diabetes complications (leg amputation, blindness, nephropathy), or reduction in mortality from myocardial infarction in the working-age population, reducing the frequency and severity of myocardial infarction and stroke in working age, or the decreased in incidence of cancer of the mouth, respiratory tract, lungs, or curtailed household consumer and transport accidents, etc.

80. Brief characteristic of health indicators in urban and rural areas that are expected to get improved through implementation of preventive interventions.

81. The territory and the populations covered by the integrated preventive interventions. Should specify a city, urban / rural health center, doctor's sites, factory (ginnery, chemical plant, Talco\ smelting plant, etc.), university, school, etc., along with the population profile, reached by the carried out preventive measures (number, age, gender, occupational status, etc.).

82. Risk factors for non-communicable diseases, which incidence rates are expected to have an integrated impact. The WHO recommends all or some of the following risk factors:

- Arterial hypertension;
- Smoking tobacco;
- Overweight;
- Diabetes or pre-diabetes;
- Lack of physical activity;
- Mental stress;
- Use of alcohol and drugs.

83. Based on the specific conditions of the region, where the integrated prevention program is implemented, it may include occupational factors, environmental factors, national and regional food habits, family history, etc.

84. It should be sought to completely eliminate correctable factors, as they are less time-consuming to measure in the prophylactic examinations, clinical examinations.

85. Methods of prevention interventions should be given special attention, as the CINDY program basically is a program of preventive effect on the population rather than the study of incidence, what, unfortunately, most of the programs are completed. Preventive activities relate to both health measures, such as in the medical examination and preventive examinations of the population and measures of sanitary nature; educational measures – educating the covered by the project population on healthy lifestyle. The protocol reflects the activities directed at reducing both those risk factors, which are determined by the project objectives and which are supposed to evaluate the process of preventive interventions and the workplace rehabilitation measures, streamlining nutrition/food diet and interventions to mitigate the risk factors through health institutions that require changes in technology of medical examination of the population. In particular, people, who have risk factors or disease, the occurrence of which is associated with these risk factors should be sure to get the necessary preventive advice through group preventive exposure, individual recommendations made orally or in writing (memo, lifestyle recipe, etc.) through a variety of plays/games, rides, fairs, flyers, newspapers and etc.

86. Numerous methodological literature is available on methods of carrying out prevention interventions. Secondary prevention, aimed at reducing the risk of complications, sustainable health defects and disabilities, is implemented through individual patient rehabilitation program controlled during clinical examination.

87. *Human resources or staff that support up examinations (routine inspections) and realize preventive interventions.* Specific experts must be identified and they should be trained on the protocol and its implementation. Each full-time and part-time senior specialist health authorities must find the resources and cooperate with the local authorities in organizing a screening of the population on risk factors for the most common and problematic diseases.

88. The number of persons and timeframe of a survey to establish the basic characteristics of health indicators related to the purpose of preventive interventions. Control examinations and tests are carried out in samples of the population covered by the project (at least 200 people in the 10-year age group, separately for men and women). If covered, for example, population aged 20-70, size of samples have to be at least 1,000 men and 1,000 women.

89. *Control of preventive interventions process.* It is done by controlling the level of specific measurable risk factors in individual samples of the population covered by the demonstration project every 1.5-2 years. It is advisable to combine this work with the routine baseline medical examination of the population, reached by the project.

90. *Control of preventive interventions effect.* It's indicated in which years and how the quality of the attained goal will be assessed, that is, percentage of decreased disability and mortality in the working age population from stroke, heart attack, lung cancer, and other localizations that are associated with selected risk factors. Effect control or monitoring is carried out by the so-called endpoints, rather than volume of the work done.

91. Integrating medical labor force that is not traditionally engaged in preventive care in order to reduce non-communicable diseases (health (medical, sanitary) service, drug treatment services, nursing clinics, health centers, etc.). The protocol defines the specific tasks of the Services.

92. Integrating non-health sectors, that is, raising the issue of lifestyle modification in reducing risk factors for non-communicable diseases and involving labor force and professionals working in organizations of other ministries, departments and public organizations.

93. It is well known that health services are able to affect only 10% of the capacity of the healthy population, and 90% of your health is determined by lifestyle, working conditions, environment, diet, hereditary factors. Similarly, as clean air and clean water, the quality and variety of food are essential for human health. The health is influenced not only by the health sector but also agriculture, trade, food and meat and dairy industry and other sectors related to food availability. Providing access to a variety of healthy and safe food is one of the best ways to improve health. Accordingly, WHO Europe developed proposals for health professionals that contain the famous "Twelve steps/stages of healthy eating", again having a recommendation nature in view of the fact that every nationality, ethnic group, every region has its own, specific traditions and food culture.

94. The Program for prevention of NCDs and injuries suggests that the protocol will identify the tasks followed by implemented preventive measures, based on the immediate needs of each Service. For example, the executive committee of the Council, on whose territory the project is realized, through making its decision shall recruit subordinate services: health, education, media, sports, trade and public catering, social welfare, culture, job safety and environment protection, police and traffic police. Managers of enterprises and institutions should be tasked with labor protection, for the development of technologies of minimal hazardous for health, sanitation of workers, creating a healthy psychological climate in the team, the introduction of incentives for those who stay healthy, with no sick leave, etc. Education authorities must, for example, through the school curriculum, work with parents, students and their families to provide education of children for a healthy lifestyle (no smoking, raise their cultural level, take exercise, eat right, etc.). Institutions of agriculture, trade and public catering/food service should take steps to grow, deliver to the trading network, advertising of food capable of maintaining the health of the population, based on the population's real and especially low-income, as these groups of people are the most numerous and give a major negative morbidity, disability and mortality in the working age population.

95. Each service has, as part of its functions, assignments that directly or indirectly affect human health. The program requires availability at each service of its plans to achieve the goal.

The result of integration of efforts of non-medical sectors is estimated through the random surveys carried out by health care institutions.

96. Preventive effects on the population should not be intrusive and excessive or very expensive if the effect is dubious. It's also necessary to eliminate the appearance of "kompaneyshina/companionable spirit" and "populism" that is very typical for us. One should choose measures based on specific conditions, traditions and habits of the population, its educational and cultural level, etc. Religious denominations can make important contribution on these questions of formation of moral health.

97. Experience in the United States, Britain, Canada, France and Finland shows that the cheapest and most effective way is the active involvement of the media, where medical practice and science basically play a methodological role.

98. This project provides for the active involvement of civil society organizations, especially those working with the broad masses of the population and being publicly respected, for example, professional associations and movements, and national healing. Today through traditional healers the population is quickly heard both rational recreation ideas, and many unproven approaches, where success is questionable. It is advisable to establish cooperation with healers and help in testing rational approaches through demonstration projects, which are now beyond the capacity of social organizations and managed only by public health agencies. Such an approach would give way to rational concepts and articulate informed opinion about questionable or ineffective methods, in which the public is almost impossible to sort out. "Commercialization" of traditional medicine and healing should be excluded.

99. As part of the Research Institute of Preventive Medicine of the Ministry of Health it is planning to set up a separate coordination structure.

100. *Funding for projects.* It is assumed that funding will be allocated by local governments, which carry out the project(s). However, the successful experience of some countries shows the need to involve and extra budgetary sources. In Canada, for example, for 5 years of the program more than 350 projects were deployed. In this case, one dollar is invested by Government and 10 dollars are drawn from various other funds, companies, public organizations, private donations, funds of enterprises, etc. Specific target financial support for the projects undertaken by Ministry of Health should be both from the national/republican and local budgets.

101. *Project implementation units/bodies.* The project Coordination Council is assigned, involving representatives of different services, and headed by the project manager. It is advisable, where possible, a specialist in the field of prevention of NCDs will be the head of the project or in addition to the project main manager (director), and the project supervisor will be appointed, which is very important in the early project stages.

Since the project requires the implementation of a significant amount of non-standard work, financial incentives are needed to professionals involved in the organization of the project, the

development of documents, control surveys, group forms of preventive actions, preparing memos, information for professionals and the public.

Projects at the level of cities, districts, regions should be led by one of the Vice Chairman of the Council/Board.

10. Conclusion

102. In Tajikistan, as in any developing country, there is a problem of non-communicable diseases, the severity of which naturally increases. In this case, the economic and human losses remain high and tend to grow with the population's urbanization and aging along with current negative environmental impacts. The economic and financial crisis in modern society has exacerbated the situation.

103. Meanwhile, the progress of modern medicine, effective health care reform is not possible without adequate funding. All this provides the enduring need to mobilize additional resources and ensure their more effective utilization in line with the highest priorities with parallel development of multiple-prevention interventions, differentially aimed at every individual and the collective, as well as to the entire population as a whole, taking into account the socio-cultural, ethnic and climatic and geographical features of living with limited resources. In tajik society, more broad and effective involvement of public health is needed as public health is the science and art of disease preventing, prolonging active longevity and ensuring health through the organized efforts of all the structures and all the members of society.

104. In accordance with these provisions, the Republic of Tajikistan, as a full member of the community of nations, as a representative of the ancient culture of mankind, responsibly recognizing the challenges of urbanization and environmental disasters, recognizing all the growing of life and humanity losses from NCDs and injuries, adheres to the WHO recommendations in terms of development and implementation of the Strategy for NCDs and injuries prevention and control in the Republic of Tajikistan for the period of 2013-2023 years.

Multisectoral Plan of Action for Nutrition

Republic of Tajikistan for 2021-2025

1. Introduction

Overview

1. This Multisectoral Nutrition Plan for the Republic of Tajikistan (RT), henceforth referred to as ‘the Plan’, provides a summary of interventions proposed to improve maternal and child nutrition status in Tajikistan from 2021 to 2025. The plan describes how actors across the different sectors can invest in and contribute to the achievement of national development goals in Tajikistan through a combination of high-impact nutrition actions and interventions which address underlying causes, targeting those most at risk of malnutrition.
2. The Plan is intended to facilitate the multisectoral coordination of national and subnational actors implementing interventions to improve nutrition. It is integral to the national policy of socioeconomic development and fulfils the third strategic development objective of the National Development Strategy of the Republic of Tajikistan for the Period up to 2030: ‘ensuring food security and people’s access to good-quality nutrition’.
3. The Plan is aligned with international best practice and guidance and with the World Health Assembly Global Nutrition Targets 2025 and Sustainable Development Goals (SDGs) 2 targets, which have been adopted by the RT. This Plan builds upon other plans, strategic documents and programmes relating to health and nutrition in Tajikistan, including strategies for the Health Sector, Food Security, Social Protection, School Feeding, the newly adopted Law on Food Fortification and the upcoming the National 1000 Golden Days Communication Programme, as well as a number of donor-supported programmes which include nutrition-related goals and activities.
4. Following the Scaling Up Nutrition (SUN) Movement Principles of a multisectoral approach to nutrition and in recognition of the need for a collective and coordinated national response to the nutrition challenges facing the country, Tajikistan’s SUN Secretariat and SUN partners, has developed this national Plan. Using the Common Results Framework developed in 2017 as a starting point, the Plan has been developed through extensive engagement with government stakeholders, development partners, United Nations agencies, international and national nongovernmental organisations, civil

society and academia, as well as through analyses of secondary data, including recent national surveys and ongoing programmes.

Background to the Scaling Up Nutrition Movement

5. The importance of good nutrition for human development is demonstrated by its centrality to the achievement of the SDGs: at least 12 of these goals contain indicators highly relevant to nutrition. The consequences of undernutrition can be irreversible, particularly after the first 1,000 days (from conception to 24 months of age), and include poor cognition and educational performance, low adult productivity and increased risk of noncommunicable disease in adult life. Undernutrition is intergenerational in nature; undernourished mothers are more likely to have undernourished babies of low birth weight, who in turn have an increased risk of morbidity and mortality, being stunted and becoming an undernourished parent with stunted children themselves. Overnutrition, characterised by overweight and obesity, is also a major determinant of noncommunicable diseases, such as heart disease, stroke and type 2 diabetes.
6. The SUN Movement was initiated by the United Nations secretary-general in 2010, following the publication of the landmark *Lancet* nutrition series in 2008,ⁱ which identified undernutrition as a major global public health crisis and associated factor in over 3.5 million maternal and child deaths. The SUN Movement calls national governments to action in addressing malnutrition through scaling up high-impact nutrition interventions, in addition to those which address the multiple underlying pathways to malnutrition, and 60 countries have now signed up to the Movement.
7. Undernutrition in Tajikistan accounts for approximately 13 percent of disability-adjusted life years in children under 5 years of age and costs the country US\$41 million annually through lost productivity due to increased mortality and reduced cognitive and physical development. Two-thirds of these losses are attributed to stunting, iodine deficiency and maternal and child anaemia, which represent the greatest burden of undernutrition in Tajikistan.
8. These losses could be prevented by introduction and nationwide implementation of cost-effective and evidence-based interventions, such as promotion of optimal child feeding practices: early initiation of breastfeeding, exclusive breastfeeding until 6 months of age and timely and appropriate complementary feeding, together with continued breastfeeding to 24 months

of age, universal salt iodisation, micronutrient supplementation and management of severe and acute malnutrition.

2. Nutrition Situational Analysis

9. Although stunting rates in Tajikistan are improving, they are still the highest in the Central Asia region, and rates of micronutrient deficiency, including anaemia, vitamin A, folate and iodine deficiency, remain very high and represent severe public health problems. Overweight and obesity amongst women are on the rise in Tajikistan.
10. Climate change, seasonal fluctuations in agricultural production and incomes, dependence on imported foods and price fluxes are all factors in Tajikistan which affect the availability, accessibility and affordability of adequately diverse diets, especially for growing children and pregnant and lactating women.
11. Lack of knowledge and awareness about age-appropriate, adequate, diverse and nutritious diets result in poor infant and young child feeding practices, including inadequate complementary feeding of children 6 to 23 months of age (only 9 percent of children 6 to 23 months of age have a minimal acceptable dietⁱⁱ and low exclusive breastfeeding rate (36 percent). Suboptimal management of childhood illnesses, inadequate access to safe and clean water and poor hygiene and sanitation practices further impede improvements to nutritional outcomes for women and children.
12. Multiple assessments, reports, and expert consultations on addressing malnutrition in a sustainable manner in Tajikistan have produced similar recommendations, including the following: creation of a supportive governance environment to enable coordinated and coherent multisectoral nutrition actions; defining of common goals for nutrition and multisectoral interventions to achieve these; improvements to the targeting of nutrition actions; and a focus on women and their empowerment. Interventions which promote a life cycle approach to improving nutrition—with a special focus on children under 2 years of age, adolescent girls and pregnant and lactating women—are also recommended.

3. Goals, Targets and Strategic Objectives of the Plan for the Republic of Tajikistan

13. The Government of Tajikistan has demonstrated a clear commitment to tackling nutrition challenges. Tajikistan joined the SUN Movement in 2013, and nutrition became a priority in its own right, firmly rooted in the national development agenda; and both the World Health Assembly Global Nutrition Targets¹ for 2025 and the SDG 2² have been formally adopted. The First Deputy Minister of Health was nominated as SUN Focal Point, and a SUN Secretariat was established, based within the Ministry of Health and Social Protection of the Population (MOHSPP), and supported by other government ministries and nongovernment partners, including United Nations Children's Fund, GIZ (Gesellschaft für Internationale Zusammenarbeit), US Agency for International Development and the World Bank. This has facilitated the definition of shared goals and multisectoral actions to address the multiple and complex pathways to malnutrition, which are core principles of the SUN Movement, through the development of a Common Results Framework in 2017.

14. The overall goal of the Plan is to improve maternal and child nutrition status in Tajikistan by 2025.

15. Nutrition targets associated with the achievement of this goal are:

- 40 percent reduction in stunted children under 5 years of age between 2020 and 2025.
- 50 percent reduction in anaemia in women of reproductive age between 2020 and 2025.
- 30 percent reduction in low birthweight between 2020 and 2025.
- No increase in childhood overweight between 2020 and 2025.
- Reduction in and maintenance of childhood wasting to less than 5 percent by 2025.
- Reduction in adult overweight by 20 percent and adult obesity by 30 percent by 2025.

16. Four key strategic objectives have been identified through which the goal and target may be achieved:

- Strategic Objective 1: Create an enabling political environment for improving nutrition in Tajikistan.

- Strategic Objective 2: Improve the quality and coverage of nutrition-specific interventions.
- Strategic Objective 3: Improve the quality and coverage of nutrition-sensitive interventions.
- Strategic Objective 4: Establish a mechanism for the ongoing collection, analysis and comparison of nutrition information from multiple sectors.
- Each strategic direction is described below (Strategic Objective 3 has been divided into four subobjectives), together with their expected results.

17. Detailed lists of actions by which the results will be achieved, responsible agencies and sources of funding can be found in the table following this section.

§ Strategic Objective 1

Create an enabling political environment for improving nutrition in the RT

Result 1.1: A detailed multisectoral nutrition plan with financial and monitoring and evaluation (M&E) frameworks is in place by 2021.

Result 1.2: Sectoral policies and plans are reviewed/updated to incorporate a core set of relevant nutrition actions and indicators at national and subnational levels (*oblast, rayon, jamoat*).

Result 1.3: Government is dedicating resources to nutrition, and systems are in place to track nutrition finance by end 2021.

Result 1.4: Multisectoral nutrition coordination mechanisms are functional at national and subnational levels (*oblast, rayon, jamoat*) by end 2022.

§ Strategic Objective 2

Improve the quality and coverage of nutrition-specific interventions

Result 2.1: Capacity at national and subnational levels to provide appropriate support to improve maternal and child nutrition is enhanced.

Result 2.2: A full package of nutrition-specific interventions is consistently integrated into basic health services at national and subnational levels (*oblast, rayon and jamoat*).

Result 2.3: Infant and young child feeding practices are improved.

Result 2.4: Micronutrient status of children 6 to 59 months of age is improved.

Result 2.5: Micronutrient status of women of reproductive age is improved.

Result 2.6: Severely acutely malnourished children are treated with the appropriate treatment within Tajikistan inpatient and outpatient health facilities.

Result 2.7: Rates of low birth weight are reduced and maintained.

Result 2.8: Rates of overweight in children 6 to 59 months of age are maintained below 5.9 percent, rates of overweight in adults are reduced by 20 percent, and rates of obesity in adults are reduced by 30 percent.

§ Strategic Objective 3

20. Improve the quality and coverage of nutrition-sensitive interventions. This strategic objective has subobjectives that are outlined for the various sectors.

21. Subobjective 3.1: Improve the quality and diversity of household diets in Tajikistan

Result 3.1.1: Tajikistan agriculture policy facilitates nutrition-sensitive programming.

Result 3.1.2: Knowledge of nutrition-sensitive agriculture is improved.

Result 3.1.3: Food products available on the market and in retail outlets meet national quality standards.

22. Subobjective 3.2: Reduce the incidence of infectious diseases amongst children 0 to 59 months and women 15 to 49 years of age

Result 3.2.1: Access to quality primary health care (family planning, antenatal care, postnatal care, integrated management of childhood illnesses) is increased for children 0 to 59 months and women 15 to 49 years of age.

Result 3.2.2: Availability of and access to quality drinking water is improved for children 6 to 59 months and women 15 to 49 years of age.

Result 3.2.3: Sanitation environment is improved.

Result 3.2.4: WASH-related policies facilitate nutrition-sensitive programming.

Result 3.2.5: Knowledge on nutrition-sensitive WASH is improved.

Result 3.2.6: Individual hygiene practices are improved.

23. Subobjective 3.3: Prioritise vulnerable households with pregnant and lactating women and children 0 to 59 months of age in social protection programmes

Result 3.3.1: Nutrition-sensitive components are included in the Tajikistan Social Protection Policy.

Result 3.3.2: Knowledge of social protection workers on nutrition is increased.

Result 3.3.3: Linkages to nutrition-specific and nutrition-sensitive services are established for vulnerable groups under social protection.

24. Subobjective 3.4: Enhance the nutritional status of school-age children through improved nutrition education

Result 3.4.1: Nutrition-sensitive components are included in Tajikistan Education Policy.

Result 3.4.2: Education sector staff's knowledge of nutrition is increased.

Result 3.4.3: The number of girls continuing education after receiving compulsory education is increased.

Result 3.4.4: Nutrition status of school-age children is enhanced by improved knowledge through nutrition education in kindergarten, primary and secondary schools.

Result 3.4.5: Health and nutritional status of school-age children is enhanced/protected by the provision of basic WASH services in kindergartens, primary schools and secondary schools.

§ Strategic Objective 4

25. Establish a mechanism for the ongoing collection, analysis and comparison of nutrition information from multiple sectors.

Result 4.1: All sectors collect, analyse and report on the relevant nutrition-related indicators required to report on the progress of Strategic Objectives 2 and 3.

Result 4.2: A multisectoral nutrition information platform/system is established or integrated into the existing system for the collection, analysis, comparison, compilation and reporting of nutrition-specific and nutrition-sensitive indicators from the different sectors.

Result 4.3: Regular progress reports (annual, midterm and final) are produced, which outline progress on nutrition indicators made across and within sectors.

Result 4.4: Capacity-development needs in monitoring, evaluation and reporting are defined.

4. Actions Required for the Realisation of the Plan

26. The strategy will be realised in line with the targets, actions and basic strategic axes of other ministerial strategies, including agriculture, education, health and social protection.

27. To achieve the goal and objectives of this Plan, the following actions are required:

- Validation by the Government of Tajikistan of this strategic document.
- Determination of governance arrangements for the implementation of the Plan (see annex).
- Organisational and coordination aspects of interested parties (including the issuing of an order for the contribution of the relevant ministries and departments in the development of the multisectoral plan).
- Development of a detailed action plan by which the results listed above will be achieved (by oblast and district).
- Full costing of the action plan.
- Stable financing and planning.

5. Monitoring and Evaluation of the Progress and Realisation of the Plan

28. In order to effectively monitor and evaluate the realisation of the strategy, it will be necessary to identify a central mechanism for data collection and analysis from the different sectors implicated, relating to progress of the various strategic axes of the Plan.

29. A detailed M&E framework will be developed to track the progress and assess realisation of the Plan. Some indicators have already been outlined in the Common Results Framework and in an outline of an M&E framework in the annex of this document, and now there is a need for the establishment of baselines and end-line targets for each of the relevant ministries/departments.

30. The M&E of strategy will be the responsibility of the SUN multi-stakeholder platform, led by the MOHSPP, together with the Ministry of Economy Development and Trade and other participating ministries.

31. The MOHSPP is in charge of following normative regulations in ensuring quality of products and services for nutrition-specific interventions.

32. The Ministry of Education and Science, together with the MOHSPP, is in charge of following normative regulations in ensuring quality of products and services for organisation of school feeding.

33 . The TajikStandard Agency is responsible for technical regulation and other technical norms of the food / food production sector.

34. Local government bodies, in line with the authority given, are responsible for providing necessary data for monitoring and for reporting on progress of plans, as well as providing other information for monitoring purposes.

6. Steps in Implementation of the Plan

35. Actions to achieve the Plan by 2025 in the RT fall under the following stages:

36. First stage (2020–2021): Consolidate/describe governance, accountability, management and coordination mechanisms for the Plan:

- Integrate relevant nutrition targets into ministries' respective plans and policies.

- Conduct an analysis of capacity-building needs (at all levels) to build capacity in nutrition across ministries and departments (an initial capacity assessment was conducted by MQSUN⁺ and is included as an annex to this document).
 - Based on the detailed implementation plan given in the annex for each strategic objective and result, develop a subnational implementation plan which includes management, coordination, financing and M&E arrangements.
 - Conduct a full costing of the implementation plan.
 - Define a financial framework and potential funding mechanisms for nutrition, as well as mechanisms to track both on-budget and off-budget spending on nutrition.
37. Second stage (2020–2025): Execute the Plan through the funding (by both government and partners) and rollout of defined activities to improve nutritional status across Tajikistan according to the implementation plan agreed by sector and by region.

7. Expected Results from Implementation of the Plan

38. A multisectoral nutrition plan for the RT which addresses all the nutritional issues identified in section 2 through both nutrition-specific and nutrition-sensitive interventions.
39. Improved maternal and child nutrition status in the RT (as assessed through a Micronutrient Survey, Demographic Health Survey, Multiple Indicator Survey, etc.):
- Stunting in children 0 to 59 months of age in the RT is reduced by 30 percent by end of 2025.
 - Wasting in children 6 to 59 months of age in the RT is consistently maintained at below 5 percent.
 - Micronutrient deficiencies (including vitamin A, iodine, iron-deficiency anaemia) in children 6 to 59 months and women 15 to 49 years of age are reduced.

- There is no increase in childhood overweight in the RT from 5.9 percent; overweight in adults is reduced by 20 percent; and obesity in adults is reduced by 30 percent.

Annex 1
Approved by the Order of
the Government of the Republic of Tajikistan
as of 25th of February 2021, No.25

Multisectoral Plan of Action for Nutrition Republic of Tajikistan 2021- 2025

No.	Activity	Responsible Agency	Time Frame	Financial Source
<u>Strategic Objective 1: Create an enabling political environment for improving nutrition in Tajikistan</u>				
1.	Integrate relevant actions from the Plan into oblast and <i>rayon</i> policy and planning via sectors at subnational levels (oblast, <i>rayon</i> , <i>jamoat</i>).	Ministry of Health and Social Protection of the Population; Ministry of Education and Science; Ministry of Agriculture; Ministry of Energy and Water Resources; Ministry of Economic Development and Trade; Ministry of Industry and New Technologies; Agency for Social Protection; TojikStandard Agency, Communal State Services	2021	No financing required
2.	Conduct a full costing of the Plan.	Ministry of Health and Social Protection of the Population; Ministry of Economic Development and Trade	By end 2021	Support by funds from development partners

3.	Engage donors to complement government spending according to the priorities identified in the nutrition plan.	Ministry of Health and Social Protection of the Population; Ministry of Economic Development and Trade	By end 2021	No financing required
4.	Create a financial reporting system which documents all resources committed/spent on nutrition-specific and nutrition-sensitive interventions (both government and donor funds).	Ministry of Health and Social Protection of the Population; Ministry of Economic Development and Trade	2021	No financing required
5.	Ensure nutrition coordination mechanisms at national and subnational levels (oblast, <i>rayon</i> , <i>jamoat</i>) which include designated representatives (Nutrition Focal Points) from agencies and ministries	Ministry of Health and Social Protection of the Population	2021	No financing required
6	Conduct coordination meetings on /bimonthly basis (all levels).	Ministry of Health and Social Protection of the Population	2021-2025	No financing required
7	Create linkages / communication channels between convenors and sectoral counterparts at national and oblast levels.	Ministry of Health and Social Protection of the Population	2021	No financing required
8	Ensure consistent guidance and information sharing between the multi-stakeholder platform and subnational-level coordination mechanisms, including awareness-raising messaging, behaviour change communication materials, specific guidelines and collection of data for reporting on indicators.	Ministry of Health and Social Protection of the Population	2021-2025	No financing required
Strategic Objective 2: Improve the quality and coverage of nutrition-specific interventions				
9.	Conduct an assessment of the nutrition workforce and capacity of the health sector at all levels: - Policy and management.	Ministry of Health and Social Protection of the Population	2021	Support by funds from development partners

	<ul style="list-style-type: none"> - Staff at inpatient and outpatient health care facilities; - Community-based health workers and volunteers (to supervise / carry out nutrition-specific interventions at the national and subnational levels). 			
10	<p>Identify the competencies required to provide the appropriate support to improve maternal and child nutrition:</p> <ul style="list-style-type: none"> - Technical, management. - Leadership. - Coordination. - Implementation. - Logistics. 	Ministry of Health and Social Protection of the Population	2021	Support by funds from development partners
11.	Elaborate on training needs and develop a full training plan and a competency framework for nutrition.	Ministry of Health and Social Protection of the Population	2021	Support by funds from development partners
12	<p>Develop a universal nutrition training package for primary health care workers, including Training of Trainers and a full set of modules:</p> <ul style="list-style-type: none"> • Introduction to nutrition-specific actions. • Maternal diet during pregnancy and lactation. • Micronutrient deficiencies. • Zinc and oral rehydration salts. • Infant and young child feeding (IYCF). • Integrated Management of Acute Malnutrition (IMAM). 	Ministry of Health and Social Protection of the Population	2021	Support by funds from development partners

13.	Conduct two 7-day Training of Trainers	Ministry of Health and Social Protection of the Population	2021 - 2023	Support by funds from development partners
14.	Rollout of training modules to provide in-service training for all cadres of health care professionals at all levels.	Ministry of Health and Social Protection of the Population	2021	Support by funds from development partners
15.	Ensure training to new cadres of workers, including periodic refresher trainings for existing staff.	Ministry of Health and Social Protection of the Population		Support by funds from development partners
16.	Determine any additional nutrition-related positions required or adjustments to existing post-holder job descriptions, as well as the scope of work at the different levels (national, oblast, <i>rayon</i> and <i>jamoat</i>).	Ministry of Health and Social Protection of the Population	By end 2021	Within the budget of MoHSPP
17.	Establish a unit under the Republican Centre of Nutrition of Ministry of Health and Social Protection of the Population dedicated to the oversight of nutrition-specific activities.	Ministry of Health and Social Protection of the Population	2021	Within the budget of MoHSPP
18.	Develop curricula for post-secondary nutrition training (e.g. Diploma in Public Health Nutrition).	Ministries of Health and Social Protection of the Population, education and sciences, industry and new technology	2021- 2025	Support by funds from development partners
19.	Train three Masters of Nutrition students per year on regional/international courses.	Ministries of Health and Social Protection of the Population, education and sciences, industry and new technology	2021-2025	Support by funds from development partners

20	<p>Produce a detailed outline of the minimum expected package of nutrition-specific interventions to be implemented throughout health facilities. This should cover:</p> <ul style="list-style-type: none"> • Counselling on maternal diet during pregnancy and lactation • Promotion of dietary diversity • Prevention and treatment of micronutrient deficiencies • Deworming • Zinc and oral rehydration salts for the treatment of diarrhoea • IYCF • IMAM • Growth monitoring • Prevention and management of overweight and obesity 	Ministry of Health and Social Protection of the Population	2021-2025	No financing required
21.	Conduct a full review and, where necessary, develop/update existing guidelines on each nutrition-specific topic to be in line with most recent World Health Organization (WHO) guidelines and National Health Strategy 2030.	Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners
22.	Monitor the dissemination and integration of a package of nutrition-specific interventions for all oblast, <i>rayon</i> and <i>jamoat</i> levels.	Ministry of Health and Social Protection of the Population	2021	Support by funds from development partners
23.	Produce/adapt and disseminate clear guidance, tools and materials for promotion of optimal IYCF practices. This should include:	Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners

	<ul style="list-style-type: none"> • Dissemination and implementation of the government of Tajikistan’s First 1,000 Golden Days communication programme. • Enforcement of the International Code of Marketing of Breast-milk Substitutes; improvement of maternity protection in the workplace; scaling up of the Baby-Friendly Hospital Initiative and familiarity of hospitals and other health facilities with, and their application of, the 10 Steps to Successful Breastfeeding.ⁱⁱⁱ • Early initiation of breastfeeding within 60 minutes of birth and the use of colostrum. • Exclusive breastfeeding to 6 months of age. • Guidance on feeding pre-term / low birthweight infants. • Continued breastfeeding up to 24 months of age. • Maternal nutrition and health during lactation. • Updated WHO guidance on infant feeding in the context of HIV. • Guidance on feeding with breastmilk substitutes. • Optimal complementary feeding for children 6 to 23 months of age with continued breastfeeding to 2 years of age and beyond, including reference to: <ul style="list-style-type: none"> ○ Guiding principles for the complementary feeding of the breastfed child (World Health Assembly / United Nations Children’s Fund Executive Board 2002). 			
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	<ul style="list-style-type: none"> ○ Guiding principles of the complementary feeding of non-breastfed children 6 to 23 months of age (WHO 2005). ○ First foods. ○ Guidance on frequency, adequacy, diversity, safety and consistency of feeds, responsive feeding and snacks for different age groups 6 to 8 months, 9 to 11 months, 12 to 23 months of age. ● Optimal care of sick children. ● Improvement in health worker knowledge on key practices to support IYCF. ● Improvement in health worker skills in counselling mothers and caregivers to support optimal breastfeeding and complementary feeding. ● Monitoring and tracking of progress. ● Essential hygiene actions, including use of sanitary latrines, safe disposal of child faeces, handwashing with soap at critical moments and safe disposal of child’s faeces, safety of food storage and food preparation, environmental hygiene. ● Information on food safety, including use of existing Tajik materials, ‘The Five Keys of Food Safety’. 			
24.	Increase quality and coverage of existing micronutrient supplementation interventions (vitamin A, micronutrient powder) through provision of training of health workers on vitamin A and micronutrient powder supplementation. Update and disseminate guidance on	Ministries of Health and Social Protection of the Population, education and science, industry and new technology, Agency of Social	2020 -2021	Support by funds from development partners

	vitamin A and micronutrient powder supplementation to all health facilities.	Protection, Food security committee, communal service		
25.	Increase quality and coverage of existing micronutrient supplementation interventions (vitamin A, micronutrient powder) through provision of training of health workers on vitamin A and micronutrient powder supplementation	Ministry of Health and Social Protection of the Population	2020 -2021	Support by funds from development partners
26.	Increase coverage of deworming interventions as appropriate. Review and revise national deworming guidance. Produce and disseminate promotional materials.	Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners
27	Promote production and consumption of locally available micronutrient rich foods (vitamin A and iron).	Ministries of Health and Social Protection of the Population, education and science, industry and new technology, agriculture; TOJIKSTANDARD, Food Security committee, civil society and private sector	2020 onwards	Support by funds from development partners
28	Promote and increase consumption of locally available vitamin A–rich foods, such as yellow and orange fleshed fruits (e.g. apricots, persimmons), vegetables (carrots, pumpkins, red and yellow peppers, green leafy vegetables) and liver. This includes production of promotional leaflets, TV and radio broadcasts, training of health workers.	Ministries of Health and Social Protection of the Population, education and science, industry and new technology, agriculture; TOJIKSTANDARD, Food Security committee, civil society and private sector	2020 onwards	Support by funds from development partners
29	Develop national standards and guidelines for supplementation of iron and folic acid and their implementation at primary health care institutions.	Ministry of Health and Social Protection of the Population	2021	Support by funds from development partners

30	Promote folic acid through the Civil Registration Offices / <i>jamoats</i> to the married-to-be couples.	Ministry of Health and Social Protection of the Population	2021-2025	Funding within the budget from MoHSPP
31	<p>Provide intermittent iron / folic acid supplementation of women of reproductive age through primary health care facilities.</p> <p>Promote intermittent iron and folic acid supplementation, recommended for menstruating women living in settings where prevalence of anaemia is 20% or higher, as is the case in Tajikistan. Before commencing supplementation, accurate measurement of maternal blood haemoglobin (Hb) concentration is needed to confirm absence of anaemia.</p>	Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners
32	<p>Ensure daily supplementation of pregnant women as early as possible in, and for the duration of, pregnancy with 30-60 mg and 0.4mg folic acid (combined with iron). If anaemia in pregnant women is at least 40%, a daily dose of 60 mg of elemental iron is preferred over a lower dose. If a woman is diagnosed with anaemia during pregnancy, her daily elemental iron should be increased to 120 mg until her Hb concentration rises to normal (Hb 110 g/L or higher) (34, 51). Thereafter, WHO standard should be followed</p> <p>the standard daily antenatal iron dose to prevent recurrence of anaemia.</p>	Ministry of Health and Social Protection of the Population	2020 onwards	Support by funds from development partners
33	Provide treatment of anaemia (Hb <110g/L) in pregnant women with 120 mg elemental iron and 0.4 mg of folic acid until concentration rises to normal.	Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners

34	Promote consumption of locally available folate-rich foods: dark leafy green vegetables, pulses, nuts and seeds, citrus fruits.	Ministry of Health and Social Protection of the Population; Ministry of Agriculture; Ministry of Economic Development and Trade	2021-2025	Support by funds from development partners
35	Ensure availability of and promote use of adequately iodised salt (>15 parts per million [ppm]) and raise awareness of consumer rights. This includes: <ul style="list-style-type: none"> • Strengthening of salt iodisation within national action plan on food fortification. • National coverage assessment. • Production of promotional materials and TV/radio promotion. • Decree on exemptions of taxes / import duties for potassium iodate. 	Ministries of Health and Social Protection of the Population; Industry and New Technologies; Internal Affairs, Education and Science; Anticorruption Agency; Committees of TV and radio, food security, mass media	2020 onwards	Support by funds from development partners
36.	Improving of legislation of the Republic of Tajikistan on food safety	Ministries of Health and Social Protection of the Population	2021-2025	No financing required
37.	Create a revolving fund for the centralised supply of potassium iodate for operating salt producers. This includes: <ul style="list-style-type: none"> • Approval of the creation of a revolving fund. • Establishment of a financial plan/mechanism for the revolving fund. 	Ministries of Health and Social Protection of the Population; Industry and New Technologies; State Unitary Enterprise Khurokvori	2021-2025	Financing within the sectoral budget
38.	Regulation of production, distribution and monitoring of fortified food	Ministries of Health and Social Protection of the Population; Industry and New Technologies	2021-2025	Financing within the sectoral budget
39.	Strengthen the capacity of regulatory agencies	Ministry of Health and Social Protection of the Population TOJIKSTANDARD Agency	2021	Support by funds from development partners

40	<p>Enact the national law on the fortification of food products. This includes:</p> <ul style="list-style-type: none"> • Approval of technical specifications for all food vehicles and micronutrient premixes. • Approval of National Food Fortification Programme. • Reduction of taxes and duties for premix and fortification equipment. • Inclusion of essential minerals and vitamins into the list of essential drugs. • Ensuring fortification equipment is available at all private-sector companies which should be fortifying their products. • Building capacity of private-sector companies in fortification. • Creating a label for fortified food. • Producing Food Fortification Manuals for private-sector companies. 	<p>Ministry of Health and Social Protection of the Population; Ministry of Industry and New Technologies; TOJIKSTANDARD Agency</p>	2020 onwards	Funding from private sector
41.	<p>Establish an M&E system for measuring the effectiveness of the food fortification programme and ensuring compliance.</p> <p>Ensure at least one fortification laboratory is available at the national level for inspection of fortified food.</p>	<p>Ministry of Health and Social Protection of the Population; TOJIKSTANDARD Agency</p>	2020 onwards	Funding from private sector
42.	<p>Scale up the Integrate Management of Acute Malnutrition (IMAM) Programme in high-burden districts to achieve 100% coverage by end 2025. This includes:</p> <ul style="list-style-type: none"> • Capacity-building of outpatient facility-based staff in outpatient treatment of severe acute malnutrition 	<p>Ministries of Health and Social Protection of the Population, agriculture, Food Security Committee, microfinance banks,</p>	2021-2025	Support by funds from development partners

	<p>and capacity building of facility-based staff in inpatient management of complicated severe acute malnutrition.</p> <ul style="list-style-type: none"> • Development and dissemination of IMAM training modules and guidelines. • Regular review of Tajikistan IMAM protocol. 	civil society, mass media, mobile companies		
43	<p>Provide community screening, selection and referral for cases of severe acute malnutrition.</p> <p>Train Health Workers at the facility and community levels on identification, screening and referral of cases of acute malnutrition.</p>	Ministry of Health and Social Protection of the Population	2021- 2025	No financing required
44.	<p>Implement growth monitoring as per WHO Growth Standard.</p> <p>Train health workers (preservice and in-service) on growth monitoring.</p>	Ministry of Health and Social Protection of the Population	2021- 2025	Support by funds from development partners
45.	<p>Ensure anthropometric equipment at health facilities are in working condition and that staff are trained and aware of accuracy checks.</p> <p>Ensure, at a minimum, all health centres, provincial, district and city hospitals have two height/length measuring boards, two digital weighing scales, one to two boxes of mid-upper arm circumference (MUAC) tapes.</p>	Ministry of Health and Social Protection of the Population	2021 -2025	Support by funds from development partners
46	<p>Link families with an acutely malnourished member to Social Protection services.</p> <p>Help health centres develop/improve links with social services and, where appropriate, refer families with an</p>	Ministry of Health and Social Protection of the Population	2021-2025	Financing within the sectoral budget

	acutely malnourished child for social protection support.			
47.	Include adequate nutritional support to children with acute malnutrition targeted through social protection programmes.	Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners
48.	Educate adolescent girls about the importance of a balanced diet and increased nutritional requirements of pregnancy. Train Ministry of Education staff and primary and secondary school teachers to educate adolescent girls on importance of diet during pregnancy. Develop educational materials for schools.	Ministry of Health and Social Protection of the Population; Ministry of Science and Education, Committees of women affairs, TV and radio, other mass media	2021 -2025	Support by funds from development partners
49.	Provide counselling for pregnant women on increased nutritional requirements of pregnancy and on breastfeeding. This includes: <ul style="list-style-type: none"> • Reviewing and updating national protocol. • Training of health workers. • Producing promotional materials and TV/radio campaigns. 	Ministry of Health and Social Protection of the Population	2021-2025	No financing required
50.	Include messages in Healthy Lifestyles campaign on increased nutrition requirements in pregnancy.	Ministry of Health and Social Protection of the Population	2021 - 2025 onwards	Support by funds from development partners
51.	Implement the Obesity Prevention and Healthy Eating Programme for the Republic of Tajikistan (RT), 2019–2024: <ul style="list-style-type: none"> - Develop and disseminate national guidelines. 	Ministries of Health and Social Protection of the Population, education and science, industry and new technology	2021-2025	Support by funds from development partners

	<ul style="list-style-type: none"> - Produce advocacy and communication materials. - Train health workers. - Produce and disseminate promotional materials/campaigns. 			
<u>Strategic Objective 3: Improve the quality and coverage of nutrition-sensitive interventions</u>				
52.	<p>Include nutrition-sensitive targets and activities in the RT Food Security Programme.-This includes:</p> <ul style="list-style-type: none"> • Goals relating to the improvement of nutritional status and dietary diversity. • Targets and indicators on consumption and dietary diversity. • Interventions to improve nutritional status of children under 5 years of age and pregnant and lactating women. 	Ministry of Health and Social Protection of the Population, Food Security Committee	2021-2025	Support by funds from development partners
53.	<p>Include nutrition-sensitive goals, indicators and activities in updated RT agriculture programmes and policies (Horticulture and Viticulture, Seed Breeding Programme, Livestock Rearing Programme, Pasture Development Programme).</p>	Ministry of Health and Social Protection of the Population; Ministry of Agriculture	2021-2025	No financing required
54.	<p>Systematically integrate nutrition objectives and indicators into Food Security interventions. This includes:</p> <ul style="list-style-type: none"> • Dietary diversity scores. • Reduction of overweight and obesity. • Stunting reduction targets. • Wasting reduction. • Reduction of micronutrient deficiencies. 	Ministry of Health and Social Protection of the Population; Ministry of Agriculture	2021-2025	No financing required

55.	<p>Monitor access to and consumption of safe, affordable, diverse and nutritious foods.</p> <p>The Food Security Programme M&E system includes indicators and collects data on dietary diversity, food consumption, food safety and food prices.</p>	<p>Ministry of Agriculture; Food Security Committee, TOJKSTANDARD Agency, civil society and consultants</p>	2021-2025	No financing required
56.	<p>Commit to human resource capacity development in nutrition-sensitive agriculture. This includes:</p> <ul style="list-style-type: none"> • Development of training resources. • Workshops and training programmes. 	<p>Ministry of Health and Social Protection of Population, Food Security Committee</p>	2021	Support by funds from development partners
57	<p>Develop and disseminate nutrition-sensitive training resource and information materials. This should include:</p> <ul style="list-style-type: none"> • Definition of malnutrition, plus causes and consequences of malnutrition. • Tajikistan's nutrition goals. • 1,000 days window of opportunity. • Pathways to improved nutrition. • Nutrition promotion and education. • Targeting of nutritionally vulnerable groups. • Food diversification. • Food safety. • Post-harvest food storage and handling. • Food processing and preservation. • Maintenance/improvement of the natural resource base. • Women in agriculture (empowerment, workload, income-generation opportunities, credit). • Delivery of nutrition messages through agriculture extension. 	<p>Ministries of Agriculture, health and social protection of population, Committee of TB and radio, civil society, mobile companies</p>	2021	Support by funds from development partners

58.	Ensure workshops/training on nutrition-sensitive agricultural programming for the Ministry of Agriculture staff are conducted at national, province and district levels, including training of ‘master trainers’ and training of agriculture-sector staff.	Ministry of Agriculture	2022–2025	Support by funds from development partners
59	Ensure agriculture extension workers are trained and have resources (including information, education and communication [IEC] materials) to conduct trainings and demonstrations to promote diversified homestead gardening, small livestock production and nutrition topics.	Ministry of Agriculture	2021–2025	Support by funds from development partners
60	Scale up implementation of existing (Food Security Programme) homestead gardening and small-scale livestock, fisheries and poultry rearing, at the household level or collectively at the village level, to increase the availability of diverse, safe and nutritious food, including micronutrient-rich crops and animal-source proteins.	Ministry of Agriculture	2022–2025	Support by funds from development partners
61.	Through the implementation of the sectoral programme, enforce the necessary conditions and measures to ensure the safety of food, from production and import to consumption, for: <ul style="list-style-type: none"> • Meat and meat products. • Cereals, roots and tubers. • Dairy and dairy products. • Fruit and fruit products and Vegetables and vegetable products. 	Ministries of Industry and New Technologies, economic development and trade, Food Security Committee, TOJKISTANDARD Agency	2021-2025	Financing not required
62.	Increase coverage of government- and development partner-supported programmes on access to safe	State communal Service, Ministry of Health and Social Protection of the	2021 2025	Support by funds from

	<p>drinking water (e.g. WHO Water Safety Plan, Oxfam, Aga Khan, US Agency for International Development, etc.) water, sanitation and hygiene (WASH) programmes. Targets include the following:</p> <ul style="list-style-type: none"> - 100% of the population has access to safe drinking water by 2030 (government goals on safe water provision). - Distance to collect water is <1km. - 100% of the population has access to safe storage facilities and equipment by 2025. - Habit of drinking water from unprotected sources is eliminated by 2025. - There is reduction of diarrhoeal disease amongst children 6 to 59 months of age. 	Population, Anti-corruption committee		development partners
63.	Improve access to sanitation facilities for all (environmental hygiene, toilets and safe disposal of child faeces).	Ministry of Health and Social Protection of the Population; Ministry of Energy and Water Resources; Committee on Television and Radio	2021 -2025	Support by funds from development partners
64.	Improve access by all to handwashing facilities.	Ministry of Health and Social Protection of the Population; Ministry of Energy and Water Resources; Committee on Television and Radio	2022	Support by funds from development partners
65.	Improve solid waste disposal and management for all.	Ministry of Health and Social Protection of the Population; Ministry of Energy and Water Resources; Committee on Television and Radio	2022	Support by funds from development partners
66.	Implement Tajikistan WASH Policies.	Ministry of Health and Social Protection of the Population;	2022	Financing not required

	<ul style="list-style-type: none"> – Ensure agencies responsible for water/sanitation policy strategy and programme recognise the importance of these activities in the improvement of nutrition and health status. – Raise awareness on the important role of improvements to water and sanitation as a pathway to improved nutritional status. 	Ministry of Energy and Water Resources; State communal services		
67.	Integrate nutrition objective and indicators for stunting, wasting targets into WASH programme. Improve access by nutritionally vulnerable groups to drinking water and adequate sanitation.	Ministries of Health and Social Protection of the Population, energy and water resources, education and science, civil society, mass media	2021-2025	Financing not required
68.	Monitor access to safe water, sanitation facilities and hygiene. Indicators include: <ul style="list-style-type: none"> • Diarrhoea prevalence. • Handwashing locations with soap and water available. • Access to improved water sources. • Hygienic disposal of child faeces. • Separation of livestock and human living spaces. 	Ministry of Health and Social Protection of the Population; Centre for State Control on Health and Social Protection of the Ministry of Health and Social Protection of the Population; Ministry of Energy and Water Resources, State Communal Services, civil society, mass media	2021-2025	Financing not required
69.	Commit to human resource capacity development in nutrition-sensitive WASH programmes; develop and roll out training package and manual, plus training of extension workers. This should include: <ul style="list-style-type: none"> • Definition of malnutrition, plus causes and consequences of malnutrition. • Tajikistan’s nutrition goals. • 1,000 days window of opportunity. 	Ministry of Health and Social Protection of the Population, education and science, Committee of women affairs and family, civil societies, mass media	2021	Support by funds from development partners

	<ul style="list-style-type: none"> • Pathways to improved nutrition. • Nutrition promotion and education. • Targeting of nutritionally vulnerable groups. • Water-/sanitation-related pathways to undernutrition. • Actions to improve water-/sanitation-related nutrition outcomes. • Women and water/sanitation. • Inclusion of health and nutrition goals in water and sanitation policy and programming. • Nutrition promotion in water and sanitation programming. 			
70.	Develop and disseminate nutrition-sensitive WASH training resource and information.	Ministry of Energy and Water Resources; State Communal Services	2021-2025	Support by funds from development partners
71.	<p>Improve individual hygiene practices in the following areas:</p> <ul style="list-style-type: none"> - Practice of correct handwashing with soap and water at critical times. - Food hygiene practices. - Safe disposal of child faeces. - Safe disposal of solid waste. - Separation of livestock/domestic animals from cooking areas and play areas. 	Ministry of Health and Social Protection of the Population; Ministry of Energy and Water Resources; Committee on Television and Radio; local authorities, civil society.	2021-2025	Support by funds from development partners

72.	<p>Develop and disseminate nutrition-sensitive training resource and information materials. This should include:</p> <ul style="list-style-type: none"> • Definition of malnutrition, plus causes and consequences of malnutrition. • Tajikistan’s nutrition goals. • 1,000 Days window of opportunity. • Pathways to improved nutrition. • Nutrition promotion and education. • Targeting of nutritionally vulnerable groups. • Targeting and protection of most vulnerable groups to prevent malnutrition. • Empowerment of women. • Inclusion of health and nutrition goals in social protection policy and programmes. • Nutrition promotion within social protection programming. 	Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners
73.	<p>Target vulnerable populations (pregnant and lactating women and children under 60 months of age) for nutrition interventions, especially during emergencies or disasters—including vaccination campaigns and micronutrient campaigns, targeting of IEC materials/activities, balanced food basket, emergency stocks and nutrition programmes and services.</p>	Ministry of Health and Social Protection of the Population;	2021-2025	Support by funds from development partners
74.	<p>Systematically integrate nutrition objectives and indicators in Tajikistan Education Strategy. This includes:</p>	Ministry of Education and Science; Ministry of Health and Social Protection of the Population	2021-2025	Financing not required

75.	Commit to human resource capacity development (teachers and parents) in nutrition education.	Ministry of Education and Science; Ministry of Health and Social Protection of the Population	2021-2025	Support by funds from development partners
76.	<p>Develop and disseminate nutrition-sensitive training resource and information materials for education specialists and teaching staff.</p> <p>Train and raise awareness of education/teaching staff at national, oblast and <i>rayon</i> levels on the importance of nutrition, nutrition targets and indicators, as well as means of improving nutrition through education. This should include:</p> <ul style="list-style-type: none"> • Definition of malnutrition, plus causes and consequences of malnutrition. • Tajikistan's nutrition goals. • 1,000 days window of opportunity. • Food groups. • Dietary diversity and food choices. • Prevention of micronutrient deficiencies. • Prevention of overweight/obesity. • Essential hygiene actions. • Improvement of nutrition status through educational activities. 	Ministry of Education and Science; Ministry of Health and Social Protection of the Population, local authorities, civil society	2021-2025	Support by funds from development partners
77.	Monitor access by adolescent girls to secondary education as part of the ongoing Education Strategy and School Feeding Strategy.	Ministry of Education and Science	2021-2025	Financing within education sector

78.	Add nutrition topics to relevant curriculum components for kindergarten, primary and secondary pupils. This should include: <ul style="list-style-type: none"> • Types of malnutrition. • Nutrition through the life cycle. • Food groups, dietary diversity and food choice. • Prevention of micronutrient deficiencies. • Prevention of overweight/obesity. • Essential hygiene actions. 	Ministry of Education and Science	2022–2025	Support by funds from development partners
79.	Integrate nutrition messaging around dietary diversity, healthy eating and prevention of overweight and obesity into school feeding programmes.	Ministry of Education and Science; Ministry of Health and Social Protection of the Population	2022	Support by funds from development partners
80	Implement WASH in schools and provide basic services in terms of water availability, toilets and handwashing facilities.	Ministry of Education and Science	2021–2025	Financing not required
81.	Ensure agreement by each sector on nutrition targets and indicators (based on those proposed in the sectoral action-plan chapters).	Ministry of Health and Social Protection of the Population; Ministry of Education and Science; Ministry of Agriculture; Ministry of Energy and Water Resources; Ministry of Economic Development and Trade; Ministry of Finance; Ministry of Industry and New Technologies; Agency for Social Protection;	2021	No financing required

		TOJIKSTANDARD Agency State Communal Services		
82.	Conduct a review of current inclusion/coverage of nutrition in sector information systems, including at the subnational level.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of the RT	2021	No financing required
83.	Ensure each sector identifies means for the regular collection and analysis of defined nutrition indicators and, where possible, identify opportunities to use/adapt existing systems and tools.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2022	No financing required
84.	Identify opportunities for joint monitoring between sectors where possible.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2022	No financing required
85.	Develop/adapt software/formats currently used to integrate nutrition data collection (each sector).	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2022	Support by funds from development partners
86.	Conduct awareness raising and capacity building around the inclusion of nutrition data in sectoral information systems.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021-2025	Support by funds from development partners
87.	Build capacity in each sector to conduct a regular review of the progress towards targets based on the information collected.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021 -2025	Support by funds from development partners
88.	Develop a multisectoral M&E Framework	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	Support by funds from development partners

89.	Define and develop a mechanism/system (existing or new) which can serve as a platform for the collection, compilation, analysis and comparison of nutrition-related data from all the sectors.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	Support by funds from development partners
90.	Establish a mechanism for each sector to report on progress of nutrition-related indicators to the multisectoral nutrition information system.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	No financing required
91.	Define an overall reporting format to be used to report on the achievement of indicators agreed by all sectors in the Plan.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	No financing required
92.	Define a format for annual reporting by sector on the achievement of nutrition indicators.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	No financing required
93.	Plan joint M&E training, supervision and activities.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	No financing required
94.	Publish regular sectoral monitoring reports.	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	No financing required

95.	Include an analysis of capacity-development needs in monitoring, evaluation and reporting in the Capacity Assessment	Ministry of Health and Social Protection of the Population; Agency on Statistics under President of RT	2021	Support by funds from development partners
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Collection of Health Facility Reporting Formats

1. Work Plan Format at District PHC Center

“Submitted”
Deputy Manager of
Primary Health Care Centre, Khuroson district
Sobiri A.
2021.01.02

“Approved”
Manager of Primary Health
Care Centre- Khuroson district
Murodov M

Work plan for 2021 by the Deputy of Gulrezi Health House- Primary Health Care Centre, Khuroson district

#	Naming activities	Implementation period	Person in charge	Supervisor
Organization activities				
1.	Develop work plan for 2021	December, 2020	Ismonova Zumratbi	Deputy Manager
2.	Organizing activities in the health house (HH) according to the approved schedule and monitoring the enforcement of labor discipline by employees	Constantly	Ismonova Zumratbi	Manager of Primary Health Care Centre (PHCC)
3.	Supervision on reactivate and develop a logbook and required journals of HH for the activities in 2021	December, 2020	Ismonova Zumratbi	Deputy Manager
4.	Implementation of regulations which the President of the Republic of Tajikistan Emomali Rahmon addressed on his speech to the health workers	Constantly	Ismonova Zumratbi	Manager of PHCC Deputy Manager
5.	Supervision on implementation of established order of MOHSPP under the # 1119,#95,#579, #25, #689,# 536, #74 by HH workers	Constantly	Ismonova Zumratbi	Deputy Manager, family medicine doctor and quality committee
6.	Implementation of order #327 on “Communication with the patients” at the HH by health workers	Constantly	Ismonova Zumratbi	Commission on consultation
7.	Active participation in gatherings, meetings and other PHCC occasions, communities, rural community and districts	Regular	Ismonova Zumratbi	Manager of PHCC Deputy Manager

8.	Provision of consultation at HH to the staff on speeches, different reports, nursing, infectious diseases and prevention of COVID-19 in the RT.	According to work plan and methodology	Ismonova Zumratbi	Manager of PHCC Deputy Manager
9.	Supervision on the implementation order process on “Strengthening epidemiology of new infectious COVID- 2019 control in the RT” by MOHSPP from 2020.01.01, #59 on at HH	According to work plan’s activities and methodologies	Ismonova Zumratbi	Manager of PHCC Deputy Manager
10.	Facilitating specific activities for the implementation of Government Decrees of the Republic of Tajikistan focused on the health sector and the implementation of the Programme and Sectoral Strategies in HH	According to work plan’s activities	Ismonova Zumratbi	Manager of PHCC Deputy Manager
11.	Verification of the accuracy of the information collected by staff on the list of population’s local service and information on their health status	January,2021	Ismonova Zumratbi	Manager of PHCC Deputy Manager
12.	Conduction of health education activities on personal and community hygiene improvement and infectious diseases prevention	According to the plan	Ismonova Zumratbi	Manager of PHCC Deputy Manager
Therapeutic measures				
1.	Keeping medical equipment in a good condition and provision of proper maintenance of medicines and vaccines in the storage of HH	Constantly	Ismonova Zumratbi	Manager of PHCC and household
2.	Establish patients admission by family medicine doctors, gynecologists and pediatricians, arranging medical equipment required documents for the patients diagnoses and treatment	Constantly	Ismonova Zumratbi	Manager of PHCC Deputy Manager

3.	Support provision to the local doctors and to the invited area for the patient's treatment and other general diagnosis measures and vaccinating populations	Regular	Ismonova Zumratbi	Manager of PHCC Deputy Manager
4.	Fully active participation in population's immunization campaign and the quality of this vaccination of the local population.	Regular	Ismonova Zumratbi	Manager of PHCC Director of Immunization centre
5.	Participation on registering women in labour, target group of women, pregnant women, sick children and referring them to the doctors for medical examination	During the year	Ismonova Zumratbi	Manager of PHCC Deputy Manager Director of RepHC
6.	Provision of first aid at the time of need to the patients on measuring B/P, fever, weight and height of the patient, pregnant women and children and referring them to the medical examination	Regular	Ismonova Zumratbi	Manager of PHCC Deputy Manager
7.	Timely submission of report on "Childbirth and neonate mortality" in the HH area	Constantly	Ismonova Zumratbi	Manager of PHCC Deputy Manager
8.	Supervision on the implementation order # 456 and to cover children for immunization by local vaccinators	According to the plan	Ismonova Zumratbi	Manager of PHCC Director of Immunization centre
9.	Regular supervision on primary care to the people with disabilities and being under registration of local clinical doctors	Regular	Ismonova Zumratbi	Manager of PHCC Head of Medical advisory committee
10.	Medical care provision to the needy people, people involved in the Chernobel disaster, humanitarian warriors, war and labor veterans, World War II veterans and retired people	Regular	Ismonova Zumratbi	Manager of PHCC Deputy Manager

11	Supervision on distribution of Vitamin A, Sprinkles, Albendazol and other medications by HH workers	According to the plan	Ismonova Zumratbi	Deputy Manager Director of Integrated Management of Childhood Illness (IMCI)
12	Submission of instant message notifications on time to the State Centre for Sanitary and Epidemiological Surveillance in the district	Regular	Ismonova Zumratbi	Manager of PHCC Deputy Manager
Health education activities				
1.	Conduction of consultations and recommendation among local target population on the topic of infectious disease prevention and taking actions on proper distribution of advertising brochures	Constantly	Ismonova Zumratbi	Manager of PHCC Deputy Manager
2.	Conduction of discussions among local population on the topics of different diseases prevention, HIV, nutrition, obesity prevention, healthy nutrition, breastfeeding, infectious disease prevention, infectious of new COVID-19, violence in the family and regulation of events and celebrations and improving healthy lifestyle	Constantly	Ismonova Zumratbi	Manager of PHCC Deputy Manager
3.	Take practical steps to implement order #138 and conduct outreach and awareness-raising on drug abuse prevention	Regular	Ismonova Zumratbi	Manager of PHCC Deputy Manager
4.	Improve your knowledge through professional retraining, taking course training by the principles of family medicine, and others	Constantly	Ismonova Zumratbi	Deputy Manager Human resources manager
5.	Active participation in the social, cultural of the PHCC and ensuring the participation of all employees of the HH in these activities.	Constantly	Ismonova Zumratbi	Manager of PHCC Deputy Manager

6.	Timely submission of reports with quality and specific monthly, every trimester, quarterly and annually of HH to the PHCC administration	According to the plan	Ismonova Zumratbi	Manager of PHCC Deputy Manager
7.	Summary of the work plan for 2021	December 2021	Ismonova Zumratbi	Manager of PHCC Deputy Manager

Deputy Ismonova Z. Gulrezi Health House of PHCC, Khuroson district

«Мувофиқ қарни шукур»
Муовини менежер
МКАТС-и Ҷумҳурии Хуросон
2-қоғам янавари соли 2021

**НАҚШАИ
КОРИИ МУДИРИ БУНГОҲИ САЛОМАТИИ ГУЛРЕЗИ
ХУРОСОН ДАР СОЛИ 2021**

№	Исмонии чорбинҳо	Мӯҳлати сарфани	Ифрокунанда	Назоратчиганда
Чорбинҳои тиббӣ				
1	Тартиб додани нақшаи кор барои соли 2021	Декабри соли 2020	Исмонова Зумратби	Муовини менежер
2	Таъкиди кор дар БС тибби речин муҳимлиги ва назорати риёси интизомии меҳнат аз тарафи қорамандон	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер
3	Бурани назорат оиди барқарор намудани ва тартиб додани дафтар ва маҷаллаҳои дозимат БС барои филология дар соли 2021	Декабри соли 2020	Исмонова Зумратби	Муовини менежер
4	Иҷрои дастури супоришҳои Ассоциатори сукуҳахати миллӣ-Пешвои миллат, президенти Ҷумҳурии Тоҷикистон, муҳтарам Ҷомӣ Раҳмон, ки дар Паёмони дар назди қорамандони соҳаи танзурӯстӣ гузоштаванд	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер
5	Зери назорат гирифтани иҷрои фармоишҳои амалкунандаи Назорати танзурӯстӣ ва хизмати иҷтимоии Ҷумҳурии Тоҷикистон №119, №5, №597, №25, №689, №336, №74 аз тарафи қорамандони БС	Домӣ	Исмонова Зумратби	Муовини менежер, тибби оилави ва Кумитгаи сифат
6	Дар БС риёси фармони №127 «Мушаррат бо мурочуватунаниҷон» аз тарафи қорамандон	Домӣ	Исмонова Зумратби	Комиссия оид ба мушаррат
7	Филология иштирок намудани дар Ситгоҳи маълумкоти ва дигар чорбинҳои МКАТС, маҷаллаҳои минтақа, Ҷамъаоти деҳот ва ноҳия	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер
8	Додавни маълумат ба қорамандон барои таъбир намудани баромад ва маъруҳаҳои гуногун оиди мавзӯҳои қорамандон, беморҳои сироятӣ, пешгирии сироти қорамандон COVID-19 ва филология аз рӯи принсипи тибби оилави	Мунтазам	Исмонова Зумратби	Менежери МКАТС муовини менежер
9	Назорати рафти иҷрои фармони Назорати танзурӯстӣ ва хизмати иҷтимоии Ҷумҳурии Тоҷикистон аз 1-уми янави соли 2020, №59 «Оид ба тақдими назорати эпидемиологияи сироти қорамандон нани 2019 – иСО» дар Ҷумҳурии Тоҷикистон» дар БС	Тибби нақша ва методология	Исмонова Зумратби	Менежери МКАТС муовини менежер
10	Пешбурди қорамандон муҳаққак бақри иҷрои Қорамандон Ҷумҳурии Ҷумҳурии Тоҷикистон, ки ба соҳаи танзурӯстӣ ингазонда шудава ва иҷрои Барнома ва СҶратегияҳои соҳаи дар БС	Тибби нақшаи чорбинҳо	Исмонова Зумратби	Менежери МКАТС муовини менежер
11	Саноии аҳолияти маълумотҳои тартиб додани қорамандон оиди руҳияти аҳолии минтақаи хизматӣ ва маълумотҳои оиди вазни саломати оиди	Янавари соли 2021	Исмонова Зумратби	Менежери МКАТС муовини менежер
12	Дар минтақаи ноҳияи ҳамаҷониба гузаронидани қорамандон сангарию-марфияти оиди беҳдошти гигиенаи шаҳар, ҷамъиятӣ ва пешгирии беморҳои сироти	Тибби нақша	Исмонова Зумратби	Менежери МКАТС муовини менежер
Чорбинҳои мушарратӣ				
1	Дар ҳолати ҳуб ниҳол доштани асбоби ағҷони хизматӣ, тибби ва таъкиди дурӯсти ниҳолҳои дурӯворк ва вақинаҳои дар БС қойишга	Домӣ	Исмонова Зумратби	Муовини менежер ва ҳолатлар
2	Таъкиди намудани қабули беморон аз тарафи тибби оилави, занони ва кудона, таъбир намудани асбоби ағҷони тибби ва ҳуҷҷатҳои дозимат барои таъкиди таъбиҳои шаҳриандон	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер

«Мувофиқ қарни шукур»
Муовини менежер
МКАТС-и Ҷумҳурии Хуросон
2-қоғам янавари соли 2021

**НАҚШАИ
КОРИИ МУДИРИ БУНГОҲИ САЛОМАТИИ ГУЛРЕЗИ
ХУРОСОН ДАР СОЛИ 2021**

№	Исмонии чорбинҳо	Мӯҳлати сарфани	Ифрокунанда	Назоратчиганда
Чорбинҳои тиббӣ				
1	Тартиб додани нақшаи кор барои соли 2021	Декабри соли 2020	Исмонова Зумратби	Муовини менежер
2	Таъкиди кор дар БС тибби речин муҳимлиги ва назорати риёси интизомии меҳнат аз тарафи қорамандон	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер
3	Бурани назорат оиди барқарор намудани ва тартиб додани дафтар ва маҷаллаҳои дозимат БС барои филология дар соли 2021	Декабри соли 2020	Исмонова Зумратби	Муовини менежер
4	Иҷрои дастури супоришҳои Ассоциатори сукуҳахати миллӣ-Пешвои миллат, президенти Ҷумҳурии Тоҷикистон, муҳтарам Ҷомӣ Раҳмон, ки дар Паёмони дар назди қорамандони соҳаи танзурӯстӣ гузоштаванд	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер
5	Зери назорат гирифтани иҷрои фармоишҳои амалкунандаи Назорати танзурӯстӣ ва хизмати иҷтимоии Ҷумҳурии Тоҷикистон №119, №5, №597, №25, №689, №336, №74 аз тарафи қорамандони БС	Домӣ	Исмонова Зумратби	Муовини менежер, тибби оилави ва Кумитгаи сифат
6	Дар БС риёси фармони №127 «Мушаррат бо мурочуватунаниҷон» аз тарафи қорамандон	Домӣ	Исмонова Зумратби	Комиссия оид ба мушаррат
7	Филология иштирок намудани дар Ситгоҳи маълумкоти ва дигар чорбинҳои МКАТС, маҷаллаҳои минтақа, Ҷамъаоти деҳот ва ноҳия	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер
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9	Назорати рафти иҷрои фармони Назорати танзурӯстӣ ва хизмати иҷтимоии Ҷумҳурии Тоҷикистон аз 1-уми янави соли 2020, №59 «Оид ба тақдими назорати эпидемиологияи сироти қорамандон нани 2019 – иСО» дар Ҷумҳурии Тоҷикистон» дар БС	Тибби нақша ва методология	Исмонова Зумратби	Менежери МКАТС муовини менежер
10	Пешбурди қорамандон муҳаққак бақри иҷрои Қорамандон Ҷумҳурии Ҷумҳурии Тоҷикистон, ки ба соҳаи танзурӯстӣ ингазонда шудава ва иҷрои Барнома ва СҶратегияҳои соҳаи дар БС	Тибби нақшаи чорбинҳо	Исмонова Зумратби	Менежери МКАТС муовини менежер
11	Саноии аҳолияти маълумотҳои тартиб додани қорамандон оиди руҳияти аҳолии минтақаи хизматӣ ва маълумотҳои оиди вазни саломати оиди	Янавари соли 2021	Исмонова Зумратби	Менежери МКАТС муовини менежер
12	Дар минтақаи ноҳияи ҳамаҷониба гузаронидани қорамандон сангарию-марфияти оиди беҳдошти гигиенаи шаҳар, ҷамъиятӣ ва пешгирии беморҳои сироти	Тибби нақша	Исмонова Зумратби	Менежери МКАТС муовини менежер
Чорбинҳои мушарратӣ				
1	Дар ҳолати ҳуб ниҳол доштани асбоби ағҷони хизматӣ, тибби ва таъкиди дурӯсти ниҳолҳои дурӯворк ва вақинаҳои дар БС қойишга	Домӣ	Исмонова Зумратби	Муовини менежер ва ҳолатлар
2	Таъкиди намудани қабули беморон аз тарафи тибби оилави, занони ва кудона, таъбир намудани асбоби ағҷони тибби ва ҳуҷҷатҳои дозимат барои таъкиди таъбиҳои шаҳриандон	Домӣ	Исмонова Зумратби	Менежери МКАТС муовини менежер

2 RHC Monitoring

Rural Health Center _____ in the territory of Jamoat _____ located in the village of _____, to the villages of _____ provides medical services.

RHC structure consists of _____ health house; Health house consists of _____.

Operating schools that belong to RHC _____.

RHC consists of a waiting room, registration, head doctor's room, family doctor's room, gynecologist, immunization room, treatment/procedure room, oral rehydration therapy room, sputum induction room and _____.

Staffing

№		Staffing norms	Positions filled	%	How many people
1.	Doctors				
2.	Nurses				
3.	Cleaners				
4.	Total				

Working conditions in the RHC _____,

Condition of the building _____,

The highest qualification level of doctors is _____ person, qualification level 1 _____ person, qualification level 2 _____ person, Nurses with highest level _____ person, qualification level 1 _____ - person, qualification level 2 _____.

Population composition:

№		RHC	RHC and HH together
1.	Village		
2.	Household		
3.	Total population:		
4.	Adults		
5.	Children 0-14 years old		
6.	Children up to 1 year old		
7.	Children 1-5 years old		
8.	Adolescents 15-17 years old		
9.	18-19 years old		
10.	Pregnant women		
11.	WWII participants		
12.	Former participants of the Soviet-Afghan War		
13.	Participants in liquidation of the Chernobyl nuclear power plant accident		
14.	Disabled from the disease:		
15.	Children		

Demographic indicators

№	List	2020	%	2-month 2021	%
1.	Childbirth				
2.	Home birth				
3.	Total mortality				
4.	Mortality 0-18 years				
5.	Mortality 1-5 years				
6.	Mortality 0-1 years				
7.	Perinatal mortality				
8.	Maternal mortality				
9.	Birth rate				
10.	Total mortality rate				
11.	Natural population increase				

Causes of children's death.

№	Name	Age	Address	Date of death	Place of death	Diagnosis
1.						
2.						
3.						
4.						
5.						

Documentation; _____

Registration journals at work: reception of patients, registration of dispensary control, age, local, registration of pregnancies, birth registration, home birth registration, registration of infectious patients, registration of home visits, patronage, advocacy/propaganda related work, vaccination registration, immunization plan, nurse working tasks at households, there are ___ emergency plan for AIDS relief _____ and _____ have been adapted based on MoHSPP RT order of #840.

The indications for patients admission follows as:

№		2020		-month 2021	
		Total	Per day	Total	Per day
1.	Accepted and examined				
2.	Teenagers and adults				
3.	Children under 14 years old				
4.	Pregnant women				
5.	Total visit of households				
6.	Due to illness				
7.	Doctors' workload: family doctors				

Documentation; _____

Reception at medical treatment rooms

№		2020	-month 2021
1.	Room for the oral rehydration therapy (ORT)		
2.	Treatment/procedure room		
3.	Physiotherapy room		
4.	Laboratory		

Documentation; _____

Dispensary patients

№		Previously registered	Registered	Discharged from registry	Currently registered
1.	Adults				
2.	0-18 years old				
3.	Total				
The composition of dispensary diseases including infectious					
4.	Typhoid fever				
5.	Jaundice				
6.	Bloody diarrhea				
7.	Brucellosis				
8.	Injury from animals				

Somatic symptom disorders

№	Diseases	2020	-month 2021
1.	Ischemic heart disease		
2.	Hypertension		
3.	Respiratory diseases		
4.	Diseases of the digestive organs		
5.	Kidney and urinary tract diseases		
6.	Endocrine diseases		
7.	Including diabetes		
8.	Cancer		
9.	Nervous diseases		
10.	Mental illness		
11.	Eye diseases		
12.	Total		

Documentation;

TEENAGERS

#		2020	-month 2021
1.	Total number of adolescents		
2.	Including young boys		
3.	Underwent a medical examination		
4.	Including young boys.		
5.	All registered at the dispensary.		
6.	Including young boys		
7.	Registered at the dispensary.		
8.	Including young boys.		
9.	Discharged from dispensary registration.		
10.	Including young boys.		
11.	Registered at the dispensary		
12.	Including young boys		
13.	Treated patients.		
14.	Including young boys.		
15.	Treated.		
16.	Including young boys.		
17.	Transferred to the teen room.		
18.	Including young boys.		
19.	Discharged from teen room.		
20.	Including young boys.		

Documentation;

PREGNANCY INFORMATION

To the female doctor at RHC _____ is appointed. Visits to RHC ____ times

Indicators in this area:

#		2020	-month 2021
1.	Total registered.		
2.	Including up to 12 weeks		
3.	Birth		
4.	Birth at home		
5.	Preterm birth		
6.	Passed the examination by a family doctor		
7.	Patients (total)		
8.	Anemia		
9.	Respiratory diseases		
10.	Diseases of the heart and blood vessels.		
11.	Diseases of the digestive organs		
12.	Kidney and urinary tract diseases		
13.	Endocrine diseases		
14.	Wassermann reaction 1 (WR)		
15.	Wassermann reaction 2 (WR)		
16.	HIV		
17.	Intrauterine device		
18.	OK		
19.	Condom		

Documenation; _____

Immunization indicators

#		2020	-month 2021
1.	BCG vaccine		
2.	MMR-1		
3.	Pentavalent-1		
4.	Pentavalent-3		
5.	OPV-1		
6.	OPV-3		
7.	Hepatitis B-1		
8.	OPV-4		
9.	DPT 4		
10.	DT		
11.	MMR-2		

Documenation; _____

WORK WITH CHILDREN UNTIL 14 YEARS OLD

#		2020	-month 2021
1.	Patients were identified:		
2.	Including diarrhea		
3.	Acute respiratory diseases		
4.	Eye diseases		
5.	Ear diseases		
6.	Diseases of the digestive organs		
7.	Endocrinological diseases		
8.	Congenital diseases		
9.	Diseases of the urinary tract		
10.	Injuries		

Documenation; _____

Medical examination of schoolchildren in schools № _____ in the month of _____ was conducted according to the plan.

Target group	Conducted medical examination	Detected diseases	Patients with cardiovascular disease	Patients with respiratory disease	Patients with nerves and nervous system	Patients with back pain and movement control	Patients with ear, nose and throat diseases	Patients with eye and vision disorders	Patients with endocrinology disorders	Patients with digestive symptoms	Patients with urinary tract infection	Patients with skin disorders	Patients with mental health	Patients with blood disorders	Patients with oral cavity	Helminthiasis	Other patients	Healthy patients

Documentation; _____

CONCLUSIONS AND RECOMMENDATIONS;

Monitoring was conducted by;
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____

Period in completing shortcomings _____
 Get acquainted with the conclusion _____ signature _____

3 Health House Monitoring

Health House _____ in the territory of Jamoat _____ located in the village of _____, to the villages of _____ provides medical services. Operating schools that belong to HH _____.

HH consists of a waiting room, facility head's room, immunization room, treatment/procedure room, and _____.

Staffing

Nº		Staffing norms	Positions filled	%	How many people
1.	Nurse				
2.	Cleaner				
3.	Total				

Working conditions in the RHC _____,

Condition of the building _____

Qualification level of nurses; higher _____ person, level 1 _____-person, level 2 _____ person.

Population composition:

Nº		Health House
1.	Village	
2.	Household	
3.	Total population:	
4.	Adults	
5.	Children 0-14 years old	
6.	Children up to 1 year old	
7.	Children 1-5 years old	
8.	Adolescents 15-17 years old	
9.	18-19 years old	
10.	Pregnant women	
11.	WWII participants	
12.	Former participants of the Soviet-Afghan War	
13.	Participants in liquidation of the Chernobyl nuclear power plant accident	
14.	Disabled from the disease:	
15.	Children	

Demographic indicators

Nº	List	2020	%	2-month 2021	%
1.	Childbirth				
2.	Home birth				
3.	Total mortality				
4.	Mortality 0-18 years				
5.	Mortality 1-5 years				
6.	Mortality 0-1 years				
7.	Perinatal mortality				
8.	Maternal mortality				
9.	Birth rate				
10.	Total mortality rate				
11.	Natural population increase				

Causes of children's death

Nº	Name	Age	Address	Date of death	Place of death	Diagnosis
1.						
2.						
3.						

Documentation; _____

Registration journals at work: reception of patients, registration of dispensary control, age, local, registration of pregnancies, birth registration, home birth registration, registration of infectious patients, registration of invited doctors for home visits, patronage, advocacy/propaganda related work, vaccination registration, immunization plan, nurse working tasks at households, there are _____ emergency plan for AIDS relief _____ and _____ have been adapted based on MoHSPP RT order of #98. _____

The indications for patients admission follows as:

№		2020		-month 2021	
		Total	Per day	Total	Per day
1.	Accepted and examined				
2.	Teenagers and adults				
3.	Children under 14 years old				
4.	Pregnant women				
5.	Total visit of households				
6.	Due to illness				

Documentation;

Reception at medical treatment rooms:

#		2020	-month 2021
1.	Room for the oral rehydration therapy (ORT)		
2.	Treatment/procedure room		

Documentation;

Dispensary patients

№		Previously registered	Registered	Discharged from registry	Currently registered
1.	Adults				
2.	0-18 years old				
3.	Total				

The composition of dispensary diseases including infectious

4.	Typhoid fever				
5.	Jaundice				
6.	Bloody diarrhea				
7.	Brucellosis				
8.	Injury from animals				

PREGNANCY INFORMATION

To the female doctor at HH _____ is appointed. Visits to HH ____ times

Indicators in this area:

#		2020	-month 2021
1.	Total registered.		
2.	Including up to 12 weeks		
3.	Birth		
4.	Birth at home		
5.	Preterm birth		
6.	Passed the examination by a family doctor		
7.	Patients (total)		
8.	Anemia		
9.	Respiratory diseases		
10.	Diseases of the heart and blood vessels.		
11.	Diseases of the digestive organs		
12.	Kidney and urinary tract diseases		
13.	Endocrine diseases		
14.	Wassermann reaction 1 (WR)		
15.	Wassermann reaction 2 (WR)		
16.	HIV		
17.	Intrauterine device		
18.	OK		
19.	Condom		

Documentation;

4 Report of the Family Medicine Doctor

**REPORT
OF THE FAMILY DOCTOR
FOR THE MONTH _____ OF 20____**

Facility _____
Name _____

1. Visits

Total visits to health facility	Including due to illness		Visits to households			Including due to illness # of total checked patients	
	Children 0-17 years old	Adolescents and adults	Total	Children 0-17 years old	Adolescents and adults	Total	For those with first time visit
1	2	3	4	5	6	7	8

Total visits to _____ households. Patients in the area were identified as people, including children under 18 years of age. Out of the patients found, at home were treated number of patients _____, and number of hospitalized patients _____.

2. Prenatal and postnatal control

Coverage of pregnant women in the period up to 12 weeks _____ 12-20 weeks _____, 21-30 weeks _____, 31 weeks and more _____.

Number of first births _____, repeat births _____, total, including: 2-3 _____, 4-5 _____ and more than 5 births _____. The number of birth intervals less than 2 years _____, 2 years and more _____.

Number of registered pregnancies during the reporting month

Number of registered pregnancies	Up to 12 months	Registered up to 12 weeks by				Examination by a midwife	HIV		
		Gynecologist	Family doctor	Midwifery	Nurse		Total	Test strip	IFA

Infants who were monitored (1) _____, including: home births (2) _____, were monitored by doctors (3) _____ and nurses (4) during the first 3 days, performed breastfeeding within the first hour (5) _____.

The number of pregnancies was examined by a family doctor _____ and the endocrinologist _____ was examined. The examination conducted by an obstetrician-gynecologist up to 12 weeks gestation _____ 12-21 weeks gestation, _____ 22 weeks gestation and more (01) _____.

The number of immunizations conducted in the service area during the reporting month

BCG vaccine - _____, at maternity unit _____, OPV-0 _____, at maternity unit _____,
Hepatitis B (GB)-1 _____, at maternity unit _____,
OPV-1 _____, OPV-2 _____, OPV-3 _____, IPV _____,
Pentavalent-1 (DPT-1, Hib-1, GB-2) _____, Pentavalent-2 (DPT-2, Hib-2, GB-3) _____,
Pentavalent-3 (DPT-3, Hib-3, GB-4), RV-1 _____, RV-2 _____,
MR-1 (1 year old) _____, OPV-4 (1 year old) _____, BCG vaccine-2 (6 c) _____, BCG-3 vaccine (16 c) _____,
DPT-4 (16-23 months old) _____, DT (6 years old) _____, MR-2 (6 years old) _____

Dispensary ("D") control of patients

List of diseases	Were already registered at "D" at the beginning of the year	Registered for "D" control	Removed from "D" list during the year			Were registered till the end of the year at "D" control	Improvement	
			Total	From these				
				Treated	Changed the address			Death
A	1	2	3	4	5	6	7	8
Total								
Including:								
All types of tuberculosis								
Endemic goiter								
Diabetes								
Chronic rheumatic heart disease								
Essential hypertension								
Ischemic heart disease								
Shortness of breath								
Chronic airway inflammation								
Gastric and duodenal ulcers								
Chronic hepatitis, unknown								
Rheumatoid arthritis								
Nephritis								
Pelvic inflammatory disease								
Anemia								
Hypotrophy								
Rickets								

Name of the family doctor / _____ / _____ phone number _____

Facility head / _____ / _____ phone number _____

“ _____ ” _____ 20 _____

5 Report of Family Medicine Nurse

**REPORT
OF THE NURSE WORKER
FOR THE MONTH _____ OF 20____**

Facility _____
Name _____

3. Visits

Total visits	Visit to health facility		Total	Nurse visit to households		
	From these			From these		
	Independently	For medical services (including immunization)		Providing medical services independently	For the purpose of medical services as prescribed by doctors	Prophylactics and patronage
1	2	3	4	5	6	7

Total visits to _____ households. Patients in the area were identified as people, including children under 18 years of age. Out of the patients found, at home were treated number of patients _____, and number of hospitalized patients _____. Infants who were monitored (1) _____, including: home births (2) _____, were monitored by doctors (3) _____ and nurses (4) during the first 3 days, performed breastfeeding within the first hour (5) _____.

4. Number of registered pregnancies during the reporting month

Number of registered pregnancies	Up to 12 months	Registered up to 12 weeks by				Examination by a midwife	HIV		
		Gynecologist	Family doctor	Midwifery	Nurse		Total	Test strip	IFA

5. Prenatal and postnatal control

Coverage of pregnant women in the period up to 12 weeks _____ 12-20 weeks _____, 21-30 weeks _____, 31 weeks and more _____.
Number of first births _____, repeat births _____, total, including: 2-3 _____, 4-5 _____ and more than 5 births _____.
The number of birth intervals less than 2 years _____, 2 years and more _____.

6. The number of immunizations conducted in the service area during the reporting month

BCG vaccine - _____, at maternity unit _____, OPV-0 _____, at maternity unit _____,
Hepatitis B (GB)-1 _____, at maternity unit _____,
OPV-1 _____, OPV-2 _____, OPV-3 _____, IPV _____,
Pentavalent-1 (DPT-1, Hib-1, GB-2) _____, Pentavalent-2 (DPT-2, Hib-2, GB-3) _____,
Pentavalent-3 (DPT-3, Hib-3, GB-4), RV-1 _____, RV-2 _____,
MR-1 (1 year old) _____, OPV-4 (1 year old) _____, BCG vaccine-2 (6 c) _____, BCG-3 vaccine (16 c) _____,
DPT-4 (16-23 months old) _____, DT (6 years old) _____, MR-2 (6 years old) _____

#	List of conducted educational activities (diseases) among population	Place for conducting discussion and lectures	# of discussions	# of participants	# of lectures	# of participants	Distributed leaflets
	HIV/AIDS						
	Malaria						
	Tuberculosis						
	Diarrhea						
	Typhoid fever						
	Hepatitis						
	Food poisoning						
	Flu						

#	List of conducted educational activities (diseases) among population	Place for conducting discussion and lectures	# of discussions	# of participants	# of lectures	# of participants	Distributed leaflets
	Brucellosis						
	Healthy lifestyle						
	Personal hygiene						
	Sport						
	Smoking						
	Drugs						
	Anemia						
	Iodine deficiency						
	Vitamin A deficiency						
	Cardiovascular diseases						
	Cholera						
	Drinking						
	Burns						

Nurse _____ / _____ / _____

Facility head _____ / _____ / _____

“ _____ ” _____ 20 _____

6 Daily Nurse Report on Patronage

Daily nurse report on patronage

#	Name of the facility	Phone	May 16, 2021																
			# of visited households	# of population	Identified diseases	Acute respiratory diseases	From this children under 18 years old	Other diseases	Pneumonia, total	Pneumonia related to covid-19	Pneumonia after covid-19	Seasonal pneumonia	Home treatment	X-ray	From abroad	School	# of teachers	# of school-children	Teachers 60+ years old
1.																			
2.																			
3.																			
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

7 Monitoring Sheet on Family Medicine Doctors Used in Hissor

MONITORING THE ACTIVITY OF FAMILY DOCTORS

1. INFORMATION ABOUT THE DOCTOR

1a	Name (full)			
1б	Age / Gender		M	F
1B	Phone / E-Mail			
1Г	Location / Position / Work experience			
1Д	Facility / Location			
1e	Qualification level		Specialization	

2. INFORMATION ABOUT THE NURSE

2a	Name (full)			
2б	Age / Gender		M	F
2B	Phone / E-Mail			
2Г	Location / Position / Work experience			
2Д	Facility / Location			
1e	Qualification level		Specialization	

№	Indicators	New report	Registration
---	------------	------------	--------------

3. ACTIVITY OF FAMILY DOCTORS FROM 01.01.2020 TO DATE

Total population	0-1 years old	1-4 years old	5-14 years old	0-14 years old	15-17 years old	18-19 years old	Women of childbearing age	Elderly
3a	Acceptance of patients			Number of registrations at journal:				
3б	Year	Total	Children 0-17 years old		Adolescents and adults			
			Total	Including due to illness	Total	Including due to illness		
	2020							
	3-months 2021							
3B	Household visits			Number of registrations at journal:				
3Г	Year	Total	Children 0-17 years old		Adolescents and adults			
			Total	Including due to illness	Total	Including due to illness		
	2020							
	3-months 2021							
3Д	Percentage of planned visits (not less than 100 percent)							
	Actual number of visits per month Percentage of planned visits = -----x100 = -----x100 that is fulfilled per month% Number of scheduled visits per month, units							
3e	Percentage of planned visits to households (not less than 100 percent)							
	Actual number of visits per month Percentage of planned visits = -----x100 = -----x100 that is fulfilled per month% Number of scheduled visits per month, units							

4. ANALYSIS OF №024 FORMS FOR 20 UNITS PER YEAR (FOR THE YEARS OF BIRTH 2014–2021)

4a	Treatments	In the center	At home
	Doctors		
	Family nurses		
4б	Writing periodic epicrisis		
	-Children under 1 year old every 3 months		
	-Children up to 2 years old every 6 months		
	-Children up to 5 years old every year		
	-Weight, height		
	-Breastfeeding tips		
	-Assessment of visual and auditory organs		

5. CRITERIA FOR COVERAGE OF DISPENSARY EXAMINATIONS

5a	Coverage of people under the dispensary examination (DE) depending on the nosological forms with the help of medical and preventive care, not less than 10% per month. Number of people enrolled for medical and preventive care, at the presence of doctors for dispensary treatment, in one month.	
----	---	--

	Complete coverage of people eligible for medical and preventive = $\frac{\text{Total number of people under dispensary treatment for one month}}{\text{Total number of people eligible for medical and preventive under dispensary treatment}} \times 100$ %									
56	Coverage of children under the dispensary (DM) due to nosological forms with the help of medical and preventive care, not less than 10% during the month									
	Number of people enrolled for medical and preventive care, at the presence of doctors for dispensary treatment, in one month.									
5B	Complete coverage of people eligible for medical and preventive = $\frac{\text{Total number of people under dispensary treatment for one month}}{\text{Total number of people eligible for medical and preventive under dispensary treatment}} \times 100$ %									
	Already registered	Registered	Unregistered				Currently under registration			
			Total	Due to becoming well	Due to changing address	Due to death				
5r	Form 30 and annual epicrisis on dispensary disease and rehabilitation plan									
6. COVERAGE OF PREVENTIVE IMMUNIZATIONS OF THE ALOCATED POPULATION										
6a	Complete coverage of IP = $\frac{\text{Number of people immunized during one month}}{\text{Total number of people who must follow the immunization plan during a month}} \times 100$ in a month, percent									
66	Vaccine	Number of planned	Number of immunized	%	Vaccine	Number of planned	Number of immunized	%		
	BCG-1				Pentavalent-3					
	OPV-0				RV-1					
	Hepatitis B-1				RV-2					
	OPV-1				MR-1					
	OPV-2				OPV-4					
	OPV-3				DPT-4					
	IPV				DT (6 years old)					
	Pentavalent-1				MR (6 years old)					
	Pentavalent-2									
6B	Data consistent in Form 063 with Form 024									
	Number of forms tested	Form 063	Form 024	Immunization journal	Consistent with	Not consistent				
7. Services for women of childbearing age										
7a	Number of women of childbearing age	Under the surveillance	Registered total	including the number of registered pregnant women (%)				Completed pregnancy		Under the surveillance
				Till 12 weeks	12-20 weeks	21-30 weeks	From 31 + weeks	By birth	Abortion	
	Number of births			Homebirths	Homebirths with the presence of medical personnel					
76	Coverage of childbearing age women with contraceptive materials				Intrauterine device					
					Consumables					
					Injectable materials					
					Condom					
8. DISTRIBUTION OF VITAMIN A CAPSULES FOR CHILDREN FROM 6 TO 59 MONTHS										
8a	(whether the planning (request) is done correctly, whether there is a journal for receiving vitamin A capsules and a list of distribution of vitamin A capsules).									

#	Name of the person who conducted monitoring	Signature	Date	Number of the document
1.				
2.				
3.				
4.				
5.				

8 Healthy Lifestyle Center Work Plan**“Agreed”**

Director of the Republican Healthy Lifestyle Center

_____ Muhtarova P.

January 11, 2021

“Approved”

Deputy Chairman of Hissor town

_____ Yuldoshzoda MB.

January 11, 2021

WORKING PLAN

of the Healthy Lifestyle Center’s activities of Hissor town

for 2021 year

№	TITLE OF ACTIVITIES	EXECUTOR	EXECUTION PERIOD	RESPONSIBLE	REMARKS
	1. ORGANIZATIONAL WORKS				
1.1	Collection of detailed report on implementation of planned activities by HLSC Hissor town	HLSC	Quarterly	Director of the Center	
1.2	Analyzing activities of HLSC Hissor town	HLSC	Quarterly Based on report	Director of the Center	
1.3	Submission of the report on HLSC Hissor activities to the administration of Republican HLSC.	HLSC Center	Quarterly Based on report	Director of the Center	
1.4	Preparation of information on urgent orders from government of the Republic of Tajikistan, MoHSP RT, and Republican HLSC	HLSC	Timely	Director of the Center	
1.5	Providing the “Joint plan on strengthening health, disease prevention and developing healthy lifestyle” with the relevant varies departments and health related sub-structures	HLSC	January	Director of the Center	

№	TITLE OF ACTIVITIES	EXECUTOR	EXECUTION PERIOD	RESPONSIBLE	REMARKS
1.6	Collection and analyzing reports based on “Joint plan on strengthening health, disease prevention and healthy lifestyle” with health-related sub-structures	HLSC	Semiannual	Director of the Center	
1.7	Preparing presentations on activities for the HLSCs meetings with directors	HLSC	During the year	Director of the Center	
1.8	Participating at the HLSCs meetings with directors	HLSC	Quarterly	Director of the Center	
1.9	Preparing presentation for the Council Coordination of Hissor town on implementation of “National program of forming of healthy lifestyle in the Republic of Tajikistan for 2021-2025”	HLSC	Fourth quarter of the year 2021	Director of the Center	
1.10	Organizing and conducting Council Coordination of Hissor town on implementation of “National program of forming of healthy lifestyle in the Republic of Tajikistan for 2021-2025”	HLSC	Quarterly	Director of the Center	
1.11	Analyzing of execution of “National program of forming of healthy lifestyle in the Republic of Tajikistan for 2021-2025” in Khuroson district	HLSC	Quarterly	Director of the Center	
1.12	Analyzing of execution of informational and educational parts of other national and health programs	HLSC	During the year	Director of the Center	
1.13	Collection and analyzing of information based on joint plan with relevant health related facilities	HLSC	Semiannual	Director of the Center	
1.14	Analyzing of the infectious situation in town	HLSC	Semiannual	Director of the Center	
1.15	Obtaining information from the district Sanitary and Epidemiological Supervision Service Center on the infectious situation in the district	HLSC	Semiannual	Director of the Center	

№	TITLE OF ACTIVITIES	EXECUTOR	EXECUTION PERIOD	RESPONSIBLE	REMARKS
2. Educational and informational events					
2.1	Participation in organizing seminars in implementation framework of the “Guideline on the partnership with communities on health issues” at the district level	HLSC	According to the instruction of plan implementation	Director of the Center	
2.2	Conduct educational and informational event according to joint plan with respective facilities and health related sub-structures	HLSC	According to a joint plan	Director of the Center	
2.3	Organizing and conducting events according to implementation plan on the “Program prevention of obesity and promotion of healthy nutrition in the Republic of Tajikistan for 2019–2024”	HLSC	During the year	Director of the Center	
2.4	Organizing and conducting educational and informational events in the framework of Strategy on “Expanded Programme for demand for immunization and child health services”	HLSC	During the year	Director of the Center	
2.5	Organizing and conducting educational and informational events in the framework of Strategy on providing information for immunization for emergency use	HLSC	During the year	Director of the Center	
2.6	Organizing and conducting educational and informational events among labor migrants and their family members relating to the prevention of infectious diseases and their safety	HLSC	During the year	Director of the Center	
3. Implementation of the “Guideline on the partnership with communities on health issues”, which is approved by MoHSP RT, order №153 dated March 9, 2017					
3.1	Conducting meetings regarding the “Guideline on the partnership with communities on health issues” at the government of Hissor town level	HLSC	Second quarter	Director of the Center	

№	TITLE OF ACTIVITIES	EXECUTOR	EXECUTION PERIOD	RESPONSIBLE	REMARKS
4. Informational and educational events at the district level					
4.1	Organizing and conducting informational and educational event among population of district to prevent maternal and child mortality	HLSC	During the year	Director of the Center	
4.2	Organizing and conducting informational and educational event among population of district to prevent infectious and non-infectious (non-communicable) diseases	HLSC	During the year	Director of the Center	
4.3	Organizing and conducting informational and educational event according to the joint plan with Committee of Youth and Sport, Center for AIDS Prevention and Control and the fight against infectious diseases in adolescents (HIV, TB, hepatitis A and C, etc...)	HLSC	During the year	Director of the Center	
4.4	Execution of the implementation plan on "Program for prevention obesity and formation of healthy eating habits, designed for 2019-2024"	HLSC	During the year	Director of the Center	
4.5	Implementing the training module on "Interpersonal Communication on Child Immunization"	HLSC	During the year	Director of the Center	
4.6	Organizing and conducting informational and educational event dedicated to international days/various world days	HLSC	During the year	Director of the Center	
4.7		HLSC	During the year	Director of the Center	
4.8	Organizing and conducting informational and educational event among population of Khuroson district about unfavorable/negative impact of consanguineous marriage	HLSC	During the year	Director of the Center	
4.9	Organizing and conducting informational and educational event dedicated to international days/world days in collaboration with other respective authorities and offices	HLSC	During the year	Director of the Center	

№	TITLE OF ACTIVITIES	EXECUTOR	EXECUTION PERIOD	RESPONSIBLE	REMARKS
4.10	Publishing articles on preventing infectious (Coronavirus) and non-infectious (non-communicable) diseases	HLSC	According to a joint plan	Director of the Center	

Director

Yomgurov B.

9 Report of District Hospital

Ministry of health and social protection of the population of the Republic of Tajikistan
Health Department and social protection of the population of Central District Hospital of Khuroson of
Khatlon oblast.

To the Executive Office of the State Authority of Khuroson district.

Report on health activities for the first four months of 2021 in Khuroson district

In hospitalization section– 1 central district hospital and 5 numeral hospitals (#2; #5; #7; # 6; #3) function.
In hospitalization section by the district executive authority of public government 1363,000TJS has allocated for salaries in the first four months of 2021, of which 126,2315 TJS has been spent, that is 93%. 33,930TJS was allocated for material resources and 30,000 TJS was used in procurement, the coverage is 83%.

According to the order by the Government of the Republic of Tajikistan (RT) from 2008.12.02 under # 600 central district hospital was budgeted of 183,333TJS for the first four months of 2021 and 159,663TJS served, the coverage is 87%.

There are 53 medical doctors working as inpatients in the district, including 40 with a professional qualification and 13 young (experienced) specialists. 211 paramedical staff. 121 nurses and 140 other staff. In total there are 525 staff (males-234, females -291) are working.

List of qualification specialists level in the district

	53-medical doctors		211- paramedical staff	
	Qualification	% qualification	Qualification	% qualification
Total number	43	77%	120	56%
High	19	44%	71	59%
First	6	14%	32	27%
Second	18	42%	17	14%

In the first four months of 2021 in hospitalization section of Khuroson district 1.864- patients were hospitalized of which 1.767 got treated and patients in total were hospitalized for 11.010 days and beds coverage makes 41%. The average of hospitalization days -6. The number of mortality was 19 including 9 neonates the age of one (1) week.

In the first four months of 2021 controlled infectious disease have been registered. 15 patients were registered with Acute respiratory disease (ARD) and 6 patients with Acute gastro-intestinal tract diseases (AGIT). 49 dog bites registered. Brucellosis is not recorded.

Currently the number of patients with disabilities are 1.631 in the State of Social Insurance Agency. In the district number of children with disabilities up to age of 18 is 580.

In admission department of the central hospital 2 medical doctors and 17 paramedical staff work. In the first four months of 2021, 479 patients were addressed of which 608 were hospitalized and 75 received emergency medical care. In the department 46 patients had a high fever and were tested for malaria but patients with malaria were not found out.

Surgery department includes 30 beds. In the department 14 medical doctors and 11 paramedical staff work, department consists of 30 beds, including 10 general surgery beds, 10 pediatric surgery beds, 5 trauma beds and 5 urology beds. In the first four months of 2021, 253 patients were hospitalized and 250 got treated, patients in total were hospitalized for 1,844 days and beds coverage makes 56%. In the first four months of 2021 in operation department the number of mortality were 2 deaths were recorded. In total 227 operations were conducted in the department of which 117 were emergency case and 110 were planned. The average of hospitalization days- 8.

Surgery department functions since 2015.01.22 with the order # 600. In the first four first months of 2021, the department provided services amounting to 81,231TJS.

Maternity department consist of 25 beds. In the department 3 Ob/Gy, 1 Pediatrician, 13 midwives, 12 medical nurses.

In the first four months of 2021 in the department, 634 women were hospitalized of which 621 were discharged, patients in total were hospitalized for 2,662 days and beds coverage makes 100%. The average of hospitalization days- 4. In the first four months 567 neonates were delivered (275 girls and 293 boys) of which

120 were delivered by C-sections that is 19%. Number of recorded neonatal mortality up to age of one (1) week- 9.

List of birth and mortality record in the first four months in Khuroson district

Live births	Neonatal mortality	Mortality record					Termination	No. of women received contraception	Home delivery	% of home delivery	% infant mortality up to age of one (1)
		Total	Up to age 1	From age 1 up to 2	From age 2 up to 5	From age 5 up to 18					
1097	6	111	11	2	5	2	7	13682	9	10.3%	9.1%

Pediatrician department consists of 26 bed. In the department 3 medical doctors, 9 nurses work. In the first four months of 2021 in the department 126 patients were hospitalized of which 121 got treated, patients in total were hospitalized for 576 days, beds coverage makes 20%. No. of mortality -5, the current indication in the first four months of 2020 was 12 people. The average of hospitalization days -5.

Gynecology department consists of 10 beds. In the department 1 doctor and 7 medical nurses work. In the first four months of 2021, 67 patients were hospitalized of which 65 got treated, patient in total were hospitalized for 424 days, beds coverage makes 40%. The average of hospitalization days- 6.

Gynecology department from 2021.01.22 by the order #600 started to work. The department in the first four months of 2021- provided services amounting to 18,108 TJS.

Therapeutic department consists of 20 beds. In the department 3 medical doctors and 9 paramedical staff work. In the first four months of 2021, 232 patients were hospitalized of which 220 got treated, patient in total were hospitalized for 1,626 days, efficiency is 74%. No. of registered mortality -3. In the therapeutic department, there are 5 beds for cardiac patients, of which 1 doctor works on 0.5 units. The average of hospitalization days- 7.

Diabetes: There are 218 patients with diabetes in the district, including 21 patients with type one (1) and 197 patients with type 2.

Resuscitation and anesthesia department: In the department 2 medical doctor and 8 nurses work. In the first four months of 2021, 186 patients were hospitalized of which 175 got treated and were referred to other departments. 268 referred to resuscitation department. 268 anesthesia cases were performed, including 105 intravenous, 44 endotracheal and 119 spinal anesthesia. Complications of post-anesthesia was not recorded.

Laboratory: In the district there are five (5) clinical laboratories where 10 lab specialists work. Five of them have high qualification. In the first four months of 2021, blood tests, 1284 urine tests, 992 malaria tests, 159 biochemical tests and 444 parasitic worm tests were conducted in the laboratory and 15 people were infected with parasitic worm.

Ultrasound diagnosis room: In the first four months of 2021, 134 patients were examined.

ECG room: In the first four months of 2021- 283 patients were examined.

RV room: In the first four months of 2021- 1140 patients were examined.

X-ray room: In the first four months of 2021- 305 patients were examined for X-ray.

Blood transfusion centre: In the first four months of 2021, patients received 17 litres, 710 ml, blood and serum -1 litre-570 ml. No. of post-operative morbidity was observed. The centre is provided with 60 refrigerators and required amount of blood is always available.

TB room: In the first four months of 2021, 20 patients were registered with TB and by indication nine (9) of them were with positive TB. In the first four months of 2021, 15 patients were registered of which 8 were positive. Currently there are 174 patients with TB in the district.

Reproductive Health Centre: In the first four months of 2021 in the district the number of deliveries were 1097, home deliveries-9, termination-7, contraception use-13.682 and women in labour-27.796.

Centre for HIV Prevention and Control. In the first four months of 2021 the total number of tested people – 1.909 of which 1.871 were tested with rapid test and 45 were tested with enzyme-linked immunosorbent assay (ELISA). In the first four months of 2021, 4 people were registered. The total number of infected patients in the district is 87. In four months of 2020 the total number of registered infected patients were 3.

Numeral hospital #2 named after J.Rasulov consists of 15 beds. In the hospital 4 medical doctors and 7 paramedical staff work.

Therapeutic department consists of 5 beds and in the first four months of 2021, 35 people were hospitalized of which 35 got treated, patients in total were hospitalized for 340 days, beds coverage makes 62%. The average of hospitalization days -10.

Pediatric department consists of 5 beds and in the first four months of 2021, 30 people were hospitalized of which 29 got treated, patients in total were hospitalized for 283 days, beds coverage makes 53%. The average of hospitalization days -10

Maternity department consists of 5 beds. In the first four months of 2021, 38 patients were hospitalized of which 38 were discharged. In the four months of 2020, 38 number of infants were delivered (19- girls and 19 boys), patients in total were hospitalized for 122 days, beds coverage makes 30%. The average of hospitalization days -3.

Numeral hospital # 3 named after Qizilqal'a consists of 10 beds. In the hospital one (1) medical doctors and 6 paramedical staff work.

Pediatric department consists of 5 beds. In the first four months of 2021, 4 patients were hospitalized of which 3 got treated, patients in total were hospitalized for 16 days, beds coverage makes 3%. The average of hospitalization days-5.

Gynecology department consists of 5 beds. In the first four months of 2021, 14 patients were hospitalized of which 10 got treated, patients in total were hospitalized for 79 days, beds coverage makes 14%. The average of hospitalization days-6.

Numeral hospital #5 named after Mirzorahimov consists of 75 beds. In the hospital, 10 medical doctors and 37 paramedical staff work.

Admission department: In the department 1 medical doctor, 4 medical nurses work. In the first four months of 2021, 1.466 people addressed of which 97 were hospitalized and 134 were provided with emergency services.

Laboratory: In first four months of 2021, in laboratory hospital # 5, 286 blood tests, 286 urine tests, 247 malaria tests and 287 parasitic worm tests were conducted. The no. of infected people with parasitic worm is 62.

Therapeutic department of numeral hospital #5 consists of 20 beds. In the first four months of 2021, 54 patients were hospitalized of which 55 got treated and 683 beds a day, the efficiency of beds is 31%. Mortality case is not registered. The average of hospitalization days-12.

Pediatric department consists of 15 beds. In the first four months of 2021, 79 patients were hospitalized of which 73 got treated and 841 beds a day, the efficiency of beds is 52% there is no mortality. The average of hospitalization days-11.

Infection disease department consists of 25 beds. In the first four months of 2021, 5 patients were hospitalized of which 5 got treated, patients in total were hospitalized for 41 days, beds coverage makes 3%. The average of hospitalization days-8.

Maternity department consists of 15 beds. In the first four months of 2021, 199 women were hospitalized of which 198 got treated. In the department in 2021, 201 neonates were delivered (91 girls and 110 boys), patients in total were hospitalized for 1036 days, beds coverage makes 65% there is no mortality. The average of hospitalization days-5.

Numeral hospital # 6 named after Uljaboev T. consists of 15 beds. In the hospital 2 medical doctors and 7 paramedical staff work.

Pediatric department consists of 5 beds. In the first four months of 2021, 4 patients were hospitalized of which 4 got treated, 44 days and beds coverage makes 8%. The average of hospitalization days- 11.

Gynecology department consists of 10 beds. In the first four months of 2021, 28 patients were hospitalized of which 27 got treated, patients in total were hospitalized for 288 days and bed coverage makes 26%. The average of hospitalization days- 11.

Numeral hospital # 7 named after Navoi consists of 15 beds. In the hospital 1 medical worker and 5 paramedical staff work.

Therapeutic department consists of 10 beds. In the first four months of 2021, 13 patients were hospitalized of which 12 got treated, patients in total were hospitalized for 125 days and beds coverage makes 11%. The average of hospitalization days- 10.

Pediatric department consists of 5 beds. In the first four months of 2021, 3 patients were hospitalized which covered 23 days and beds coverage makes 5%. The average of hospitalization days- 12.

Fayzzoda J.S. Head doctor of Khuroson Central District Hospital.

Health indicators for Khuroson district for 2021.

#	Naming	Unit of measurement	In the years of		Difference +,-
			2020.04	2021.04	
1.	Number of medical facilities	Quantity	56	56	0
	Including rural areas	Quantity	45	45	0
2.	Total number of hospitals	Quantity	6	6	0
	Including central hospitals	Quantity	1	1	0
3.	Numeral hospitals	Quantity	5	5	0
	Number of beds	Quantity	241	241	0
4.	Number of medical doctors	Number	55	53	-2
	Including high qualification	Number	55	53	-2
	Paramedical	Number	188	211	+23
	Surgeons	Number	14	14	0
	Midwives	Number	9	13	+4
	Therapists	Number	3	3	0
	Pediatricians	Number	3	3	0
	Dentists	Number	6	5	-1
	Family medical doctor	Number	20	20	0
	Family nurses	Number	36	36	0
5.	Number of maternities	Number	3	3	0
6.	Number births	Number	1080	1103	+23
	Including live birth	Number	1079	1079	+18
	Neonatal mortality	Number	1	6	+5
	Hospital deliveries	Number	1078	1091	+13
	Home deliveries	Number	6	9	+3
	Women mortality	Number	0	0	0
7.	Number of infectious patients		0	0	0
	Malaria		0	0	0
	Blood test		0	0	0
	Acute gastro-intestinal tract diseases		1	6	+5
	Jaundice		0	0	0
	Brucellosis		0	0	0
	Victims of animal		16	49	+33
	Convulsion		0	0	0
	TB		12	20	+5
	Acute peripheral paralysis		0	0	0
	Acute fever		0	0	0
	Itchy		0	0	0
	Burning		0	0	0
8.	Patients with HIV		4	4	0
	Females		2	3	+1
	Males		2	1	-1
	Children	Up to age of 16	0	0	0

Fayzzoda J.S. Head doctor of Khuroson Central District Hospital.

Report on beds coverage in Khuroson Central District Hospital for March, 2021 (quarter)

Medical facilities	Beds	Annual plan	Quarter plan	Beds day coverage	Implementation	Hospitalized	Discharged	Hospitalization average
Central hospital								
Surgery department	30	9900	3300	1844	56	259	250	7
Pediatric department	26	8320	2773	576	21	126	121	5
Therapeutic department	20	6600	2200	1626	74	232	220	7
Maternity department	25	8000	2667	266	100	634	621	4
Gynecology department	10	3200	1067	424	40	67	65	6
In total	111	36020	12007	7138	59	1318	1277	5
Numeral hospital # 5 named after Mirzorahimov								
Pediatric department	15	8500	1600	841	52	79	73	11
Therapeutic department	20	6600	2200	683	31	54	55	12
Infectious department	25	4800	3400	41	1,2	5	5	8
Maternity department	15	4800	1600	1036	65	199	198	5
In total	75	24700	8800	2601	29	337	331	12
Numeral hospital #2 named after Rasulov J								
Therapeutic department	5	1650	550	340	62	35	35	10
Pediatric department	5	1650	533	283	53	30	29	10
Maternity department	5	1650	533	122	30	38	38	3
In total	15	4850	1616	745	46	103	102	7
Numeral hospital #7 named after Navoi								
Therapeutic department	10	3300	1100	125	11	13	12	10
Pediatric department	5	1600	533	25	5	3	2	12
In total	15	4900	1633	150	9	16	14	11
Numeral hospital #6 named after Uljaboev T								
Pediatric department	5	1600	533	44	8	4	4	11
Therapeutic department	10	3300	1100	288	26	28	27	11
In total	15	4900	1633	332	20	32	31	11
Numeral hospital #6 named after Qizilqal'a								
Pediatric department	5	1600	533	16	3	4	3	5
Therapeutic department	5	1650	550	79	14	14	10	6
In total	10	3250	1083	95	9	18	13	7
Total	241	78620	26772	11061	41	1824	1768	6

Statistician: Vohidova H.

Minutes of Meeting

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Ministry of Health and Social Protection of Population and Republican Centers

PHC Unit of Department for Reform, PHC and International Relations, Ministry of Health and Social Protection of Population

Date	May 25, 2021
Name of the person answers	Bandaev Ilhom
Position	Head

1. Is the tasks/roles of patronage nurse the same as FMN?
Same
2. Is there a written document describing clear scope of work for patronage?
 - Regulation about family nurses
 - Regulation of activity
 - PHC facility should work according to FMN
3. Is it possible for patronage nurse to visit only problematic families? Is it possible for patronage nurse to conduct only necessary things for the family?
Basically No. Because it is decided by regulation.
4. When partronage nurse is working together with staff of Healthy Life Style Center, is there any sharing of roles?
It is possible. But due to shortage of HLC at district level, it is actually not possible.
5. Some FMD wants to work abroad such as Russia, is there any plan to tackle with the issue?
MOH should think about it. There are some ideas such as exchanging agreement with FMD to work at home areas at least three years. We are thinking about increasing their working motivation, and we need to work with ministry of finance.
6. Plan of integration of vertical programs to PHC
In Sogd, it is proceeding as a pilot. We need an international consultant for this matter and we want to learn from other countries' experiences.

8. Documents below available?

Document	Available?
Result of MOHSP survey on prevention of obese in 2017, which mentioned in the "Program for Prevention of Obesity and Promotion of Healthy Nutrition in the Republic of Tajikistan 2019-2024"	See the Official site of MOH
Result of the Feed Cities Survey, an ongoing multi-country study, which describes the urban food environments of cities in central Asia, the Caucasus and south-eastern Europe; the WHO STEP wise approach to Surveillance (STEPS) survey, a simple, standardized method for collecting, analyzing and disseminating data on non-communicable disease (NCD) risk factors; and the WHO European Childhood Obesity Surveillance Initiative (COSI) survey.	Ask WHO

9. Expand plan of MCH handbook?

We understand the importance of MCH handbook in terms of improving health knowledge of mothers, and I think it is a good tool for them for education. As for the expanding plan, it is a matter of family medicine center.

Maternal and Child Health Service, Family Planning,
Ministry of Health and Social Protection of Population

Date	May 22, 2021
Name of the person answers	Nabiev Zoir
Position	Director

No	Question	Answer
1	Situation child malnutrition and obesity	MOH has a pilot district in this matter. MOH has a nutrition project in 20 health facilities in "Jaikhon district". The district is selected as a pilot because the district was a problematic district. We have a report on survey in nutrition in this district, and we can share with you. (However, the survey team could not obtain the report at the end of May.)
2	Situation of utilization of MCH handbook	I, personally think it is necessary to revise the handbook. (But no answer what kind of revision.) He also has an idea that the handbook should distributed not only the handbook itself, but also with IT tool such as monitoring the mother's behavior. If JICA wants to promote MCH handbook, I support to promote the handbook.

Department of Medical and Pharmaceutical Education, Staff Policy and Science, MoHSP RT.

Date	May 15
Name of the person answers	Dr Yusufi Salomiddin
Position	Head

1. Organization structure

This department is directly from the Minister, not under any deputy minister.

There are 27 medical colleges and 11 scientific institutes under this department.

2. Tasks

- Education program
- Post-graduation education
- Research assistance (in terms of editioned commission including journals and thesis, and ethical committees)
- HR of all hospitals (Republican, Oblast and district) (HR of Head of directors of RHC is in charge of PHC manager at district level.)

3. FMD

One FMD should be exist 1,500 population in urban area, and 1,200 population in rural area. Last year, there was only 12 FMD graduated from medical university. (When there was SINO project, there were 30-40 FMD graduate per year.)

As an alternative, MOH is implementing pediatrician and ENT send to 6-months course for training as FMD, then it should be 120-150 FMD produced per year. However, since this course has 3-years compulsory. They can return to work as their own specialist after 3 years.

Salary of FMD is 30% higher than other specialists. (20% higher in urban area.) This decision was made between MOH and MOF.

But according to the director, it is not only FMD has been shortage, other special doctors are also in shortage.

70% of medical students are coming as their own expenses. 30% has scholarship by the government. This 30% students basically cannot decide specialty by themselves. MOH appoints their specialty according to area of shortage.

4. Policy document on increase HR in health
Develop on human resources 2021-2030

5. Refresh training for MD

Every MD has to receive one - month refresher course every 5 years in PGMI or RCFM (family medicine).

6. Actual numbers of MD by specialty

Refer Statistic book by Statistic center

Clinical Training Center for Family Medicine

Date	30 April 2021
Name of the person answers	Rajabzoda Salohiddin Rajab
Position	Director

He is a new director, has been working as a director of FMC since June 2020. Before current position, he had been working as departments of MOHSPP.

He went to Japan (Sapporo) for 1 month as a participants of MCH training by JICA, and he has a good impression to Japan.

1. Organization

Republic FMC (103 staff)

Oblast FMC

Inter-district FMC in Danghara, Kuroson, Shartuz, capital city of GBAO and Hujand

(Not all the district have a branch of FMC.)

2. Responsibilities

1) To train FMD and FMN (family medicine doctors and nurses)

There are 23 kinds and 18 kinds of modules, respectively for FMD and FMN.

In addition, there is 6-months course for both FMD and FMN.

There are 14 courses for capacity building.

From this year, nurses who does not have a certificate of FMN, but working at PHC facilities, can participate in FMN training. PHC manager level can also participate in the training.

2) Development of regulatory documents and laws (Republic FMC)

3. Number of FMD who already received 6-months course

At the moment, 2,403 FMD in the country. Accumulation number of trained FMD was 4,453.

However, it is the number including FMD who resigned.

4. Online training

Aga Khan is conducting online training. Aga Khan established online training center in Rasht.

Nonboring district of Rasht, which are people of Tojikobod, Rahsh, Norobod, Sangvor,

Roghun is coming to Rasht and from there, FMD receives online training from FMC in

Dushanbe.

5. Demarcation of FMC and reproductive health center (RepHC)

Due to shortage of human resource, both centers should be integrated, and FMC should take a lead all the activities at PHC level. (Opinion of the director of FMC.)

Reproductive Health Center

Date	28. 4. 2021
Name of the person answers	Ghanizoda Munira
Position	Director

1. Responsibilities of RepHC

- ✓ Family planning
- ✓ Antenatal care (ANC) (including analysis of indicators)
- ✓ Maternity mortality
- ✓ Capacity building of staff of the centers and PHCs
- ✓ Monitoring

Number of RepHC in the country is as follows;

GBAO 9

Khatlon 28

Sogd 16

Dushanbe 16

DRS 13

Total 86

Indicators are collected every quarter. (Requested to send latest data of indicators.)

Main indicators are

- ANC coverage (pregnant woman who registered before 12 weeks of gestation)
- Home delivery
- Contraceptive usage
- Number of diseases among pregnant woman such as anemia, kidney, goiter, heart, intravascular, intestine, TB, diabetes, and HIV

2. Latest data of ANC visit

1st quarter of 2021.

Country: 90.4%

Khatlon 92.1%, Sogd 92.7, GBAO 87.0%, DRS 83.4%, Dushanbe 98.8%

3. Priorities in Action plan

We put districts which has relatively bad rate of the indicators as high priority area.

4. Problems

- Home delivery still exists
- Adolescent health

We currently noticed that care for teenagers was not enough. Especially for girls. As for boys, they receive health check up when they go for army, but girls do not have chance to receive health check up. Specially, we need urine strips to examine if the girl got pregnant or not.

We need to cover health check up for special age groups. Also we need to development of capacity for specialist of adolescent health.

5. Impact of COVID-19 for pregnant women at PHC level

Many pregnant women were feeling fear of visiting health facilities due to possibility of getting infected. Therefore, rate of ANC decreased, and home delivery case increased at the beginning of pandemic. I decided to show up the TV program to promote pregnant women to go to health facilities without a fear. I shoot many TV program and encouraged women to go to the health facilities.

Immuno-prophylaxis Center

Date	May 22
Name of the person answers	Dr. Samadzoda
Position	Director

He showed up after 20 minutes from appointment time, and told me that he only had a short time for answering the questions.

No	Question	Answer
1	Situation of EPI service (immunization rates)	We have a report on Immunization rate by district, and I can show you it later. (However, we could not obtain it at the end of May.)
2	Problem of EPI in Tajikistan	<p>The biggest problem is a gap between report and actual practice. At site, immunization is not implemented actually, but the health staff write the report as it is complete.</p> <p>The immunization data is not correct.</p> <p>I know the actual practice at site. There are a lot of mother who does not want baby to get immunization. Generally, health staff cannot convince these mothers, and write the report as immunization is conducted.</p> <p>I and my staff visited 65 districts for far for monitoring of immunization and we found that vaccine was still stocked in refregirator. We asked the reason. Health staff explained that the above story.</p> <p>Most problematic districts are Hissor, Vahdat., Roghun, Rahit, Rudaki, and Sangvor.</p>

Healthy Lifestyle Center

Date	30 April 2021
Name of the person answers	Parvina
Position	Director

1. Organization structure

Healthy Lifestyle Center (HLC) was established in 2000.

Republic HLC (49 staff)

Oblast HLC (19 staff, 5 positions are vacancy)

District HLC (1 staff at each district)

2. Most related law/regulation

National Program on Health Lifestyle

Guideline on Partnership with Community in Health Issues

3. Professions of the staff

Medical doctors and nurses in epidemiology, public health, pediatrician and ObGy

Journalist

Education staff (teachers) in conducting TOT

4. Responsibility

There are 5 departments in HLC.

1) Analytical dept.

Data collection

2) Education dept.

Planning of educational activities jointly with schools, kindergartens, and universities

3) Prevention dept.

Prevention of infection and NCDs by producing visual materials

4) Migration dept.

Providing information on health for internal and external migrants. Working with Ministry of Labor and Migration service committee.

5) Communication dept.

Working with mass media, journalists, and developing video and TV program.

5. Main international partners

Aga Khan and Abt.

There are no donors in Tursunzoda, Shahrinan, Hissor, Vakhdat, Khovaling, Baljuvon, Muminobad, Shezod.

6. Activities at community

Working with community volunteer and PHC facilities (Family doctors and nurses).

There is a Health Community Groups consisted by volunteers. They work to change health behavior of population.

7. Health check up for early detection of NCDs

No system. At the moment, conducting and receiving of health check up is responsibility of PHC facilities and community people.

Healthy Lifestyle Center (Republican), 2nd visit

Date	14 May 2021
Name of the person answers	Dr Mukhtorova Parvina
Position	Director of the Republican Healthy Lifestyle Center of the MoHSPP RT. Other participants: Dr Pirov Davron, Deputy Director Dr Anvarova Surayo, Head of the Department of Internal and External Migration

1. History

- HLC was established in 1999 with assistance by ADB. Its model was Kazakhstan's "National Center for Healthy Lifestyle Development". In 2002, oblast level HLCs were set up.
- In the beginning, MOH focused on the treatment. Gradually they shifted its focus to the side of prevention and paid more attention to how to approach community people.
- Almost 10 years since the establishment, HLC spent a lot of time to develop regulations and secure budget. Since 2010, MOH assigned HLC to manage 1st national program. At present they are in-charge of 3rd national program (2021-2026), which emphasize on the prevention of infectious and non-infectious disease under the influence of COVID-19. Roles of community became more and more important.

2. Oblast & district level HLC

- In 2002, oblast level HLCs were set up.
- According to the financial situation, there are some extent of flexibility in the organization structure of HLC at province/district level. Some centers are part of district PHC. Some are independent and have own budget.
- Some staffs are working as part-timer.
- Some province/districts develop original teaching materials.

3. Organizations at Republican level

- HLSC has Resource center, Public Relations and Analytical departments.
- HLSC collects monthly report by regions through Oblast. Analytical department is in-charge of data analysis on a quarterly basis. Sughd shows better performance than other oblast, probably because their education level is high, and local women are economically and socially active.
- HLC follows National Strategy until 2030 and on developed "Guideline on Partnership with Communities on Health Issues".

3. Assistance by donors

ADB

- ADB conducted TOT which covers topics of communication, first 1000 days, immunization, NCD etc. Two persons from HLC joined in the TOT.
- Director and Deputy Director of HLSC did not see the results of baseline survey of ADB, which is conducted Nov. 2020. They said that their resource center is in-charge of reviewing reports by donors.

USAID

- Originally Swiss Development Corporation (SDC) supported to make guidelines on the methods to approach community people. USAID took over their activity since 2020. They are going to provide training of district personnel in 12 districts by Abt.
- In the year of 2021, they start training in 4 districts (Jomi, Balkhi, Yovon, Khuroson). They will start 10-days TOT on May 18th. Orientation was held before the Ramadan.
- 10-days TOT is targeted to health staff at district level. After that, 5 days training will be held for RHC doctor and nurses, who are to be members to approach community.

Donor coordination

- MOH has a meeting with donors biannually. HLC participates in the meeting as a part

of MOH. HLC itself does not organize meetings with donors but they feel the necessity of it.

Expected supports by JICA in the future

If JICA and assist training of district staff with SDC guidelines in the districts where donor assistance is not available, it will be very helpful.

Scaling up Nutrition (SUN)

Date	14 May 2021
Name of the person answers	Dr. Sherali Rahmatulloev
Position	Member of the SUN coordination council

1. Structure of SUN

- Tajikistan joined in SUN in 2013. There are 43 members in the coordination council of SUN, including related ministries, institutions and donors. The member list is updated every year. The latest update was April 2021.
- Although 4 persons are listed as members of SUN secretariat, there are no full-time staff.
- Nutrition improvement and food safety are priority issues for Tajikistan government. However, involvement of other sectors in nutrition improvement is not strong enough. In order to strengthen involvement by other sectors, the government appointed Deputy Minister, Ministry of Health and Social Protection as a focal person of SUN.
- There is no SUN representative at Oblast level.

2. Recent activities in the nutrition sector

- Multisectoral Plan of Action for Nutrition (2021-2025) was developed with an assistance by UNICEF. (Soft copy of English version was obtained.)
- They have quarterly meeting with coordination council members. The latest one was held on March 16, at Serena hotel, with the support by UNICEF.
- SUN Tajikistan is planning to hold an online regional meeting with central Asian countries to celebrate 30th anniversary of independence.
- The government of Tajikistan will start financing to school feeding program in pilot districts this year.
- MOH has a plan to develop training program for nutrition specialist, as a post graduate course after medical school. They will send 5 eligible doctors abroad to develop facilitators for the program.

3. Expected supports by JICA in the future

- MOH appreciated JICA's support to MCH handbook. It was distributed to the pilot 14 districts by WB and 12 by UNICEF. They are happy to have JICA's support to the rest of the districts.

- MOH had a survey on Micronutrient Status Survey in Tajikistan in 2003, 2009, 2016. They planned to conduct a next Micronutrient Status Survey in 2020 but it was postponed. They need an external assistance to it.

Tajikistan enacted Food Fortification Law recently. They need an external assistance to improve existing food factories to produce fortified products.

State Institution “Republican Center for Protection of the Population from Tuberculosis”

Date	29. 04. 2021
Name of the person answers	Rajabzoda Aslidin
Position	Director

PHC providers play an important role in TB by following one of the four tasks:

1. Detection. 90% of *TB detection* is primarily taking place in *Primary Health Care (PHC)*.
2. Referral
3. Control
4. Prevention.

TB specialist.

1. there is about 1 TB specialist per district and physically he/she does not have time to follow on all patients, calculating medication dosage by weight, etc... There are cases when the drugs are given for patients to take, however, when the patients feel better, they stop taking the drugs as prescribed for 6 months.
2. the patients become burden by out-of-pocket spending for additional supplements, such as vitamins, liver protectors, etc... The institution's budget is very low for providing such supplements. For example the main institution based in Dushanbe receives only about 20,000-30,000 TJS per year for this type of activity.

Donors:

1. USAID
2. Global Fund
3. State Institution “Republican Center for the Formation of Healthy Lifestyle”
4. Medecins Sans Frontieres

TB drugs and reagents:

1. 1st line – last three years is purchased by the government.
2. 2nd line – purchased by the Global Fund
3. Lab reagents purchased by the government and the Global Fund.

TB programs:

1. *in 1998-2001, the TB DOTS program started in Tajikistan by USAID/CAR.*
2. *Tuberculosis Control Program for 2003-2010.*
3. *National Programme for Tuberculosis Protection of the Population of the Republic of Tajikistan for 2010–2015.*
4. *Protection from Tuberculosis in the Republic of Tajikistan for 2015-2020.*
5. *Protection from Tuberculosis in the Republic of Tajikistan for 2021-2025.*

Equipment:

1. there are 56 GeneXpert for molecular test for TB – the reagents are provided by the Global Fund, which is costs 12 USD/person.
2. there are about 100 modern X-ray apparatus.

The decrease of TB prevalence - the main reasons are:

1. less migrants entering the country due to the closed borders that lowered the speed and incidence of infection;
2. covid-19 treatment protocol contained the medicine that are belong to the 2nd line anti-TB drugs such as levofloxacin, azithromycin;
3. people wearing masks, seeing doctors/nurses regularly.

Statistics:

#	District	Incidence of TB (per 100,000 people)	Death of TB (per 100,000 people)
	Khuroson	31.3	0.9
	Jomi	46.6	2.3
	Dusti	34.8	0.9
	Temurmalik	40.4	1.4
	Kushoniyon	44.0	2.1
	Vahkdat	43.0	0.9
	Hissor	45.9	1.0
	Tursunzoda	29.1	1.0
	Shahrinnav	23.4	1.6
	Rogun	34.2	2.3
	Sangvor	39.0	0.0

Priority:

1. Improved nutrition / food assistance

Country has 1500 beds. The biggest hospital "Machiton" located in Vahdat district has 420 beds and provides 16 TJS per patient meal per day. In other districts it could be 1 TJS per patient meal per day. Until 2019, the Global Fund provided food assistance up to 250 TJS for each TB patient via their bank accounts.

Supplements – vitamins, liver/hepatic protectors, etc...

**Integrated Management of Childhood Illness (IMCI) Center
In Institute Scientific Clinical Pediatric and Surgery for Children**

Date	28. 04. 2021
Name of the person answers	Ikromov Turakhon Sharbatorich
Position	Director

1. Structure

9 professor and 10 assistant professor conduct research in the following areas of the children 0-5 years: Nutrition, anemia, pneumonia, obesity, malnutrition, disabled, kidney stone. Also they conduct case review of the children 0-18 years.

There are 15 department in the institute including 12 clinical department.

2. IMCI training situation

Since March 2020, all IMCI trainings have been stopped due to COVID-19. Before the time, this institute provides IMCI training to entire country. IMCI training is 6-days package and 25 health workers are trained at once. The training is consisted by theoretical part as well as practical part.

They also provide TOT training on IMCI for the Oblast level. After the training, they conduct monitoring.

In Dushanbe, all the facilities have been already covered to receive the training. As for country level, about 70% have been covered although there is no exact register which states who have been received the training.

3. Problems in IMCI training

As it is mentioned above, registration system of the health worker does not exist. Currently, ICAT (Integrated computerized Adopted Training) is being implemented so they hope the registration system will be computerized in the future.

4. Good practice of mothers to take care of babies in Tajikistan

Nutrition practice for babies is good in Tajikistan. Mothers usually know what should give to babies.

5. Challenge practice of mother to take care of babies in Tajikistan

Drinking water is not clean. When feeding babies, mothers cannot give food with clean bottles.

Institute of the Post Graduate Education of the Medical Personnel

Date	April 26, 2021
Name of the person answers	Muhiddinzoda Nuriddin
Position	Director

1. System of Post Education for medical personnel

Providing post education for 80 kind of specialities including nurses.

There are some training course.

1-month training course for MD and nurse

6-month training course for MD and nurse after 2-5 years of working, every 5 years.

As for family medicine doctors, the system is the same as other MDs.

As special treatment for family medicine doctors, they provide 650 TJS per month during residency.

Online education system is now developing in KT and Hujand as trial by ICAP (in USA).

Education system is necessary to get approval Ministry of Education, therefore, after the approval, it will become official education method.

Budget for the post-education is enough because it is secured by government budget.

However, it is welcome donor's cooperation.

Avicenna Tajik State Medical University

Date	April 26 2021
Name of the person answers	Jamshed Dekhoev
Position	Head of International Relation Dept. & Prof. of Pediatric Dept.

1. System of becoming family medicine doctor

After 6 years of medical school, they get diploma of MD. After that, 2 years residency for 2 years working at health centers appointed by MOH. After that, 2-4 years working at health centers as family medicine doctor, then, becoming a specialist.

2. Popularity of specialist of family medicine doctor

Less popular.

Popularity of specialist in Tajikistan is surgery, ObGy, cariology, oncology, and traumatology, while family medicine doctor is not a popular as specialty. Only 5-10% students want to be family medicine doctor.

3. Any person who encourage student become family medicine

There is a department of family medicine in the university. Mrs. Yodgorova Maytambi is the head of the department. She encourages students to become family medicine doctor.

District Hospital

District (Rayon) Hospital (Name: Dusty)

Date	May 18, 2021
Name of the person answers	Razokov Mansur (service delivery) Bekmurodov Bakhtiyor (MCH)
Position	Deputy of Head

Overall information of the facility

CDH -1

Numeral hospital – 4

Center of dermatology

No	Question	Answer
1	Cathment population	122 000
2	Total number of bed	220
3	Total Number of medical doctors in District	186 (including 12 doctors in numeral hospital)
3.2	Number of medical doctors in this hospital	186
3.3	Medical doctor's specialty of the hospital (circle)	X Surgery, X Therapeutic, X Ob/Gy, X Infection, X Pediatric, X Reanimatology, (No) Endocrinologist, Anesthesiology (NO) Cardiology, X ENT, (NO) Neurology, (NO) Psychology, Yes Laboratory Urology,, Proctology, child surgery
4	Total Number of nurses in District	271 (including numeral hospital,
4.1	Number of Nurses in this hospital	233
5	Number of total inpatients in 2020	7305
		252 patients for 4 months of 2021
5.1	Only in in-patient in the hospital?	() yes (X) No Also see outpatient while came by ambulance or admit to hospital with complaints

Number of in-patient

NA, but there is a data on every department for inpatients

2020

Surgery 471

Pediatric 1223

Therapy – 539

Cardiology 127

2021 (4 months)

Surgery 198

Pediatric 347

Therapy – 181

Cardiology 13

Health service delivery

No	Question	Answer
1	What kind of equipment for Diagnosis of NCDs (cardiovascular and diabetes) are currently available? (circle)	Laboratory, ECG, Ultrasound, X-ray digital If there is other equipment (physiotherapy, ergometria, Doppler US, ophthalmoscope, otoscope)
2	What kind of diagnosis of nutrition-related disease are currently available?	Weight scale YES Height scale YES Other ()
3	Is cancer treatment provided in this hospital?	Not, all referred to national or oblast hospital
5 (skipped No 4 question)	What percentage of the patients referred from health centers?	Direct (self-referral) 80 % Referred from PHC 20 %
6	To where the patients are referred if they cannot be treated here?	Oblast level hospitals First call for oblast team to make decision
7	What equipment is necessary to make diagnose of NCDs more?	CT, MRI
8	How to monitor NCD patients after discharging the hospital?	Send information to PHC with prescription List of actions for follow up during home and

		patronage visit
9	What is the criteria to refer NCD patient? No equipment available?	Complexity of disease and not clear diagnose
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	Yes 1 doctor is responsible (head of pediatric department responsible, organize the kitchen for preparing food, Oblast Administration distributed the formula (therapeutically food) for feeding

At cardiology department

No	Question	Answer
C1	How many in-patient are here at the moment?	13
C2	What is the highest number of the in-patient?	Hypertension Heart attack
C3	What is the percentage of male patient?	Male 40 % Female 60 %
C4 If female patient is more in number	What is the reason of less number of male patient?	Can't respond

At pediatric department

No	Question	Answer
P1	How many in-patient are here at the moment?	25
P2	What is the highest number of the in-patient? (Circle)	Malnutrition 3 Diarrhea - 10 ARI - 6 Other (anemia - 5)
P3	What do you think about mother's knowledge towards prevention of diarrhea and malnutrition?	On malnutrition limited knowledge (how to cook the food) But good understating of diarrhea among mothers
P4	What kind of advise to mothers to prevent diarrhea and malnutrition during admission to the hospital?	On nutrition – DON'T use of bottle, breastfeeding, how to feed children Hygiene for diarrhea, more liquor

District (Rayon) Hospital (Name: Hissor)

Date	May 17
Name of the person answers	Dr. Azamov
Position	Deputy

Overall information of the facility

No	Question	Answer
1	Cathment population	
2	Total number of bed	283
3	Total Number of medical doctors in District	
3.2	Number of medical doctors in this hospital	94
3.3	Medical doctor's specialty of the hospital (circle)	<input type="radio"/> Surgery, <input type="radio"/> Therapeutic, <input type="radio"/> Ob/Gy, <input type="radio"/> Infection, <input type="radio"/> Pediatric <input type="radio"/> Reanimatology, <input checked="" type="radio"/> Endocrinologist, <input type="radio"/> Anesthesiology <input type="radio"/> Cardiology, <input type="radio"/> ENT, <input type="radio"/> Neurology, <input type="radio"/> Psychology, <input type="radio"/> Laboratory (Be)
4	Total Number of nurses in District	
4.1	Number of Nurses in this hospital	280
5	Number of total inpatients in 2020	10,055
5.1	Only in in-patient in the hospital?	(<input type="radio"/>) yes (<input type="radio"/>) No

Number of in-patient

Inpatient

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	774	871	868	924	639
2	Diabetes	105	102	92	97	81
3	Cancer					
4	Malnutrition (child)	20	26	41	40	35
5	Anemia	1240	1230	1226	1227	1238

Health service delivery

No	Question	Answer
1	What kind of equipment for Diagnosis of NCDs (cardiovascular and diabetes) are currently available? (circle)	Laboratory, <input type="radio"/> ECG, <input type="radio"/> Ultrasound, <input type="radio"/> X-ray, <input type="radio"/> CT, <input type="radio"/> MRI There are some private clinic which have ultrasound, the patients go there when necessary. If there is other equipment ()
2	What kind of diagnosis of nutrition-related disease are currently available?	Weight scale <input type="radio"/> Height scale <input type="radio"/> Other ()
3	Is cancer treatment provided in this hospital?	No (Patients go to oncology center in Dushanbe.)
5 (skipped No 4 question)	What percentage of the patients referred from health centers?	Direct (self-referral) 70 % Referred from PHC 30 %
6	To where the patients are referred if they cannot be treated here?	Normally, doctors come from Dushanbe.
7	What equipment is necessary to make diagnose of NCDs more?	Doppler for US, MRI, Electric encephalogram
8	How to monitor NCD patients after discharging the hospital?	After discharging from Dist Hosp, the patient will be registered at RHC or HH in his area. After 20 days, he will come to district hospital for follow up. Or FMD keeps seeing the patient, and if his condition is getting worse, FMD sends him to district hospital. Insulin is free of charge.
9	What is the criteria to refer NCD patient? No equipment available?	MOH guideline exists.
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	Mostly by FMD. FMD is giving advice to prevent malnutrition and obesity.

At cardiology department

No	Question	Answer
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C1	How many in-patient are here at the moment?	12 patients (total 45 beds)
C2	What is the highest number of the in-patient?	High blood pressure, cardiovascular, diabetes, pancreatitis, intestinal diseases, anemia
C3	What is the percentage of male patient?	Male 40 % Female 60 %
C4 If female patient more number	What is the reason of less number of male patient?	The reason is that when a woman becomes a mother, her child's health comes first, so she puts herself off.

Diabetes (DM): There were about 200 patients in Soviet time. Now, the number of patient increased to about 16,000.

Moreover, in Soviet era, there was regular health check ups in school, working places, and factories. However, there is no such regular check up system now.

These days, since the number of family which is worry about keeping status of life is increased, mental health became one of the issues.

As for NCDs, people in Tajikistan take a lot of carbohydrate, the director is worrying about if this food culture is one of the reasons to increase NCDs.

At pediatric department

No	Question	Answer
P1	How many in-patient are here at the moment?	10patients in 30 beds
P2	What is the highest number of the in-patient? (Circle)	No problem Malnutrition (In 2020, there were 35 malnutrition children and one died.) No1 is ARI. No. 2 is Diarrhoea (Reasons are no quality drinking water and drinking river water.) Other ()
P3	What do you think about mother's knowledge towards prevention of diarrhea and malnutrition?	Conducting education as for the followings. Breast feeding Prevention of infection
P4	What kind of advise to mothers to prevent diarrhea and malnutrition during admission to the hospital?	Prevention of anemia Prevention of malnutrition Immunization

		Hygiene Mothers are good listener. However, doctors are not sure how much they understand because they are not well educated.
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Before, school teachers were also volunteers for health. But for this couple of years, there are no volunteers.

District (Rayon) Hospital
(Name: Roghun Central City Hospital)

Date	May 24, 2021
Name of the person answers	Akobirov Bakhtovar
Position	Head of Central City Hospital

Departments: Internal diseases, Pediatric, Maternity and Gynecology, Surgery and reanimation

Overall information of the facility

No	Question	Answer
1	Catchment population	46000 of entire Roghun rayon
2	Total number of bed	78 beds in Central City Hospital (in Obygarm hospital is 98 beds, before it was a Central Rayon Hospital, that's way there are big hospital in Obygarm, also hospital in Obigarm easy to access from other rayon health facilities)
3	Total Number of medical doctors in District	15 (6 in hospital of Obygarm) Lack of doctors is 32 (PHC and hospital staff working for both facilities)
3.2	Number of medical doctors in this hospital	9 doctors
3.3	Medical doctor's specialty of the hospital (circle)	Surgery, Therapeutic, Ob/Gy, Infection, Pediatric Reanimatology, (No) Endocrinologist, Anesthesiology (No) Cardiology, (No) ENT, (No) Neurology, (No) Psychology, (No) Laboratory, Urologist
4	Total Number of nurses in District	96 (including 48 in Obygarm)
4.1	Number of Nurses in this hospital	48
5	Number of total inpatients in 2020	1875 (including 789 in Central City hospital)
5.1	Only in in-patient in the hospital?	(X) yes () No No ambulatory patients

Number of in-patient

Inpatient

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular disease					84 (including 56 with hypertension)
2	Diabetes					16
3	Cancer					0
4	Malnutrition (child)					5
5	Anemia					16

By hearing, no data available by diagnoses from narrative report.

Internal diseases department – 183 patients

Same building (both hospital and PHC in same building of 4 floors)

Health service delivery

No	Question	Answer
1	What kind of equipment for Diagnosis of NCDs (cardiovascular and diabetes) are currently available? (circle)	Laboratory (poor,) ECG (Yes, 3, one not functioning, Ultrasound (Yes, 3, one not functioning, X-ray (1 portable), CT, MRI (No) If there is other equipment (No)
2	What kind of diagnosis of nutrition-related disease are currently available?	Weight scale Yes (2 for children no for adults) Height scale Yes (2, old since soviet time) Other (No)
3	Is cancer treatment provided in this hospital?	No (as no specialist and CDH should refer patients with cancer to specialized cancer hospitals in Dushanbe)
5 (skipped No 4 question)	What percentage of the patients referred from health centers?	Direct (self-referral) 65 % Referred from PHC 35 %
6	To where the patients are referred if they cannot be treated here?	To Dushanbe specialized Centers
7	What equipment is necessary to make diagnose of NCDs more?	ECG, cardiomonitor, For maternity infant incubators, warmer Lab analyzer
8	How to monitor NCD patients after discharging the hospital?	By PHC and call to come in certain period of time
9	What is the criteria to refer NCD patient?	No doctors (oncologist) No Lab

	No equipment available?	Severity of diseases Unclear diagnose
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	No, but pediatrician passed training on therapeutic treatment

At cardiology department NO department – internal diseases

No	Question	Answer
C1	How many in-patient are here at the moment?	3 (1 in Obygarm)
C2	What is the highest number of the in-patient?	Up to 20 patients High blood pressure More then 80 % with hypertension
C3	What is the percentage of male patient?	Male 40 % Female 60 %
C4 If female patient more number is in	What is the reason of less number of male patient?	More stress Prevalence of obesity among women Etiology, among women the hypertension more prevalent

At pediatric department

No	Question	Answer
P1	How many in-patient are here at the moment?	2
P2	What is the highest number of the in-patient? (Circle)	Up to 5 Malnutrition (very less number) Diarrhoea (most cases) ARI (seasonable) Other ()
P3	What do you think about mother's knowledge towards prevention of diarrhea and malnutrition?	Moderate EIC available
P4	What kind of advise to mothers to prevent diarrhea and malnutrition during admission to the hospital?	Hygiene Hand washing Healthy nutrition

In 2020 in comparison with 2019 number of diarrhea decreased.

**District (Rayon) Hospital
(Name: Sangvor CDH)**

Date	May 21, 2021
Name of the person answers	Saidov Rajabaly
Position	Head of CDH

Population of district – 23350

2 numeral hospitals (Jildara and Myionadu)

Departments in CDH:

- Surgery
- Pediatric
- Maternity
- Therapy
- Infection
- Ward for emergency care

JICA has been constructed an infection department for 24 beds in CDH which was recently opened by Ambassador of Japan.

Overall information of the facility (CDH)

No	Question	Answer
1	Cathment population	23350
2	Total number of bed	70 beds Jildara – 20 beds Moynadu – 30 beds
3	Total Number of medical doctors in District	14 doctors
3.2	Number of medical doctors in this hospital	8 doctors in CDH
3.3	Medical doctor's specialty of the hospital (circle)	(2) Surgery, (1) Therapeutic, (1) Ob/Gy, (1) Infection, (1) Pediatric (NO) Reanimatology, (No) Endocrinologist, Anesthesiology (No) Cardiology, (No) ENT, (No) Neurology, (No) Psychology, Laboratory (1 doctor) Lack of doctors – 10 of different specialties
4	Total Number of nurses in District	
4.1	Number of Nurses in this hospital	24 (excluding numeral hospitals, below # for them 9 nurses in numeral hospital Childara

		4 nurses in numeral hospital Mionadu
5	Number of total inpatients in 2020	1221 inpatients in total for entire rayon Myonadu 337 Childara 205 For CDH – 679
5.1	Only in in-patient in the hospital?	(X) yes (X) No Have ambulatory patients to follow up the discharged patients

Several doctors from Health center works for hospital too on contract base

Number of in-patient (only data for 2020 available)

Inpatient

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				NA	5 (ischemic), 1(infarct) 37 hypertension
2	Diabetes				NA	8
3	Cancer				NA	0
4	Malnutrition (child)				NA	14 ARI 14 diarrhea 16 malnutrition (child)
5	Anemia				NA	0
					NA	28 with respiratory diagnoses 21 with digestive system diseases, 26 with urine tract diseases

Distribution of patients 2020 by departments in CDH

- Therapy department: 120 patients
- Pediatric department: 42 patients
- Infection department: 39 patients
- Surgery department: 160 patients
- Maternity department: 322 patients

Health service delivery

No	Question	Answer
1	What kind of equipment for Diagnosis of NCDs (cardiovascular and diabetes) are currently	(1) Laboratory (no biochemical, only express tests, general blood and urine tests), (1) ECG, (1) Ultrasound, (1) X-ray, (No)CT, MRI

	available? (circle)	If there is other equipment (oxygen concentrator)
2	What kind of diagnosis of nutrition-related disease are currently available?	Weight scale (2) Height scale (2) Other (Yes, length measurement tap)
3	Is cancer treatment provided in this hospital?	NO Only dispensary observation done by PHC
5 (skipped No 4 question)	What percentage of the patients referred from health centers?	Direct (self-referral) 20 % Referred from PHC 80 %
6	To where the patients are referred if they cannot be treated here?	Dushanbe national hospitals
7	What equipment is necessary to make diagnose of NCDs more?	Biochemical analyze, ECG, Echography, digital X Ray, ambulance car, US, defibrillator, vacuum, cardio monitor, for sugar testing device Coagulator for surgery
8	How to monitor NCD patients after discharging the hospital?	Follow up by PHC, inform PHC, make appointment to visit hospital specialists, Giving health advices Register as risk group
9	What is the criteria to refer NCD patient? No equipment available?	No Lab, no specialists Unclear diagnose Yes
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	No such staff

At cardiology department (no cardiology department, all patients in therapy department)

No	Question	Answer
C1	How many in-patient are here at the moment?	4 with hypertension 2 with diabetes
C2	What is the highest number of the in-patient?	High blood pressure 8
C3	What is the percentage of male	Male 20 %

	patient?	Female 80 %
C4 If female patient more number	What is the reason of less number of male patient?	Obesity

At pediatric department

No	Question	Answer
P1	How many in-patient are here at the moment?	2
P2	What is the highest number of the in-patient? (Circle)	Malnutrition 2 Diarrhea 4 ARI - 7 Other (with high temperature, urine diseases)
P3	What do you think about mother's knowledge towards prevention of diarrhea and malnutrition?	Very low
P4	What kind of advise to mothers to prevent diarrhea and malnutrition during admission to the hospital?	There is a therapeutic feeding How to feed children, physical activities

CME for health workers prefer to do by using distant learning method as expensive to travel and stay in Dushanbe

**District (Rayon) Hospital
JOMI**

Date	May 4
Name of the person answers	Dr. Nuralizoda Alihanjon
Position	Director
Contact number	905751000

Overall information of the facility

No	Question	Answer
1	Cathment population	180,000
2	Total number of bed	226
3	Number of medical doctors	46 Surgery, Pediatric, ObGy, Infectionist, ENT, Noenatology, Reanimation, Cardiology, Urology, Traumatology, Neuropathology
4	Number of nurses	168
5	Number of total inpatients in 2020	8,626
6	Number of total Outpatients in 2020	No outpatient

Number of inpatient and outpatient

Health facility reports of divisions for 12 months, 2020												
Wards/departments 12 months 2020	Bed	from Village	Child up to 17 years old	Transferred from another department	Death	Bed per day	Discharged	Deaths, percent	Bypassing beds	Average treatment	Bed occupancy, percent	Bed occupancy
Surgical	587	534	231	117	1	6451	598	0.2	15	11	52	161.3
Pediatric	473	447	473	66		4338	518		17.3	8.3	46.3	144.6
Reanimation	173	170	81	145	32	1168	55	10.8	9.2	21.2	62.4	196
Internal medicine	158	130		7	1	1054	166		8.4	11.6	31.3	97.7
Infectious diseases	404	356	71		4	3121	402	1	13.4	8	38	104
Misakifary	3953	3582		70		13773	4036		100.9	3.4	115	344.3
Pathology	312	284				1327	231		46.2	5.7	88.5	265.4
Urology	271	243				2387	278		18.5	9	51	159.1
ENT	356	328	202			3816	350		14	10.9	48.9	152.6
Cardiology	202	186		11	2	2243	204	1	13.6	11	52.3	149.5
Maternity	361	287				2608	366		24.4	7.1	55.7	174
Total	7250	6556	1058	417	40	43186	7206	0.5	289	6	57.4	179.2
Numeral hospital #4	344	344	88			2233	342		17.1	6.5	34.2	112
Numeral hospital "Mehnat"	493	493	179			2344	493		25	5	39.1	117.2
Numeral hospital #3	539	539	14			1352	539		27	2.5	22.5	67.6
Total	1376	1376	281	0	0	5929	1374		22.9	4.3	32.9	98.8
Total for district	8626	7932	1339	417	40	49115	8580	0.4	28.5	5.7	52.3	163.2

**District (Rayon) Hospital
Kuroson**

Date	May 7
Name of the person answers	Dr. Faizzoda
Position	Director

15 RHCs and 31 HHs

Overall information of the facility

No	Question	Answer
1	Cathment population	120,000
2	Total number of bed	111
3	Number of medical doctors	District total 56 District total 36 Surgery, Therapeutic, ObGy, Infection, Pediatric Endocrinologist, Reanimatology, Anestatology Psychologist, Neurology, Cardiology, Lab, ENT
4	Number of nurses	District total 215 District hospital 132
5	Number of total inpatients in 2020	(There is a report, but not known now.)

Number of inpatient

No	Disease	2016	2017	2018	2019	2020	2021
1	Cardiovascular diseases	58	45	52	62	58	16
2	Diabetes	23	28	19	29	61	16
3	Cancer	0	0	0	0	0	0
4	Malnutrition (child)	14	4	36	40	38	8
5	Anemia	15	18	30	40	60	7

Health service delivery

No	Question	Answer
1	What kind of Diagnosis of NCDs (cardiovascular and diabetes) are currently available?	Consultation ⇒ Lab test ⇒ Examination (blood pressure, Pulse, SpO ₂ , ECG) There is an own lab here.
2	What kind of diagnosis of nutrition-related	Measuring Weight and height

	disease are currently available?	
3	What kind of NCDs treatable in this district hospital?	Other than cancer treatable
4	What kind of nutrition-related diseases are treatable in this district hospital?	F95, F75, Biscuit available
5	What percentage of the patients referred from health centers? (against the patients directly comes to district hospital)	Not know
6	To where the patients are referred if they cannot be treated here?	Dushanbe or Bokhtar
7	What are the difficulty to make diagnose of NCDs?	No CT and MRI, and gastroscope
8	What are the difficulty to treat NCD patients?	After Doctor prescribes drugs, doctor informs PHC nurse to follow, nurse follows by home visit. Doctor also gives his tel number to patient, so that patient can call him anytime. Sometime doctor will call to patient to ask his condition.
9	Is there a guideline to refer a NCD patient?	Actually, It depends on test available.
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	Pediatrican does it. There is a kitchen however, due to shortage of budget, kitchen has been closed for the patient. It is only working for staff lunch.

- Anemia among pregnant women

Maternity dept. was reconstructed by KfW with equipment. They have new department building with own lab.

Biggest problem is anemia among pregnant women. More than 50% of pregnant women have anemia. However, Many of them are normal if they get test in Dushanbe or Qurganteppa (Bokhtar). Therefore, deputy of head of maternity doubts the hemoglobin meter in maternity lab is something wrong. She asked lab staff to check hemoglobin meter of the lab, but nobody listened her.

Other factors of anemia is especially rural area, pregnant women do not care about health. They do not have any knowledge of health including nutrition.

Other problem on anemia is shortage of iron tablet. Each PHC estimates their quantity of needs, and PHC manager consolidates the total quantity for district. However, PHC manager mistook the calculation and less quantity of iron tablets came.

At pediatric dept., there were 2 malnutrition patients admitted (1year old and 2 years old). The 2-year-old child also had anemia. As pediatrician told, due to lack of knowledge of mothers, they do not cook well at home, instead, they feed food from shop, with low quality, to children, and that causes malnutrition.

At therapeutic dept., there are 20 beds including 5 beds for cardiology. According to staff there, number of the in-patients is less because of Ramadan season. Head of the doctor in the department told economic situation of people around here has been worse since COVID-19 epidemic, because most of male population sent back to the country from Russia and they had been no job in Tajikistan. He also told that the situation will cause negative effect to health of the people as well.

**District (Rayon) Hospital
Kushoniyon**

Date	5 May
Name of the person answers	Davlatzoda Mahmad
Position	Head

Overall information of the facility

No	Question	Answer
1	Cathment population	249,787
2	Total number of bed	245
3	Number of medical doctors	51 Surgery, Therapuetic, Ped, Obgy, Infectioninst, reanimatologist, ENT, cardio, traumatology
4	Number of nurses	405
5	Number of total inpatients in 2020	25,370
6	Number of total Outpatients in 2020	

Health service delivery

No	Question	Answer
1	What kind of Diagnosis of NCDs (cardiovascular and diabetes) are currently available?	By Lat test. Clinical symptoms. X-ray, ultrasound, ECG, are available
2	What kind of diagnosis of nutrition-related disease are currently available?	Malnutrition 1 year old girl, -4SD, 67cm, 4.6kg Cannot drink breast milk well.
3	What kind of NCDs treatable in this district hospital?	F75 F100 is given
4	What kind of nutrition-related diseases are treatable in this district hospital?	As above
5	What percentage of the patients referred from health centers? (against the patients directly comes to district hospital)	60% refer, 40% self

6	To where the patients are referred if they cannot be treated here?	Oblast hospital
7	What are the difficulty to make diagnose of NCDs?	
8	What are the difficulty to treat NCD patients?	
9	Is there a guideline to refer a NCD patient?	There is guideline (protocol) by MOH in each internal disease
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	

Cardiology is internal medicine department,. 10 beds are for cardiology among out of 40 internal department. As for diabetes treatment, endoclonologist will come for treatment from district health center.

At numeral hospital they are allowed to treat only light case of NCDs and malnutrition.

NCD is increasing as people like sweet food and carbonhydrate.

District Healthy Lifestyle Center

Healthy Lifestyle Center, Hissor district

Date	21 May 2021
Name of the person answers	Dr Bobokul Yomgurov Shirin Sharipova, instructor
Position	Director

1. Organization structure

13 staff, all of them at district level.

3 out of 13 staff at sub-district level.

3 doctor-instructors who are assigned at sub-district level are also working at RHCs.

Department	Staff
National program	3 doctor-instructors (Surgeon, neuropathologist, pediatrician), and 3 nurse-instructors
Information	media specialist
Administration	Human resources, accountant, cleaner, secretary

2. Activities

- Main activity is "Explanation about health issues to general public".
- They hold seminars. They usually call ahead to the designated places where they are plan to conduct their seminars.
- In general, they do not do the individual home visits.
- They receive brochures and booklets from Republican HLSC.
- Data analysis on NCDs is not their responsibility.
- There is no system of monitoring and evaluation on their activities.
- They send an article to local newspaper twice in a month.
- They conducted a big event on "World Health Day" on 7 April 2021 at the district hospital. They were distributing booklets/brochures and had small discussions with the population.

3. Documents

- There are 11 jamoats and Hissor town. Each employee covers 2 jamoats.
- They have their regulation, work plan, individual work plan, monthly report.

4. Trainings

- Usually, they educate themselves, do not have any teaching standards.
- They are rarely participating at any trainings at the republican level.
- Each Wednesday they have their weekly meetings where they discuss their work.

5. Issues in work

- They have no operational budget. When they need to go to villages far away from their office, they need to pay transportation cost from their pocket. It is a burden to the HLSC staff, because their salary is not high (ex. one of the staff in lower position makes only 450 TJS per month.)
- Administratively they belong to the district hospital. They are using 1 room and small corridor provided by the district Sanitary Epidemiological Surveillance Services.
- They need chairs, tables, and tablets. They do not have a vehicle. Their computer is broken.

6. Others

- They don't have Facebook page. No internet in their office.

Healthy Lifestyle Center, Khuroson

Date	7 May 2021
Name of the person answers	Gultuhsor Turkmenova
Position	Director

1. Organization structure

11 staff, all of them at district level. No staff at sub-district level.

Department	Staff
National program	Chief (Chemist), instructor
Information	Chief (Chemist), media specialist
Documentation	Chief (Chemist), nurse
Administration	Human resources, accountant, librarian, Cleaner

2. Activities

- Main activity is "Explaining health issues to the general public". For example, they picked up topics such as COVID-19 and diarrhea. They hold seminars, make house visits, according to the orders by the Obrast. When the Obrast provides some posters or materials (ex. face masks), they distribute them to the local people.
- On average, they have 2-3 events per day. They work according to their daily schedule.
- When they make house visits, they go together with patronage nurses. When they go to school, they go together with specialists. So, they consider that there is no duplication of work.
- They make annual plan, daily/monthly/quarterly reports and send them to Obrast, district government, DHC and district hospital
- Data analysis on NCDs is not their responsibility.
- There is no system of monitoring and evaluation on their activities. Once a year, they receive an inspector sent by the Obrast. He checks their daily/ monthly report from the viewpoint of numerical increase. However, there is no punishment if numbers of some of their activities are decreased in comparison with those of the last year.
- They send an article to the local newspaper every week.

3. Example of Daily report



- Requirements: Name of visitor, Location, make of school, types of activity, topic, number of participants, type and number of distributed materials
 - Signature by the responsible person and stamp are important "proof" to endorse their activities.
- ### 4. Trainings
- Sometimes the Obrast and Vaccination center invites the director of HLC. This year, the director had 3 trainings. On the occasion of training, they share brochures for community people also.
- ### 5. Issues in work
- They have no operational budget. When they need to go to villages far away from their office, they need to pay transportation costs from their pocket. It is a burden to the HLC staff, because their salary is not high (ex. one of the staff in a lower position makes only 450 TJS per month.)
- ### 6. Others
- They don't have a Facebook page.

Healthy Lifestyle Center, Kushoniyon

Date	6 May 2021
Name of the person answers	Jalilov Erkin
Position	Director

1. Organization structure

12 staff, 5 at district level and 7 at sub-district level.

District	Director, accountant, human resources, computer operator (in-charge of update of their Facebook page), assistant
Sub-district	Called as sub-district workers 3 teachers who are qualified in high education 4 doctors (stomatologist, infectionist, pediatrician, dermatologist)

2. Activities

- Spread propaganda for health topics. There are 26 standard topics to cover. In case of an emergency, for example an outbreak of some infectious disease, it must be added.
- Provide training for health staff.
- Hold seminars for community people.
- Make an annual plan, daily report and monthly report for provincial HLC.
- Internal meeting with Sub-district workers every week.
- Meeting with DHC 2-3 times per week.

3. Trainings/materials

- They don't have training on communication approaches to community people.
- They don't have standardized teaching materials for community people. (Although the federal HLC already developed them, they did not receive them yet.)

3. Others

- They want to have a vehicle for their activities.

Numeral Hospital

Numeral Hospital Dusty #4

Date	May 18, 2021
Name of the person answers	Sapargeldy Kilichev
Position	Chief Doctor of hospital

Overall information of the facility

11 patients wards, 25 beds (15 for pediatric and 10 for adult)

No water supply system functions, outside latrine, no sewage system

2 doctors positions (therapist and pediatrician), 1 taken (pediatrician)

No	Question	Answer
1	Cathment population	3200
2	Number of medical doctors	1 pediatrician
3	Number of nurses	6
4	Number of total Outpatients in 2020	226 patients discharged

Number of outpatient (according by narrative annual reports from 2018 (228 total number of patients , 2019 (228 discharged) and 2020 below)

Out-patient (ONLY Inpatient counted and registered)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	NA	NA	36	36	34
2	Diabetes	NA	NA	0	0	1
3	Cancer	NA	NA	0	0	0
4	Malnutrition (child)	NA	NA	16	16	12
5	Anemia	NA	NA	0	0	0

Health service delivery

No	Question	Answer
1	What kind of Diagnosis of NCDs (cardiovascular and diabetes) are currently available?	Hypertension Pneumonia, bronchitis

2	What kind of diagnosis of nutrition-related disease are currently available?	Malnutrition
3	What kind of NCDs treatable in this district hospital?	Hypertension, bronchopneumonia
4	What kind of nutrition-related diseases are treatable in this district hospital?	Malnutrition
5	What percentage of the patients referred from health centers? (against the patients directly comes to district hospital)	60 % are self-admission Mainly those patients who can't afford themselves to get treatment at CDH
6	To where the patients are referred if they cannot be treated here?	Mainly to CDH (according to internal regulation on referral), but also may recommend to go to oblast and national level facilities
7	What are the difficulty to make diagnose of NCDs?	No specialist (only pediatrician works here) No ECG, no ultrasound,
8	What are the difficulty to treat NCD patients?	Not availability of drugs (patient should buy themselves), no laboratory for testing
9	Is there a guideline to refer a NCD patient?	Guideline for treatment of pediatric cases at hospital and malnutrition guideline
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	NA – don't have such staff at hospital Information on nutrition taken from Guideline F75 and F100, BP 100 are available – these are formula for treatment of malnutrition (for treatment of children with -3Z severity of malnutrition)

Numeral hospital No.3 and Rural Health Center 50 Solagi Tajikistan together in the same building

Date	May 4
Name of the person answers	Dr. Ashurov
Position	Director of numeral hospital

Overall information of the facility

No	Question	Answer
1	Cathment population	About 42,000? Covers 2 Jamoats
2	Number of medical doctors	NH 2 MD (1 Obgy 1 pediatric) 4 MD in RHU (Thrapeutic, periactrc, Obgy, Lab)
3	Number of nurses	12 in NH, 6 in RHC
4	Number of total Outpatients in 2020	1,285 in RHC, 369 in NH
	Number of HH under this facility	17
	Number of bed	20

Number of inpatient

30 in internal dept., 13 in Pediatric dept., 507 for normal delivery in 2020

Number of outpatient

Out-patient

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	They are not allowed to receive at NH level.				
2	Diabetes					
3	Cancer					
4	Malnutrition (child)					
5	Anemia	-	1	4	16	5

Health service delivery

No	Question	Answer
1	What kind of Diagnosis of NCDs (cardiovascular and diabetes) are currently available?	In the Lab, blood, HIV, urine, stool test can be done.
2	What kind of diagnosis of nutrition-related	Diagnosis by measurement height and weight

	disease are currently available?	
3	What kind of NCDs treatable in this district hospital?	Not allowed
4	What kind of nutrition-related diseases are treatable in this district hospital?	Iron tablet is available at PHC level. Now no inventory due to shortage of iron tablet for 3-4 months. Now the patient buy iron tablet from drugstore,
5	What percentage of the patients referred from health centers? (against the patients directly comes to district hospital)	Most come by themselves
6	To where the patients are referred if they cannot be treated here?	CDH Jomi
7	What are the difficulty to make diagnose of NCDs?	Microscope is too old. There was hemoglobin meter before but not available for use not.
8	What are the difficulty to treat NCD patients?	NA
9	Is there a guideline to refer a NCD patient?	NA
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	NA

MCH handbook is not available at least for 1 and half years due to no distribution.
Education to population is done by patronage nurse. Their task is to find pregnant woman and people who has disease for the referral.
They visit 70 HH in average per day.
Before there was a health volunteer consisted by school teacher, community leader and women's leader. It was by USAID project. Now, the volunteer still work with USAID new project.

Numeral Hospital No. 6 (Same building of RHU Uljaboev) Khuroson District

Date	May 7
Name of the person answers	Mr. Rahim
Position	Feldsher

Overall information of the facility

No	Question	Answer
1	Cathment population	8,167
2	Number of medical doctors	2 (Cardiologist and Pediatrician)
3	Number of nurses	7 + Feldsher
4	Number of total Outpatients in 2020	As of May 2021, 222 (34 in-patient)

Number of outpatient

Out-patient

No	Disease	2016	2017	2018	2019	2020	2021
1	Cardiovascular diseases	NA					26 (9 in patient)
2	Diabetes						13 (2 in patient)
3	Cancer						
4	Malnutrition (child)						
5	Anemia						

Other diseases as of May 2021

Urology 39, Digestive 28, Respiratory (NCDs) 47, Backpain 9

Total 162

Health service delivery

No	Question	Answer
1	What kind of Diagnosis of NCDs (cardiovascular and diabetes) are currently available?	Lab. For blood and urine (If necessary, portable ECG and Ultrasound are borrowed by district hospital)
2	What kind of diagnosis of nutrition-related disease are currently available?	Malnutrition treatment is centralized in CDH
3	What kind of NCDs treatable in this	In the rest of questions, the feldsher said he could not

	district hospital?	answer as he was not a head.
4	What kind of nutrition-related diseases are treatable in this district hospital?	
5	What percentage of the patients referred from health centers? (against the patients directly comes to district hospital)	
6	To where the patients are referred if they cannot be treated here?	
7	What are the difficulty to make diagnose of NCDs?	
8	What are the difficulty to treat NCD patients?	
9	Is there a guideline to refer a NCD patient?	
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	

From 0800 to 1700, people tend to go to RHC. Numeral hospital is for 1700 to 0800 (night time) for outpatient. In the daytime, numeral hospital is only receiving the outpatient who are referred from HH.

There are 15 beds including 5 beds for pediatric. There is a 6-months child in patient at this time who has diarrhea and temperature. He is with his mother and 2 brothers and sisters. His mother told us that the reason of diarrhea is eating immature fruits from garden tree. He has been in-patient for 5 days.

Numeral Hospital Regional hospital of Obygarm (before was a central hospital until 2009) Roghun district

Date	May 24, 2021
Name of the person answers	Tosheva Farida
Position	Chief Doctor

Building from 1985, very old and needs for capital renovation

Hospital has separate from CDH budget as entity

Overall information of the facility

No	Question	Answer
1	Catchment population	25000
2	Number of medical doctors	8
3	Number of nurses	45
4	Number of total Outpatients in 2020	1086

Departments: pediatric, maternity and gynecology, therapy, surgery, reanimation, infection diseases, admission

Number of beds 97

Number of outpatient

Out-patient NOT provided ambulatory care, only first aid and emergency care

2019 – 1370 in patients

2020 – 1086 in patients

Not available data by diagnoses

Internal diseases (20 beds) 66 in-patients in 2019, 69 inpatients in 2020

Pediatric 110 in 2019 and 63 in 2020 inpatients

Health service delivery

No	Question	Answer
1	What kind of Diagnosis of NCDs (cardiovascular and diabetes) are currently available?	Diabetes Hypertension Gastritis Pyelonephritis Pancreatitis Anemia (Infection: Brucelles and Postoperative patients) After traffic accidents, traumas

2	What kind of diagnosis of nutrition-related disease are currently available?	Malnutrition Diabetes
3	What kind of NCDs treatable in this district hospital?	Diabetes Hypertension Gastritis Pyelonephritis Pancreatitis Anemia
4	What kind of nutrition-related diseases are treatable in this district hospital?	Malnutrition Anemia Diabetes There is nurse responsible for food preparation (working as a diet specialist)
5	What percentage of the patients referred from health centers? (against the patients directly comes to district hospital)	10% 90% by self-admission
6	To where the patients are referred if they cannot be treated here?	To Central City Hospital Fayzabad CDH Dushanbe Or call sanaviation (from Dushanbe)
7	What are the difficulty to make diagnose of NCDs?	No X Ray Limited lab (only general test and express testing with 1 lab technician Lack of specialists (no cardiologist, X ray specialist, reanimatologist, mental health) Lack of 5 doctor as mentioned above by specialty
8	What are the difficulty to treat NCD patients?	Lack of specialists Limited lab capacity
9	Is there a guideline to refer a NCD patient?	National Guidelines for PHC printed by WB No other guidelines specially for hospital care
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	Allocated a nurse who provides recommendations on food preparation In pediatric department limited equipment for preparing therapeutic food

55

Numeral Hospital Regional Hospital Dehoty Childara

Date	May 21, 2021
Name of the person answers	Mirzoev Nazarhuja
Position	Chief Doctor

Overall information of the facility

No	Question	Answer
1	Cathment population	6500 of population in Jildara Jamoat
2	Number of medical doctors	2 doctors (Laboratory Technician and therapy) – no lack in staff
3	Number of nurses	5
4	Number of total Outpatients in 2020	210

Total number of beds 20

Maternity for 3 beds (200 births per year)

Number of outpatient

Out-patient

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				NA	50
2	Diabetes				NA	35
3	Cancer				NA	0
4	Malnutrition (child)				NA	0
5	Anemia				NA	65

Types of patients mainly hospitalized with following diagnoses

- Pielopheritis
- Hypertension
- Diabetes
- Anemia
- ARI

Health service delivery

No	Question	Answer
1	What kind of Diagnosis of NCDs	Hypertension - 2 patients

56

	(cardiovascular and diabetes) are currently available?	Pielophephritis – 1 patients Endometritis – 1 patients
2	What kind of diagnosis of nutrition-related disease are currently available?	Not at the moment, but patient with diabetes
3	What kind of NCDs treatable in this district hospital?	<ul style="list-style-type: none"> • Pielophephritis • Hypertension • Diabetes • Anemia • ARI
4	What kind of nutrition-related diseases are treatable in this district hospital?	Diabetes Malnutrition (received F75 and F100 formula)
5	What percentage of the patients referred from health centers? (against the patients directly comes to district hospital)	100 % due to BBP program (eligibility for free service by referral)
6	To where the patients are referred if they cannot be treated here?	CDH
7	What are the difficulty to make diagnose of NCDs?	No equipment (ECG) No specialist
8	What are the difficulty to treat NCD patients?	No equipment Lack of medicines Infrastructure No water
9	Is there a guideline to refer a NCD patient?	No guideline
10	Allocation of nutritionist, situation of providing nutrition education and treatment by ages, Inventory management of Ready to use therapeutic food	No staff There is F75 and F100 but no trained staff for use

District/City Health Center

District/City Health Center
(Name of district: Dusty)

Date	May 17, 2021
Name of the person answers	Sharipov Bozor
Position	Head of PHC

Under Dusty district health center 14 Rural health Center 32 Health house

There is a shortage of doctors in PHC at least for 10% as well as shortage of family nurse shortage (doctors work as family doctor, however majority of them have not passed 6 months re-training course on family medicine)

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	<p>(Yes) Diagnosis and treatment of out-patient for catchment area population</p> <p>(Yes) Management of PHC facilities</p> <p>(Yes) Coordination with other health organization centers such as IMCI reproductive health center, healthy lifestyle center, immunization center (all these structures are part of PHC) with TB Center, AIDS Center (separate entities), skin diseases/dermatology center</p> <p>() other</p> <ul style="list-style-type: none"> • ANC care for pregnant women • Immunization of children up to 6 years old • Dispensary care for chronic patients • Prevention of infection diseases • Prevention of diseases and health promotion activities among population • Treatment of children with malnutrition • Coordination work with narrow specialists (in case of complicated cases)
2	Health staff (number of total medical doctors and family medicine doctor) in this health	<p>Total number of MD in this center: 20</p> <p>Family medicine doctor: 4</p> <p>(total number in the district: 56 doctors including</p> <p>In this health center: 28 family doctors (only 7 doctors passed re-</p>

	center	training course on family medicine)
3	Health staff (number of nurse)	Total number of nurse in this center – 19 at Rayon Health Center Family medicine nurse – 6 at Rayon Health Center (total number of nurses in the Dusty district: 202 including 22 family nurse In this health center: 6 family nurse
4	Available equipment for making diagnosis (circle)	ECG, Ultrasound, fluorography, Others: Laboratory is belongs to private laboratory Behdoshy (list of test are not large, only basic tests such as general blood and urine tests and stool test for worms) HIV testing and hepatitis tests are provided by Rural Health Center by using express test system

Activity partner organizations

No	Question	Answer
1	What centers do you work with at district level? Do they have branch at your district? Yes, all Centers (Reproductive, Healthy Lifestyle, IMCI, Immuno-prophylaxis , Centers) are exists at rayon	(X) Family medicine center located in district health center with 4 doctors and 4 nurses and 1 medical statistician (X) Reproductive health center (X) Healthy lifestyle center (X) Immuno-prophylaxis center (X) IMCI center (X) TB center (X) HIV center – these centers are independent (X) others – dermatology

Reporting items

No	Question	Answer
1	What kind of reports do you submit to Oblast/Republican level?	Monthly report on Center activities (narrative report with # of admissions, ANC, # of deliveries, mortality, perinatal death, population with age group etc) to be submitted to oblast health administration Annually statistical reports (in total 17 forms, scanned, including IMCI data, infection diseases, health personnel, # of patients received care etc/)

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting mass-screening medical checkup for early detection of NCDs	Conducting the check up for adolescents for newborn for all types NCD, as well for dispensary population at annual base, for chronic patients (diabetes, cardiovascular) – 2 times a year. For group of patients with disability status (group for disability) upon request
2	How do you conduct to check for child malnutrition?	(Yes) During home visit to be done by patronage nurse from all Health houses and Rural Health Center, during visit the weight scale and shoulder tap are used (NO) At the time of Vaccination Others From the time of discharge from maternity children with malnutrition are under observation, 157 children registered and they receiving the therapeutically feeding
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	At sufficient level, during COVID it was organized a lots of health promotion activities during home visits
4	Availability of supporters for health promotion activities at community level	Before volunteer groups are formed by USAID project but now no volunteers any more
5	situation and possibility of health education for children at school	Organized on monthly base at 48 schools with health promotion activities
6	existence of health education by media	Example of Using TV program No local TV but at Oblast TV Khatlon there is a program Example of Using radio program Local Radio several times broadcasted info on COVID (not related to other topics) Example of using newspaper Local newspaper named Payomi Dusty – on monthly base have to submit article (latest

		information was on botulism, COVID)
7	existence of application for smartphone related health promotion	NA Have heart first time
8	MCH handbook utilization for health education of mother and child	Yes, they used, for all women who visited the Reproductive Health Center received the MCH Hand book, but at level of rural center no handbook available So, far there is enough number for distribution in the stock of RH Center

Dusty is a USAID pilot on nutrition

Providing seminar and training through RHC to population by nurse according to schedule

On weekly base organized internal training by QI committee (still exist) for nurses.

At rayon 2 qualified trainers on nutrition.

District/City Health Center
(Name of district: Hissor)

Date	May 17
Name of the person answers	Dr. Nosirov
Position	Deputy

Covering population: 330,162

Number of Health facilities: 1District hospital, 1 numeral hospital, 1 Area hospital (between district hospital and numeral hospital), 2 maternity hospital, 35 RHC, 41 HH, 8 medical point (immunization, first aid, and patronage activities are providing)

Covering 12 Jamoats including center area

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center Hissor HLC belongs to district hospital	(<input type="radio"/>) Diagnosis and treatment of out-patient (<input type="radio"/>) Management of PHC facilities (<input type="radio"/>) Coordination with other health organization centers such as family medicine, reproductive health center, healthy lifestyle center (<input type="radio"/>) other
2	Health staff (number of total medical doctors and family medicine doctor) in this health center	Total number of MD in this center: 58 Family medicine doctor: 89 in district (total number in the district: 181) In this health center: 22) 67 FMD are working at RHC (there are only 6 RHC who does not have FMD.)
3	Health staff (number of nurse)	Total number of nurse in this center 63 Family medicine nurse 593 (total number in the district: 593) In this health center: 24)
4	Available equipment for making diagnosis (circle)	<input type="radio"/> Lab, <input type="radio"/> ECG, <input type="radio"/> Ultrasound, <input type="radio"/> X-ray, (MOH promised to the district that digital X-ray will be provided.) Lab service has a contract with

Activity partner organizations

No	Question	Answer
1	What centers do you work with at district	(<input type="radio"/>) Family medicine center

	level? Do they have branch at your district?	(<input type="radio"/>) Reproductive health center (<input type="checkbox"/>) Healthy lifestyle center (<input type="radio"/>) Immuno-prophylaxis center (<input type="checkbox"/>) IMCI center (<input type="checkbox"/>) TB center (<input type="checkbox"/>) HIV center (<input type="checkbox"/>) others
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Reporting items

No	Question	Answer
1	What kind of reports do you submit to Oblast/Republican level? (reports are submitted to MOH directly.)	There are formats. Other than those report, the director himself developed the monitoring sheet on performance of FMD. The monitoring sheet is used for the follow-up the activities of FMD. Observation of the monitoring sheet came once from Farkhol district.

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting mass-screening medical checkup for early detection of NCDs	Only in the city area, DHC conducted Antenatal care with RepHC in 2019, cancer check-up using mammography with cancer center in 2021. Moreover, HIV screening is also conducted.
2	How do you conduct to check for child malnutrition? (not asked)	(<input type="checkbox"/>) By Home visit by patronage nurse (<input type="checkbox"/>) At the time of Vaccination Others
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs? (not asked)	
4	Availability of supporters for health promotion activities at community level	No volunteers. Usually nursing students support the activities. (There is a nursing school in Hissor)
5	situation and possibility of health education for children at school	At RHC level, they usually conduct activities with school. They do medical check up at school.
6	existence of health education by media	Example of Using TV program No local TV Example of Using radio program No local radio Example of using newspaper

		Yes
7	existence of application for smartphone related health promotion	No
8	MCH handbook utilization for health education of mother and child	They are not a pilot.

According to the director, there is no problem in nutrition status although there were 497 underweight babies in 497.

The biggest problem in health is cardiovascular diseases. There are 2,967 patients in the register as those diseases and there are 1,318 women among them. The number of patients of DB is 2,578, and there are 267 cancer patients registered.

City Health Center
(Name of district: City Health Center in Roghun)

Date	May 24, 2021
Name of the person answers	Uruzov Umdechon
Position	Head of PHC network in Rogun

There is a separate a HC for Hydropower station with separate management and budget but this facility sends report to Rayon Health center

Rural Health Center – 4 (most distant Rural Center – 20 km, Javoni)

Health Center – 12 (most distant HH – 30 km, Lohur)

Ambulatory of FM in district Health Center – 1 in city , District Health Center – 1

2 departments for emergency care (1 in city and 1 in Obygarm)

Centers: IMCI, RH, HLC, AIDS (no IFA for diagnostic), TB (with GynXpert), Immunoprophylaxes (very low number of staff working in Centers) – all under PHC Management

Cooperation with MSDP (Aga Khan Foundation, which PHC activities (renovation of 9 HH and 3 Rural HC and provided bags for nurses only, but no bags for FD and introduced the business planning)

Catchment population of district health center is 12 440 of city

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	(Yes) Diagnosis and treatment of out-patient (Yes) Management of PHC fa and budget for PHC facilities based on regulation (all salaries received from rayon HC) (Yes) Coordination with other health organization centers such as family medicine, reproductive health center, healthy lifestyle center (Yes) other: emergency care (have ambulance car), human resource management for PHC network
2	Health staff (number of total medical doctors and family medicine doctor) in this health center	Total number of MD in this center: Family medicine doctor: 12 in rayon and 7 in district Health center (total number in the district: 41 doctors In this health center: 20 doctors 32) 6 passed FM training and currently 2 at the FM training In 2011 the FM training organized in center itself (distant training) Lack of doctors: 25 including narrow specialists (psychology, surgeons, LOR, pediatricians)
3	Health staff (number of nurse)	Total number of nurse in this center Family medicine nurse – 39 (all FM retrained)

		(total number in the district: 103 In this health center: 2 family nurses) Lack of nurses: not
4	Available equipment for making diagnosis (circle)	Lab (biochemical analyzer), ECG (6 items, 4 in Rural HC, Ultrasound, X-ray (2 including 1 digital), Ultrasound (2, 1 provided by JICA), fluorography Others: GynXpert

Laboratory: HIV, RW, general test of blood and urine, stool for worms, biochemical, brucellosis

Became part of BBP program in 2020

Activity partner organizations

No	Question	Answer
1	What centers do you work with at district level? Do they have branch at your district? Yes, but they part of PHC system (integrated)	(X) Family medicine center (X) Reproductive health center (X) Healthy lifestyle center (X) Immuno-prophylaxis center (X) IMCI center (X) TB center (X) HIV center (No) others

Reporting items

No	Question	Answer
1	What kind of reports do you submit to Oblast/Republican level?	DHIS system (2 stasticians) which produces all reporting forms Quarterly narrative report to MOH (PHC department of MOH) on all activities of PHC facilities (admission, disability, prevention etc)

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting mass-screening medical checkup for early detection of NCDs	Monitoring by IMCI Center Home visits Screening for weight and height (all HH equipped with height and weight scales) AI therapeutically feeding is in CDH

		RH Center makes monitoring and every HH has hemoglobinoometer and test system for HIV and hepatitis
2	How do you conduct to check for child malnutrition?	(Yes) By Home visit by patronage nurse (Yes) At the time of Vaccination (may detect malnutrition) Others
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Still low
4	Availability of supporters for health promotion activities at community level	Yes there 100 volunteers managed by HL Center (all topics) Have enough quantity of EIC Very often conduct the trainings supported by MSDSP (AKF)
5	situation and possibility of health education for children at school	All schools has health corner and health staff responsible for every schools (42 schools, 9747 schoolchildren)
6	existence of health education by media	Example of Using TV program NO, only national TV Channel Example of Using radio program Local, prepare information on COVID Example of using newspaper Nury Rogun, Rayon health center submit health promotion articles
7	existence of application for smartphone related health promotion	NA
8	MCH handbook utilization for health education of mother and child	Before MCH handbook was distributed, RH Center organized health promotion among visitors (showing movies at TV which is set up in RH Center)

District Health Center (Name of district: Sangvor)

Date	May 21, 2021
Name of the person answers	Mirzoev Mirzoshoh
Position	Deputy Head of PHC

Center of Sangvor district is 250 km distance from Dushanbe, time spending for 1 way to district is about 7 hours

Population of district – 23350

Rural HC – 4, most distant RHC (Logir) is at 80 km

Health houses – 22, most distant HC (Sangvor) is at 110 km

Catchment population of District Health Center 5600 (covering 5 Health center)

In district 1 school, orphanage school

Winter time is limited access due to snow and stone falls

Centers:

- Family Medicine Center
- IMCI
- TB (integrated into PHC)
- HLC
- Immuno-prophylaxes
- AIDS (integrated into PHC)
- Reproductive health
- SES (independent)

50% of pregnant women registered after 12 weeks of pregnancy due to distances

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	(X) Diagnosis and treatment of out-patient (X) Management of PHC facilities (X) Coordination with other health organization centers such as family medicine, reproductive health center, healthy lifestyle center (X) other immunization, prevention of NCD, ANC, home visits
2	Health staff (number of total medical doctors and family medicine doctor) in this health center	Total number of MD in this center: 10 Family medicine doctor: 3 (all retrained) (total number in the district: 14 (including 1 FD from Rural Health Center) In this health center: 10) Narrow specialists: 1 ETI, 1 ophthalmologist, 1 gynecologist, 1 urologist, 1 trauma, 1 dental care, 1 TB specialist, no pediatrician

		Lack of doctors – 5 for rayon (including district health center) Retraining program funded by AKF
3	Health staff (number of nurse)	Total number of nurse in this center - 28 Family medicine nurse – 18 (all retrained) (total number in the district: 72 (including 43 re-trained) In this health center: 28)
4	Available equipment for making diagnosis (circle)	Lab – NO (but in hospital) , ECG - YES, Ultrasound - YES, X-ray – NO (but in hospital), Others: FD doctors (some devices out of order, broken) Laboratory in hospital: express tests (HIV, hepatitis, RW), general test of blood, urine and stool for worms No biochemical tests, problem with reagents Rayon HC suffers from lack of space

Activity partner organizations

No	Question	Answer
1	What centers do you work with at district level? Do they have branch at your district? Yes, all Centers except SES are part of PHC system	(X) Family medicine center (X) Reproductive health center (X) Healthy lifestyle center (X) Immuno-prophylaxis center (X) IMCI center (X) TB center (X) HIV center (X) others SES

Reporting items

No	Question	Answer
1	What kind of reports do you submit to Oblast/Republican level?	Annual reporting form On monthly base narrative report with population data (births, deaths), # of admissions, invalids, # of pregnant, # of women at fertility age, TB data

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting mass-screening medical checkup for early	During home visits (every day report to MOH) Among school children 2 times a year medical check up High risk group (diabetes, asthma, hypertension, hepatitis,

	detection of NCDs	cancer – every 3 month medical check up
2	How do you conduct to check for child malnutrition?	(X) By Home visit by patronage nurse, (X) At the time of Vaccination (less numbers, mainly by home visits) 12 children with malnutrition registered currently in entire rayon Others NA
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	HLC provides health education Among population there is a volunteers, who provides info on obesity, ANC, hypertension Sufficient level of knowledge, Population attitude at moderate level (problem with conditions in family) Lack of medicines (should order from Dushanbe) Some patients don't follow advices given by doctors
4	Availability of supporters for health promotion activities at community level	Yes, supported by AKF (60 volunteers for entire rayon)
5	situation and possibility of health education for children at school	Rayon health center staff provides lectures on hygiene (once a month)
6	existence of health education by media	Example of Using TV program National TV Example of Using radio program NO Example of using newspaper Local newspaper "Mavjy Hingob", rayon health center on monthly base submit health related article, newspaper distributed only among state entities
7	existence of application for smartphone related health promotion	NA, first time hearing
8	MCH handbook utilization for health education of mother and child	Don't know on MCH handbook

Clinical guidelines in rayon health center distributed by AKF

District/City Health Center
(Name of district: Shakhrinav)

Date	May 20
Name of the person answers	Dr. Ahmedov (FMD)
Position	Director

Pop 124,805

1 District hospital, 2 Area hospital, 3 emergency care center, 1 diagnostic and treatment center (has bed), 1 medical diagnostic center (without bed)

20 RHC, 15 HH

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	(<input type="radio"/>) Diagnosis and treatment of out-patient (<input type="radio"/>) Management of PHC facilities (<input type="checkbox"/>) Coordination with other health organization centers such as family medicine, reproductive health center, healthy lifestyle center (<input type="checkbox"/>) other
2	Health staff (number of total medical doctors and family medicine doctor) in this health center	Total number of MD in this center: 30 Family medicine doctor: 6 (including director) (total number of MD in the district: 76, among them 40 are FMD)
3	Health staff (number of nurse)	Total number of nurse in this center 56 Family medicine nurse 21 (total number of NS in the district: 296, among them 218 are FMN)
4	Available equipment for making diagnosis (circle)	Bekhdoshti Lab, <input type="radio"/> ECG, <input type="radio"/> Ultrasound, <input checked="" type="radio"/> X-ray, (X-ray available in TB center and district hospital.) Others:

Under district, there are 4 more laboratories, general lab, blood, urine, stool, HIV

Activity partner organizations

No	Question	Answer
1	What centers do you work with at district level? All should be in CDH. but, in reality, not.	(<input type="radio"/>) Family medicine center (<input type="radio"/>) Reproductive health center (<input type="radio"/>) Healthy lifestyle center (<input type="radio"/>) Immuno-prophylaxis center

	(<input type="radio"/>) IMCI center (<input type="radio"/>) TB center (<input type="radio"/>) HIV center (<input type="radio"/>) others Tropical disease center, National training center (This is under CHD.)
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Reporting items

No	Question	Answer
1	What kind of reports do you submit to Oblast/Republican level?	Major data are the followings. <ul style="list-style-type: none"> • Human resource • Population demographic • IMR, SUMR • No. of delivery • Immunization • New infection case (COVID and TB, Hepatitis) • Implementation of health strategy • Constitution and renovation of facilities

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting mass-screening medical checkup for early detection of NCDs	There was a HARTS program in 2 years ago by MOH, WHO, and FMD. The program was for improving early detection of HBP (high blood pressure) and DB (Diabetes). Among 20 RHCs, the program divided into 10 for intervention and other 10 for non-intervention. For intervention RHCs, the following interventions were conducted in order. <ol style="list-style-type: none"> 1. Teaching criteria of HBP 2. Identifying high risk groups of the people over 18 y.o by measuring BP, age, cholesterol and BMI. 3. Identifying obese group 4. Teaching criteria of referral for the above risk groups 5. Teaching steps for treatment of HBP at PHC level 6. Teaching education knowledge for people for healthy lifestyle 7. Teaching criteria for DB and treatment The program covered 46,804 people in total and

		<p>succeed to measure BP, BMI and questionnaires of lifestyle.</p> <p>According to the director, in the intervention areas, there was an increase of early detection of NCDs comparing with non-intervention areas.</p> <p>The director wants to conduct the program in the non-intervention area, as well. However, there is no support from donors. The program itself does not take cost so much. The necessary costs are providing note for recording, scales for height and weight, and conducting trainings.</p>
2	How do you conduct to check for child malnutrition?	<p>() By Home visit by patronage nurse</p> <p>(<input type="radio"/>) At the time of Vaccination</p> <p>Also, checking height and weight during the vaccination.</p> <p>3-4% of the children are malnutrition, although the director considers it is not a big problem.</p>
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Staff of HLC are actively works on health awareness in terms of nutrition and necessity of walking exercise.
4	Availability of supporters for health promotion activities at community level	Before COVID, there was community groups, but they were stopped after COVID.
5	situation and possibility of health education for children at school	Check up once a year is mandatory by MOH prilaz.
6	existence of health education by media	<p>Example of Using TV program</p> <p>No</p> <p>Example of Using radio program</p> <p>There is a local radio. Recording specialist talk about diseases and broadcast.</p> <p>Example of using newspaper</p> <p>There is a local newspaper. Sometimes there is an article about diseases.</p>
7	existence of application for smartphone related health promotion	No

8	MCH handbook utilization for health education of mother and child	According to the director, this district is one of the pilots. (However, there was no inventory of MCH handbook in RHC as well as HH.)
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District/City Health Center
(Name of district: **Temurmalik, Shahraki Bahmanrud**)

Date	May 19, 2021
Name of the person answers	Izatzoda Nurullo
Position	Head of PHC in Temurmalik district

10 Rural Health Centers, 28 Health houses

Population 71 000 of district

Catchment population of Rayon Health Center – 11 000

Total in rayon 52 doctors including 28 in PHC, among staff there is 1 cardiologist

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	(Yes) Diagnosis and treatment of out-patient – in time case detection, referral (Yes) Management of PHC facilities (for all rural health centers and health houses (Yes) Coordination with other health organization centers such as family medicine (1 FM Center), reproductive health center, healthy lifestyle center (are part of PHC), TB and AIDS Centers (independent) (Yes) other Prevention of diseases, immunization for children, women of fertility age register under dispensary observation, registration of pregnant women (at 12 weeks) and supervision up to delivery and postnatal period, working under national programs (7: IMCI, Reproductive health, immunoprophylaxis,, health life style, TB, AIDS, blood donation, trauma and NCD (, obesity, disability (only invalids for period 20210 2023), in time implementation of orders adapted by national level
2	Health staff (number of total medical doctors and family medicine doctor) in this health center	Total number of MD in this center: Family medicine doctor: 4 (this passed re-training on FM) (total number in the district: 24 (including 12 FD in district) – there is lack of 16 doctors In this health center: 12)
3	Health staff (number of nurse)	Total number of nurse in this center - 56 Family medicine nurse – 11 (not all passed re-training – only 6 has) (total number in the district: at PHC 220 In this health center: 56) No lack of nurses

75

4	Available equipment for making diagnosis (circle)	Lab (only clinical test, general blood test, urine, RF, (syphilis) hepatitis and HIV with rapid express tests only for pregnant women), ECG, Ultrasound, No X-ray, Others: fluorography but very old (since 1960), 2 oxygen concentrator and 1 US were delivered during COVID
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Activity partner organizations

No	Question	Answer
1	What centers do you work with at district level? Do they have branch at your district?	(YES) Family medicine center in Rayon PHC Center (YES) Reproductive health center (YES) Healthy lifestyle center (YES) Immuno-prophylaxis center (independent) (YES) IMCI center (YES) TB center (YES) HIV center (independent) (NO) others

Reporting items

No	Question	Answer
1	What kind of reports do you submit to Oblast/Republican level?	Statistical reports on annual base Also on monthly base after conduction a monthly summary meeting with all PHC facilities compile a report and submit to oblast and national level (narrative). Information on different topics prepared, mainly according to MOH collegium topics (every month different issues raised and discussed at collegium and Termurmalik prepares information on this issue)

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting mass-screening medical checkup for early detection of NCDs	HLC has a staff which working in schools, mosques to provide lectures and health promotion among population. Staff accompanied by cardiologist in order to respond to issues asked by population. FMD works with their catchment population, conducting a screening among students and school children for obesity, NCD Dispensary group population (1410 people including 198

76

		children) passed 4 times medical check up
2	How do you conduct to check for child malnutrition?	(Yes) By Home visit by patronage nurse (every day, make examination of children by screening of weight and tap), at rayon health center organized room for checking weight and height (Yes) At the time of Vaccination (do weight and height measurement) Others By self admission of parents to rayon health center Center staff passed training on children malnutrition, Center has therapeutically nutrition, also given brochures Currently 26 children under observation age group 6 months to 5 years old.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Knowledge it is not at good level, there is room for improvement Patients don't follow recommendations (diet, decrease weight) Every week on Saturday there is an exercise day for medical staff as healthy style
4	Availability of supporters for health promotion activities at community level	There were only community supporters on TB (in previous USAID TB Project), but not for NCD
5	situation and possibility of health education for children at school	HLC organized lectures for children in schools (46 schools)
6	existence of health education by media	Example of Using TV program No local TV, only national TV Example of Using radio program No Example of using newspaper Local newspaper Istiqolol and Healthy Life Style submits articles on healthy life
7	existence of application for smartphone related health promotion	NA, don't know on application
8	MCH handbook utilization for health education of mother/child	Yes they used, distribution was in 2017, they stock out of MCH handbook, not any more in use

District/City Health Center
(Name of district: Tursunzoda)

Date	May 19
Name of the person answers	Dr. Rustamov
Position	Director

Population 324,000

1 District hospital, 1 area hospital, 5 dentist centers, 23 private hospital, clinic, diagnostic center (license is given by MOH)

Background of being many private hospitals are, according to the director, there are good specialists in this district, and they opened their clinics. Moreover, since the district locates boarder of Uzbekistan, doctors can expect to have patients from Uzbekistan as well.

There are 28RHC, 50HH in the district.

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	(<input type="radio"/>) Diagnosis and treatment of out-patient (<input type="radio"/>) Management of PHC facilities (<input type="radio"/>) Coordination with other health organization centers such as family medicine, reproductive health center, healthy lifestyle center (<input type="radio"/>) other Care for pregnant women and disabled
2	Health staff (number of total medical doctors and family medicine doctor) in this health center	Total number of MD in this center: 89 total MD number in the district: 194 Family medicine doctor: total in district 92 FMD in DHC 36, EMD in RHC 56
3	Health staff (number of nurse)	Total number of nurse in this center 124 Family medicine nurse 188 (total number in the district: 590 In this health center: 41) Total FMN in district 314, DHC 41, RHC 273
4	Available equipment for making diagnosis (circle)	Lab (Bekh), <input type="radio"/> ECG, <input type="radio"/> Ultrasound, <input type="radio"/> X-ray, Others:

DHC has a meeting with RHCs every Wednesday.

Number of outpatients

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular	2,921	3,306	3,091	3,193	2,966
2	Diabetic	1,907	1,654	1,720	1,797	1,920
3	Cancer	321	402	444	477	464
4	Malnutrition (children)	158	148	116	166	114
5	Anemia	1,540	1,412	1,316	1,264	1,075

Activity partner organizations

No	Question	Answer
1	What centers do you work with at district level? Do they have branch at your district?	(<input type="radio"/>) Family medicine center (<input type="radio"/>) Reproductive health center (<input type="radio"/>) Healthy lifestyle center (<input type="radio"/>) Immuno-prophylaxis center (<input type="radio"/>) IMCI center (<input type="radio"/>) TB center (<input type="radio"/>) HIV center (<input type="radio"/>) others

No donors cover the district.

Reporting items

No	Question	Answer
1	What kind of reports do you submit to Oblast/Republican level?	RHC submits report every month and DHC reports the report to MOH quarterly. In the report, DHC focuses on the followings. <ul style="list-style-type: none"> · Number of health facility · population (age group) · Number of delivery · Number of outpatient · Number of home visit · Number of human resource · Finance status · Rehabilitation status of health facility · New health equipment · Complains from people · MCH service provision · Support for disable people · Progress of national program

		<p>· Progress of program of IMCI, TB, HIV</p> <p>Aside of reports, new minister for MOH decided to have a meeting every morning with the directors of DHC. Agenda is 1. Number of COVID patient, 2. Status of ANC, 3. Status of child health, 4. Status and problem of infrastructure.</p> <p>The director requested to the minister that poor infrastructure of HHS, poor water supply at health center level, shortage of ambulances.</p>
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Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting mass-screening medical checkup for early detection of NCDs	No regular checkup besides school health checkup and ANC.
2	How do you conduct to check for child malnutrition?	(<input type="radio"/>) By Home visit by patronage nurse (<input type="radio"/>) At the time of Vaccination Others
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Focusing on delivery of message of prevention of DB to people. Recently, the director feels that numbers are increasing who care about DB, HBP and cholesterol intake.
4	Availability of supporters for health promotion activities at community level	All prevention activities are conducted through HLC. There is not health volunteer, but Department of Youth and Women's committee are supportive for the activity.
5	situation and possibility of health education for children at school	This year, they are focusing on health checkup at school more. Since January, DHC has been conducting health checkup for all the school (about 120 schools) and it will end at the end of May. The purpose is to screen NCDs from young age. The student who has risk will be referred to the hospital for treatment. The student who has risk but not necessary for the treatment will be provided nutrition advice.
6	existence of health education by media	Example of Using TV program Yes there is a local TV broadcast.

		<p>Example of Using radio program</p> <p>There is a radio broadcast. The program of prevention of disease is broadcasted at market and park.</p> <p>Example of using newspaper</p> <p>There is a local newspaper.</p>
7	existence of application for smartphone related health promotion	No smartphone used but there is a Facebook page.
8	MCH handbook utilization for health education of mother and child	No pilot.

There is FMD department in the DHC. There are 5 rooms for the people in the department, which is for pregnant woman, after-delivery woman, baby-having woman, child- having woman, and teenagers. Each room has at least 1 FMD and 1 FMN and the person can ask anything to them. If the person is needed the treatment, the person is referred to specialist.

The director is very supportive for FMD activities because he thinks FMD is a key to people health. He also insisted to conduct an interview to FMD and arranged it.

Interview to Dr. Morodov Alisher (FMD)

One of the biggest problems in the district if NCDs. Especially, DB, cardiovascular, and mental health are the problems. As for malnutrition, there are 6 new cases in this year, but the doctor thinks most of the malnutrition is caused by congenital.

Dr. Morodov emphasized that it is very much necessary to improve health awareness of the people to health. He also pointed out the followings to prevent child disease.

- Mother's class during pregnancy: DHC has a class for pregnant women and it is very important to have a correct knowledge for baby growth
- Cooking class with Family health center: Targeting mothers with child 2 years old. There is a recipe book
- Nutrition during 1,000 days which MOH promotes is very important. We are following the work plan on it. Especially, exclusive 6-month breast feeding and mother's cooking skill after 7 months is very important. The above cooking school is useful for mothers with after 7 months baby to have correct knowledge of nutrition
- Home visit is also very important to find early detection of child diseases

According to Dr. Morodov, around 25% of mothers in this area do not have enough knowledge to bear child and most of them live in rural area. For example, when he had a cooking class for cooking mash potato, almost all mothers did not understand what they cooked. He asked the mothers why they did not understand the cooking. The answer was that they did not have a sense of grams (or quantities) of the materials, due to lack of basic education.

Diarrhoea is decreasing after introducing vaccination of rotavirus (3 years ago). However, there are still diarrhea cases due to inappropriate storage of food, lack of persona hygiene, lack of washing fruits and vegetables from running water, and lack of handwashing. These are not decreasing.

District/City Health Center
(Name of district: Vakhdat)

Date	May 22
Name of the person answers	Dr. Kholov
Position	Director

There are 11 Jamoats and 2 of them in mountainous area with 3,000m-4,000m.
Population 352,000 (official) but actually, the population is more than that nearly 387,000 because there are immigrants live from Afganistan, due to security issues. 7,028 Afgan family is living at the moment.

Health facility

1 CDH, 6 numeral hospitals, 12 private hospitals with 52 MDs
30RHC, 79HH

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	() Diagnosis and treatment of out-patient () Management of PHC facilities () Coordination with other health organization centers such as family medicine, reproductive health center, healthy lifestyle center () other
2	Health staff (number of total medical doctors and family medicine doctor) in this health center	Total number of MD in this center: 23 Family medicine doctor: 90 (total number in the district: MD: 487)
3	Health staff (number of nurse)	Total number of nurse in this center Family medicine nurse 312 (total number in the district: 1,529 In this health center: 44) There is a branch of DHC, and 10 FMD and 24 FMN are working.
4	Available equipment for making diagnosis (circle)	Lab, <input type="radio"/> ECG, <input type="radio"/> Ultrasound, No X-ray, (patients who need X-ray is sent to private clinic.) Others:

Many patients have ARI, diarrhea, anemia, HBP, and cardiovascular diseases.

Number of Out-patients in Health Center of Vahdat district

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	352	376	402	436	455
2	Diabetes	1515	158	1609	1693	1814
3	Cancer	96	98	102	105	125
4	Malnutrition (child)	103	108	126	126	132
5	Anemia	1327	1411	1424	1424	1432

According to the Director of DHC,

Main issues of disease here is mental health. Some people have mental diseases, which feel the person is special from the other people (particularly shows the symptom in spring), and have double personality.

Other issues are;

- Malnutrition
- Water sanitation (there is a tap water in city area, but in rural areas, people use spring water or canal water. There is well also.)
- NCD (needs early detection. Usually, nurses find patients by home visit. Needs strengthen the skills of patronage nurses for early detection.)

As for health check up for people, sometimes DHC conducts caravan with collaboration of HLC, TB, IMCI, HIV centers. School visit is mandatory for HLC and HIV centers.

Activity partner organizations

No	Question	Answer
1	What centers do you work with at district level? Do they have branch at your district?	(<input checked="" type="checkbox"/>) Family medicine center (<input checked="" type="checkbox"/>) Reproductive health center (<input checked="" type="checkbox"/>) Healthy lifestyle center (<input checked="" type="checkbox"/>) Immuno-prophylaxis center (<input checked="" type="checkbox"/>) IMCI center (<input checked="" type="checkbox"/>) TB center (<input checked="" type="checkbox"/>) HIV center () others

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of conducting	As above. (Mostly by caravan)

	mass-screening medical checkup for early detection of NCDs	
2	How do you conduct to check for child malnutrition?	() By Home visit by patronage nurse () At the time of Vaccination Others
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	
4	Availability of supporters for health promotion activities at community level	
5	situation and possibility of health education for children at school	
6	existence of health education by media	Example of Using TV program No Example of Using radio program There is a local broadcast. Working with HLC and RepHC, broadcasting materials are developed for the men who are going to Russia for working. This is about prevention of all the diseases in abroad. The program is broadcasting 2,3 times a month. Other radio activity is broadcasting a radio program on COVID prevention. The program is broadcasted in front of Mosque. There are 190 mosques in the district. Example of using newspaper No
7	existence of application for smartphone related health promotion	NO
8	MCH handbook utilization for health education of mother and child	Yes. They use the handbook.

District/City Health Center Jomi

Date	May 3
Name of the person answers	Dr. Saliev Amriadin
Position	Director

7 RHCs and 53 HHs

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center/ Please provide related regulation	We are doing activities based on Hukumat regulation
2	Health staff (number of medical doctors and their specialities)	District total 79MD, and among them, 12 FMD In this facility there are 63 MD, among them, 12 FMD (all FMD are working in this facility)
3	Health staff (number of nurse)	92 Ns, among them, 18 FMN
4	Available equipment for making diagnosis	

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	Patronage nurse of health centers visit every household.
2	Asking about situation of medical checkup for child malnutrition	Every 6 months, MD team visit school and conducting check up
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	
4	Availability of supporters for health promotion activities at community level	No volunteer No necessary to place volunteer in medical field because they are not medical personnel
5	situation and possibility of health education for children at school	MD team medical check up
6	existence of health education by media	Local newspaper and radio exists at Oblast level
7	existence of application for smartphone related health promotion	No
8	MCH handbook utilization for health	Yes, using as a standard

	education of mother and child	
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NOTE:

In Jomi district, District hospital is only for inpatient. Outpatient service is provided by District health center.

Diagnosis equipment for outpatient is X-ray (newly came before one month operated by 2 technicians), Ultrasound, and ECG (every cardiologist has one each ECG, total 4).

There is also laboratory, which is run by BEHGOSHI, a company contracted with MOH. Lab receives 100 patient's test per day. HIV and Hepatitis C lab is run by government.

BEHDOSHTI

Health center's employees (around 60 including MD/Nurses) will start their education on family medicine from May 2021.

District/City Health Center Khuroson

Date	May 7
Name of the person answers	Dr. Aslan Sobiri
Position	Deputy Director

District population: 126,000 DHC catchment population: 19,000

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center/ Please provide related regulation	They have reproductive center, Children center and immunization center.
2	Health staff (number of medical doctors and their specialities)	District total 48MD, and among them, 11 FMD In this facility there are 19 MD, among them, 4 FMD
3	Health staff (number of nurse)	263 nurses, 88 FMN In this facility there are 41 nurses, 22FMN
4	Available equipment for making diagnosis	Ultrasound, ECG. There is no X-ray.

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	There is a laboratory run by BEHDOSHTI LLC.
2	Asking about situation of medical checkup for child malnutrition	They check by weight-for-height. MUAC is also used.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Local women do not have sufficient knowledge about health and hygiene because they have little education.
4	Availability of supporters for health promotion activities at community level	There are health volunteers trained by USAID project, "Feed the future".
5	situation and possibility of health education for children at school	Once a year, they send a team to schools for health check-up.
6	existence of health education by media	Every month the deputy director writes an article for a local newspaper. Sometimes they appear on TV at Obrast to share health message.
7	existence of application for smartphone related health promotion	No

8	MCH handbook utilization for health education of mother and child	Yes, using as a standard.
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Number of Out-patients in Health Center of Khuroson district

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	214	210	221	231	236
2	Diabetes	109	125	143	178	215
3	Cancer	3	4	2	6	0
4	Malnutrition (child)	4	5	6	3	4
5	Anemia	76	98	110	198	307

District/City Health Center
Kushoniyon

Date	5 May
Name of the person answers	Rasul
Position	Manager

Covers 8 Jamoats with population of 249,787.

Under District health center, there are 24 RHC and 50 HH.

Centers related to DHC.

- IMCI
- Immunization
- HIV/AIDS
- RepHC
- HLC
- Dermatology
- Education
- Tropical disease center
- FMC

No	Question	Answer
1	Role and scope of responsibility & service of District/city health center	
2	Health staff (number of medical doctors and their specialities)	District total 58 MD (25 FMD) In this center 11 MD (2 FMD)
3	Health staff (number of nurse)	District total 377 (51 FMN) In this center 51 MD (0 FMN)
4	Available equipment for making diagnosis	Lab service run by XXXXXXXX

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup	Mass screening by Health Caravan

	for early detection of NCDs	For remote areas, borrow X-ray vehicle from Oblast hospital. They bring U.S., lab, ECG. They test Hep C, HIV, urine, and blood but this is not for detection of NCD.
2	Asking about situation of medical checkup for child malnutrition	
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	
4	Availability of supporters for health promotion activities at community level	Volunteer
5	situation and possibility of health education for children at school	They are discussing on it. 1 time per year before school starts in August. HLC goes to school.
6	existence of health education by media	They have district radio and district newspaper
7	existence of application for smartphone related health promotion	They have Facebook
8	MCH handbook utilization for health education of mother and child	RepHC to pregnant women

HLC in the district

There are 12 staff by health and education personnel.

Using TV, radio, newspaper.

Providing seminar and training through RHC to population.

36 topics in health education

Ex) nutrition (healthy eating)

Pilot of USAID project

Also, they cooperate with Vodo kanal and medical waste service, and school.

Healthy Lifestyle Center, Kushoniyon

Date	6 May 2021
Name of the person answers	Jalilov Erkin
Position	Director
Contact number	915447244

1. Organization structure

12 staff, 5 at district level and 7 at sub-district level.

District	Director, accountant, human resources, computer operator (in-charge of update of their Facebook page), assistant
Sub-district	Called as sub-district workers 3 teachers who are qualified in high education 4 doctors (stomatologist, infectionist, pediatrician, dermatologist)

2. Activities

- Spread propaganda for health topics. There are 26 standard topics to cover. In case of an emergency, for example an outbreak of some infectious disease, it must be added.
- Provide training for health staff.
- Hold seminars for community people.
- Make an annual plan, daily report and monthly report for provincial HLC.
- Internal meeting with Sub-district workers every week.
- Meeting with DHC 2-3 times per week.

3. Trainings/materials

- They don't have training on communication approaches to community people.
- They don't have standardized teaching materials for community people. (Although the federal HLC already developed them, they did not receive them yet.)

3. Others

- They want to have a vehicle for their activities.

Healthy Lifestyle Center, Khuroson

Date	7 May 2021
Name of the person answers	Gultuhsor Turkmenova
Position	Director
Contact number	911016626

1. Organization structure

11 staff, all of them at district level. No staff at sub-district level.

Department	Staff
National program	Chief (Chemist), instructor
Information	Chief (Chemist), media specialist
Documentation	Chief (Chemist), nurse
Administration	Human resources, accountant, librarian, Cleaner

2. Activities

- Main activity is "Explaining health issues to the general public". For example, they picked up topics such as COVID-19 and diarrhea. They hold seminars, make house visits, according to the orders by the Obrast. When the Obrast provides some posters or materials (ex. face masks), they distribute them to the local people.
- On average, they have 2-3 events per day. They work according to their daily schedule.
- When they make house visits, they go together with patronage nurses. When they go to school, they go together with specialists. So, they consider that there is no duplication of work.
- They make annual plan, daily/monthly/quarterly reports and send them to Obrast, district government, DHC and district hospital
- Data analysis on NCDs is not their responsibility.
- There is no system of monitoring and evaluation on their activities. Once a year, they receive an inspector sent by the Obrast. He checks their daily/ monthly report from the viewpoint of numerical increase. However, there is no punishment if numbers of some of their activities are decreased in comparison with those of the last year.
- They send an article to the local newspaper every week.

3. Example of Daily report



- Requirements: Name of visitor, Location, make of school, types of activity, topic, number of participants, type and number of distributed materials
 - Signature by the responsible person and stamp are important "proof" to endorse their activities.
- ### 4. Trainings
- Sometimes the Obrast and Vaccination center invites the director of HLC. This year, the director had 3 trainings. On the occasion of training, they share brochures for community people also.
- ### 5. Issues in work
- They have no operational budget. When they need to go to villages far away from their office, they need to pay transportation costs from their pocket. It is a burden to the HLC staff, because their salary is not high (ex. one of the staff in a lower position makes only 450 TJS per month.)
- ### 6. Others
- They don't have a Facebook page.

Rural Health Center

Rural Health Center Qadriddin Giyosov Jamoat, Jomi

Date	May 4
Name of the person answers	Dr. Aimatov Olimjon
Position	Director, RHC Qadriddin Giyosov

No	Question	Answer
1	Number of health staff and their specialty	6 doctors (3 therapists, pediatrician, gynecologist, stomatologist) 15 nurses, 1 laboratory technician
2	Contents of activity for health service provision to population	4,869 for this RHC 16,396 with catchment population for all sub HH
3	When this building was built?	1961
4	Problem in infrastructure	Deteriorated. It shakes.
5	Availability of electricity	Yes but limited during winter
6	Availability of water	There is a well and water tank. Canal water is used for the garden.
7	Availability of Equipment for health check up and diagnose	Laboratory, Sphygmomanometer, pulse-oximeter,

How is/was the COVID-19 situation in your area?
6 positive cases were detected at the district hospital after referral from this center.

Due to COVID-19, is there any changes of people behavior on prevention of infectious disease?
People became more conscious about the health. When they find any health problems, they come to HC more often.

Besides COVID-19, What is your impression towards the trend of NCDs? Increase? If increase, particularly what kind of disease is increasing?

Number of patients of NCDs and nutrition-related diseases (if there is data)

The head of HC said that he couldn't provide this information because he was not in-charge

of data management.

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	They detect hypertension. They refer the patient to the DHC. No treatment is provided here.
2	Asking about situation of medical checkup for child malnutrition	Suspected cases were found through patronage. They were requested to come to the RHC and checked wight-for-height by pediatrician.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	A few people watch their nutrition intake and care about exercise.
4	Availability of supporters for health promotion activities at community level	No volunteers or supporters.
5	situation and possibility of health education for children at school	HH nurses visit schools for health education. Gynecologist visits high school once a month. There is a meeting at sub-district level every Tuesday, with directors of HH and schools.
6	existence of health education by media	Nurses disseminates health information via local newspaper, radio and TV.
7	existence of application for smartphone related health promotion	No. Sometimes they receive messages about COVID from MOH.
8	MCH handbook utilization for health education of mother and child	Yes.

Patronage: 15 households per day per nurse in average. On foot.

There is no PC, no printer at this center.

**Rural Health Center
Tursun Uljaboev Jamoat, Khuroson**

Date	May 7
Name of the person answers	Nazarova Sabokhat
Position	Head, RHC Tursun Uljaboev

Catchment area population: 6,297, there are 3 HHs under this RHC, covering 5,749 population.

No	Question	Answer
1	Number of health staff and their specialty	3 doctors (OBGY, Pediatrician, Therapist), no FMD. 10 Nurses (2 of them are FMN)
2	Contents of activity for health service provision to population	OBGY, Pediatrics, Internal medicine
3	When this building was built?	1975
4	Problem in infrastructure	When they find problems, they repair them with their pocket money.
5	Availability of electricity	Yes but limited during winter
6	Availability of water	They have to bring water with bucket from the well.
7	Availability of Equipment for health check up and diagnose	Laboratory, gynecological examination table, disposable gynecological mirror, Thermometer, sphygmomanometer. No ultrasound, ECG, X-ray

How is/was the COVID-19 situation in your area?
10 positive cases out of 20 suspected cases. 1 death.

Due to COVID-19, is there any changes of people behavior on prevention of infectious disease?
People are more aware of infectious disease. They call RHC immediately when one of their family member has a fever. RHC staff learned a lot through COVID experience to protect themselves.

Besides COVID-19, What is your impression towards the trend of NCDs? Increase? If increase, particularly what kind of disease is increasing?
Now most of them had a knowledge that anemia is a serious health problem because of

patronage. Some people do not follow advices by patronage nurses.

Number of patients of NCDs and nutrition-related diseases (if there is data)

HC staff tried to sum up yearly total but they gave up because it took too much time.

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	38	39	42	44	48
2	Diabetes	10	13	15	26	26
3	Cancer	6	5	0	2	0
4	Malnutrition (child)	4	6	5	3	2
5	Anemia	8	12	23	35	27

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	They can check blood pressure, urine, blood.
2	Asking about situation of medical checkup for child malnutrition	They find underweight children through patronage and ask the children to come to RHC to check weight and height. They refer serious cases to district hospital. They don't have BP-100.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	People do not pay much attention to prevention of NCDs. Some diabetic people started some exercise and taking herbal medicine. Most people think if they take medicine, all problems will be solved.
4	Availability of supporters for health promotion activities at community level	No volunteers or supporters now.
5	situation and possibility of health education for children at school	There are 2 schools in this catchment area. They go there for vaccination and extermination of worms.
6	existence of health education by media	No
7	existence of application for smartphone related health promotion	No
8	MCH handbook utilization for health	Yes.

	education of mother and child	
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Patronage: there are 4 patronage nurses. Every day they visit 20-25 households per day in average. Local people are happy to talk with them.

Rural Health Center Navbahor Jamoat, Kushoniyon

Date	May 6
Name of the person answers	Atajonova Malika
Position	Acting Head, RHC Navbahor

No	Question	Answer
1	Number of health staff and their specialty	6 Nurses (2 of them are FN) 2 cleaners, 1 guard
2	Contents of activity for health service provision to population	3,803 (489 households)
3	When this building was built?	1955
4	Problem in infrastructure	There is no air conditioner, disrupted wall
5	Availability of electricity	Yes but limited during winter
6	Availability of water	There is a pump in the yard
7	Availability of Equipment for health check up and diagnose	Thermometer, sphygmomanometer, gynecological examination table, refrigerator

How is/was the COVID-19 situation in your area?
20 positive cases out of more than 100 tests. 1 death, it was a head of this RHC.

Due to COVID-19, is there any changes of people behavior on prevention of infectious disease?
People are more aware of hygiene. They wash their hands more often and try to avoid gatherings.

Besides COVID-19, What is your impression towards the trend of NCDs? Increase? If increase, particularly what kind of disease is increasing?
Cases of diabetes are increasing due to stress, inactive life style caused by unemployment. People cannot get employment after the closure of national border.

Number of patients of NCDs and nutrition-related diseases (if there is data)

HC staff tried to sum up yearly total but they gave up because it took too much time.

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	They can check hypertension. They refer the patient to the DHC for treatment and they follow up the patient.
2	Asking about situation of medical checkup for child malnutrition	They find underweight children through patronage and ask the children to come to RHC to check weight and height. They refer suspected cases to the nearest RHC because they do not have a WHO table to check wasting. They do not have stock of BP-100 either. Now they have 8 children under follow-up.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	On patronage, they explain about food pyramids, healthy eating habit with a lot of fruits and vegetables. About exercise, local people are not familiar with such idea.
4	Availability of supporters for health promotion activities at community level	No volunteers or supporters.
5	situation and possibility of health education for children at school	Once or twice a month, they have seminars at school.
6	existence of health education by media	No
7	existence of application for smartphone related health promotion	They use telephone to follow-up patients.
8	MCH handbook utilization for health education of mother and child	Yes.

Patronage: They go patronage every day. For example, the head of HC are in-charge of 120 households. She visits 30-40 households per day. Sometimes household members call her when she doesn't visit their house for a few days.

Rural Health Center (RHC)
(Name of RHC: Ergash Sulton)
(District: Dusty)

Date	17 May 2021
Name of the person answers	Kuliev Farmon (Head of RHC, was on vacation) Kuliev Murodaly (ophthalmologist)
Position	Doctor ophthalmologist

No	Question	Answer
1.1	Population covered	2382 with 4 service areas (uchastka)
1.2	Number of households covered	412
1.3	Population under 1 years old	70
1.4	Number of health staff and their specialty	MD: 2 (1 gynecologist and 1 ophthalmologist) Midwife: 1 Nurse: 5 Among them number of patronage nurse 3, and 1 of them does a vaccination too
1.5	Numbers of FMD and FMN	Family medicine doctor (0) FMN (3 (retrained on FN)
2	Contents of activity for health service provision to population	(YES) Vaccination (YES) Antenatal care (YES) Treatment given based on prescription (NO) Minor surgery (sutures, disinfection – all these done at CDH (YES) others eye diseases, gynecology, TB care (if have a patient), first aid for all diseases during home visit or patient self admission
3	When this building was built?	Year 1980
4	Problem in infrastructure	Water supply doesn't work Heating (however water radiators are set up) Old equipment, chairs broken Needs for capital repair In total 6 rooms (including one for observation of pregnant women)
5	Availability of electricity	Summer time electricity available whole time available, but during winter season it is by schedule
6.1	Availability of water	Water taken from well by hand pump (underground

		water)
6.2	Water source	(YES) Well () Canal, river () Others
7	Availability of Equipment for health check up and diagnose	(Yes 1) Height scale (Yes 1) Weight scale (2) BP Sphygmomanometer (Yes 1) Measuring tape Stethoscope (3 but 1 is broken) (weight for children remained from Soviet time but it doesn't work) Others – calendar for pregnancy 1 FD bag is available, but it is not used at all, rarely at the Center but not for home visit, all equipment is packed look like never used

Former Pilot rayon for USAID, before many materials distributed but currently it is not as no request activities related to MCH handbook, malnutrition to be done due to no project

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				24	26
2	Diabetes				10	10
3	Cancer				1	0
4	Malnutrition (child)				10	5
5	Anemia				20	20

All patients with cardiovascular diseases are not applied to this Health center for care. They apply to Rayon health Center, for last years no data available.

Data taken not from reports but according to hearing from health workers of Rural Health center

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (3 patronage nurse)
2	Contents of home visit	(YES) Listening of health complaints (YES) BP measuring but only 1 device available. Mainly use the household BP devise (YES) Asking conditions of pregnant women and child

		(YES) Asking conditions of NCD patient (with diabetes and hypertension, heart diseases) (YES) Others Asking for person with temperature, diarrhea
3	Difficulties in conducting home visit especially in providing health advice	Lack of medical equipment (even thermometers, distant area, coverage for transport expenses, rejection of immunization, refuse from registration of pregnancy, giving lab tests, very religious custom All dispensary patients all pass medical check up at Rayon Health Center

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(NO) school teachers (3 schools) (NO) volunteers () Others – do themselves health promotion, during field works conduct health promotion activities on infection diseases
2	Targets for health education	(Yes) Schoolchildren (Yes) Pregnant women (Yes) Teenagers (women) (Yes) Mothers (NO) Mother-in-law (YES) Others among teachers, labors at fields
3	Topics	(Yes) Nutrition (among mother with malnutrition children (Yes) Breast feeding (No) Obesity (Yes) Hygiene (hand washing, cleaning of homes (Yes, hepatitis, typhoid, worms) Prevention of infectious disease (Yes) Diarrhea (YES) Others acute respiratory diseases (winter time), diabetes
4	Difficulties in conducting health education especially in making them understand	Population ignore passing lab testing due to financial problems Limited number of health promotion materials

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(2) of cases and (0) of death Information materials on COVID available
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	People became more accurate, more careful, avoiding the crowded areas, prevent relatives to have many contacts, no wearing of masks

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (YES) height (YES) weight (YES) arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Level of knowledge is lacking, population don't read even the IEC on NCD (they take but not read). Not serious in terms of changing the attitude.
8	MCH handbook utilization for health education of mother and child	Don't have at Heath Center, more than 10 months not distributed among pregnant women. Before RH Center delivered but not now.

Rural Health Center (RHC)
(Name of RHC: Dahbed)
(District: Hissor)

Date	May 17
Name of the person answers	Dr. Morodov (FMD)
Position	Head

No	Question	Answer
1.1	Population covered	5,903
1.2	Number of households covered	937
1.3	Population under 1 years old	169
1.4	Number of health staff and their specialty	MD: 3 (Obgy, FMD, Dentist) Midwife:1 Nurse:8 Among them number of patronage nurse: 7
1.5	Numbers of FMD and FMN	Family medicine doctor (1) FMN (6)
2	Contents of activity for health service provision to population	(<input type="radio"/>) Vaccination (<input type="radio"/>) Antenatal care (<input type="radio"/>) Treatment given based on prescription (<input type="radio"/>) Minor surgery (sutures, disinfection) (<input type="radio"/>) others First aid
3	When this building was built?	1989
4	Problem in infrastructure	Toilet, water heating, No AC
5	Availability of electricity	Not all the time
6.1	Availability of water	yes
6.2	Water source	(<input type="radio"/>) Well (<input type="radio"/>) Canal, river (<input type="radio"/>) Others Centralized
7	Availability of Equipment for health check up and diagnose	(<input type="radio"/>) Height scale (<input type="radio"/>) Weight scale (<input type="radio"/>) BP Sphygmomanometer (<input type="radio"/>) Measuring tape (<input type="radio"/>) Stethoscope (<input type="radio"/>) Others

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	5	3	7	6	6
2	Diabetes	4	4	6	5	6
3	Cancer					
4	Malnutrition (child)	4	8	5	7	5
5	Anemia	98	113	105	117	123

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average ()
2	Contents of home visit	() Listening of health complaints () BP measuring () Asking conditions of pregnant women and child () Asking conditions of NCD patient () Others, medication according to px, such as IV and injection
3	Difficulties in conducting home visit especially in providing health advice	There are some parents who want the child to get vaccination. They do not understand the merit of vaccination. Sometime young nurses have difficulty to convince the people.

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	() school teachers () volunteers () Others No support
2	Targets for health education	() Schoolchildren () Pregnant women () Teenagers (women) () Mothers () Mother-in-law () Others There is a junk-food shop near school. Staff advised not to buy anything from the shop, but most of the students already bought hotdog and they

		liked the taste. It is very difficult for them to understand it is a kind of dangerous behavior.
3	Topics	() Nutrition () Breast feeding () Obesity () Hygiene () Prevention of infectious disease () Diarrhea () Others Hand washing, prevention of TB because there was a new TB patient recently)
4	Difficulties in conducting health education especially in making them understand	They believe people understand.

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(26) of cases and (4) of death Death: Two were old people and other two were 40's and 28 y.o.
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	People got careful to prevent and care about temperature.

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement () height () weight () arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Good
8	MCH handbook utilization for health education of mother and child	The head said they used it, but there was no handbook stocked.

Rural Health Center (RHC)
(Name of RHC: Obygarm Health Center)
(District: Roghun)

Date	May 24, 2021
Name of the person answers	Ilhomiddon Nasreddinov, (reanimatologist by specialty)
Position	Head of Rural Health Center (Ambulatory Obygarm)

Many doctors works (has contract with hospital) for regional hospital too due to lack of staff

No	Question	Answer
1.1	Population covered	10367
1.2	Number of households covered	1802
1.3	Population under 1 years old	380
1.4	Number of health staff and their specialty	MD: 14 (FD 6, all retrained) Midwife: 0 Nurse: 14 (including 6 FN) Among them number of patronage nurse 8 (there are 8 areas)
1.5	Numbers of FMD and FMN	Family medicine doctor (6) FMN (6)
2	Contents of activity for health service provision to population	(X) Vaccination (X) Antenatal care (X) Treatment given based on prescription (X) Minor surgery (sutures, disinfection) (X) others dental care, laboratory (RW, HIV)
3	When this building was built?	Year 1976, former dormitory
4	Problem in infrastructure	Need for renovation, lack of water (no drinking water)
5	Availability of electricity	All the time and seasons
6.1	Availability of water	Available
6.2	Water source	() Well () Canal, river (X) Others – from spring (which is open and not protected/covered, according to health staff the water is not clean as accessible for animals)
7	Availability of Equipment for health check up and diagnose	(2 (1 for children and 1 for adults, need for 4 additional) Height scale (2 (1 for children and 1 for adults, need for 4 additional) Weight scale

	(8) BP Sphygmomanometer (8) Measuring tape (8) Stethoscope (YES) Others ECG (but old), need for US, ECG, dental and surgery sets (instrumental), there is a minor surgery theatre with need for vacuum, cardio monitor, oxygen concentrator
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Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				NA	60
2	Diabetes				NA	35
3	Cancer				NA	15
4	Malnutrition (child)				NA	50
5	Anemia				NA	40

By hearing from Head of facility

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (8)
2	Contents of home visit	(X) Listening of health complaints (X) BP measuring (X) Asking conditions of pregnant women and child (X) Asking conditions of NCD patient (X) Others – every day report on diseases, patients with temperature, migrants which back home, number of households visited with numbers of population, ARI, diarrhea
3	Difficulties in conducting home visit especially in providing health advice	Visit should be done by walking, better to have a separate transport Ignorance from population side due to every day visit

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(NO) school teachers (X total 8, 1 per area) volunteers (X) Others in 2 schools there nurses (1 per each), collaboration with these nurses
2	Targets for health education	(X) Schoolchildren (X) Pregnant women (No) Teenagers (women) (X) Mothers (No) Mother-in-law (X) Others via HLC and RH do population promotion activities
3	Topics	(X) Nutrition (X) Breast feeding (X) Obesity (X) Hygiene (X) Prevention of infectious disease (X) Diarrhea (X) Others COVID, HIV, TB
4	Difficulties in conducting health education especially in making them understand	Head of jamoats may collect easily group and provide lectures Acceptance of provided information is quite well

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(160) of cases and (4) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	A lot of self-treatment, wearing masks, use of antiseptic

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (X) height (X) weight (X) arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Moderate, patients follow the advices
8	MCH handbook utilization for health education of mother and child	Not available, did not receive, so awareness on MCH handbook is limited

There is guidelines on COVID and latest PHC guidelines (every doctor has one)

Rural Health Center (RHC) (Name of RHC: Childara) (District: Sangvor)

Date	May 21, 2021
Name of the person answers	Ikromzoda Ismon
Position	Nurse Head of Rural HC left for FM training (6 months)

Covering 8 health houses

No laboratory

AKF support to PHC system (renovation, equipment, re-training)

5 rooms

No	Question	Answer
1.1	Population covered	1276 in Jamoat Center
1.2	Number of households covered	210
1.3	Population under 1 years old	31
1.4	Number of health staff and their specialty	MD: 1 Midwife: 1 Nurse: 4 Among them number of patronage nurse 2 but all do home visits
1.5	Numbers of FMD and FMN	Family medicine doctor (no) FMN (1 (passed 6 months training)
2	Contents of activity for health service provision to population	(X) Vaccination (X) Antenatal care (X) Treatment given based on prescription (X) Minor surgery (sutures, disinfection) (NO) others
3	When this building was built?	2010 Renovated by AKF 2013
4	Problem in infrastructure	No water
5	Availability of electricity	All time, during winter time according to schedule
6.1	Availability of water	No
6.2	Water source	(X) Well (X) Canal, river () Others
7	Availability of Equipment for health check up and diagnose	(X 1) Height scale (X 1) Weight scale (1) BP Sphygmomanometer (3) Measuring tape (2) Stethoscope (X) Others FM and FN bags provided by AKF

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				NA	15
2	Diabetes				NA	7
3	Cancer				NA	0
4	Malnutrition (child)				NA	2
5	Anemia				NA	5

By hearing from nurse and from register

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (5)
2	Contents of home visit	(X) Listening of health complaints (X) BP measuring (X) Asking conditions of pregnant women and child (X) Asking conditions of NCD patient (X) Others health promotion activities related to infection diseases, immunization, disability
3	Difficulties in conducting home visit especially in providing health advice	Distant community Population increased but staff position remains same Low level of information utilization by population

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(4) school teachers (0) volunteers (0) Others
2	Targets for health education	(X) Schoolchildren by health workers (X) Pregnant women () Teenagers (women) (X) Mothers () Mother-in-law () Others
3	Topics	(X) Nutrition (X) Breast feeding () Obesity (X) Hygiene (X) Prevention of infectious disease

		(X) Diarrhea () Others
4	Difficulties in conducting health education especially in making them understand	General literacy of population

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(0) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	No really changes, it was a panic last year

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (X) height (X) weight (X) arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Moderate A lots of EIC materials distributed
8	MCH handbook utilization for health education of mother and child	Don't use

Rural Health Center (RHC)
(Name of RHC: Istiqlol)
(District: Shakhrinav)

Date	May 20
Name of the person answers	Dr. Khojaev (FMD)
Position	Head

No	Question	Answer
1.1	Population covered	8,692
1.2	Number of households covered	1,153
1.3	Population under 1 years old	230
1.4	Number of health staff and their specialty	MD: 3 (2FMD, 1 dentist) Midwife: 0 Nurse: 14 (10 FMN) Among them number of patronage nurse 14
1.5	Numbers of FMD and FMN	Family medicine doctor (2) FMN (10)
2	Contents of activity for health service provision to population	(<input type="radio"/>) Vaccination (<input type="radio"/>) Antenatal care (<input type="radio"/>) Treatment given based on prescription (<input type="checkbox"/>) Minor surgery (sutures, disinfection) (<input type="checkbox"/>) others First aid
3	When this building was built?	Around 1950 年
4	Problem in infrastructure	Renovation was done in 2008. However, there was a mistake of wiring. Hence, some electric devices cannot use.
5	Availability of electricity	No problem
6.1	Availability of water	No water
6.2	Water source	(<input type="checkbox"/>) Well (<input type="radio"/>) Canal, river (<input type="checkbox"/>) Others Using river water from 200m
7	Availability of Equipment for health check up and diagnose	(<input type="radio"/>) Height scale (<input type="radio"/>) Weight scale (<input type="radio"/>) BP Sphygmomanometer (<input type="radio"/>) Measuring tape (<input type="radio"/>) Stethoscope (<input type="checkbox"/>) Others

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020	2021
1	Cardiovascular diseases					24	22
2	Diabetes					19	17
3	Cancer					14	14
4	Malnutrition (child)	Tendency to have child in poor family				5	6
5	Anemia					20	15

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (80)
2	Contents of home visit	(<input type="radio"/>) Listening of health complaints (<input type="radio"/>) BP measuring (<input type="radio"/>) Asking conditions of pregnant women and child (<input type="radio"/>) Asking conditions of NCD patient (<input type="checkbox"/>) Others
3	Difficulties in conducting home visit especially in providing health advice	No difficulties because nurses work according to the Working plan, and they understand it is their work.

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(<input type="checkbox"/>) school teachers (<input type="radio"/>) volunteers (<input type="checkbox"/>) Others There are 6 volunteers who was selected one each from Mahala.
2	Targets for health education	(<input type="radio"/>) Schoolchildren (<input type="radio"/>) Pregnant women (<input type="radio"/>) Teenagers (women) (<input type="radio"/>) Mothers (<input type="radio"/>) Mother-in-law (<input type="checkbox"/>) Others Father in law
3	Topics	(<input type="radio"/>) Nutrition (<input type="radio"/>) Breast feeding (<input type="radio"/>) Obesity (<input type="radio"/>) Hygiene (<input type="radio"/>) Prevention of infectious disease (<input type="radio"/>) Diarrhea

		() Others ARI
4	Difficulties in conducting health education especially in making them understand	There are families (about 5% of all families) which ignore what health staff say.

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(1 detected as positive among 19 doubt cases) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	People started to put on a mask when many people gather. Ceremony which many people gather was canceled. People also aware of prevention of other infectious diseases.

During the pandemic period, staff were busy with health checkup and monitoring of 120 migrant workers who came back from Russia.

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (<input type="radio"/>) height (<input type="radio"/>) weight (<input type="radio"/>) arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Families are aware of prevention of all diseases not only NCDs.
8	MCH handbook utilization for health education of mother and child	NO

There is a laboratory in this RHC. Tests are available in HIV, urine and stool.

There are four rooms which are used for ANC, Treatment, Vaccination, and ORS.

Rural Health Center (RHC) (Name of RHC: Dehai Kazoz Rural Health Center Saidmumin Rahimov) (District: Temurmalik)

Date	May 20, 2021
Name of the person answers	Avleokulov Abdulhakim
Position	Rural HC Head

Under Rural HC 5 Health Houses

No	Question	Answer
1.1	Population covered	8268 with Health Houses 3202 Rural Health center catchment area
1.2	Number of households covered	400
1.3	Population under 1 years old	243 (in nearest catchment population)
1.4	Number of health staff and their specialty	MD: 3 (gynecologist, pediatrician, FM (retrained through 6 month course) Midwife:1 plus 4 midwives in Health house Nurse: 14 Among them number of patronage nurse 18
1.5	Numbers of FMD and FMN	Family medicine doctor (1) FMN (5)
2	Contents of activity for health service provision to population	(Yes) Vaccination (Yes) Antenatal care (Yes) Treatment given based on prescription from doctors of numeral hospital and CDH (No) Minor surgery (sutures, disinfection) (yes) others health promotion on immunization, COVID, nutrition
3	When this building was built?	Year 1983
4	Problem in infrastructure	Electricity not supply. No water, no heating, old equipment and lack of equipment Maintain the cold chain for vaccines
5	Availability of electricity	At the time of interview no electricity Winter time only 2 hours available
6.1	Availability of water	No
6.2	Water source	() Well () Canal, river (YES) Others Buying And preserve water in tank (13 tons)

7	Availability of Equipment for health check up and diagnose	(Yes, 1) Height scale (Yes, 2) Weight scale (Yes, 2) BP Sphygmomanometer (Yes, 1) Measuring tape (4) Stethoscope (yes) Others thermometers, shpatel No FD bag delivered
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Number of patients of NCDs and nutrition-related diseases (if there is data)

By hearing from head of Rural Health Center

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				6	20
2	Diabetes				4	6
3	Cancer				NA	NA
4	Malnutrition (child)				6	3
5	Anemia				70 (registered)	150(registered)

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (14)
2	Contents of home visit	(X) Listening of health complaints (X) BP measuring (X) Asking conditions of pregnant women and child (X) Asking conditions of NCD patient (X) Others Detect patient with high temperature For all children up 6 years old call for vaccination
3	Difficulties in conducting home visit especially in providing health advice	Distant catchment (farest HH is at 80 km distance from Rural Health Center) No access during winter time High size of catchment population, for instance for 1 midwife 3202 population Remote mountain area

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(No) school teachers (No) volunteers (Yes) Others in case for need for emergency transportation community collects funds
2	Targets for health education	(X) Schoolchildren (X) Pregnant women (X) Teenagers (women) (X) Mothers (X) Mother-in-law (X) Others in mosque (specially on TB, botulism, COVID)
3	Topics	(X) Nutrition (X) Breast feeding (X) Obesity (3 patients registered) (X) Hygiene (X) Prevention of infectious disease (TB, botulism, COVID) (X) Diarrhea () Others
4	Difficulties in conducting health education especially in making them understand	Low utilization of giving information

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(0) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	Staring wearing mask in schools, mosque

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (X) height (X) weight (X) arm Checking during home visit
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Limited knowledge but health workers provided information via lectures on this topic
8	MCH handbook utilization for health education of mother and child	Yes, they distribute to all pregnant women

Rural Health Center (RHC)
(Name of RHC: Toichi)
(District: Tursunzoda)

Date	May 19
Name of the person answers	Dr. Yakubova
Position	Head (FMD)

No	Question	Answer
1.1	Population covered	13,134
1.2	Number of households covered	1,601
1.3	Population under 1 years old	369
1.4	Number of health staff and their specialty	MD: 6 (4FMD, 1dentist, 1Obgy) Midwife: 1 Nurse: 18 (all of them are FMN) Among them number of patronage nurse All of them
1.5	Numbers of FMD and FMN	Family medicine doctor (4) FMN (18)
2	Contents of activity for health service provision to population	(<input type="radio"/>) Vaccination (<input type="radio"/>) Antenatal care (<input type="radio"/>) Treatment given based on prescription (<input checked="" type="checkbox"/>) Minor surgery (sutures, disinfection) () others First Aid
3	When this building was built?	1958 This building was used to be a hospital before civil war. After the war, a person purchased the building and after that, the RHC has been renting the building as a health facility by the person.
4	Problem in infrastructure	Needs to move from the personal property building to official building. Local Hukmat has already found the land in new place but still no building is constructed because of lack of budget.
5	Availability of electricity	No problem
6.1	Availability of water	Available of Vodocanal water pipe
6.2	Water source	() Well () Canal, river (<input type="radio"/>) Others
7	Availability of Equipment for health check up and diagnose	(<input type="radio"/>) Height scale (<input type="radio"/>) Weight scale but no baby scale

	(<input type="radio"/>) BP Sphygmomanometer (<input type="radio"/>) Measuring tape (<input type="radio"/>) Stethoscope () Others
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Number of patients of NCDs and nutrition-related diseases (if there is data)

There was no record in the RHC. After the interview, the following data was collected from DHC statistic center.

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	134	245	177	204	209
2	Diabetes	23	26	24	39	28
3	Cancer	2	3	3	3	4
4	Malnutrition (child)	22	27	22	14	17
5	Anemia	128	84	30	76	91

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (90)
2	Contents of home visit	(<input type="radio"/>) Listening of health complaints (<input type="radio"/>) BP measuring (<input type="radio"/>) Asking conditions of pregnant women and child (<input type="radio"/>) Asking conditions of NCD patient (<input type="radio"/>) Others Situation monitoring of disabled people
3	Difficulties in conducting home visit especially in providing health advice	There are some persons who do not follow the advice. Some Mother-in-laws don't change their minds. There are about 10% families which is difficult to give advice.

In 3-4 years ago, about 2,500 people were moved from Roghun where dam was constructed.

The area where they migrated was originally an area where Islamic discipline is very strict, and the precepts are completely different from the people who originally live in this area.

For example, the people do not have custom to receive antenatal care. Nurses had difficulty to convince them. The head of the RHC consulted DHC director. The DHC director consulted

the mahala leader of the area. Finally, the Mahala leader convinced the people to come to ANC and they started to come to RHC. The mahala leader's nickname is "Samurai" because he is very active for everything.

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	() school teachers () volunteers () Others , There are 4 active women in the community and they always support the activities of RHC.
2	Targets for health education	() Schoolchildren () Pregnant women () Teenagers (women) () Mothers () Mother-in-law () Others They use the opportunity to educate Mother-in-law at the time of wedding ceremony. When wedding ceremony, men and women usually wait for long time in a separate room. During the time, women normally spend time with having tea. The nurse of the RHC goes to the wedding ceremony and spends the tea time with them and have chats in terms of visiting RHC for ANC.
3	Topics	() Nutrition () Breast feeding () Obesity () Hygiene () Prevention of infectious disease () Diarrhea () Others Importance of immunization, prevention of TB, prevention of DB, prevention of COVID-19
4	Difficulties in conducting health education especially in making them understand	Almost no problem except there are some families which has difficulty of educating.

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was	(54 doubt cases, 1 detected positive by PCR) of

	epidemic	cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	Increased awareness of health by people. Especially measuring temperature. Using alcohol, using soap.

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement () height () weight () arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Increase people who do not take salt and oil so much.
8	MCH handbook utilization for health education of mother and child	No pilot. Never seen.

Rural Health Center (RHC)
(Name of RHC: Burunov)
(District: Vahdat)

Date	May 21
Name of the person answers	Dr. Murodov (FMD)
Position	Head

Same building as Numeral hospital No.2

I stayed from 13:30 to 15:00 but no patient came.

No	Question	Answer
1.1	Population covered	10,169
1.2	Number of households covered	1,216
1.3	Population under 1 years old	267
1.4	Number of health staff and their specialty	MD: 2 (1 FMD, 1obgy) Midwife: 1 Nurse: 6 (all are FMN) Among them number of patronage nurse 6 of them ,all of them 1 patronage nurse visits 30 HH per day.
1.5	Numbers of FMD and FMN	Family medicine doctor (1) FMN (6)
2	Contents of activity for health service provision to population	(<input type="radio"/>) Vaccination (<input type="radio"/>) Antenatal care (<input type="radio"/>) Treatment given based on prescription (<input type="radio"/>) Minor surgery (sutures, disinfection) (<input type="radio"/>) others First aid
3	When this building was built?	1969, in 2011, it was renovated
4	Problem in infrastructure	Not all the room providing water tap
5	Availability of electricity	No problem
6.1	Availability of water	Tap
6.2	Water source	(<input type="radio"/>) Well (<input type="radio"/>) Canal, river (<input type="radio"/>) Others There is a well in the area, and water come to the room by pipes.
7	Availability of Equipment for health check up and diagnose	(<input type="radio"/>) Height scale (<input type="radio"/>) Weight scale (<input type="radio"/>) BP Sphygmomanometer (<input type="radio"/>) Measuring tape (<input type="radio"/>) Stethoscope (<input type="radio"/>) Others Doctor's bag

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	50	46	41	45	40
2	Diabetes	15	18	18	18	16
3	Cancer	6	5	5	5	3
4	Malnutrition (child)	38	35	30	28	21
5	Anemia	25	20	18	16	14

- At the moment, there are 50 pregnant women who are registered. Among them, 11 are anemia.
- There is no consolidated data for a pregnant woman. ObGy and staff have their own way of taking data and recording.
- Asked the possible reasons of decreasing malnutrition, but the head did not answer clearly.
- Asked about some data, but the answers were inconsistent. If I asked the same question indifferent way, the answer was different.
- No awareness of change of data in terms of increase and decrease.

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (200) One nurse has 10 houses per day
2	Contents of home visit	(<input type="radio"/>) Listening of health complaints (<input type="radio"/>) BP measuring (<input type="radio"/>) Asking conditions of pregnant women and child (<input type="radio"/>) Asking conditions of NCD patient (<input type="radio"/>) Others Baby measuring (height, weight) Pregnant women registration Disable person registration Health awareness (First, nutrition and hygiene education to pregnant woman, second, breast feeding and child nutrition education to mothers. Then, they give treatment such as infection and IV fluid. They check if there is a disabled. Also. They give advices as follows.

		<ul style="list-style-type: none"> • how to massage to baby to prevent physical disability. • How to treat baby • How to play with baby • How to prevent infection disease <p>One household is took 10 minutes in average.</p>
3	Difficulties in conducting home visit especially in providing health advice	<p>Distance is difficulty. They have to walk for a longtime to get to the house.</p> <p>To listen and convince families which complain side effect of immunization.</p> <p>Every 25 of month is the immunization day for the RHC and mother should bring the children. But some mothers do not come. Therefore, patronage nurses have to bring them to the RHC.</p>

There are 24 people who are registered as physical and mental disabled. There is no difference between male and female who has disable. Most of the people had stress by the civil war, according to the head.

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	<p>() school teachers () volunteers () Others</p> <p>Volunteers from teachers, women, monks.</p> <p>Health staff trained them as messengers of health promotion. They go to school and provide message, or mosques.</p>
2	Targets for health education	<p>() Schoolchildren () Pregnant women</p> <p>() Teenagers (women) () Mothers</p> <p>() Mother-in-law</p> <p>() Others</p> <p>Giving advice for disable people and caregivers on personal hygiene. Sometimes they need to go out for being in the sun. Teaching on how to give a basic care to disabled people for caregivers who do not know them. Giving the opportunity to disabled children to be in front of people such as a party in order not to feel inferior. Give advice for</p>

		old people not to go out so much during pandemic since old people are at risk of COVID-19.
3	Topics	<p>() Nutrition () Breast feeding () Obesity</p> <p>() Hygiene () Prevention of infectious disease</p> <p>() Diarrhea</p> <p>() Others</p>
4	Difficulties in conducting health education especially in making them understand	Understandings good. Main difficulty is transportation. We have to walk anywhere to the distant place.

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(0, but 3 doubt cases) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	Mask, washing hand with soap, using alcohol, avoiding mass meeting

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement () height () weight () arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	<p>Male are not working hard according to the head.</p> <p>Female has less risk due to hard work.</p> <p>Many nurses are female. Since there are some people (male and middle age) who do not listen the nurse. The head trains the young nurse how to talk with middle aged male.</p>
8	MCH handbook utilization for health education of mother and child	No pilot. The head found the handbook in Rudaki and Hisor, and he brought the handbook from the districts because he thought it was a good book. It is unfortunate that we are not a pilot according to the head.

**Rural Health Center (RHC)
Chorsu, Kushoniyon District**

Date	May 6
Name of the person answers	Mamadaliyeva Ziyoda
Position	Lab doctor

Located in Uzbek community

Population covered (2 Jamoat) 4,473

Population before 1 y.o. 132

Population before 5 y.o. 617

No	Question	Answer
1	Number of health staff and their specialty	1 pediatrician 2 MW 16 Nurses (among them, 8 ns conduct patronage)
2	Contents of activity for health service provision to population	House visit Immunization ANC Health education
3	When this building was built?	1951
4	Problem in infrastructure	Leaking water (but trying to fix sealings every year)
5	Availability of electricity	Not all the time
6	Availability of water	Using canal water
7	Availability of Equipment for health check up and diagnose	Height scale but no weight scale, baby scale is available, BP

How is/was the COVID-19 situation in your area?

Since the beginning of 2021, there is no infection case. At the time of epidemic, there were 18 cases in total and 2 death cases. But the deaths were categorized other pneumonia.

Due to COVID-19, is there any changes of people behavior on prevention of infectious disease?

Water quality. Health staff taught people how to use chlorine

Number of patients of NCDs and nutrition-related diseases (if there is data)

Number of new patients

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	4	46	NA	NA	NA
2	Diabetes	2	1	1	2	5
3	Cancer	NA				
4	Malnutrition (child)	NA	NA	NA	NA	6
5	Anemia	NA	NA	NA	NA	NA

They have a register book which is written patient's name, patient address & contact number, and disease. If you want to know the numbers of patient by disease, they have to count one by one from this register.

As May 2021, they have the following numbers

Diabetes 3, Malnutrition 6, Anemia 30

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	If there is a symptom, they refer the patient to district hospital. After the patient is diagnosed and prescribed medicine, they register the patient name in their register book.
2	Asking about situation of medical checkup for child malnutrition	NA
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	They tell people not to take oily food (fried food) so much, but seldom numbers are following their advise.
4	Availability of supporters for health promotion activities at community level	It is conducted by SES.
5	situation and possibility of health education for children at school	They go to school with SES and give advices to children to wear mask, wash hand, bring water from home and not to take water from river.
6	existence of health education by media	NA

7	existence of application for smartphone related health promotion	NA
8	MCH handbook utilization for health education of mother and child	Not asked.

Focus Group Discussion with health workers (with 4 nurses in the RHC)

Topic: People's knowledge and attitude to prevention of NCDs and infection disease including diarrhea

They started to complain a lot about people around here do not listen what health workers told.

I asked the example of their topics of health education.

One of their health education topics is not to drink river water, bring water bottle from home and drink it.

I said that however, if you take a look of their practice, child tend to drink water from river, and no adults stop it even though they are around the children.

They said that even adults do not follow the health workers advice.

I asked the reason. They said they are not sure about reasons.

I again asked them if they tell not to do that if they see child is drinking river water.

They said, when Soviet time, there was such a strict way by health workers, but after independence, health workers do not say strictly to the people.

I told them then what to do if nobody stop children to drink river water, asking until when they have to give the same kind of message to people. I also asked what to do for them to follow health advice.

Everyone was silence. They said, we will do whatever we have to do. That is it.

Health House

Health House (HH)
(Name: Galaba)
(District: Dusty)

Date	May 17, 2021
Name of the person answers	Maya Tangriberdieva (Head of Health House) Khamroeva Gulnavruz (midwife) Davronova Almagul (nurse)

No	Question	Answer
1.1	Population covered	1574
1.2	Number of households covered	225
1.3	Population under 1 years old	51
1.4	Number of health staff and their specialty	MD: NA (doctor from district health center visits once every Thursday) Midwife: 1 Nurse: 2 Among them number of patronage nurse 3 (1 nurse also works for vaccination)
1.5	Numbers of FMD and FMN	Family medicine doctor (NA) FMN (0)
2	Contents of activity for health service provision to population	(Yes) Vaccination (Yes) Antenatal care (Yes) Treatment given based on prescription (NA) Minor surgery (sutures, disinfection) (Yes) others do the injections if prescribed by doctors
3	When this building was built?	Year 2004, there are 4 rooms
4	Problem in infrastructure	No water, but HH is quite clean, no heating, use the traditional coal stove
5	Availability of electricity	Yes during whole year
6.1	Availability of water	Water from canal or well
6.2	Water source	(X) Well (X) Canal, river (X) Others, from neighboring households bring the water
7	Availability of Equipment for health check up and diagnose	(2 (one for children and 1 for adults) Height scale (X 2(one stand and one floor)) Weight scale

	(3) BP Sphygmomanometer (1) Measuring tape (1) Stethoscope () Others refrigerator for vaccines
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Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases					26
2	Diabetes					4
3	Cancer					0
4	Malnutrition (child)				54	48
5	Anemia					5

From hearing of nurse, no reports available, only could find report on malnutrition

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (3) All catchment population divided among 3 nurses
2	Contents of home visit	(X) Listening of health complaints (X) BP measuring (X) Asking conditions of pregnant women and child (X) Asking conditions of NCD patient (X) Others giving follow up to malnutrition, call for immunization
3	Difficulties in conducting home visit especially in providing health advice	Every day patronage even on weekends

No lab tests available for patients, so they have to go to rayon level

No standard on ANC available

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(NO) school teachers (NO) volunteers (Yes) Others health staff do health education by themselves

2	Targets for health education	() Schoolchildren (X) Pregnant women () Teenagers (women) (X) Mothers () Mother-in-law () Others
3	Topics	() Nutrition () Breast feeding () Obesity (X) Hygiene (X) Prevention of infectious disease (X) Diarrhea (X) Others (using safe water, migrants to register, safe pregnancy)
4	Difficulties in conducting health education especially in making them understand	No really, as the population is well accepted them

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(0) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	NA

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (X) height (X) weight (X) arm Chest and head size
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Population has limited knowledge, patients with hypertension not always intake the medicines, but they control their BP, patients with diabetes have glucometer
8	MCH handbook utilization for health education of mother and child	Yes, staff used but maternity staff not fill their part of MCH handbook (only fill in exchange card)

Health House (HH)
(Name: Health House Kady Ob)
(District: Roghun)

Date	May 24, 2021
Name of the person answers	Sharipov Fayziddin, Head of Health House Siadbekzoda Guloza, Nurse in Health House (patronage)

2 staffing positions, both taken

HH provides services for 3 communities

Every Saturday a gynecologist from Rayon Health Center makes the visit to HH

Every Monday or Friday a therapist from Rayon Health Center makes the visit to HH

No	Question	Answer
1.1	Population covered	857
1.2	Number of households covered	103
1.3	Population under 1 years old	30
1.4	Number of health staff and their specialty	MD: N/A Midwife No: Nurse: 2 Among them number of patronage nurse 2 (both patronage)
1.5	Numbers of FMD and FMN	Family medicine doctor () FMN (1 passed training in 2015 in Dushanbe in Republican FM Center and received a FN bag
2	Contents of activity for health service provision to population	(X) Vaccination (X) Antenatal care (opening a ANC card) (X) Treatment given based on prescription (X) Minor surgery (sutures, disinfection) – first aid (sutures, stopping bleeding) (X) others PHC for patients with hypertension, with high temperature
3	When this building was built?	In 2015 the building was renovated by AKF Building constructed in 2009
4	Problem in infrastructure	Almost no problems, but no water and heating in winter time

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		HH is easy to access – on main road from Dushanbe to Rasht
5	Availability of electricity	All the time but with limitation during winter months
6.1	Availability of water	No water
6.2	Water source	(No) Well (No) Canal, river (X) Others Brings from community
7	Availability of Equipment for health check up and diagnose	(X) Height scale (1 for adults and 1 for children) (X) Weight scale (1 for adults and 1 for children) (X) BP Sphygmomanometer (3 in total, 1 is a mercury) (X) Measuring tape (2) (X) Stethoscope 2 (X) Others (additional equipment for minor surgery, new book shelf

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases					20
2	Diabetes					3
3	Cancer					0
4	Malnutrition (child)					0
5	Anemia					8

Good registration system for patients (scanned)

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (2) 103 household
2	Contents of home visit	(X) Listening of health complaints (X) BP measuring not to all but if requested by family member (X) Asking conditions of pregnant women and child (X) Asking conditions of NCD patient, follow up of treatment and if necessary refer to doctor (X) Others

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		Have reporting system for home visits with every day reporting to PHC manager
3	Difficulties in conducting home visit especially in providing health advice	Distant of community Quite high intensity of home visits Some of community members feels stigma due to high intensity of home visits But very active for immunization

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(YES, 1) school teachers (No) volunteers (Yes) Others Every Monday and Thursday visit to school in community to monitor the sanitary hygiene norms (there is 1 school in community) But not lectures provided among school children
2	Targets for health education	(No) Schoolchildren (X) Pregnant women (No) Teenagers (women) (X) Mothers (No) Mother-in-law (X) Others – distribution of EIC (COVID, others, many types available), general population
3	Topics	(X) Nutrition (X) Breast feeding (X) Obesity (X) Hygiene (X) Prevention of infectious disease (X) Diarrhea (X) Others immunization
4	Difficulties in conducting health education especially in making them understand	Low acceptance due to low literacy of local population

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(0) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of	Use of antiseptic among population, using chlorine in households

	infectious diseases	
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NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (X) height (X) weight (NO) arm Low prevalence of malnutrition among children
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Quite good knowledge and follow up the advices and recommendations given by health workers
8	MCH handbook utilization for health education of mother and child	Don't use and even heart first time oh MCH handbook

Only one wish:

- Provide free medicines for treatment

Health House (HH)
(Name: Saridasht)
(District: Sangvor)

Date	May 21, 2021
Name of the person answers	Oдинаев Aub (Head of HH) Hojaeva Salima (patronage nurse)

Provides service to 6 community

No	Question	Answer
1.1	Population covered	1348
1.2	Number of households covered	210
1.3	Population under 1 years old	34
1.4	Number of health staff and their specialty	MD: NA Midwife: No Nurse: 2 Among them number of patronage nurse 2
1.5	Numbers of FMD and FMN	Family medicine doctor (NA) FMN (1 (training on 2010 in Rasht)
2	Contents of activity for health service provision to population	(X) Vaccination (X) Antenatal care (X) Treatment given based on prescription (NO) Minor surgery (sutures, disinfection) but provides service for postoperative cases (X) others First Aid, dispensary care, invalids
3	When this building was built?	Year 1989, renovated by AKF in 2014 (with equipment and furniture)
4	Problem in infrastructure	No water Lack of space (in total 3 wards but very small size)
5	Availability of electricity	No problem
6.1	Availability of water	No water inside of facility
6.2	Water source	() Well (X) Canal, river () Others
7	Availability of Equipment for health check up and diagnose	(2, 1 for adults and 1 for children) Height scale (2, 1 for adults and 1 for children) Weight scale (2 but both procured by themselves, the provided by AKF devices brake in 1 month) BP Sphygmomanometer (2) Measuring tape (2) Stethoscope

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	(X) Others pulse oxymeter No sterilization device and no boiling of urine for pregnant women
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Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				27	28
2	Diabetes				7	8
3	Cancer				NA	0
4	Malnutrition (child)				NA	0
5	Anemia			NA	35	35
	Obesity				NA	24

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (210)
2	Contents of home visit	(X) Listening of health complaints (X) BP measuring (X) Asking conditions of pregnant women and child (X) Asking conditions of NCD patient (X) Others health promotion, advices on nutrition, on COVID
3	Difficulties in conducting home visit especially in providing health advice	Distant communities Population ignore in time coming for vaccination Low understanding of health messages

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(2) school teachers (8) volunteers (NO) Others Community work supported by German Agro Action
2	Targets for health education	(X) Schoolchildren (X) Pregnant women (X) Teenagers (women) (X) Mothers (X) Mother-in-law

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		(X) Others
3	Topics	(X) Nutrition (X) Breast feeding (X) Obesity (X) Hygiene (X) Prevention of infectious disease (X) Diarrhea (X) Others Volunteers use the referral blank for sending patients to HH
4	Difficulties in conducting health education especially in making them understand	Not follow up the health advices But currently acceptance of health advices by population improved

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(5) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	Self isolation of community people during COVID increased Hygiene improved Less numbers of participants at public events

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (X) height (X) weight (X) arm (but no checking devices)
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	There is an interest from population side, but still moderate level of knowledge
8	MCH handbook utilization for health education of mother and child	Not

Health House (HH) (Name: Khuji) (District: ShakhriNAV)

Date	May 20
Name of the person answers	Dr. Saidov (FMD)

The head of the HH is FMD and he has a carrier as a medical doctor for 29 years. Four years ago when this building was constructed, he came here from another health center by his wish. The reason for him to come here was to serve people here. The area did not have any health center before due to mountainous area. People decided to make community fund for newly construction of the HH and they built this HH.

No	Question	Answer
1.1	Population covered	1,464
1.2	Number of households covered	165
1.3	Population under 1 years old	42
1.4	Number of health staff and their specialty	MD: 1 (FMD) Midwife: 0 Nurse: 2 (FMN) Among them number of patronage nurse 2
1.5	Numbers of FMD and FMN	Family medicine doctor (1) FMN (2)
2	Contents of activity for health service provision to population	(<input type="radio"/>) Vaccination (<input type="radio"/>) Antenatal care Since the FMD is a male, antenatal care always conducts with a nurse. FMD take care of measuring BP and questioning. All measurement which needs to touch the body are done by nurse. (<input type="radio"/>) Treatment given based on prescription (<input type="checkbox"/>) Minor surgery (sutures, disinfection) (<input type="radio"/>) others First aid
3	When this building was built?	In 2017. In this area, road was blocked during winter-time. People wanted to have HH in this area and collected fund.
4	Problem in infrastructure	No toilet facility One room needs to be rehabilitation
5	Availability of electricity	No problem

6.1	Availability of water	No water
6.2	Water source	() Well () Canal, river () Others There is a water source 100m ahead in the mountain. The place is the water source for all the household in this area. (Visited the water source as well. It is well protected as a holly place for the people. One a year, people gather here and pray for thanking clean water.)
7	Availability of Equipment for health check up and diagnose	() Height scale () Weight scale () BP Sphygmomanometer () Measuring tape () Stethoscope () Others

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	No data due to not yet opened.	2	3	1	1
2	Diabetes		3	2	2	2
3	Cancer		0	0	0	0
4	Malnutrition (child)		3	2	1	1
5	Anemia		3	5	2	4

There are three children who are disabled. The reason of having disable is, according to the FMD, consanguineous marriage. Since this area is mountainous, the kind of marriage is more frequent than that of other places.

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (8 0)
2	Contents of home visit	() Listening of health complaints () BP measuring () Asking conditions of pregnant women and child () Asking conditions of NCD patient () Others
3	Difficulties in conducting home visit especially in providing health advice	Long distance in some areas. Home visiting in winter. In winter the road becomes

		worse and it is hard to walk. Some households do not allow vaccinations religiously, and it is difficult to explain to such households.
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Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	() school teachers () volunteers (women) () Others There is a support from Mahala.
2	Targets for health education	() Schoolchildren () Pregnant women () Teenagers (women) () Mothers () Mother-in-law (decrease number of children, have enough time space between delivery) () Others to all family members
3	Topics	() Nutrition () Breast feeding () Obesity () Hygiene () Prevention of infectious disease () Diarrhea () Others ARI, Keep the toilet clean, come for AND, danger sign of pregnant woman, danger sign of baby, danger sign of eclampsia and pre-eclampsia
4	Difficulties in conducting health education especially in making them understand	Since the area is mountainous, it is difficult to collect a lot of people at once. Therefore the education is done at household level. In daytime, it is difficult to have an education session because everyone works at field. What they do is to ask Mahala to collect some people when everyone has time and do education for 10 to 15 minutes. It is difficult to educate the families which has low education level.

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(8 doubt) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	Wearing masks prevent other ARIs. People use alcohol.

mother comes the HH frequently for consultation. The FMD told the mother there is no problem and not to worry so much. No drugs prescribed. The child is registered as a disabled and he goes to the rehabilitation center.

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (<input type="radio"/>) height (<input type="radio"/>) weight (<input type="radio"/>) arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	When SINO project was in place, there was roleplay session at school with HLC for demonstrating to the students. Health staff promotes prevention of obese of women. Staff advices to do exercise, and decrease the quantity of eating. There are many obese among the woman over 40. When they become a mother-in-law, they start to become obese because they do not have to do housework anymore. The main reason of becoming obese among them is they do not know how to excise and it is necessary to teach them how to do excise.
8	MCH handbook utilization for health education of mother and child	NA

Training of FMD was very effective in terms of learning many kinds of symptoms and diseases.

There are two patients during the interview.

1. Mother with 2-month old baby with fever. The FMD examined the baby and he conclude there is no other problems. He prescribed Paracetamol and gave advice to mother to keep breastfeeding. He emphasized that he leant the FMD training not to give unnecessary medication must not be given to patients.
2. Mother with child two-year old with microcephaly with ARI. According to the FMD, the

Health House (HH)
(Name: Health House Dehai Hasanbegi)
(District: Temurmalik)

Date	May 20, 2021
Name of the person answers	Haydarov Hasanali (Head)

Building constructed in 2014 by population support

No	Question	Answer
1.1	Population covered	2220
1.2	Number of households covered	220
1.3	Population under 1 years old	70
1.4	Number of health staff and their specialty	MD: NA Midwife:1 Nurse: 2 (including head of Health House) Among them number of patronage nurse 3
1.5	Numbers of FMD and FMN	Family medicine doctor (NA) FMN (1)
2	Contents of activity for health service provision to population	(YES) Vaccination (YES) Antenatal care (YES) Treatment given based on prescription (NO) Minor surgery (sutures, disinfection) (NA) others
3	When this building was built?	2014
4	Problem in infrastructure	Heating Electricity Water taken from water tank
5	Availability of electricity	Not always (cut for 3-4 hours during summer time, in winter time by schedule)
6.1	Availability of water	From water tank (every health facility has own water tank)
6.2	Water source	() Well () Canal, river (X) Others (tank)
7	Availability of Equipment for health check up and diagnose	(1) Height scale (1) Weight scale (3) BP Sphygmomanometer (3) Measuring tape (2) Stethoscope (NA) Others

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases				6	6
2	Diabetes				6	4
3	Cancer					0
4	Malnutrition (child)				2	1
5	Anemia				5	5

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (3)
2	Contents of home visit	(X) Listening of health complaints (X) BP measuring (X) Asking conditions of pregnant women and child (X) Asking conditions of NCD patient (NA) Others
3	Difficulties in conducting home visit especially in providing health advice	No doctor Old equipment

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(NO) school teachers (NO) volunteers (NA) Others
2	Targets for health education	(X) Schoolchildren (X) Pregnant women () Teenagers (women) (X) Mothers () Mother-in-law () Others
3	Topics	(X) Nutrition (X) Breast feeding (X) Obesity (X) Hygiene (X) Prevention of infectious disease (X) Diarrhea (X) Others COVID
4	Difficulties in conducting health education	Really not, population follows the recs specially

	especially in making them understand	related to child health
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COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(0) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	Population follows personnel hygiene, use of antiseptic Use of chlorine at home

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (X) height (X) weight (X) arm Also visual check of body
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	In comparison with past 3 -4 years knowledge improved but in practice no really implementation of recs on healthy style Population more seriously accept recs for child health (immunization) In general increase the level of literacy of young mothers.
8	MCH handbook utilization for health education of mother and child	Yes, delivered among pregnant women

No standards and guidelines available at health house

Community need in safe drinking water to be used for household

Health House (HH) (Name: 1st May) (District: Tursunzoda)

Date	May 19
Name of the person answers	Dr. Nouzima (FMD) (FMD who comes twice per week from nearest RHC) Ms. Shainaeva (Nurse, Head of HH)

The area is the Uzbek people's area. The head of HH is 59 years old and she will retire in this year after 42 years work here.

According to the head, most of the people are farmers. They normally go to school for 11 years and then they start to help family as farmers. Since most of the family have their own land for farming, there are less people who has to work at Russia.

Most of the mothers have 4,5 children while other places of DRS decreased the number of children to 2, since once again, the area is a farming area.

No	Question	Answer
1.1	Population covered	2,389
1.2	Number of households covered	400
1.3	Population under 1 years old	71
1.4	Number of health staff and their specialty	MD: 0 (FMD comes 2 days/week) Midwife: 1 Nurse: 3 Among them number of patronage nurse 4 (Every day 3 nurses are visiting household while one stays at HH for the patients. They rotate the roles.)
1.5	Numbers of FMD and FMN	Family medicine doctor (0) FMN (1)
2	Contents of activity for health service provision to population	(<input type="radio"/>) Vaccination (<input type="radio"/>) Antenatal care (<input type="radio"/>) Treatment given based on prescription (<input type="checkbox"/>) Minor surgery (sutures, disinfection) (<input type="checkbox"/>) others First Aid There was one lady came during the interview, and she complained HBP and Menstrual blood abnormalities. She was prescribed Paracetamol and took some rest in HH.

3	When this building was built?	Do not know. The building was used to be a Jamaot office.
4	Problem in infrastructure	No water
5	Availability of electricity	No problem
6.1	Availability of water	Water is brought from the near house which has tap water. The staff goes to the house with container.
6.2	Water source	() Well () Canal, river () Others
7	Availability of Equipment for health check up and diagnose	() Height scale () Weight scale () BP Sphygmomanometer () Measuring tape () Stethoscope () Others

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020	2021(number of registered)
1	Cardiovascular diseases						11
2	Diabetes						8
3	Cancer						1
4	Malnutrition (child)						1
5	Anemia						19

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (100)
2	Contents of home visit	() Listening of health complaints () BP measuring () Asking conditions of pregnant women and child () Asking conditions of NCD patient () Others
3	Difficulties in conducting home visit especially in providing health advice	It is difficult to walk in a long way. There is a village to take one hour by walking with 45 household. When the nurse goes to the village and covers for all the houses, it takes 4 houses. However, the nurses prefer to visit houses rather than waiting

		for the patient at HH in terms of keeping motivation of their work.
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Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	() school teachers () volunteers () Others Nobody
2	Targets for health education	() Schoolchildren There is a school in the area with 375 students. They visit the school for checking their health. They also provide Albendazole, and Vitamin A. () Pregnant women Most of the delivery are conducted at facility. There are 1-5 home delivery per year. () Teenagers (women) () Mothers () Mother-in-law Since wives usually do not have mobile phone (they are prohibited by the family members), HH makes a phone call to mother-in-law if necessary. The reason of the call is inviting them for immunization. There are a few families who do not want the children to get vaccination. The staff explains about the side effects such as inflammation of the injection site, but the staff explains more about the merits of immunization. () Others
3	Topics	() Nutrition () Breast feeding () Obesity () Hygiene () Prevention of infectious disease () Diarrhea () Others Prevention of anemia
4	Difficulties in conducting health education especially in making them understand	There are a lot of anemia among pregnant women. According to the head, although pregnant woman has to prepare food for family members, she cannot eat whatever

		they want, because wife is the last person to have food among family members. They know they have to eat meat but meat has already been eaten by others. It is a custom here to eat wife is the last person, so that it is difficult to change it.
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**Health House (HH)
(Name: Mekhrobod)
(District: Vakhdat)**

Date	May 21, 2021
Name of the person answers	Ms. Sharipova (FMN)

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(3) of cases and (0) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	People get to wear masks, and hand washing. If there is a family member who has temperature, he/she is isolated in the family.

No	Question	Answer
1.1	Population covered	3,385
1.2	Number of households covered	457
1.3	Population under 1 years old	100
1.4	Number of health staff and their specialty	MD: 0 (every Tue OBGY and FMD are coming) Midwife: 1 Nurse: 2 (FMN) Among them number of patronage nurse 3
1.5	Numbers of FMD and FMN	Family medicine doctor (0) FMN (2)
2	Contents of activity for health service provision to population	(<input type="checkbox"/>) Vaccination (<input type="checkbox"/>) Antenatal care There are 43 registered as pregnant women at the time. (<input type="checkbox"/>) Treatment given based on prescription (<input type="checkbox"/>) Minor surgery (sutures, disinfection) (<input type="checkbox"/>) others First aid
3	When this building was built?	1990
4	Problem in infrastructure	No water
5	Availability of electricity	No problem
6.1	Availability of water	No water
6.2	Water source	(<input type="checkbox"/>) Well (<input type="checkbox"/>) Canal, river (<input type="checkbox"/>) Others
7	Availability of Equipment for health check up and diagnose	(<input type="checkbox"/>) Height scale (<input type="checkbox"/>) Weight scale (<input type="checkbox"/>) BP Sphygmomanometer (<input type="checkbox"/>) Measuring tape (<input type="checkbox"/>) Stethoscope (<input type="checkbox"/>) Others Save the children provided furniture in 2018, as well as providing trainings on health awareness prevention. They also developed the community funding system on emergency transportation but it

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement (<input type="checkbox"/>) height (<input type="checkbox"/>) weight (<input type="checkbox"/>) arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	In 2020, MOH started obesity prevention program, and we also started activities for it since January 2021. The main activity is to improve the knowledge on nutrition among people. By the activity, some people started to go to fitness club located in the district center even though they live in the village. Most of them are women. A mentality that dislikes obesity is beginning to form among women. All HH staff were interested in the free application of mobile phone which shows number of steps, as an example to introduce people to increase awareness of excises. According to the staff, it is very good for the people to know there is such an application.
8	MCH handbook utilization for health education of mother and child	NA

		is finished at the time of the project ended. Since then, there were no donors.
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Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases		18	14	18	13
2	Diabetes		5	4	4	3
3	Cancer		1	1	2	2
4	Malnutrition (child)		2	3	2	4
5	Anemia		14	18	16	14

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (150)
2	Contents of home visit	(<input type="radio"/>) Listening of health complaints (<input type="radio"/>) BP measuring (<input type="radio"/>) Asking conditions of pregnant women and child (<input type="radio"/>) Asking conditions of NCD patient (<input type="radio"/>) Others
3	Difficulties in conducting home visit especially in providing health advice	Some pregnant women do not go for ANC. There is a village which has long walking distance. They have to spend whole morning time on the day of visit.

The answer to the question, is there a quota in terms of numbers of visiting was yes. They have to visit at least 20 households per day, and they did not have any day to below that number. Even though they are tired, they have to do it because they are monitored by the boss in FMD in RHC. It is not allowed as well to decrease the number of visiting household. Staff here has a complain to keep visiting houses, but they cannot complain directly to the boss because they are afraid of losing their job.

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	(<input type="radio"/>) school teachers (<input type="radio"/>) volunteers 6 active women (<input type="radio"/>) Others

2	Targets for health education	(<input type="radio"/>) Schoolchildren (<input type="radio"/>) Pregnant women (<input type="radio"/>) Teenagers (women) (<input type="radio"/>) Mothers (<input type="radio"/>) Mother-in-law, husband (<input type="radio"/>) Others
3	Topics	(<input type="radio"/>) Nutrition (<input type="radio"/>) Breast feeding (<input type="radio"/>) Obesity (<input type="radio"/>) Hygiene (<input type="radio"/>) Prevention of infectious disease (<input type="radio"/>) Diarrhea (<input type="radio"/>) Others Family planning, birth space,
4	Difficulties in conducting health education especially in making them understand	Some pregnant women are not allowed to go to ANC by their husband.

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(12 doubt cases) of cases and (1) of death (old man) (A nurse wanted to tell me something, but the doctor who attended me stopped her to say.)
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	People tended to stay at home even though they felt not good before, but now, they come to HH if they feel bad.

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition 4例のみで大きな問題ではない。	Measurement (<input type="radio"/>) height (<input type="radio"/>) weight (<input type="radio"/>) arm
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	No problem in people knowledge. After receiving blood laboratory test, people tend to aware that they have to care about nutrition, especially avoiding sweet food.
8	MCH handbook utilization for health education of mother and child	NA

Health House (HH)
(Name: Chamanzor)
(District: Hissor)

Date	May 17
Name of the person answers	Muhamadieva Anora, Head HH Chamanzor

No	Question	Answer
1.1	Population covered	2,928
1.2	Number of households covered	400
1.3	Population under 1 years old	96
1.4	Number of health staff and their specialty	MD: 0 (visit by gynecologist once a week) Midwife: 1 (head of HH) Nurse: 3 Among them number of patronage nurse 4, including midwife
1.5	Numbers of FMD and FMN	Family medicine doctor (0) FMN (2)
2	Contents of activity for health service provision to population	(✓) Vaccination (✓) Antenatal care (✓) Treatment given based on prescription () Minor surgery (sutures, disinfection) (✓) others (patronage, which is the main task)
3	When this building was built?	In 2018, build by donations from community people
4	Problem in infrastructure	Many cracks on the wall
5	Availability of electricity	Yes, but they often have power cut
6.1	Availability of water	Yes, pipe water system was installed by a donation from local businessman
6.2	Water source	() Well () Canal, river (✓) Others
7	Availability of Equipment for health check up and diagnose	(✓) Height scale (✓) Weight scale (✓) BP Sphygmomanometer (✓) Measuring tape (✓) Stethoscope (✓) Others (thermometer)

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020	Present

1	Cardiovascular diseases						10
2	Diabetes						12
3	Cancer						2
4	Malnutrition (child)						0
5	Anemia						1

The head of HH said that she could not count annual data. She memorized the present number of patients.

Home Visit

No	Question	Answer
1	Number of household/patronage nurse	Average (100)
2	Contents of home visit	(✓) Listening of health complaints (✓) BP measuring (for pregnant women only) (✓) Asking conditions of pregnant women and child (✓) Asking conditions of NCD patient (✓) Others (notification of immunization schedule)
3	Difficulties in conducting home visit especially in providing health advice	Head of HH said that doing patronage per house in every 3 day was too much. Honestly speaking, she prefers not to do it because it makes her tired. She has been working as a patronage nurse for 40 years. Walking around in the village made a lot of wrinkles on her face. However, she said that it was their main task and obligation, so they should to do it. And she is happy to have communications with local people.

Health Education

No	Question	Answer
1	Supporters and partners when conducting health education	() school teachers () volunteers () Others They have no supporters
2	Targets for health education	(✓) Schoolchildren (✓) Pregnant women (✓) Teenagers (women) (✓) Mothers (✓) Mother-in-law (✓) Others (young fathers)
3	Topics	(✓) Nutrition (✓) Breast feeding (✓) Obesity

		(✓) Hygiene (✓) Prevention of infectious disease (✓) Diarrhea (✓) Others
4	Difficulties in conducting health education especially in making them understand	Head of HH said that she didn't feel difficulties because she has 40 years of career. People understand is she explained well.

COVID -19 situation

No	Question	Answer
1	Situation of COVID-19 while it was epidemic	(6) of cases and (1) of death
2	Due to COVID-19, if any changes of people behavior on prevention of infectious diseases	Last year local people wore face masks and used disinfectant even in the house. Patronage nurses wore face masks also. Now people go back to the normal life.

NCDs prevention and nutrition activities

No	Question	Answer
1 (2 in previous)	Method of checking child malnutrition	Measurement () height () weight () arm They don't use measurement. Judge from the appearance.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	People who got NCD do not change their lifestyle. They don't listen to nurses' advices. They think if they take medication, there is no problem.
8	MCH handbook utilization for health education of mother and child	No. (this is not one of the pilot districts)

Focus Group Discussion in Hissor

Participants: 13 women who have children under 2 years old
Date: May 17, 2021
Place: Health House Chamanzor, Hissor District
Purpose of FGD: To collect information about health seeking behavior of women who have infants, especially on reproductive health, child and family's care

About participants

- Despite the request by the survey team to collect 8 persons, the head of HH collected 13.
- Age: Average was 27.9 years old. The youngest was 22, the oldest was 35.
- Number of children: Average was 2.2. Minimum was 2, Maximum was 4.
- Education: all of them completed 9 years of education. There is no high school in the village, so most of the local girls stop proceeding further education.
- All of them live with their husbands' side of family, their parents and brothers. In a household, there are 10-12 members live together.
- All of them have gardens and cattle, so they don't have to buy glossaries on daily basis. Some of family members work in Russia.

Discussions by participants

ANC

- All of participants said that they took ANC every month at this HH. Every Friday a Gynecologist comes from DHC to this HH, so they use the opportunity. During the pregnancy, they go to Reproductive health center twice to take echo and laboratory service. It cost 300 TJS, in addition to 10 TJS for transportation
- MCH cards are not used because it is not one of the pilot districts.
- They know the importance of ANC because the head of HH, a midwife, talks a lot about ANC through patronage.

Delivery

- Most of them had deliveries at District Maternity Hospital. Home delivery is not allowed. If they have complications or need C-Section, they go to Dushanbe. They do not go to the District Maternity Hospital if they need C-Section because they believe that their tubes would be tied after the C-Section. This story was told by one of the participants as a real experience of their neighbor. All the other participants and Head of HH agreed

with it.

- Normal delivery costs 1000-1500 TJS. If there are complications, it is more expensive, up to 3000 TJS, because of longer days of hospitalization. C-section costs 5000 TJS.

PNC

- All participants said that when they delivered the first child, they go back to parents' home directly from the hospital and stayed there for 40 days after the delivery. So, they cannot come to the HH but they can talk with nurses over the phone.
- If they do not want to have a next baby very soon, they can consult a head of HH about family planning. Health of HH refer them to the Reproductive Center and half of them had ring insertions.

Lactation

- All of participants said that they ever heard about Exclusive Breast Feeding (EBF). However, most of them explained that EBF meant keeping BF for 2 years.
- There was one participant who actually completed EBF until 6 months.
- They said that they prefer to give their babies breastmilk because it is free. Formula is very expensive for them.
- 10 out of 13 participants gave the colostrum to their babies. Hospital nurses explained them that the colostrum is useful to enhance babies' immune system, so they followed their advices.

Nutrition intake

- Usually they eat bread and noodles, vegetables and fruits from their garden, such as potatoes, carrots, green leaves, beans, pumpkins and apples.
- They have cows, hens, goats and sheep in the yard. They have eggs, milk and milk products on daily basis.
- They eat meats once a week or once a month. They cannot afford to buy enough meats for their big family.
- When they are pregnant, they eat as usual. In the early stage of pregnancy, they eat something sour, like apples from the garden.
- When they are lactating, they also eat as usual. Their mothers-in-law prohibit them to eat tomatoes and cucumbers because they cause children's diarrhea.
- They cook for their family. Every day, they ask their mothers-in-law what they should cook. One of the participants said that when she wanted to make additional dish, like fried potatoes, she suggested it to her mother-in-law. Her mother-in-law declined her

suggestion so she could not cook them. She confessed that it made her sad.

- They said that they do not go out to buy foods very often. Basically, they cook what they have.

Health seeking behavior for their child

- Their children receive vaccinations according to the schedule. Patronage nurses always remind them when they should bring their children to HH for vaccination.
- When their children have fever/ diarrhea, they call the head of HH.
- When they used to use canal water, they had a lot of diarrhea cases, even typhoid. Now they have piped clean water, so they have less cases of diarrhea.

Patronage

- All of participants agreed that they receive a patronage approximately in every 3 day.
- After the vaccination, most of participants said that they receive phone calls from nurses to check conditions of children.
- All of participants said that they are happy to meet nurses through patronage. Some of them pointed out that always they welcome the head of HH because she was someone like a second mother to them.

NCDs

- 2 of their mothers-in-law suffer from diabetes. 5 of their fathers /mothers-in-law are hypertensive. 3 of participants are hypertensive, 1 have a kidney problem. They go to the District Hospital periodically.
- Participants who have diabetic mothers-in-law regards that the cause of diabetes was obesity. One of the mothers-in-law weighs more than 100kg, she likes sweets and never watches what her eats.
- Some participants who have hypertensive parents-in-law said that hypertension was caused by stress. After facilitator asked about salt intake, one of participants said that her hypertensive mother-in-law usually sprinkled salt on apples. The mother-in-law said that she could take salt as much as she wanted because she took an antihypertensive drug.
- None of the participants' family members suffer from cancer, cardiovascular diseases.

Influence by other family members

- All participants said that if they want to do something, they must ask for permission from their mothers-in-law. For example, today they asked their-mothers-in-law if they

could go out to join a meeting at HH. When they want to take ANC, they also ask for permission from their mothers-in-law. All participants agreed that it was their culture.

Profile of participants

No.	Name	Age	Number of children	Youngest child's age (months)	Living with parents in-law
1	Saidova M	22	2	7	Yes
2	Churaeva Z	23	2	7	Yes
3	Nasridinova N	23	2	17	Yes
4	Umashova D	25	2	21	Yes
5	Tursoashova Sh	26	2	6	Yes
6	Nuralieva G	28	3	11	Yes
7	Jonmirzoeva P	28	2	12	Yes
8	Norova Sh	29	2	20	Yes
9	Olimova Z	29	2	12	Yes
10	Burhanova M	30	2	5	Yes
11	Muminova N	31	3	9	Yes
12	Yuldasheva Z	34	4	7	Yes
13	Toshburieva H	35	2	17	Yes
Average		27.9	2.3	11.6	-

Focus Group Discussion (FGD)



Participants of FGD



Place of FGD, Health House Chamanzor

House of one of the FGD participants



Appearance of the house. household members are 12, including parents in-law and brother in-law's family.



Her kitchen. She uses both of propane gas and electricity for cooking.

**Health House (HH)
Ismoil Somoni, Jomi**

Date	May 4
Name of the person answers	Pirova (head)

Population covers. 1,364 (194 HH, children under 1: 48, children under 5: 205)

No	Question	Answer
1	Number of health staff and their specialty	3 (regular staff are 2 nurses, and 1 FMD comes once a week due she live near this HH.)
2	Contents of activity for health service provision to population	First aid, work under FMD, follow up NCD patient, vaccination,
3	When this building was built?	1960's
4	Problem in infrastructure	Under renovation
5	Availability of electricity	Most of time available
6	Availability of water	In front of the building, there is a small river. From the river
7	Availability of Equipment for health check up and diagnose	Height weight BP, Refregilator, stabilizer, woman examination bed

How is/was the COVID-19 situation in your area?
No cases due to strict quarantine

Besides COVID-19, What is your impression towards the trend of NCDs? Increase? If increase, particularly what kind of disease is increasing?

Number of patients of NCDs and nutrition-related diseases (if there is data)

Number of patient under monitoring of the HH

In 2021, 13 of cardiovascular, and 9 diabetes patients are under monitoring.

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases					1
2	Diabetes	1	3	1	4	7
3	Cancer	0	0	0	0	2
4	Malnutrition (child)					
5	Anemia					

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	NA
2	Asking about situation of medical checkup for child malnutrion	NA
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Everyone listens health staff very well
4	Availability of supporters for health promotion activities at community level	3 Volunteers of USAID project (women)
5	situation and possibility of health education for children at school	In school, usually they talk about health issues before class starts from 5 to 10 minutes. (COVID, higine, wash hand, bring drinking water and not to drink river water)
6	existence of health education by media	Don't know
7	existence of application for smartphone related health promotion	Don't know
8	MCH handbook utilization for health education of mother and child	NA

Vaccination (child) is 100% here.

For NCD patient, nurses talk about diet when they go for home visit, but they do not listen to them. All the patient are women (because men are working in Russia).

Major topic for population education is breast feeding and nutrition.

Health House (HH)
Mirzoobod Village, Kalinin Jamoat, Jomi

Date	May 4
Name of the person answers	Alieva Mijgona (Acting head - head was on annual leave), HH Mirzoobod

Population covers. 4,904, 584 households

No	Question	Answer
1	Number of health staff and their specialty	1 Gynecologist (on leave and irregular), 6 nurses, 1 cleaner
2	Contents of activity for health service provision to population	Vaccination, Home visit, ANC
3	When this building was built?	1953
4	Problem in infrastructure	Building is deteriorated. When maintenance works such as paintings and small repairs are needed, they were done by local people' donation.
5	Availability of electricity	Available but limited during winter season
6	Availability of water	Brought from the nearest canal
7	Availability of Equipment for health check up and diagnose	Height weight BP, refrigerator, woman examination bed, sphygmomanometer, thermometer

How is/was the COVID-19 situation in your area?

There were 119 suspected cases. Positive case was not found.

Due to COVID-19, is there any changes of people behavior on prevention of infectious disease?

People began to develop habits of handwashing after repeated house visits.

Besides COVID-19, What is your impression towards the trend of NCDs? Increase? If increase, particularly what kind of disease is increasing?

They don't know because they have no data.

Number of patients of NCDs and nutrition-related diseases (if there is data)

They send their data to DHC on every 25th. They asked us to collect data from DHC.

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	They don't cover it at this HH. If they find any symptom through house visit, they refer the patient to DHS.
2	Asking about situation of medical checkup for child malnutrition	They check wasting by weight-for-height.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	They explain about healthy lifestyle when house visit. Sometimes they distribute brochures on important health issues such as COVID, when DHC shared some of them.
4	Availability of supporters for health promotion activities at community level	There was one local businessman who donated masks to HH.
5	situation and possibility of health education for children at school	There is a school besides of this HH. They often visit it and provide short lectures on health issues. Also, they distribute antiparasitic to students periodically.
6	existence of health education by media	They don't do it.
7	existence of application for smartphone related health promotion	They don't do it.
8	MCH handbook utilization for health education of mother and child	They use it.

On May 4, they visited 41 households, with 402 family members. They talked with 78 persons about COVID-19.

**Health House (HH) Gulreds
Khuroson District**

Date	May 7
Name of the person answers	Ms. Ismonova

Catchment population 1,870, Catchment household 380

No	Question	Answer
1	Number of health staff and their specialty	3 Nurses
2	Contents of activity for health service provision to population	Registration of pregnant women Vaccination Giving injection (treatment) Patronage (all 3 nurses go home visits, and head of HH is in charge of 150 HH)
3	When this building was built?	2016 by community Each house paid 100TJS for the construction
4	Problem in infrastructure	No enough furniture Toilet was constructed by UNICEF
5	Availability of electricity	In summer OK, In winter some hours only
6	Availability of water	No water. Water is given by neighborhood house which has a well
7	Availability of Equipment for health check up and diagnose	BP, weight scale, height scale, stethoscope, measuring tape (refrigerator)

How is/was the COVID-19 situation in your area?
7 cases and 1 death (over 60 y.o.) during epidemic

Due to COVID-19, is there any changes of people behavior on prevention of infectious disease?
People tend to wash hand more, wearing masks, and do not hand shake, (but nobody wear masks.)

Number of patients of NCDs and nutrition-related diseases (if there is data)

No	Disease	2016	2017	2018	2019	2020	2021
1	Cardiovascular diseases	No data available					5
2	Diabetes						6
3	Cancer						0
4	Malnutrition (child)	Never had malnutrition case before					0
5	Anemia	No data available					3

HH Gulrez

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases	16	18	23	27	25
2	Diabetes	11	19	22	26	35
3	Cancer	3	3	0	3	0
4	Malnutrition (child)	2	2	3	2	1
5	Anemia	10	16	20	30	42

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	Refer to district hospital when patient complains related NCDs
2	Asking about situation of medical checkup for child malnutrition	Measuring arms at vaccination
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	Not enough, for example, women stop to go to school at 8 or 9 grades (about 15 years old) because parents do not want for girls to go school anymore. They are not well educated to be mother.
4	Availability of supporters for health promotion activities at community level	Volunteer (everyday some volunteer come to HH to clean). There were 2 school teachers as volunteer at the time of USAID project, but after project ends, they do not work for health anymore.
5	situation and possibility of health education for children at school	They go to school and tell children about hygiene, COVID-19, and teenager's health (mostly for girls)

		teaching about menstruation.
6	existence of health education by media	NA
7	existence of application for smartphone related health promotion	NA
8	MCH handbook utilization for health education of mother and child	Yes, to all pregnant women they provide.

**Health House (HH)
Navruz Village, Navbahor Jamoat, Kushoniyon**

Date	May 6
Name of the person answers	Khasanov Murod, Head HH Navruz

Population covers: 1,126, 175 households

No	Question	Answer
1	Number of health staff and their specialty	2 Nurses
2	Contents of activity for health service provision to population	Patronage, vaccination, consultation, check of blood pressure, treatment of diarrhea, ANC/PNC
3	When this building was built?	2014
4	Problem in infrastructure	Too cold during winter because of underfloor storage space.
5	Availability of electricity	Available but limited during winter season
6	Availability of water	Brought from the canal in front of the HH
7	Availability of Equipment for health check up and diagnose	Stethoscope and thermometer. There are no height weight BP, refrigerator, sphygmomanometer

How is/was the COVID-19 situation in your area?
There were 2 suspected cases. Positive case was not found.

Due to COVID-19, is there any changes of people behavior on prevention of infectious disease?
People began to develop habits of avoiding congestion.

Besides COVID-19, What is your impression towards the trend of NCDs? Increase? If increase, particularly what kind of disease is increasing?
Diabetes seems increasing. Even children are diabetic. They don't know reasons but they guess it is caused by climate change, poverty.

Number of patients of NCDs and nutrition-related diseases (if there is data)

The head of HH said that he memorized every data related to HH and told us number of patients in the table below without seeing any records.

No	Disease	2016	2017	2018	2019	2020
1	Cardiovascular diseases					7
2	Diabetes					5
3	Cancer				1	2
4	Malnutrition (child)				3	2
5	Anemia					18

Questions on NCDs prevention and nutrition activities

No	Question	Answer
1	Asking about situation of medical checkup for early detection of NCDs	When they find someone might having symptoms, they ask about his/her body conditions.
2	Asking about situation of medical checkup for child malnutrition	They use MUAC when they find underweight children.
3	From your point of view, what is the knowledge and attitude of the people towards prevention of NCDs?	There are a lot of people who do not have education. They cannot understand about anemia.
4	Availability of supporters for health promotion activities at community level	A local benefactor established this HH with his contribution.
5	situation and possibility of health education for children at school	There is no school in this catchment area. But they have to go to the nearest school for vaccination and extermination of parasite because children living in their catchment area study there.
6	existence of health education by media	They don't do it.
7	existence of application for smartphone related health promotion	They don't do it.
8	MCH handbook utilization for health education of mother and child	They use it.

Patronage: every day they visit 10-25 households. They talk about prevention of infectious disease. After the pandemic of COVID-19, local people because to appreciate them.

Development Partners

World Bank (WB)

Date	May 14 2021 May 18 (Financial)
Name of the person answers	Mutriba Latypova (Health specialist) Mr. Andugaffor (Financial specialist) Mr. Farukh (Financial specialist)

1. Names of projects WB implementing

Health Service Improvement Project

Early Childhood Development Project

World Bank is a funding source. They transfer budget to ministry of finance, and the fund goes to ministry of health. Implementor is MOH.

They also fund source of BBP (Basic Benefit Package, or Program of State Guarantees), which is implemented nation-wide, and PBF (Performance based Financing) which is implemented in only target districts.

BBP apply for PHC service and emergency service. Patient can receive medical service free of charge if the service is listed. (For example, if the pregnant woman is registered to PHC before 12 weeks, the woman can receive all the tests during the pregnant period.) But it should be noted that the laboratory of district hospitals have been to outsourcing, the patient has to pay 50% of the fee.)

PBF if one of the components of HSIP, and it is conducted at 10 districts since 2015. It is payment system to pay to the health facility based on performance. For instance, if the nurse complete all the immunization to one child, she can get 60 TJS as PBF. The same payment is conducted to the health facility as well, and the facility can use the money for renovation of the facility.

As for now, there are 10 indicators such as immunization, and 2 indicators in NCDs such as treatment of HBP.

New round of PBF has been started February 2021, after stopping September 2019. Currently, it is implemented in 16 districts.

Also, there are indicators for home visit in PBF system. Nurse can register household that she is in charge, and she can get 2TJS per household per year if she visits the house at least twice a year.

Monitoring of implementation of indicators are judged by checklist. The nurses also receive training on how to check in the list by PC.

Second component is strengthening of FMD.

WB is designing and implementation of 2-year training course of FMD, as well as 11-months training for FMD.

As lessens and learnt, WB understands that one of the skills of lacking among FMD is management skill. Therefore, WB supports to improve the capacity of management skills of FMD such as performance analysis of the staff.

Furthermore, WB supports to improve working environment of FMD, since many FMDs are going out of the country and working in the different country such as Russia. Especially, WB is supporting to improve infrastructure such as water, equipment (doctor's bag), and solar panels for electricity.

2. Challenges of HBP

- Management skills of fund is lack at PHC level. Fund which was not used is back to the government. WB invited the international consultant from Armenia, who was the person fixed the system to Armenia, as a trainer.
- Digitalization is very slow in Tajikistan. Some PHCs does not know the number of household they cover yet. This comes from taking notes by each nurse by paper base. In one of the districts in Sogd, there is a pilot to make digitalize all the system at PHC level.

3. Health budget (in May 18)

Mr. Andugaffor, and Mr. Farukh, (specialist for finance)

Since 2016, budgeting system for health is Per Capita Financing. From 2016 to 2019, this system covers 88 cities and districts, which is almost all in Tajikistan.

In 2020, "Implementation of normative per capita financing" was established and based on this, the following health budget per capita was decided.

In urban area: 67 TJS/ person

In rural area: 54 TJS/ person

The health budget is provided to local hukmat first, then provided to DHC annually.

After providing the health budget to DHC, DHC decides the budget to each RHC, including HH belongs to RHC, based on the covering population of RHC.

However, it should be noted that 95% of the budget spend for salary, and only 5% can use for activities.

その他、オフレコの情報（保健省に読まれる記録には残さない）

- 新しい大臣、副大臣の中に、だれも PHC に興味がある人がいない。PHC や家庭医の重要性を説くために、最初のステップからやり直す必要がある。
- 保健省に PHC にどのような支援が必要かについて、明確に答えられる人がいない。PHC の包括的なアセスメント（人材、インフラ、技術レベル等）を実施したいが、調査項目すら挙げるができない。

GIZ など、PHC 強化にシフトしたドナーが増えるのは心強いが、保健省の興味のない分野なので、Soft Diplomacy を考えていかなければいけない。

World Health Organization (WHO), GIZ Joint meeting

Date	May 11
Name of the person answers	WHO: Parvina Makhmudova GIZ: Natascha Bohlmann UNICEF: Anthony Asije Observers USAID: Gulnora Boboeva ADB: Firuza Dodomizoeva AKDN: Hadi Husani

Objective: To contribute to moving towards universal health coverage in Tajikistan

	Outcome 1.1	Strengthened health sector governance and financing mechanisms with an emphasis on PHC
giz	Outcome 1.2	Improved accessibility and quality of integrated primary health care service delivery
	Outcome 1.3	Effective infection prevention and control system across the health care delivery system, including COVID-19 crisis response

DCC Health Meeting



05/03/2021

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05/03/2021

Outcome 1: Strengthened health sector governance and financing mechanisms with an emphasis on PHC

Output 1.1	Upgraded health governance capacities
Output 1.2	Health sector public finance management (PFM) and programme budgeting capacities strengthened
Output 1.3	Nation-wide roll-out of improved Basic Benefit Package (BBP) supported

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Outcome 2: Improved accessibility and quality of integrated primary health care service delivery

Output 2.1	Mechanism of integrated primary health care delivery developed in selected districts
Output 2.2	A standardized patient referral system developed
Output 2.3	Quality management and improvement mechanisms for selected health facilities with an emphasis on primary health care developed
Output 2.4	Increased awareness on infection prevention, including COVID-19

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05/03/2021

Outcome 3: Effective infection prevention and control system across the health care delivery system, including COVID-19 crisis response

Output 3.1	Selected departments of primary and secondary health facilities meet basic minimum infection prevention and control standard and practice
Output 3.2	Awareness and knowledge of population at household level on Infection Prevention and Control increased
Output 3.3	National capacity to respond effectively to COVID-19 Pandemic enhanced

DCC Health Meeting 20

1. WHO

Support PHC 5-years plan

MCH referral system improvement in 28 District

Equipment provision with UNICEF

Strengthening of family medicine

Community approach

NCD control

2 GIZ

Nutrition: Complementary feeding

Clean way of food preparation

Community nutrition volunteer

E-learning for PHC manager

(Activities in nutrition will be finished at Dec 2023.)

Disabilities

(Target district: Bokhtar city, Panji, Norak)

MCH project extend to Dec. 2023, activities are referral system improvement, medical equipment provision

3. WB

E-patient registration system

4. USAID

Nutrition resource centers

5. ADB

Their main focus is secondary level, and not conducting many activities at PHC level.

WHO suggested to make this meeting to regular PHC-TWG meeting with MOH and family medicine center. Participants agreed on the idea and will start the PHC-TWG to have biweekly.

3. SUN

UNICEF-GIZ-USAID collaborate to the secretariat of SUN

ADB

Date	May 12
Name of the person answers	Cebel, Isfandior
Position	Manila, Project Implementation Unit in Dushanbe

Asking output3 (community mobilization)

1. Results of KAP survey

Conducted in Nov 2020 by UNICEF and consultants

At the stage of finalization, will share after approval from MOH.

Contents of KAP survey

- MCH service
(ex. Of questions: what are the main barriers for seeking care)
- Health facility and staff
- Outreach to community

2. Assessment of capacity of HLC

At the stage of waiting for approval from MOH.

Based on the assessment, they are going to plan of activities for capacity building

3. Activities implemented so far

- TOT for republican centers of HLC, ReproHC, FMC
- Contents: Behaviour change communication, Referral system from PHC facility, status of pregnancy, care during pregnancy and nutrition
- By international trainer (from India) and national trainer (national trainer belongs to State Medical University Ibn Shina)
- After that, they will provide TOT training at district level in the target districts

4. Important points to work at community level

- Community involvement, but not only pregnant women but also monther-in-law and father-in-law
- Receiving ANC
- Receiving immunization
- Nutrition especially 1,000 days from birth is important

UNICEF (Nutrition & WASH)

Date	Apr 29, 2021
Name of the person answers	Ammar Orakzai (WASH) Malohat Shabanova (Nutrition)

WASH

Health facilities which have access to drinking water is only 24%. In rural are, access to water is very limited. Basic water supply has been improved to 81%, but quality is not detected.

Challenge: there are 3,200 PHC facilities and 80% have limited or no access to WASH services.

(KMK sources)

In urban and semi-urban areas only 68% of systems are in working conditions. (25% dysfunctional.)

In rural, functionality is less than 40%.

Medical waste management at primary and secondary level facilities left to its individual management. (No standard)

No monitoring system and water policy requires improvement.

Government budget for water is only 0.2%. Most of the budget comes from donors. Budget for operation and maintenance is very limited.

In Jamoat level, it has limited source of water, and not connected to pipes (VK). Also, it is not easy to dig a well. Therefore, they are using surface water, which is not properly regulated. Many organizations (at community level) are in place but coordination is poor.

Standard, guidelines are out of date.

Recently, donor organization started to project.

EU: developing hand washing facilities to 1,500 PHC

In school, 79% of schools across the country (= means 21% or 815 schools or 427,875 children have no access to safe water) have access to a functioning water supply system. 47% of schools have access to improved sanitation and only 26% have water and soap

available in designated handwashing areas near toilets.

Overall issues on WASH in Tajikistan

- Provision of drinking water and sanitation services is characterized by institutional gaps, overlapping authorities, and financial sustainability issues.
- Unavailability of WASH data
- Outdated standards

Nutrition

◆ Overall nutrition status

Deaths by malnutrition preventable by Universal salt iodization, flour fortification, micronutrient supplementation, and management of severe acute malnutrition.

According to DHS 2017, anemia increased while stunting and wasting decreased. (More than 8% of children are underweight, 6% of children are wasted, and 1.8% of these are severely wasted. Which means around 60,000 children facing risk of death.)

◆ Treatment of malnutrition (Severe malnutrition)

- F70, F100 package milk specialized
- Antibiotics
- Vitamin A
- Deworming tablet
- Ready-to-use food

◆ Causes of malnutrition

Behavior is the main reason. Food is available but not accessible. There are some households which are shortage of food.

◆ What we can do at community level

To household, which is lack of knowledge, we can provide complementary food, and promote breast feeding. (One of the reasons for giving up breast feeding is, in summer, temperature of breast milk is high, and mother thinks she wants to give baby something cold instead of warm milk. Then mother starts to give water.)

For health worker, it is necessary to have communication skills to people, especially needs to have convincing skills. At the moment, they have limited skills for counseling.

◆ What is UNICEF doing

UNICEF supports MOH “100-days communication” (5-year program). It is composed by maternal and child nutrition. Also, they are trying to change the behavior of mother-in-law. Necessary to work together with community for health workers.

◆ Multisectoral approach

Needs multisectoral approach for nutrition, WASH and social protection. For example, it is important to teach parents how to use cash properly for them to use money for nutrition. (Purchasing behavior) Needs more cooperation with the areas of agricultural, financial, and economy.

◆ SUN

Tajikistan participated in SUN in 2013, and its concept is engaging people to 1000 days. In February 2021, country approved “Multi-sectoral action plan for nutrition”.

◆ Issues

1. No nutrition discipline

There is no nutritionist in Tajikistan as a profession. Nutrition training provided only from Developing partners. Health workers do not have knowledge on holistic nutrition.

2. No nutrition surveillance in country

There was surveillance on micronutrition in 2003 but since then, there was not surveillance. Lack of studies on nutrition in Tajikistan.

◆ Questions after the meeting with UNICEF (nutrition and WASH)

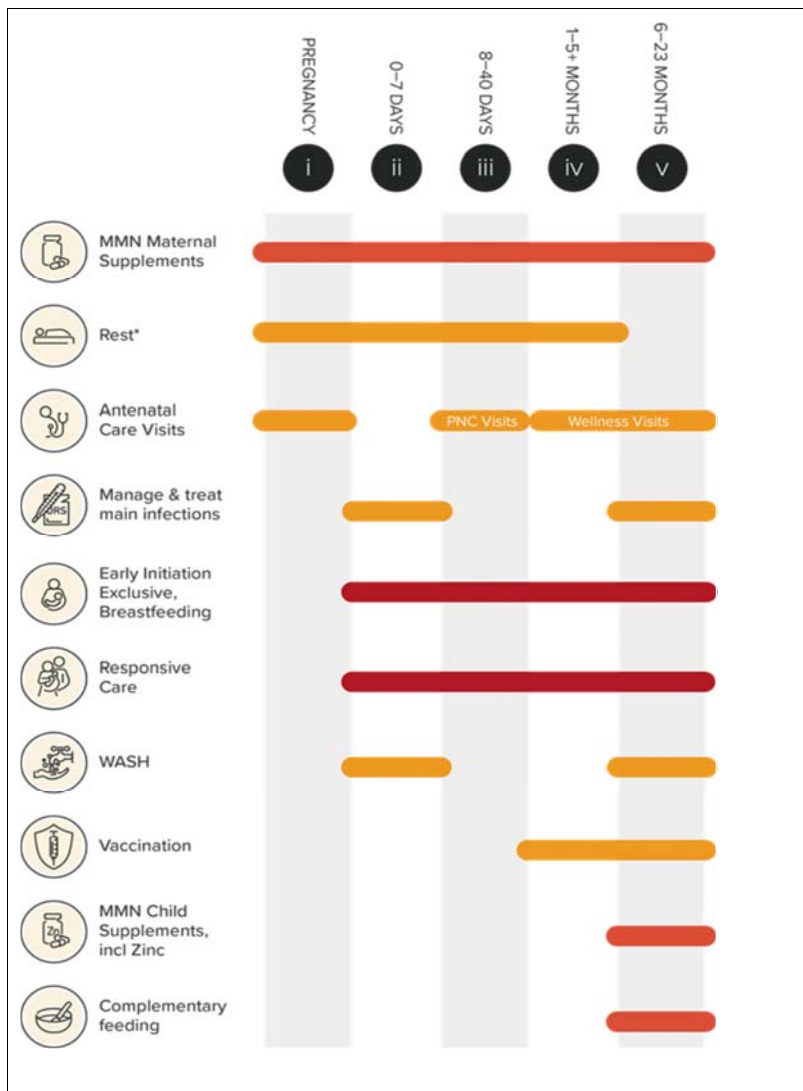
Question 1
If you could tell me the name of the districts you implement activities of WASH as well as nutrition, so that it will help me if we collaborate or prevent duplication.
Answer
Under nutrition, there is no targeted districts, all nutrition interventions (Vitamin A supplementation, Universal Salt Iodization, Treatment of Acute Malnutrition) are implemented nationwide. Integrated Maternal and Health Care projects funded by IsDB and ADB are implemented Fayozobod, Shohin, Rasht, Danghara, Norak, Khovaling, Baljuvon districts. List of districts under WASH interventions:

Nos.	Region	District
1	Areas of Republican Subordination	Tajikabad
2		Nurobod
3		Sangvor
4		Lakhsh
5		Vahdat
6		Hissar
7		Rudaki
8		Tursunzoda
9		Shakhrinav
10		Rogun
11		Varzob
12	Gorno-Badakhshan Autonomous Region (GBAO)	Darvoz
13		Vanch
14		Ishkoshim
15		Murgob
16		Roshtkala
17		Shugnon
18		Khorog
19	Sughd	Panchakent
20		Konibodom
21		Isfara
22		Istaravshan
23		Mountain Mastchoh
24		Mastchoh
25		Asht
26		Aini
27		Zafarobod
28		Spitamen
29		Ch. Rasulov
30		Istiklol
31		B. Gafurov
32		Devashlich
33	Khatlon	Bokhtar city
34		A. Jomi
35		Vose
36		Temurmalik
37		Hovaling

38		Vakhsh	
39		Shakhritus	
40		Kushonyon	
41		Jaihun	
42		Pyanj	
43		Levacant	
44		Kulyab	
45		Kulyab city	
Question 2			
Are you thinking about using MCH handbook as one of the communication tools from health workers to mothers?			
Answer			
<p>Since 2014, UNICEF has been supporting the MoHSP to introduce a MCH handbook within the health system to educate mothers, fathers, and families on care practices and record maternal and child health status in the thousand critical days from conception through the first two years of life. The handbook includes essential information for mothers and families on childcare and development and strengthens a link between families and primary health through creating demand and improving quality health care services. The objectives of MCH handbook introduction are many-folds: It aims to integrate early child development concept in the current health service delivery system; standardize service and communication across service providers; demand links among different health service providers / specialists and thereby promoting the 'family medicine' practices; stimulate dialogues between health workers and parents and between father and mother; and change parenting behaviours at household level. For the sake of proper introduction of the MCH Handbook and its optimal use by mother and caregivers, a technical guide for PHC workers on use of the MCH Handbook was also developed. UNICEF further supported testing of the content and operational feasibility of the MCH handbook in five selected districts representing all regions of the country. Following the MoHSP approval of the handbook and operational modality, in 2017, UNICEF supported Republican Family Medicine Centre to introduce MCH handbook through PHC and maternity hospitals in 12 districts. At the same time, a baseline assessment using Lot Quality Assurance Sampling (LQAS) methodology (and considering each rural health centre catchment area as supervision area) was also supported in those districts. The assessment identified family practices requiring further attention to address local-level equity gaps (i.e., gaps in pregnancy care, hygiene practices, IYCF, and timely vaccination¹ as well as low-performing areas within</p>			

¹ The low rate of timely vaccination coverage was partly because less than half the families possessed home-based records such as immunization cards without which timeliness could not be validated.

the districts). UNICEF also supported the Family Medicine Centre to set up a monitoring and evaluation framework (incl. selection of a few key process indicators, development of reporting mechanism/template).
UNICEF is using MCH handbook in the Integrated Mother and Health Care projects in Fayozobod, Shohin, Rasht, Danghara, Norak, Khovaling, Baljuvon districts.
In addition to that to assess the impact of the MCH handbook, UNICEF jointly with MoHSPP and ADB is conducting a Randomized Control Trial in Fayozobod, Shohin and Rasht districts.
Question 3
Who or what department is the key person when you discuss nutrition issues in MOHSPP?
Answer
Mr. Sherali Rahmatulloev, advisor on MCH in MoHSPP.
Question 4
What republican center is the key counterpart when you implement nutrition activities in MOHSPP centers?
Answer
Republican Family Medicine center and Pediatric Research Center
Question 5
In the slide among 10 most effective & impact interventions which you showed us, What works most (or what work well) in Tajikistan?
Answer
The 10 Priority behaviors shown on slide are paired with the 5 moments for change so that children get the best care and supportive environment when they need it most. The 10 priority behaviors are linked to each and should be implemented a comprehensive approach to change behaviors.



USAID

Date	May 11
Name of the person answers	Malika Makhkambaeva (Health in charge USAID county office)

1. 3 main directions

HIV

TB

MCH in Nutrition

(additional directions; disability and COVID response)

2. Healthy mother, healthy baby

Conducted 12 districts of Khatlon Oblast excluding Bokhtar city, Norak, Panji. (Food production is not available in the 3 places due to this project is related to agricultural point of view.)

Components

- 1) Nutrition at hospital maternity and child department
- 2) Support MOH in capacity building in SUN
- 3) Social behavior change

Period: 2020-2025

Budget: 17 million USD

Volunteer

Since MOH does not have maintain health volunteer, USAID works with HLC (Healthy lifestyle center).

HLC has around 10 staff at district level. However, it is not sufficient to cover entire district.

Future plan

- Social behavior change through TV program
- HLC training for oblast and national level

3. Working with WFP

(USAID finishes this program this year and she heard that Japan will take over the program.)

Since June 2017 until this year

Target district: Kulob, Dusti, Shartuz, Valhi, Aini

Activities

Provision of therapeutic food

Online monitoring system to monitor malnutrition (data on height, weight, etc. input directly to tablet and the data is sent to Institute of Pediatrics)

4. Working with UNICEF

Quality improvement on Universal salt iodization (operated from Washington DC)

5. Other small projects

- Physical rehabilitation
- Training for physio-therapist
- Training for orthopedic surgeons
- Basic assistance device such as wheelchairs, hearing aids
- Development curriculum on Physio-therapeutic area at national medical university

6. COVID response

Lab test improvement

Improve awareness on COVID and promotion of vaccination

7. Regional project

Elimination of TB from central Asia

8. Possibility of collaboration

- Support of HLC: There are so many things to improve HLC. If the other partner work, USAID is ready for collaboration
- If Target district is duplicated: Shall collaborate after coordination
- If target district is different: will Provide USAID developed materials

European Union (EU)

Date	May 12, 2021
Name of the person answered	Leila Emerson

EU strategy

Based on Multi-year implementation plan

EU responsibility of Health Development Program

Only funding and monitoring & evaluation

Relation between previous project (District health information system)

Until district level (DHC and CDH) and will expand to PHC level

Remaining issues: 1) website update is doubtful (medstat.tj) 2) never integrated to health management

Conditions of EU to support MOH

- Macro economic stability
- Public finance management
- Budget transparency
- Sector policy

There are indicators to assess the above conditions, EU firstly agreed on the conditions with MOH, then payment is implemented according to achievement of indicators.

EU refused to pay from 2016-18 because MOH did not follow the above compliance.

EU has been assisting PHC past 10 years.

Donors approach are different from each other in data collection system, therefore, she stressed that it is necessary to integrate each system into DHIS.

She also stressed that when assisting PHC level, it should be comprehensive, not focusing on specific area.

⇒FMD has an important role in PHC improvement.

⇒World bank is developing system as package of FMD.

She stressed that needs integration between health and education area in child health.

She is thinking about FMD should go outreach, not waiting at the health facility, and widely conduct activities in occupational areas such as factory rather than community.

She also mentioned about low status and salary of FMD.

Education course of FMD was supported by SDC but it was finished already. EU and WB took over the support.

In order to FMD to remain at community, it is necessary to give them incentives.

MOH should strengthen their leadership in health system.

Next strategy of EU will be focus on PHC.

World Food Programme (WFP)

Date	June 7, 2021
Name of the person answers	Shamsiya MIRALIBEKOVA
Position	in-charge of nutrition, WFP

For the improvement of nutrition from the viewpoint of food security, WFP implements 2 activities, namely 1. School Feeding Programme, 2. The Prevention and Treatment of Moderate Acute Malnutrition (MAM) Project.

1. School Feeding Programme

- This programme is to provide school meals at the targeted 52 districts in Khatlon and Sughd Region GBAO and DRS where food security is not sufficient. It also aims to assist capacity building of Tajik government in operation and management of school meals. It is planned that involvement of WFP will be reduced gradually. Operation and management of school meals aims to be fully transferred to Tajik government by the year of 2027.

- During the closure of school due to COVID-19 in 2020, food materials (fortified flour, vegetable oil and chick-pea) for school lunch were distributed to the household of school children. After the re-open of schools, hot and nutritious school meals were provided to the 1st to 4th grades of primary school students at approximately 2000 schools in the target districts. Times for school meals are utilized as educational opportunities of nutrition intake and hygiene for students.

2. The Prevention and Treatment of MAM Project

- The project provides therapeutic food to PHC facilities for the treatment of Moderate Acute Malnutrition (MAM) of under 5 children. It targeted 4 districts (Balkhi, Shahritus, Kulob, Dusti) in Khatlon and Ayni district in Soghd. In 2020, more than 9000 malnourished children had treatment at about 250 PHC facilities. Screening of malnourished children is conducted through house visits and immunization at PHC facilities.

- In 2020, "Social behavior change communication plan on the prevention of malnutrition in Tajikistan", to promote behavior change of community people for nutrition improvement, was finalized. The plan specified methods of diffusion of knowledge to community people by health promoters about food hygiene, reduction of usage of cooking oil and preservation of vegetables.

Aga Khan Development Network (AKDN)

Date	June 10, 2021
Name of the person answers	Guldarbogh Sadonshoeva
Position	Manager of Community Based Health Program

Prior to the interview, we emailed AKDN to ask an overview of the project. The following is the answer to the mail.

Project title	Integrated Health and Habitat Improvement Project
Period of the project	From (month) (year) to (month) (year)
Target districts of the project	In Rasht Valley total seven districts. AKHS covers six districts of Rasht Valley: Rasht, Tojikobod, Sangvor, Nurobod, Rogun and Lakhsh districts, except Fayzobod.
Components of the project	<p>IHHI II is funded by the Swiss Agency for Development and Cooperation (SDC) and the AKDN, and implemented by the AKDN – the Aga Khan Foundation (AKF) as lead and representative, Mountain Societies Development Support Programme (MSDSP), Aga Khan Health Services (AKHS), and Aga Khan Agency for Habitat (AKAH).</p> <p>The project focus will be fostering active engagement of communities and local authorities in participatory development planning informed by Integrated Watershed Management (IWSM), enhancing access to and quality of health, drinking water and sanitation services, and improving Natural Resource Management (NRM) and Disaster Risk Reduction (DRR). The project will also promote community behaviour that is healthier, safer, and more environmentally-sustainable.</p> <p>The target area covers the districts of Fayzobod (health components is not presented in this district), Rogun, Nurobod, Rasht, Tojikobod, Lakhsh, and Sangvor of Rasht Valley (Districts of Republican Subordination).</p> <p>The intended impact of the project is <i>People benefit from basic public services in a peaceful and equitable society allowing them to improve their quality of life.</i> To achieve this, the project will deliver the following outcomes: 1) Communities, including</p>

women and youth, participate actively as stakeholders/actors in local development; **2) The population has access to and uses vital public services;** and **3) People in the target area adopt healthier, more environmentally-sustainable, and disaster-safer behaviours**

Outcome one will be achieved by developing Integrated Village Development Plans (IVDPs) and Watershed Management Plans (WMPs) at sub-watershed level to address the development priorities of communities – plans will be owned and implemented by communities and local authorities, who will receive training to develop the plans.

Outcome two will be achieved by constructing, rehabilitating, and conducting minor renovation of primary healthcare centres; provision of basic medical equipment to primary health care facilities; training health professionals including Family Medicine (FM) doctors, nurses and other health workers; establishment of a Clinical Excellence

Centre for Continuing Medical Education (CME) via eHealth; establishment of safe and clean drinking water supply systems to provide villages access to safe and clean drinking water, construction of public flush toilets each catering to a strategic district centre, incentivising communities to construct private ecosan or flush latrines, and incentivizing them to improve their existing sanitation facilities using non-project resources; implementation of resilient NRM projects and sub-projects demonstrating soil bioengineering techniques; supporting youth and women-oriented income generating and livelihood development activities; and supporting marginalised members of communities through capacity building programs for integration into government activities related to risk reduction, including establishing emergency communication systems, safe havens/emergency shelters, and community emergency stockpiles..

Outcome three will be achieved by delivering needs-based trainings on watershed management, soil bio-engineering, and

	resilient NRM; <u>implementing communications activities to promote healthier, more sanitary, and more environmentally-sustainable behaviours;</u> organizing exchange visits to learn and replicate best practices in resilient NRM; establishing and capacitating community/government response teams; and building the capacity of government and communities to enhance the long-term sustainability of habitat interventions.
Main activities of the project	<p><u>All the mentioned above components very close link to each other and implementation is in integrated manner.</u></p> <p><u>AKHS is mainly focus on health component and the main activities are: constructing, rehabilitating, and conducting minor renovation of primary healthcare centres; provision of basic medical equipment to primary health care facilities; training health professionals including Family Medicine (FM) doctors, nurses and other health workers; establishment of a Clinical Excellence Centre for Continuing Medical Education (CME) via eHealth; CME on MoHSP approved protocols on Non – communicable diseases;</u></p> <p><u>At community level AKHS established network of Community Health Promoters (CHPs) and implementing MoHSP approve Guidelines on partnership with Communities on health issues. AKHS at this level is responsible jointly with Healthy Life Style center to increase awareness of communities on prevention of the NCDs and previously were focused on prevention of water -borne diseases.</u></p>

Interview

1. Clinical Excellence Center

- The center was established in GBAO first, then expanded to Muminobod, Khatlon, and Rasht district.
- Clinical Excellence Center has the following roles. The Center is a tool for continue medical education for health staff at district level as well as PHC level
- AKDN asked to have at least one room for the space for the center, and provided e-health equipment. E-health is mainly to connect with PGMI (Post Graduation Medical

- Institute) to receive the sessions for continuous education program for health staff. The topic is chosen based on doctors and nurses' needs.
- The Center also has the following roles as well.
 - 1) Mini library
The Center also has a library with books and medical magazines. The library is for self study for health staff.
 - 2) Nursing competency
The Center clarifies nursing competency such as checking BP for nurses to have appropriate simple nursing techniques.
 - 3) Internet
The Center has internet access for the health staff to search latest health knowledge and techniques. Also, the Center equips PC and printers for health staff to develop presentation materials.

2. Water supply

- It is mainly implemented by Aga Khan Agency for Habitat (AKAH). What they did was to collect water from water source to village center, and they placed pipes from village center to each water place.

3. Community Health Promoter (CHP)

- CHP is a volunteer. Since it is a volunteer, you should be careful to choose the person. Selection criteria is very important to choose right and enthusiastic person. The person should be recommended by local hukumat, religious leader, and PHC staff.
- AKDN pays accommodation and food for them. In addition, AKDN give a gift to CHP once a year. Gift is sometimes a money (20 USD) or goods the CHP requested (such as shoes).
- AKDN developed health education brochures which convey very simple messages to community people about importance of breastfeeding, immunization, WASH, prevention of NCDs, necessity of exercises, harmful effects of smoking etc. AKDN provides trainings for CHPs to understand those simple messages so that CHPs can easily understand and provide them to people with brochures. In each topic, they have 1 or 2 days training (package). During the training, there is also discussion session between participants.
- CHPs understand that they are bridges between health facility and community people.

At the time of home visit by health staff, the CHP goes together with the staff (nurse). While nurse checks health status, the CHP provides health education. CHPs are big help of nurses who are busy with daily work at PHC facility in doing immunization, antenatal care, documentation and so forth. CHPs can support health staff as they conduct health education activities.

- AKDN developed more than 1600 CHPs so far. One CHP is responsible to cover 50 households.

4. Working with Healthy Lifestyle Center (HLC)

- When HLC was established, it was very weak. The staff frequently changed. Still HLC at district level is weak.
- Since MOH is strongly promoting that educational activities should be carried out through HLC, there is no choice but to cooperate with HLC to avoid friction with the Ministry.
- There is a new guideline in terms of health activities at community level, all the donors must follow the guideline.

5. School health and nutrition

- As for nutrition, there is a stunting initiative and AKDN is implementing the project in Muminobad by GIZ funding. Target is 30 villages in the district. Child is identified if she/he has malnutrition, and is categorized into severe, or moderate if malnutrition case.
- There are many cases of stunting in GBAO. AKDN is implementing the activities such as cooking demonstration and providing additional supplementation (such as F75 and F100). They will be the implementor of GIZ project which is conducted in Khatlon Oblast.

6. Important main steps to support PHC

- The salary of health staff, especially PHC level, is very low in Tajikistan. Therefore, donors should focus on improving their working conditions to support them. There are 3 steps which donors should be noticed.
 - 1) Infrastructure improvement (by renovation or reconstruction)
 - 2) Providing training to refresh their knowledge
 - 3) Providing basic equipment
- Everything should be in line with MOH standard.

