No.

MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

THE STUDY ON

THE REFORM OF HEALTH CARE SERVICES IN NAVOI REGION IN THE REPUBLIC OF UZBEKISTAN

FINAL REPORT

Main Report

FEBRUARY 2008

International Techno Center Co., Ltd.
KRI International Corp.

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As of August, 2007

PREFACE

In response to the request from the Government of the Republic of Uzbekistan, the Government of Japan decided to conduct the Study on the Reform of Health Care Services in Navoi Region in the Republic of Uzbekistan and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team headed by Ms. Chiharu Abe of International Techno Center Co., Ltd. in association with KRI International Corp., to Uzbekistan from January 2007 to January 2008.

The team held discussions with the officials concerned of the Government of the Republic of Uzbekistan and conducted field surveys at the study area. Upon returning to Japan, the team prepared this final report.

I hope that this report will contribute to the reform of health care services in Navoi Region and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Uzbekistan for their close cooperation extended to the study.

February 2008

Yoshihisa Ueda
Vice President
Japan International Cooperation Agency

February 2008

Mr. Yoshihisa Ueda
Vice President
Japan International Cooperation Agency
Tokyo, Japan

Letter of Transmittal

Dear Sir,

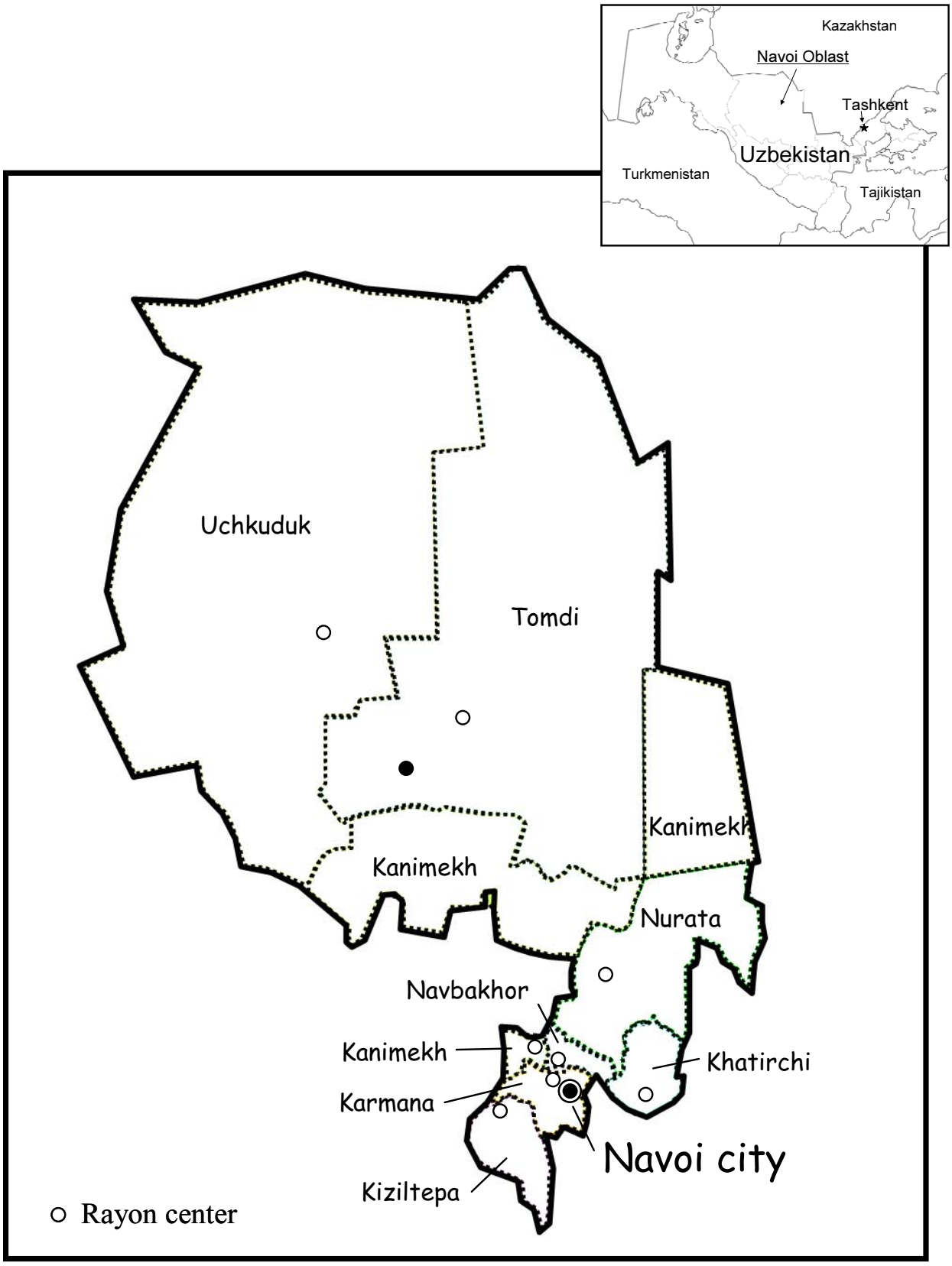
We are pleased to submit herewith the Final Report of the Study on the Reform of Health Care Services in Navoi Region in the Republic of Uzbekistan".

The report compiles the result of the study which was conducted from January 2007 to February 2008 by International Techno Center Co., Ltd. in association with KRI International Corp. under a contract with the Japan International Cooperation Agency (JICA).

The final report consists of two volumes: the Main Report and the Data Book. The Main Report presents the results of situation analysis of Navoi health sector, the strategies of improvement, and the action plan of improvement of health care services in Navoi Oblast. The Data Book contains the technical resources of the study and relevant information on the health facilities in Navoi Oblast.

We would like to express our sincere gratitude to your agency, the Ministry of Foreign Affairs, and the Ministry of Health and Social Welfare. We are also most grateful for the cooperation and assistance from the officials concerned in the Republic of Uzbekistan, the JICA Uzbekistan Office, and the Embassy of Japan in Uzbekistan. The Final Report is a fruit of excellent collaboration of all participants in the Study.

Yours Faithfully,
Chiharu Abe
Team Leader,
The Study on the Reform of Health Care Services in Navoi Region in the Republic of Uzbekistan
International Techno Center Co., Ltd in association with KRI International Corp.



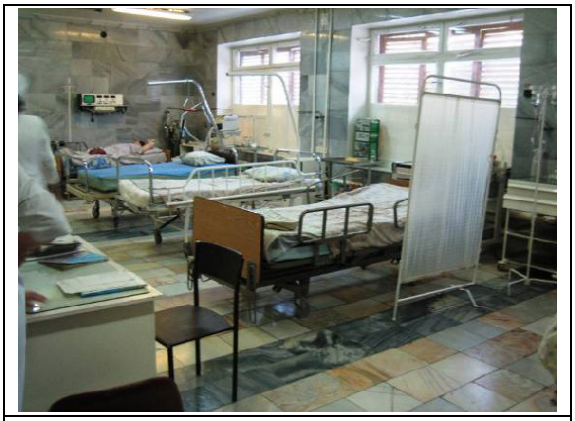
Sketched borders nod not present exact territories.

Map: Navoi Oblast

Photos

1. Major Hospitals/Dispensaries (1/2)

Entrance of main building, Emergency Center, Navoi City



Intensive care unit, Emergency Center, Navoi City

Main building, Oblast Pediatric Hospital, Navoi City

Ventilator for intensive care unit, Oblast Pediatric Hospital, Navoi City

Delivery room, Oblast Maternal Hospital, Navoi City

Nursing training room, Oblast Maternal Hospital, Navoi City

1. Major Hospitals/Dispensaries (2/2)

Main building, Oblast Pediatrics Infectious Disease Hospital, Navoi City

Preparation and disinfection room, Oblast Pediatrics Infectious Disease Hospital, Navoi City

Main building, Oblast TB Dispensary, Navoi City

Autoclave for bacteriological tests, Oblast TB Dispensary, Navoi City

Vehicle for sanitary aviation, Emergency Center, Navoi City

Old water piping system, Dermatology/STI Dispensary, Navoi City

2. RCHs and SVPs (1/2)

Main building, Nurata RCH

View of Nurata City, Nurata Rayon

Administration & consultation building, Kanimef RCH

X-ray apparatus over 25 years, Kizirtepa RCH

Main entrance of hospital building, Uchkduk RCH

Corridor and waiting space of polyclinic, Uchkduk RCH

2. RCHs and SVPs (2/2)

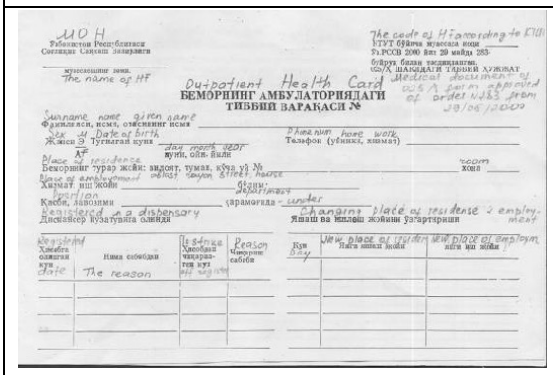
Pediatrics ward for 2 beds, Tomdi RCH

Operator of radio communication with remote area, Tomdi RCH

SVP in suburban area, Nurata Rayon

SVP in remote area, Tomdi Rayon

Physiotherapy room in SVP



Outpatient Health Card
БЕМОРНИНГ АМБУЛАТОРИЯДАГИ
ТИББИЙ ВАРАҚАСИ №

National Format of Outpatient Health Card for SVPs and Polyclinics

3. Steering Committee, Workshop and Interview survey

Steering Committee Meeting in Ministry of Health, 3rd Field Mission in August, 2007

Problem analysis in Participatory Workshop-1, Navoi City, August of 2007

Objective analysis in Participatory Workshop-1, Navoi City, August of 2007

Presentation of action plans in Workshop-2, Navoi City, August of 2007

Interview survey for resident in urban area, Navoi Oblast, 2nd Field Mission in June,2007

Interview survey for resident in suburban area, Navoi Oblast, 2nd Field Mission in June, 2007

4. Others

NOHA office, Navoi City

Thermal Power Station, Navoi City

Main street of Navoi City

Celebration of planting trees for Uzbek-Japan garden in NOHA, Navoi City

JICA Study Team and Local staffs, Navoi City

Local restaurant, Karmana City

Executive Summary

Outline of the Study

In response to a request by the Government of Uzbekistan, the Government of Japan decided to conduct the Study on the Reform of Health Care Services in the Navoi Region in the Republic of Uzbekistan (hereafter referred to as "the Study") in accordance with the relevant laws and regulation in force in Japan, and the Japan International Cooperation Agency (JICA) decided to undertake the Study in close cooperation with the authorities concerned of the Government of Uzbekistan. JICA conducted the preparatory study in July 2005. The preparatory study team held discussions with the official concerned of the Government of Uzbekistan, and the scope of work of the Study was signed by JICA and the Ministry of Health (MOH) on July 21, 2005. In accordance with the agreed scope of work of the Study, JICA sent a team of Japanese consultants (hereafter referred to as "the Study Team") to Uzbekistan in January 2007 to implement the Study.

The objectives of the Study are:
- To formulate a concrete program for the improvement and reform of health care services in Navoi Region with special emphasis on the reform of tertiary level services, and
- To pursue technology transfer to the counterpart personnel in the course of the Study.

In order to achieve the objectives above, the Study includes:
- Basic study,
- Formulation of basic strategy,
- Selection of an improvement plan for health care services in Navoi,
- Detailed plan on selected tertiary-level health care services, and
- Workshops and seminars.

The Study was carried out from January 2007 through February 2008. It consisted of five field missions. Field Missions 1 and 2 were to conduct a basic study of the current situation of the health sector in Navoi Oblast. Based on the results, the basic strategy and components of the action plan were discussed in Field Mission 3. The action plan was optimized in Field Mission 4. The contents of the program for improvement of health care services in Navoi Oblast were confirmed by both the Uzbek and Japanese sides and explained to the stakeholders in Field Mission 5.

The basic study conducted in Field Missions 1 and 2 included not only the general study of the health situation in the oblast but also several specific surveys with the purpose:
- To grasp current service provisions in Navoi Oblast,
- To clarify the current situation of management at health facilities in Navoi Oblast,
- To grasp health care provision and referring of patients regarding important diseases, and
- To clarify the factors behind care seeking behavior of people in Navoi Oblast.

The Study Team also had short visits to other oblasts and collected general information and characteristics of selected oblasts for reference.

In the course of the survey in Field Mission 1, it was found that patient-friendliness would be an important issue in the improvement of service provision. Accordingly, the Study Team and the Navoi Oblast Health Administration (NOHA) decided to call for volunteer activities by health facilities to improve the comfort of patients. Considerable effort was shown by all the health facilities, and some results were noteworthy. The activities evolved into a more systematic and drastic plan to improve the sanitary conditions of health facilities.

In Field Mission 3 to identify issues and constraints, to establish a basic strategy, and to examine the options of the action plan, the workshops were held twice at Navoi. Members of NOHA and health staff in the oblast had positive discussions to identify the issues and constraints, and to establish a framework of actions to be taken in the oblast. A following workshop was held at Tashkent, and the members of the steering committee and republican health facilities discussed the establishment of a basic strategy for an improvement program from the aspects of prevention, treatment and medical technology.

Based on the basic strategy, the objectives of the improvement plan were presented. Because the design of oblast-level health care would be most important in terms of both effectiveness and efficiency of the health care service system in the oblast, the critical decisions regarding a technically optimal and financially sustainable approach were the most important issues in the discussions. In the course of the discussions, the design of tertiary care in Navoi Oblast was determined considering the study results and the main governmental directions for health reform.

Policy of Health Reform by the Government

In Uzbekistan, the President and Cabinet of Ministers, headed by the Prime Minister, are responsible for developing national health policies. MOH is the major player in organizing, planning and managing the health care system under the decisions made by the cabinet.

On September 17, 2007, Presidential Decree No. 3923 was announced regarding the main directions of the further development of reforms and implementation of the state program of health care development. The Presidential Decree evaluated the achievements of the previous program and the necessity for further improvements in disease prevention and provision of medical services especially at oblast and rayon levels, and the Presidential Decree outlined the main points of further reform, and approved the establishments proposed by the working group formed by a Presidential Order in January 2007. Following the decree, Resolution No. PP-770 was adopted on October 2, 2007.

The structure of MOH has changed since the first years of independence. There were departments for treatment and prevention, maternal and child health, sanitary-epidemiological control, science

and medical education institutions, inspection controls, economics and financing, and development of material and technical capacity. The organizational structure of MOH has been renewed by the Resolution dated October 2, 2007.The oblast health administration has four main function streams: medical and preventive care; maternal and child health; financial and economic service; and sanitary and epidemiology. The health care delivery and research institutions at republican level are financed and regulated directly by MOH. Oblast, city and rayon health authorities perform the functions for health facilities other than those of republican level. The new policy puts some importance on the management capacity at rayon level and respective health facilities.

Overview of Health Situation in Navoi Oblast

Uzbekistan is a landlocked county in central Asia, having territory of 447,400km^2. Tashkent is the capital city, and there are 12 oblasts and the Autonomous Republic of Karakalpakstan in the country. Navoi Oblast is located in the northwest part of Uzbekistan in the middle of the Kyzyl-Kum Desert. There are eight administrative divisions (rayon). The population density of the whole oblast is around 7.5 people per km^2. Navoi has a long history, although it has undergone many changes in the latter half of the 20th century. Such an historical background reflects some characteristics of the health facilities in the oblast.

The demographic trend in Navoi Oblast shows little difference from that of Uzbekistan as a whole, and the birth and mortality rates are around 20 and 5 per 1,000 people, respectively. The annual number of deaths in the oblast is approximately 4,000. According to the statistics recorded by NOHA, the top causes were cardiovascular diseases, hypertension, tumors, and cerebral artery diseases. The annual number of deaths in hospitals is some 500 cases out of the total of 4,000 cases in the oblast. The majority of mortality cases occur at home and these are recorded in PHC facilities.

NOHA, being a part of the oblast governments, takes the role of a quasi-independent branch of MOH as well. The organizational structure of NOHA follows the framework guided by the republican government, and its departments have characteristics as regional branches of those administrations at republican level. The health administration at rayon level is invested to the Rayon Central Hospital (RCH).

Provision of Health Care Services

The actual situation on the supply side of the services in Navoi Oblast was analyzed quantitatively and qualitatively, including hospital management. Information and data were collected through the use of questionnaires, interviews and observations.

In total, 3,304 beds function for the health facilities in Navoi Oblast under MOH. Currently, 17 tertiary-level facilities, 8 RCHs, 13 rural community hospitals and 136 primary health care (PHC) facilities are scattered in Navoi Oblast.

The hospital provides only inpatient care for one or more categories of diseases and is divided into two groups in the oblast: RCHs, secondary care providers; and oblast hospitals for tertiary care. As for the latter, separate facilities deliver their services for emergency medicine, children, maternal health, ophthalmology, infectious diseases and alcohol abuse separately. In addition, there are four hospitals owned by major companies, with around 980 beds.

The average number of beds per 1,000 people was 3.8 for RCHs in 2006, and the number of inpatients for all RCHs is 123.9 per 1,000 people. 0.45 deaths per 1,000 people occurred at eight RCHs in 2006. Such low rates reflect deaths that mainly occurred at home. The bed occupancy rate (BOR) exceeds 280.5 days or 85% at most RCHs.

The numbers of beds at the oblast hospitals are lower than RCHs. BORs are over 330 days or 100% at some of them. Average lengths of stay, except one hospital, are 5-8 days.

The dispensaries specialize in services for a single category of diseases like tuberculosis (TB), cancer, dermatology/sexually transmitted infections (STI), endocrinology, psychiatry and narcology. Oblast centers provide local users with special services such as for HIV/AIDS, screening, adolescent health, blood transfusion and forensic medicine. They have no inpatient facilities.

BORs are over 330 days or 100% at the TB Dispensary, Psychiatry Dispensary and Narcology Dispensary. Generally, average lengths of stay are longer, especially for TB because of national regulations requiring that patients have to be hospitalized for the first 2 months.

Each SVP in remote areas is forced to cover a huge area. The numbers of newly registered outpatients per SVP having been diagnosed with some disease vary from 484 to 2,976.

In 2006, RCHs referred 500 patients to oblast health facilities and care for 301 with sanitary aviation, the system to dispatch specialized doctors to lower-level facilities to provide care. .

The budgets per capita in NOHA nominally continued to be increased from 2003 (8,823 soums) to 2006 (19,214 soums). Personnel expenses per capita have increased by 104% from 2004 to 2006, while the annual increase of other expenses is almost unchanged.

In Navoi Oblast, the percentages of user fees collected in the total income amount of health facilities are very small. One of the obstacles to smooth progress is the shortage of health facilities that can fully apply the scheme.

Most of the RCHs do not have places where the patients can wait for consultation and testing, which makes them patient-unfriendly. At some RCHs, toilets are far outside the inpatient wards and they are not clean. Some of them do not have hand washing facilities near the actual toilets or

an entrance of the building and that may lead to hygiene problems. There are no problems about power supply but there are problems about the supply of water at some areas. One RCH faces a sewage-related problem.

Most of the medical equipment was procured during the 1980s in the Soviet era and is very decrepit. As for maintenance of medical equipment, a joint stock company called “Medservice” handles regular checkups and maintenance services. However, Medservice cannot always catch up with the progress of advanced technology regarding medical equipment. Another problem is poor distribution of information on maintenance of medical equipment among health facilities.

Many of the health facilities in Navoi Oblast can procure only 10 - 60 % of the amount of drugs they require, mainly due to budget shortages. Consequently, patients have to pay for these shortages. Another problem is that the facilities cannot freely procure drugs in case they are off the drug lists fixed for each level of facilities.

Financing the health sector is one of the points to be discussed. Funds available for maintenance and purchase of fuels, foods, drugs and consumables are almost unchanged. The percentage of fees collected from patients in the total income is 1-2% at most for hospitals. In Navoi Oblast, most of the patients are categorized in the list of groups exempt from fees.

Secondly, referral of the patients is pointed out. In Navoi Oblast, sanitary aviation tends to be preferred to referral. It seems that there is little difference between RCHs and oblast-level facilities at Navoi and Karmana. The neurosurgery, orthopedics and traumatology of Karmana RCH are superior to oblast facilities and several patients are referred there every year. Due to the absence of city hospitals for secondary care, most of the users of the oblast facilities are people living in Navoi City.

Thirdly, the maintenance system of medical equipment needs to be discussed. Due to maldistribution of information on maintenance, even with the same equipment produced and procured in the same year, some facilities can manage to operate and repair it well, but others cannot. In addition, the preventive maintenance of equipment is currently absent.

Review of Mortality Cases

About 500 people die in hospitals out of about 4,000 total deaths per year in Navoi Oblast. During Field Mission 1, the Study Team visited four oblast-level health facilities and five RCHs, and quickly reviewed a total of 370 hospital records of mortality cases. More than half of them had the diagnosis of “heart failure,” but the Study Team tried to identify the main disease which caused cardio-respiratory arrest on the long list of diagnoses given to the patients. The major causes, namely trauma/accidents (16.8%), heart disease, stroke, cancer, liver disease, kidney disease, diabetes mellitus (DM) and childhood ARI, made up about 80% of the total deaths.

During Field Mission 2, the Study Team reviewed 66 cases that died of major causes, except for trauma/accidents, in order to evaluate the level of medical services offered in the oblast.

Out of 370 mortality cases 41 (11.1%) died of ischemic heart disease (IHD). Among the 11 cases reviewed in detail, late care seeking was common. IHD was managed conservatively, while thrombolytic agents were never used. The Republican Emergency Center has developed standards on emergency cardiology, however, they are not always used in practice.

Similarly, strokes were the cause of mortality in 52 cases (14.1%). The CT study was seldom checked, and differential diagnosis between hemorrhage and infarction was often made clinically. Neurosurgical intervention or thrombolytic agents were rarely given to patients with strokes.

Cancers/Malignancy was the cause of mortality in 17 cases (4.6%). The main treatment approach is radical or palliative surgery. Radiation therapy will be available in the near future. In Uzbekistan, where there is no screening system for cancers, most cancer patients come to hospitals with symptoms, and most of them are at an advanced and incurable stage.

Out of 370 mortality cases 24 died of liver diseases (6.4%), 22 of which were liver cirrhosis. Diet therapy, refraining from drinking alcohol or interferon therapy, was not commonly prescribed on the patients. The management of hepatic comas is not properly standardized.

Eight cases died of renal failure (2.2%). There is no specialized service for kidney diseases in Navoi Oblast. Hemodialysis is chiefly applied to acute intoxication at the Emergency Center. Expanding the indication of dialysis to chronic renal failure will be an issue in the near future.

Six cases died of DM (1.6%). A protocol for management of a diabetic coma is not standardized. The endocrinology dispensary in Navoi does not have any beds for indoor treatment. Reviewing records also suggests the lack of endocrinologists experienced in management of diabetic emergencies.

Out of 370 mortality cases 48 children died of ARI (13.0%). Five of the 10 reviewed cases were partially-treated ARI, and four of them had underlying conditions. However, the hospitals treated such patients with the simple protocol of “community-acquired ARI”. Delay in starting intravenous antibiotics and oxygenation was also very common.

The multiplicity of symptoms was commonly observed among the reviewed cases. When a specialist sees such a patient, he or she may obtain assistance from other specialists. Once a variety of symptomatic diagnoses are given to a patient, the attending physician starts multiple treatments towards each diagnosis. The root cause of too many diagnoses on the terminal patients seems to be lack of knowledge on general internal medicine and understanding of pathogenesis.

In Navoi Oblast the former General Hospital was converted to the Emergency Center several years ago. The lack of general hospital is a reason behind insufficient management of non-communicable diseases, but the review of mortality cases suggests another reason: a group of

specialists without a leading generalist. To avoid this pitfall, the new general medical center should have a tertiary-level generalist with broad and deep experience.

According to the authorities of MOH, clinical protocols and standards are under development. They must be “translated” into practical guidelines and implemented in routine practice. Usually the standards are shown for each established diagnosis. However, guidelines will be more practical if they guide the way to reaching a diagnosis from symptoms that are not overly clear. Based on such practical guidelines, regular refresh training, equipment and drugs should be systematically provided to health personnel and facilities.

People’s Care Seeking Behavior

The latest situation of utilization of health services and the determinants of people's care seeking for health problems and maternal and child care were analyzed based on quantitative and qualitative data. It was collected by household survey with 1,048 samples (4,566 individuals) and in-depth interviews with health personnel especially in PHC facilities.

Among members of the target family, 30% have had health problems for the last five years and some had more than two problems.

No significant difference was found in care seeking behavior for health problems by educational background, living standard, nationality, and knowledge about common illness (hypertension and anemia). It varied among residential areas, Navoi City and urban suburbs, rural suburbs of Navoi and remote areas. Generally, the first health facility in which people sought care was a PHC facility, i.e., SVP. People in Navoi City and urban suburbs seem to have more options from SVP to oblast health facilities according to the seriousness of the health problem, while in remote areas, there is only one choice, namely, primary health care facilities. As for maternal care, RCH was the most common health facility for deliveries. Ante natal care and child health care are provided mainly by SVP.

Most of the survey respondents benefited from the existing health care services, however a few did not go to any health facilities due to inappropriate perception of illness, economic difficulty, distance to the health facilities, or negative image of health personnel.

Although medicines provided by the health facilities are free, only 2% of the patients in Navoi City and urban suburbs and rural suburbs of Navoi City got medicine at the health facilities, while the ratio was 19% in remote areas. Most of the others bought the necessary medicine in pharmacies or at drug vendors through their own costs.

Most of the respondents were satisfied with the health care provided when they had a health problem. However, some respondents might not have expressed their honest opinions in front of

the surveyors working with the health administration and SVP staff who had established close relationships with the people.

The following were reasons why some people were not satisfied with the health care:

- They had to pay for medicine.
- They had to pay for food, linen and other related items for hospitalization.
- They could not see “qualified” health personnel.
  (It means they did not want to be treated by a general practitioner but a specialist.)
- Prescribed medicine was expensive.
- They could not feel any improvement.
- Inpatient facilities were not comfortable (congested, dirty, etc.).
- They could not communicate well with health personnel.
  (It means some had been treated roughly or medical personnel were not especially kind to them.)

The results of the household survey suggest that care seeking behavior might depend on distance and access to the health facility, economic status, cost-effectiveness and perception of health and illness. On the other hand, people might consider the balance of the economic burden and quality of services, which includes qualification and attitude of health personnel, the condition of facilities for patients, and appropriate equipment, to be an issue. The economic burden includes direct and indirect costs such as medicine, transportation, and opportunity costs, etc.

Perceptions of the health and illness of people might not be enough despite frequent communication with frontline health workers such as patronage nurses. From the viewpoint of early detection of non-communicable diseases (NCDs) such as hypertension and diabetes mellitus, people's awareness should be raised so that they pay more attention to their health even though they have no significant subjective symptoms. The patronage system could be an important information source of the health status and needs of people, and a valuable tool to control chronic disease patients at home and to increase awareness of the importance of regular health check ups if the contents of activity are regularly modified based on the actual needs and situation of people.

Generally, the survey respondents rely on public health care providers and they seem to be satisfied with the services. As there are few private service providers in Navoi Oblast, people do not have a variable choice like Tashkent and no significant differences are shown in care seeking behavior. Especially in remote areas, they have no choice but the nearest SVP. Therefore, the health care service providers in Navoi Oblast should carefully consider the actual needs and sincere opinions regarding health care services of people.

Issues to Be Tackled

Problem Identification

Uzbekistan has inherited its health care system from the former Soviet Union. This system has achieved fairly good results, and premature deaths by communicable diseases have been effectively reduced. Today, NCDs have an overwhelming majority as the cause of hospital deaths in the oblast. In the foreseeable future, they will increase both in the morbidity and mortality of the population, as its aging proceeds. Based upon the common understanding of the results of the basic studies and discussion during a series of workshops among MOH, NOHA, other stakeholders and the Study Team, the following problems were identified:

- Improvement of PHC services is not enough yet.
- Preventive services have not been adapted to disease transition.
- Curative services have not been adapted to disease transition.
- Secondary- and tertiary-level health care services in Navoi Oblast are not optimal.
- Presence of far and remote areas
- People's awareness

In Uzbekistan, the percentage of people aged over 45 years will be increased to 20.1% in 2015 and 24.0% in 2025. The advancement of population aging always involves a transition in disease patterns. As the prevalence of NCDs became higher, more money was spent on health care. Accordingly, future expenditure on health should be carefully projected.

In Uzbekistan, total expenditure on health per capita will be 1.95 times in 2012, 3.20 times in 2017 and 4.78 times in 2022 from the level of 2007. Government expenditure on health will increase 2.03 times in 2012, 3.42 times in 2017 and 5.18 times in 2022 from the current level. As for private health expenditure, currently it is 21,226 soums, and it will be 1.87 times in 2012, 3.00 times in 2017 and 4.39 times in 2022.

The above projection is made under the assumption that the level of technology and the capacity of personnel in the health sector will be advanced gradually. When MOH intends to aggressively introduce new technology for the improvement of care, the increase in expenditure will be beyond the projection.

The health care system in Uzbekistan has been faced with various imbalances since its independence from the Soviet Union. In view of the expected rapid increase of NCDs, the existing imbalances may not decrease, rather, may they widen in the coming decades.

The biggest imbalance is between actual health care needs and the health care supply. The government has tried hard to accelerate its health reform program, but it is still very much in progress. It is true that an imperfectly reformed health care system cannot meet the constantly increasing needs for better health care services, especially in Navoi Oblast where there is no general hospital.

Most of the current problems in the Uzbekistan health sector derive from this imbalance, namely, fragmented tertiary health facilities, lack of modern medical equipment, and a weak commitment to the prevention and treatment of NCDs at the primary and secondary level.

Basic Strategy for the Future Improvement

Although certain progress has been made under the State Health Care Reform Program (1998-2005), many problems still remain in the Uzbek health sector, and the health reforms continue under the latest Presidential Decree and Resolution. Adequate diagnosis and treatment of NCDs as well as quality services on maternal and child health, namely a comprehensive health care toward the changing health needs shall be realized. It is the challenge in Navoi Oblast to commence the series of activities with the basic strategies shown below.

Strategy 1: To organize effective and efficient health care service system at oblast level

At present, oblast health facilities in Navoi are scattered and operated almost individually and there is no oblast general hospital. This structure is neither effective nor efficient. Health facilities at the oblast level should offer more sophisticated and specialized services in a more integrated manner.

Strategy 2: To mitigate difficulties of health care services in remote areas

The secondary-level health facilities in remote areas should have a certain level of diagnostic and therapeutic function to alleviate economic and physical burden of going to Navoi City. Access to drugs should also be improved to reduce the economic burden of patients.

Strategy 3: To enhance secondary care services in suburban rayons

The function and role of secondary-level health facilities in Navoi suburbs should be enhanced based on the demarcation between secondary care and tertiary care, in order to achieve a reliable secondary care that can distinguish the cases to be referred to the tertiary level from the cases manageable at secondary level.

Strategy 4: To improve diagnostic skills in accordance with level of facilities

Tasks and functions of diagnoses given to the facilities in respective service levels need to be reconsidered and redefined, and then the diagnostic capacity level of each facility should be improved and the diagnostic functions of primary- through tertiary-level facilities should be networked.

Strategy 5: To optimize prevention activities

Early diagnosis and control of hypertension, DM and anemia should be emphasized. Patronage activities should be modified to raise the awareness of the general population on the importance of disease prevention.

Basically, SVPs' roles are to receive every patient, judge the severity and urgency of the case, and directly treat mild or moderate cases with common diseases. The rayon-level policlinics offer outpatient services, and RCHs offer inpatient care and planned operations for common diseases and delivery care including emergency caesarean sections. The tertiary facilities should be equipped with more specialized and sophisticated investigation equipment in addition to having basic diagnostic procedures.

Through developing the referral network, services at first contacts (SVPs, RCHs and policlinics), tertiary level diagnostic and therapeutic services, and follow-up services for discharged patients will be reorganized into an integrated health care system without a break.

The following five categories of diseases, which already are or will be major causes of morbidity or mortality and for which the effective countermeasures for prevention or control are available, shall be prioritized.

- Acute respiratory infections
- Cardiovascular diseases
- Diabetes mellitus
- Hepatic and renal diseases
- Cancers

To organize an effective and efficient health care services system at oblast level is especially the key to the reforms, since the absence of the Oblast General Hospital and the dispersed allocation of small-scale tertiary health facilities primarily prevent the system from keeping up with the changing demands of health services. In addition, the establishment of the Oblast General Hospital would enable it to play a role in the compilation of guidelines to practice the protocols for diagnosis and treatment of NCDs and implementation of in-service training.

It is also quite important to consider how to achieve the efficiency as well as effectiveness. For completion of the reform, actions must be taken for the entire strategies, namely services of secondary and primary levels also needs adequate inputs. Allocation of financial resources of NOHA is a critical issue. Establishment of the Oblast General Hospital and the Oblast Diagnostic Center inevitably involves initial investment in construction of new buildings and procurement of medical equipment, even if existing facilities and equipment are fully utilized. In addition, manageability of recurrent costs of the two oblast-level facilities must be taken into consideration, in making a decision on specialties and capacities of health care services.

Based on the results of the Study, the Study Team proposed three options for the optimal tertiary care system in Navoi Oblast: 1) to build an integrated general hospital including all pediatric subspecialties, 2) to build a new adult general hospital and oblast diagnostic center, and 3) to separate the emergency center and utilize a part of the building of the emergency center for a general hospital, and requested the consideration and decision making by MOH and NOHA The

determined optimization is to inaugurate the Oblast General Medical Center and the Oblast Diagnostic Center, in line with the new policy shown by the latest presidential decree, at the hospital complex in Navoi City. Surgery, ENT, urology, pulmonology, gastroenterology, nephrology and neurology, cardiology, neurosurgery, hematology and ICU services are will be available at the Oblast General Medical Center(277 beds) to play a role as the nucleus of health services in Navoi Oblast. The determined approach is some modification of Option 2, and requires certain amount of costs for both initial investment and recurrent. An allocation of development fund by the government is expected regarding the construction and equipment procurement. NOHA makes their maximum efforts on management taking advantage of hospital complex where the main oblast hospital services are located.

Improvement Program for Health Care Service System of Navoi Oblast

The proposed program is a series of activities to meet the changing health demands. The tertiary care in the oblast should reach the necessary standards of medical services with modern technologies. The secondary care is the responsibility of rayon-level policlinics and RCHs, where the cases to be referred to the higher level should be distinguished from the cases manageable at their level. SVPs are expected to adequately diagnose common diseases. Through developing an effective referral system, different level health facilities will be reorganized into an integrated health care network which meets the growing demand for more sophisticated health care services.

The Improvement Program for the Health Care Service System of Navoi Oblast consists of the following components and activities for years from 2008 through 2017.

Component 1: Disease Prevention and Health Promotion
Component 2: Diagnosis and Treatment Process for NCDs
Component 3: Health Facility
Component 4: Medical Equipment
Component 5: Efficiency of Drug Supply
Component 6: Sanitary Conditions of Health Facilities

Overall goals for 2017

- Life expectancy will be increased.
- The level of emergency health care will be improved.
  The mortality caused by NCDs will be contained within 1.4 times of the figures in year 2007.
- The preventive efforts are accelerated.
- The new Oblast General Medical Center can earn the half of its revenue from user's fee.

Mid-term goals in 2012

- The preventive efforts are accelerated.
- Diagnostic skills will be improved in accordance with level of facilities
- Trained doctors are assigned to health facilities as high-level internists.
- The General Medical Center and Diagnostic Center start operating and collecting users' fees.
- The number of beds at Oblast Emergency Center is reduced.

Short-term objectives in 2010

- The preventive efforts to curb the morbidity of NCDs are initiated.
- Guidelines for diagnosing and treating NCDs are developed.
- Based on the NCD guidelines, in-service training scheme is arranged.
- The permission is given to establish a new General Medical Center and Diagnostic Center.
- The indication for emergency care is narrowed down.

Component 1: Disease Prevention and Health Promotion
- Activity 1.1 Enhancement of Prevention Activities against NCDs and Health Promotion
- Activity 1.2 Upgrading of Patronage Activity

Component 2: Diagnosis and Treatment Process for NCDs
- Activity 2.1 Standardization of Diagnostic and Treatment Processes for NCDs
- Activity 2.2 Coordination among Different Subspecialties
- Activity 2.3 Personnel Plans and Regular Implementation of In-service Training Courses

Component 3: Health Facility
- Activity 3.1 Establishment of Oblast General Medical Center and Oblast Diagnostic Center
- Activity 3.2 Optimization of Oblast Emergency Center
- Activity 3.3 Strengthening of Rayon-level Health Facilities

Component 4: Medical Equipment
- Activity 4.1 Improvement of Maintenance of Medical Equipment
- Activity 4.2 Procurement of Medical Equipment for RCHs

Component 5: Efficiency of Drug Supply
- Activity 5.1 Centralizing of Medicine Preparation
- Activity 5.2 Improvement of Access to Drugs in Remote Areas

Component 6: Sanitary Conditions of Health Facilities
- Activity 6.1 Introduction of "Self-pouring and Self-flushing" Toilet

The total cost of initial investments and preparation for the activities will be 32,996.8 million soums, and 172,872.2 million soums will be needed for the regular operation of these activities in the year 2008-2017.

The Study on
The Reform of Health Care Services in Navoi Region in
The Republic of Uzbekistan

Main Report

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Abbreviations

ALOS	Average Length of Stay
AMI	Acute Myocardial Infarction
ARI	Acute Respiratory Infections
ART	Antiretroviral Treatment
BOR	Bed Occupancy Rate
CT	Computed Tomography
CVA	Cerebrovascular Accident
DM	Diabetes Mellitus
EBM	Evidence-Based Medicine
ECG	Electrocardiogram
ENT	Ears, Nose and Throat (otorhinolaryngology)
FAP	*feldshersko-accouchersky punkt* (feldsher-midwife post)
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GP	General Physician
ICD	International Classification of Diseases
ICU	Intensive Care Unit
IHD	Ischemic Heart Disease
JICA	Japan International Cooperation Agency
LAN	Local Area Network
MCH	Maternal and Child Health
MOH	Ministry of Health
NCD	Non-communicable Diseases
NGMK	*Navoiyskiy gornometallurgicheskiy komplex* (Navoi mining and metallurgy complex)
NNA	Navoi Nursing Association (Navoi Branch of Republican Nursing Association)
NOHA	Navoi Oblast Health Administration
OB/GYN	Obstetrics and Gynecology
ODC	Oblast Diagnostic Center
OGMC	Oblast General Medical Center
PHC	Primary Health Care
RCH	Rayon Central Hospital
RMA	Rayon Medical Association
SES	Sanitary Epidemiology Station
SLE	Systemic Lupus Erythematosus
STI	Sexually Transmitted Infections
SRI	Scientific Research Institute
SSE	Secondary Special Education
SUB	*selskaya uchastkovaya bolnitsa* (rural community hospital)
SVA	*selskaya vrachebnaya ambulatoriya* (rural outpatient policlinics)

SVP	*selsky vrachebny punkt* (primary health care facility)
TB	Tuberculosis
USAID	United States Agency for International Development
USD	US dollars
VCT	Voluntary Counseling and Testing

PART I
INTRODUCTION

PART I. INTRODUCTION

Chapter 1 Outline of the Study

1-1 Background of the Study

In Uzbekistan, the health system has undergone significant changes since the independence in 1991. The Law on Health Protection (1996) and the Presidential Decree on the State Program for the Reform of the Health Care System of Uzbekistan (1998) outlined the vision for the health sector in the country, and since then the government has endeavored to undertake health reforms.

Several years ago, in response to a request by the Government of Uzbekistan, the Government of Japan decided to conduct a study to assist in preparing a master plan for nationwide improvement in the health sector of Uzbekistan. Accordingly, the Japan International Cooperation Agency (JICA), the executing agency responsible for the implementation of the technical cooperation program of the Government of Japan, carried out the Study on the Restructuring of the Health and Medical System in the Republic of Uzbekistan, and a master plan was prepared aiming at improvement of the quality of medical services and enhancement of equal access to medical services for all population; establishment of an effective system of medical services for the population's general health; and improvement of the effective use of health financing and introduction of a new financing mechanism. The master plan proposed priority programs including comprehensive improvement of the health service system of respective oblasts in the country. The Government of Uzbekistan selected Navoi Oblast as a model oblast for the priority issues, and made a request to the Government of Japan to implement a study to formulate a concrete program on the improvement of health services of Navoi Oblast.

Replying to this request, the Government of Japan decided to conduct the Study on the Reform of Health Care Services in the Navoi Region in the Republic of Uzbekistan (hereafter referred to as "the Study") in accordance with the relevant laws and regulation in force in Japan, and JICA decided to undertake the Study in close cooperation with the authorities concerned of the Government of Uzbekistan. JICA conducted the preparatory study in July 2005. The preparatory study team held discussions with the official concerned of the Government of Uzbekistan, and the scope of work of the Study was signed by JICA and the Ministry of Health (MOH) on July 21, 2005. In accordance with the agreed scope of work of the Study, JICA sent a team of Japanese consultants (hereafter referred to as "the Study Team") to Uzbekistan in January 2007 to implement the Study.

1-2 Objectives and Scope of the Study

The objectives of the Study are:

- To formulate a concrete program for the improvement and reform of health care services in Navoi Region with special emphasis on the reform of tertiary level, and

- To pursue technology transfer to the counterpart personnel in the course of the Study.

In order to achieve the objectives above, the Study includes:

- Basic study,
- Formulation of basic strategy,
- Selection of an improvement plan for health care services in Navoi,
- Detailed plan on selected tertiary level health care services, and
- Workshops and seminars.

1-3 Progress of the Study

The Study was carried out from January 2007 through February 2008. It consisted of five field missions. Field Mission 1 was conducted in January-March 2007, and Field Mission 2, May-June 2007. These missions were to conduct a basic study of the current situation of the health sector in Navoi Oblast. Based on the results, the basic strategy and components of the action plan were discussed in Field Mission 3 in August-September 2007. The result of the works in Field Missions 1 to 3 was shown in the Interim Report (IT/R), and the information was shared by the concerned parties of both the Uzbek and Japanese sides to continue the planning discussions. The action plan was optimized in Field Mission 4 in October-November 2007 and the Draft Final Report was prepared to compile all the works in the Study including the details of the action plans discussed in Field Mission 4. The contents of the program for improvement of health care services in Navoi Oblast were confirmed by both the Uzbek and Japanese sides and explained to the stakeholders in Field Mission 5, and the Final Report was prepared.

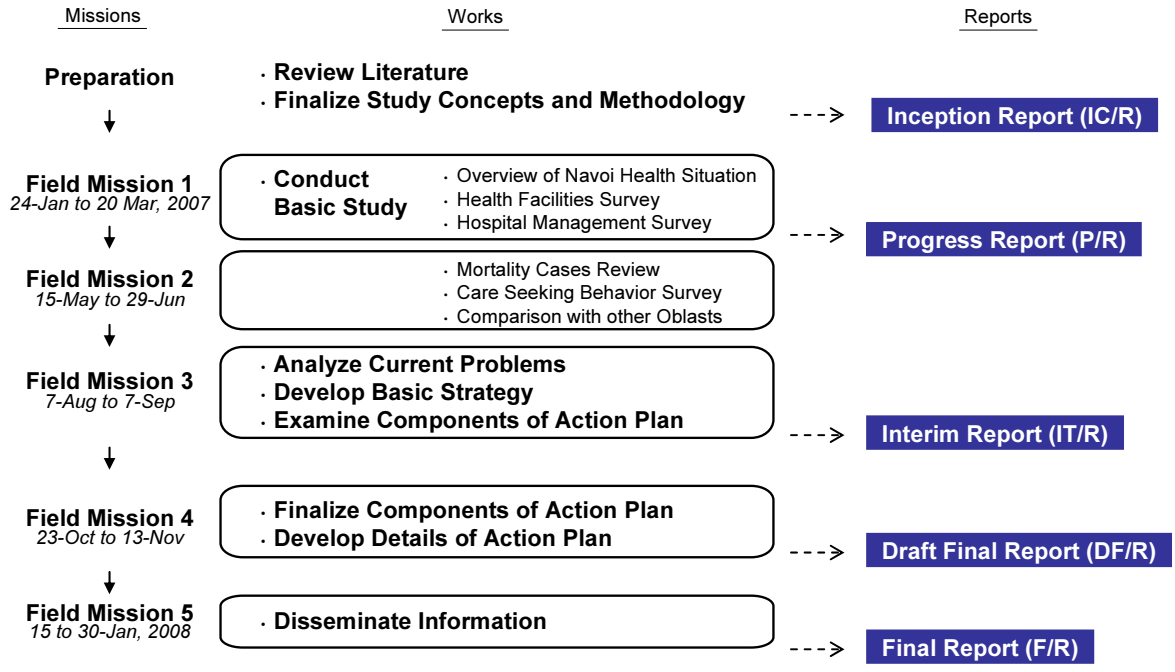


Figure 1-1: Overall Flow of the Study

1-4 Organizational Structure of the Study

The Study is implemented through the period under the organizational structure shown in Figure 1-2. The Steering Committee, consisting of key persons of MOH and Navoi Oblast Health Administration (NOHA), provided local leadership for smooth implementation of the Study. The important issues were discussed in the meetings of the Steering Committee, JICA Uzbekistan Office and the Study Team. NOHA assigned five counterpart personnel who had the most positive participation in the Study. The Study Team and counterparts were working together all the study period, maximizing their efforts for the effectiveness of the Study.

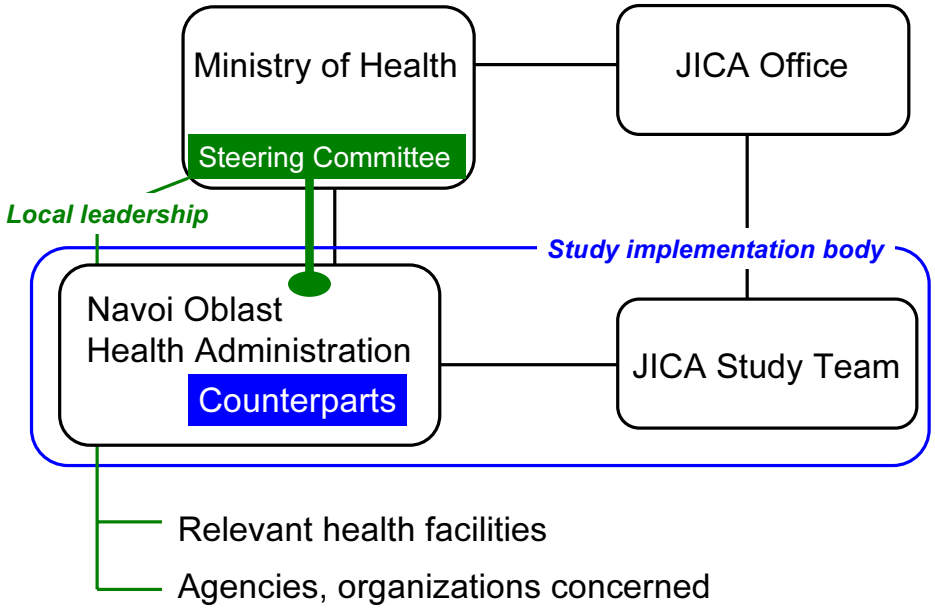


Figure 1-2: Organizational Structure

1-5 Concepts of the Study

1-5-1 Basic Principles of the Study

At the beginning of the Study, the Study Team, MOH and NOHA agreed to execute the Study with three basic principles, namely, the basic strategy should be developed in an evidence-based manner, the health reform plan should be feasible, and the Study should be carried out with the highest level of cooperative work by the Uzbek and Japanese members concerned. The concept and method of the Study reflects these principles.

1-5-2 Surveys in Basic Study

The basic study conducted in Field Missions 1 and 2 included not only the general study of the health situation in the oblast but also several specific surveys with the purpose:

- To grasp current service provisions in Navoi Oblast,
- To clarify the current situation of management at health facilities in Navoi Oblast,
- To grasp health care provision and referring of patients regarding important diseases, and
- To clarify the factors behind care seeking behavior of people in Navoi Oblast.

These surveys were designed by the Study Team in advance, and the details were adjusted through the technical discussions by MOH, NOHA and the Study Team. In Field Mission 2, the Study Team also had short visits to other oblasts and collected general information and characteristics of selected oblasts for reference. The details and results of these surveys are described in Chapters 4 to 7, Part II.

1-5-3 Proposed Activities during Basic Study

In the course of the survey in Field Mission 1, it was found that patient-friendliness would be an important issue in the improvement of service provision. Accordingly, the Study Team and NOHA decided to call for volunteer activities by health facilities to gain the comfort of patients. It was a small but important challenge in the course of basic study. Considerable effort was shown by all the health facilities, and some results were noteworthy as described in Chapter 8, Part II. The activities during the basic study evolved into a more systematic and drastic plan to improve sanitary conditions of health facilities in the rayons that have difficulties regarding water supply. It is reflected in the program as one of the action plans.

1-5-4 Developing Basic Strategy

The main tasks in Field Mission 3 were to identify issues and constraints, to establish a basic strategy, and to examine the options of the action plan. The information on the results of the basic study was shared by MOH, NOHA and the Study Team after Field Mission 2, and workshops at Navoi and Tashkent in Field Mission 3 were planned. NOHA and the Study Team held a trial workshop to understand the methods of the workshop and to share the ideas of the workshop in principle; following this, the workshops were then held twice at Navoi. Members of NOHA and health staff in the oblast had positive discussions to identify the issues and constraints, and to establish a framework of actions to be taken in the oblast. A following workshop was held at Tashkent, and the members of the steering committee and republican health facilities participated. At this workshop, NOHA presented the results of the Navoi workshop and the Study Team highlighted the important issue of the expected increase of medical demands related to non communicable diseases (NCD), including experience gained in Japan, and raised the question regarding the finance of health care. The outstanding participants, who represent the health sector in the republic, listened to the presentation and discussed the establishment of a basic strategy for an improvement program from the aspects of prevention, treatment and medical technology. The significant progress of Field Mission 3, including

the basic strategy with five pillars and the diseases to be prioritized, is described in Chapter 10, Part III.

1-5-5 Optimizing Action Plans of Program

Based on the basic strategy discussed in Field Mission 3, the long-, mid- and short-term objectives of the improvement plan were presented and the options to reform the tertiary care in the oblast were discussed in the IT/R, because the design of oblast-level health care would be most important in terms of both effectiveness and efficiency of the health care service system in the oblast. Accordingly, the Study Team suggested three options for re-organizing oblast-level health establishments for the critical decisions regarding a technically optimal and financially sustainable approach. It was the most important issue in the discussions among MOH, NOHA and the Study Team in Field Mission 4. In the course of the discussion, the conception of oblast-level health care services directed by the Presidential Decree No. 3923 of September-17, 2007 was carefully referred to and the design of tertiary care in Navoi Oblast was determined considering the study results and the main governmental directions for health reform. Part IV of this report describes the concrete program for the reform of health care services in Navoi Oblast.

During Field Mission 5, MOH and the JICA Study Team held a seminar. Several members of the steering committee, NOHA, other health staff members, international agencies in health sector, representatives of the Embassy of Japan and JICA Uzbekistan Office, and the Japanese specialists and volunteers working for JICA projects attended the seminar. In the seminar, the director of NOHA explained the outlines of the Improvement Program, and the JICA Study Team presented their technical advices. After those sessions, the members of the steering committee showed their opinions, and the country representative of WHO made his comments on the Study and the Improvement Program. The final meeting of the steering committee was held on 28th, January, 2008. In the meeting MOH confirmed its willingness to fully carry out the Improvement Program proposed through the Study.

Chapter 2 Policy of Health Reform by the Government

2-1 Policy of Health Reform

In Uzbekistan, the President and Cabinet of Ministers, headed by the Prime Minister, are responsible for developing national health policies. The Supreme Assembly adopts legislation on health care and approves the national budget for health care. MOH is the major player in organizing, planning and managing the health care system under the decisions made by the cabinet. The Ministry of Finance formulates a budget to be approved by the Supreme Assembly, and allocates funds to the oblasts, including funds for health care services. The oblast government formulates local budgets and allocates funds to administrative sectors in the oblast, while a special cost for investment is allocated directly from the development funds of the republican government.

The Uzbek government has undertaken health care reforms since 1990s. A lot of laws and presidential decrees have been adopted relating to health services to ensure the rights of citizens guaranteed by the Constitution and to introduce the required changes. "The State Health Care Reform Program, 1998-2005" was started by Presidential Decree No. 2107 of November 10, 1998, and the reform priorities were focused on establishing a system of emergency care, reforming primary health care (PHC), improving education of health personnel, developing the private sector, and the monitoring and implementation of reforms. Presidential Decree No. 3214 in 2003 revised the program, so that the republican centers of traumatology, ophthalmology and cardiology have been established and a user fee scheme has been in place since 2005.

On September 17, 2007, Presidential Decree No. 3923 was announced regarding the main directions of further development of reforms and implementation of the state program of health care development.

The Presidential Decree evaluated the achievements of the previous program and the necessity for further improvements in disease prevention and provision of medical services especially at oblast and rayon levels. The achievements; namely, the united system of emergency health care; upgraded medical services provided by the republic's specialized medical centers; optimization of PHC services; strengthened MCH services; motivation of health personnel; increase of private health care providers; and reform of the human resource development system; are emphasized, while the insufficient organizational structure of the local health administration; the necessity for additional republican specialist centers; weakness of the diagnostic network; incomplete follow-up of mothers' health status by patronage activities; continuance of prevention of infectious disease, including HIV/AIDS, are also pointed out. Based on those evaluations, the Presidential Decree outlined the main points of further reform, including the basic tasks as follows.

- To establish a modern organizational structure of health care to ensure the management and quality control of medical services.
- To establish republican practical-scientific medical centers with modern medical technologies and

quality human resources.
- To realize significant improvement of medical diagnoses through establishing a nationwide network, introducing modern medical equipment, and assigning quality human resources.
- To increase the effectiveness and reliability of prevention of infectious diseases, especially HIV/AIDS
- To improve the quality of care for women and children, especially in rural areas
- To improve the system of human resource development
- To assist the development of private health service providers

In addition, the Presidential Decree approved the following establishments proposed by the working group formed by the Presidential Order in January 2007:

- Oblast Medical Centers integrating oblast hospitals and other specialized facilities
- Oblast Children Medical Centers integrating oblast pediatric facilities
- Diagnostic Centers based on the user fee system
- Management mechanism of health care in rayons/cities
- Republican specialized medical centers of obstetrics and gynecology, pediatrics, therapy and rehabilitation, dermatology and STI, TB and pulmonology, and endocrinology

The Presidential Decree included other policies on the transition to the self-financing of specialized medical centers, standardization of oblast diagnostic centers, the directions of activities at rayon and oblast levels, improvement of the financing system, and tax exemptions of specified duration for procurement of medical equipment by health facilities. Following the decree, Resolution No. PP-770 was adopted on October 2, 2007.

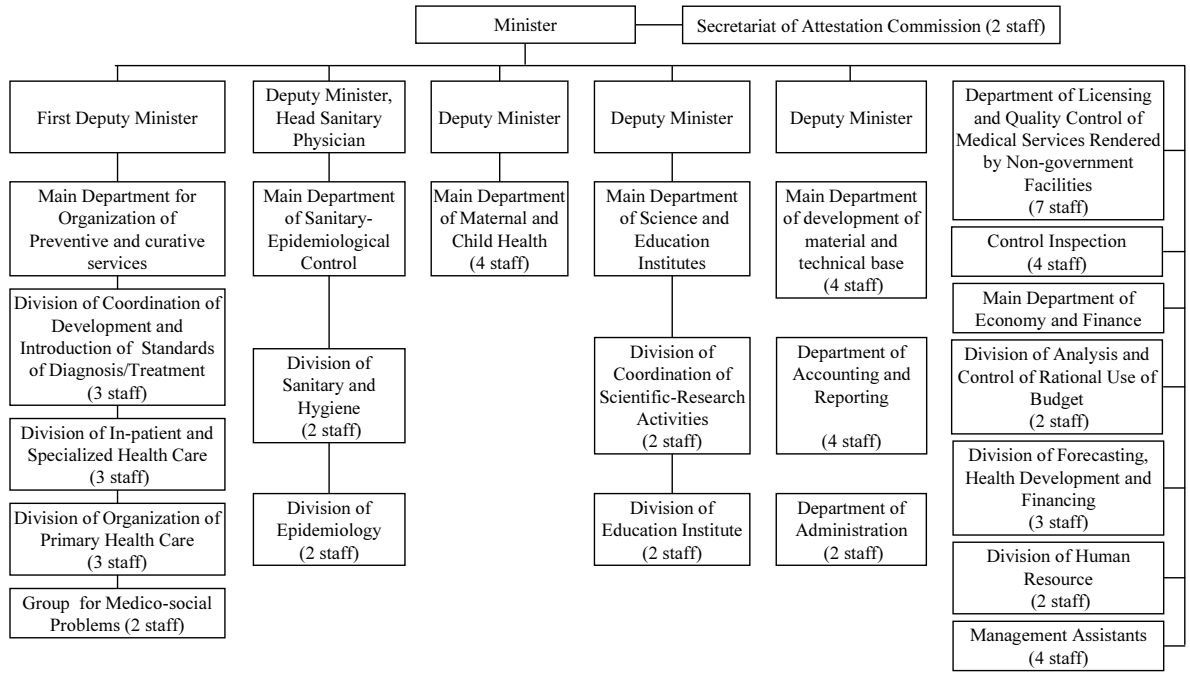
2-2 Organizational Structure of Health Administration in the Republic

The structure of MOH has changed since the first years of independence. There were departments for treatment and prevention, maternal and child health, sanitary-epidemiological control, science and medical education institutions, inspection controls, economics and financing, and development of material and technical capacity. The organizational structure of MOH has been renewed by the Resolution dated October 2, 2007. A new department for licensing and control of medical services rendered by non-governmental facilities has been added to MOH in relation to the new policy as described in 2-1. An additional function on standards of diagnosis and treatment was added to the department for treatment and prevention, while there will be little change to the structure of other departments.

The oblast health administration, headed by the oblast health authority and deputies, has four main function streams: medical and preventive care; maternal and child health; financial and economic service; and sanitary and epidemiology. Generally two specialists are assigned to each of them. In terms of supervision, the first deputy head is responsible for medical-preventive care, the other

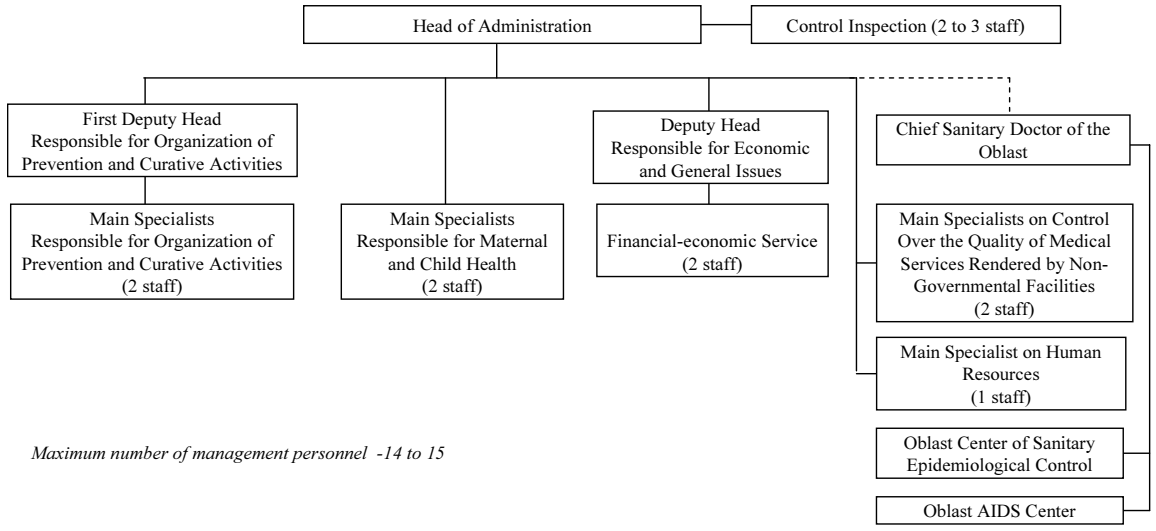
deputy is in charge of financial and economic services, and the chief sanitary doctor administers sanitary and epidemiological matters. The position of deputy head, which was in charge of maternal and child health has been abolished. The function to control the medical services by the non-governmental facilities has been added under the new policy.

The latest organizational structures of MOH and oblast health administration are shown in Figure 2-1 and 2-2.



Source: The Resolution of the President of the Republic of Uzbekistan, October 2, 2007, No.PP-700

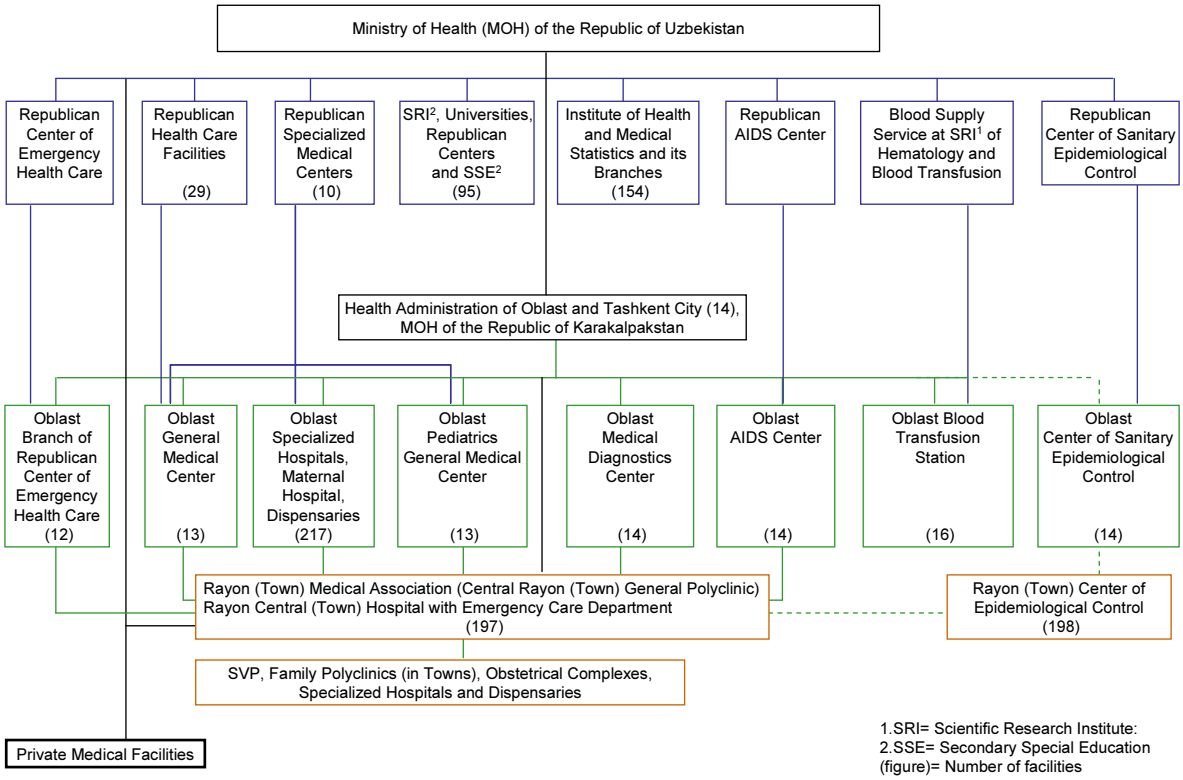
Figure 2-1: Organizational Structure of Ministry of Health



Source: The Resolution of the President of the Republic of Uzbekistan, October 2, 2007, No.PP-700

Figure 2-2: Organizational Structure of Oblast Health Administration

The health care delivery and research institutions at republican level are financed and regulated directly by MOH. Oblast, city and rayon health authorities perform these functions for health facilities other than those of republican level. The Oblast and rayon health administrations are playing more important roles in the trend of decentralization. The new policy puts some importance on management capacity at rayon level and respective health facilities.



Source: The Resolution of the President of the Republic of Uzbekistan, October 2, 2007, No.PP-700

Figure 2-3: Organizational of Health Care Service System of Uzbekistan

Chapter 3 Overview of Health Situation in Navoi Oblast

3-1 Geographical and Historical Backgrounds

Uzbekistan is a landlocked county in central Asia, having borders with Kazakhstan, Turkmenistan, Afghanistan, Tajikistan and Kyrgyzstan. Its territory is 447,400km^2, and the climate is continental. The country gained independence on August 31, 1991. Tashkent is the capital city, and there are 12 oblasts and the Autonomous Republic of Karakalpakstan in the country.

Navoi Oblast, having a total area of 110,990 km^2, is located in the northwest part of Uzbekistan in the middle of the Kyzyl-Kum Desert. It is the biggest and the least populated among 12 oblasts in the country. The oblast has a typical continental and dry climate. The population is approximately 820,000, about 60% of which live in rural areas and 40% in urban areas. There are eight administrative divisions (rayon): Karmana, Kiziltepa, Khatirchi, Nurata, Navbakhor, Kanimekh, Uchkuduk, Tomdi; and Zarafshan city.

The population density of the whole oblast is around 7.5 people per km^2, although the population is more concentrated to the southern part of the oblast, while it is scattered in the wider rayons in the north. As Figure 3-2 shows, the population density is more than 10 per km^2 in four smaller rayons around Navoi city, while it is less than 1 per km^2 in the rayons of Uchkuduk and Tomdi in the northern areas.

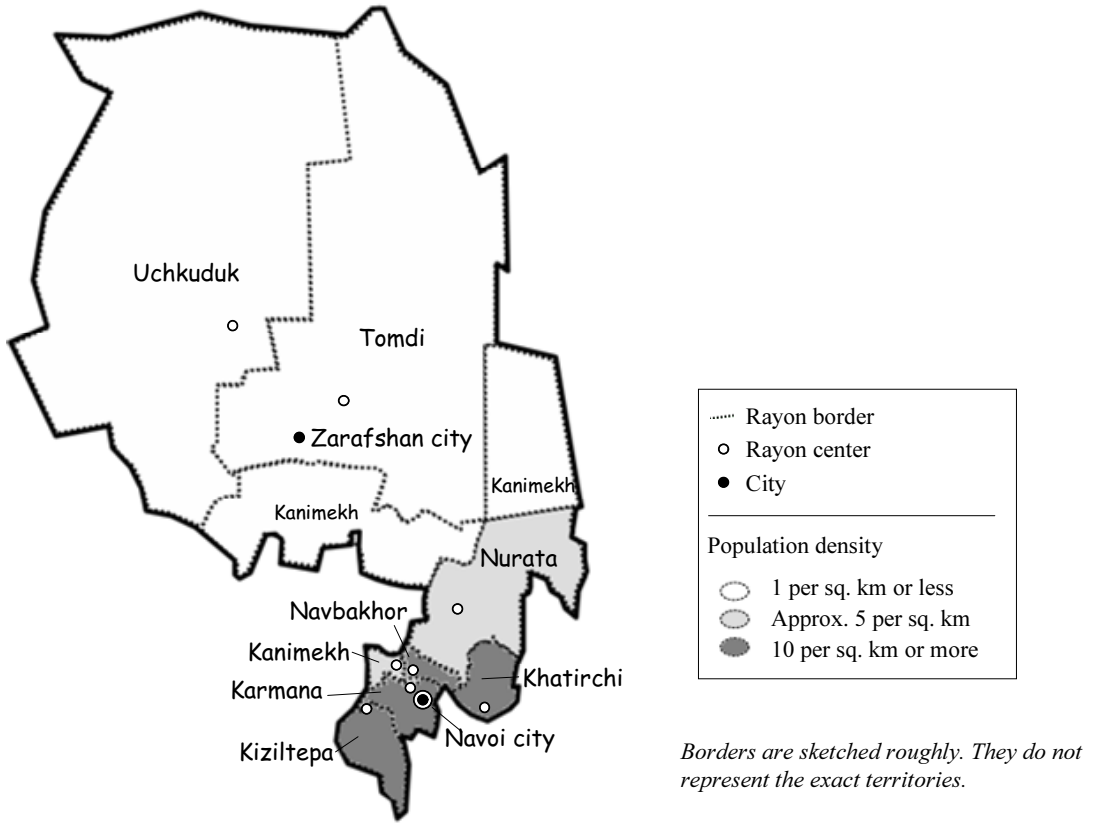


Figure 3-1: Population Density by Rayon

Table 3-1: Population of Navoi Oblast

Cities and Rayons	Population 2004	Population 2005	Population 2006	Area thousand km^2	Pop. density per km^2
Navoi city	125,436	124,425	126,198	--	--
Zarafshan city	66,020	67,930	67,559	--	--
Karmana rayon	94,537	96,055	97,607	8.4	11.6
Navbakhor rayon	81,168	82,738	83,474	7.8	10.7
Nurata rayon	75,255	75,759	76,867	15.6	4.9
Khatirchi rayon	151,135	154,163	154,543	14.1	11.0
Kiziltepa rayon	111,965	114,129	114,493	8.9	12.9
Kanimekh rayon	40,380	38,513	38,658	17.9	2.2
Tomdi rayon	25,306	22,226	23,218	18.2	1.3
Uchkuduk rayon	38,841	39,801	36,926	19.1	1.9
Whole oblast	810,043	815,739	819,543	110.9	7.4

Source: NOHA

Navoi has a long history, although it has undergone many changes in the latter half of the 20th century. The city of Navoi was constructed by the Soviet regime in 1958, when the exploitation of minerals in the Kyzyl-Kum Desert commenced. The Oblast of Navoi was established in 1982, although it was dissolved and merged into the Oblasts of Samarkand and Bukhara in 1987. At that time, Navoi city became a part of Samarkand Oblast, and transferred to Bukhara Oblast in 1989. In the year following the independence of the Republic of Uzbekistan, Navoi Oblast was re-established. Such an historical background reflects some characteristics of the health facilities in the oblast as described in Part II.

The economy of the oblast is composed of mining, metallurgical and chemical industries, and agriculture. There are enterprises such as Navoi Mining and Metallurgy Complex (*Navoiyskiy gornometallurgicheskiy komplex,* NGMK), Navoiazot manufacturing fertilizers, and other plants related to food production. NGMK has three hospitals; one each at Navoi city, Zarafshan city and the rayon center of Uchkuduk. Navoiazot also has its hospital in Navoi city. The company-owned hospitals basically provide health care for the employees and their families, but they accept certain cases from the general population based on the contract between NOHA and NGMK. The existence of these company-owned hospitals is one of the characteristics of health services in Navoi Oblast as described in Chapter 4, Part II.

3-2 Trends in Demography

The demographic trend in Navoi Oblast shows little difference from that of Uzbekistan as a whole. The proportion of young people under 14 years of age is approximately 35%, while that of people aged 65 years or above is around 3%. Similarly, the birth and mortality rates are around 20 and 5 per 1,000 people, respectively. The natural increase is maintained, while there is little migration change.

Table 3-2: Birth Rate and Mortality Rate in Navoi Oblast

	Birth Rate						Mortality Rate		
	2004		2005		2006		2004	2005	2006
	number	CBR	number	CBR	number	CBR	CDR	CDR	CDR
Navoi city [1]	1,543	14.8	1,538	14.5	1,511	14.3	4.5	4.3	5.5
Karmana rayon	1,827	19.5	1,889	19.6	1,912	19.5	4.9	5.5	5.0
Navbakhor rayon	1,663	20.0	1,665	20.1	1,664	19.9	4.5	4.8	4.2
Nurata rayon	1,734	23.0	1,772	23.3	1,687	21.9	4.4	5.4	5.1
Kiziltepa rayon	2,084	18.6	2,093	18.9	2,201	19.2	4.5	4.4	4.6
Kanimekh rayon	786	19.4	739	19.1	739	19.1	4.6	5.0	5.0
Khatirchi rayon	3,044	20.1	3,002	19.4	3,013	19.4	4.4	4.9	4.9
Tomdi rayon [1]	362	14.3	339	15.2	304	13.0	3.4	5.1	4.7
Uchkuduk rayon [1]	465	18.2	449	17.6	289	11.3	6.0	4.0	6.3
Zarafshan city [1]	150	13.0	163	14.3	100	8.6	4.2	3.1	5.5
NGMK hospital [2]	1,931	20.9	1,933	20.9	2,200	23.5	6.1	8.4	5.3
Whole oblast	15,589	19.1	15,582	19.1	15,620	19.0	4.8	5.2	5.0

CBR: Number of births per 1,000 people
CDR: Number of deaths per 1000 people
Notes: 1 Excluding population and births covered by NGMK hospitals.
2 Population and births covered by NGMK hospitals

Source: NOHA

Table 3-2 shows the rates of births and mortality in the oblast. The rates are shown by city or rayon in the table, however, the rates are indicated for the population groups covered by health services under NOHA's administration and those covered by NGMK hospitals. There is a tendency that the birth rate has been relatively high (over 20 per thousand people) in Nurata rayon and the population covered by NGMK hospitals, and lower in Tomdi rayon, which is the farthest from Navoi City. Although there is a difference between rayons and years, it is difficult to find any evident trends regarding the crude death rate in the oblast.

3-3 Causes of Deaths

The annual number of deaths in the oblast is approximately 4,000. Specifically, 4,164 deaths were reported in 2006. According to the statistics recorded by NOHA, the top causes were cardiovascular diseases (1,292, or 31%), hypertension (471, or 11.3%), tumors (345, or 8.3%), and cerebral arteries diseases (330, or 7.9%) as shown in Table 3-3.

Table 3-3: Number of Deaths by Cause (2006)

Causes	Number	Rate
All causes	4,164	100.0%
Intestinal infections	6	0.1%
TB, all types	75	1.8%
Hepatitis, all types	4	0.1%
Other infectious diseases	22	0.5%
Tumors	345	8.3%
Hypertension	471	11.3%
Cardiovascular diseases	1,292	31.0%
Cerebral arteries diseases	330	7.9%
Other circulatory diseases	252	6.1%
ARVI, ARI, bronchitis	100	2.4%
Other respiratory diseases	59	1.4%
Diseases of digestive system	301	7.2%
Pregnancy and post natal traumas	4	0.1%
Other diseases	461	11.1%
Accidental poisoning	24	0.6%
Drowning	50	1.2%
Other poisoning and injuries	251	6.0%
Suicide	96	2.3%
Murder	21	0.5%

Source: NOHA

The Study included the review of mortality cases in the basic study, targeting heart disease, cerebrovascular accidents, hypertension, cancer, diabetes, chronic diseases of the kidney/liver, and children's lower respiratory infections based on the literature review in advance of the field missions. It aimed to grasp how treatments had been given and patients had been referred regarding those important mortality cases. In other words, the survey was designed to obtain more significant information beyond the numbers. The survey started to collect the medical data from main hospitals with the prospect that the majority of relevant deaths from these important causes would be recorded in hospitals. However, it was confirmed in the course of the basic study that the annual number of deaths in hospitals is some 500 cases out of the total of 4,000 cases in the oblast. In other words, the majority of mortality cases occur at home and these are recorded in PHC facilities, which cover the domiciles of the deceased. During the basic study, the Study Team and NOHA adjusted the design of the survey and included deaths from all the causes recorded at both hospitals and PHC facilities during 2006 in the targets for data collection, and collected information of some 1,400 cases for 2006, 370 cases of which are from hospitals and the others are from PHC facilities. Table 3-4 shows the summary of these collected cases. The primary information was carefully examined, and the selected diseases were confirmed as the important causes of deaths throughout the oblast. Accordingly, the 370 cases from hospitals were carefully reviewed in Field Mission 2, as described in Chapter 5, Part II.

Table 3-4: Collected Mortality Cases by Age and by Cause

Mortality cases in hospitals

Age	Cases
under 1	58
1-4	24
5-14	8
15-49	126
50-59	56
60-69	51
70-79	32
80 or over	11
n. a.	4
Total	370

Causes	Cases
Acute respiratory infections, children	48
Acute respiratory infections, adult	3
Chronic obstructive pulmonary disease	4
Pulmonary tuberculosis	3
Other pulmonary diseases	6
Cerebrovascular accident	52
Ischemic heart disease	41
Other heart diseases	9
Hypertension	1
Malignant neoplasm	17
Cirrhosis	22
Other hepatic diseases	2
Chronic renal failure	8
Diabetes mellitus	6
Diseases of digestive system	19
Injury, accident	62
Total	303

Mortality cases at home, work places, etc.

Age	Cases
under 1	6
1-4	24
5-14	15
15-49	202
50-59	91
60-69	178
70-79	290
80 or over	232
n.a.	
Total	1038

Causes	Cases
Acute respiratory infections, children	4
Acute respiratory infections, adult	4
Chronic obstructive pulmonary disease	15
Acute respiratory failure	5
Pulmonary tuberculosis	15
Cerebrovascular accident	43
Ischemic heart disease	186
Acute heart failure	228
Chronic heart failure	22
Other heart diseases	28
Hypertension	58
Arterial sclerosis	166
Malignant neoplasm	62
Cirrhosis	52
Other hepatic diseases	4
Chronic renal failure	10
Diabetes mellitus	8
Injury, accident	24
Total	934

Source: Data collected by the Study Team

3-4 Health Administration in the Oblast

In Uzbekistan, oblast governing bodies, which replaced the executive committees of the former Soviet system, form a system of administration in respective oblasts. The Navoi oblast government is headed by the governor, the first deputy governor, and three deputy governors. It has several major departments and various administrative functions, including health administration, namely NOHA. In the context of decentralization, budgetary authority has been transferred from republican level to the oblasts, while the vertical structure of national guidelines and norms, on which decisions at oblast

level are based, is kept. NOHA, being a part of the oblast governments, takes the role of a quasi-independent branch of MOH as well. The organizational structure of NOHA follows the framework guided by the republican government, headed by the oblast health authority (director of NOHA), the first deputy and the other deputy heads. There are departments of prevention and treatment, information and statistics, technical control, sanitary and epidemiological control and others. Similarly to the status of NOHA as a whole, its departments have characteristics as regional branches of those administrations at republican level.

Throughout the republic, a hierarchical level of administration next to that of oblast is that of a rayon government, headed by a rayon governor. The rayon governments are increasingly responsible for administering social services, including health care. The health administration at rayon level is invested to the Rayon Central Hospital (RCH). As previously mentioned, there are eight rayons in Navoi Oblast, and RCHs are located at the centers of all these rayons. Generally, there are urban territorial units other than rayons in an oblast, and some of the territorial units have their own health department. In the case of Navoi Oblast, Zarafshan city has its own health department. Smaller towns and rural areas are included in the respective rayons.

In Navoi Oblast, there are three levels of health care facilities: oblast level, rayon level and primary level. The system of health care is similar to other oblasts in the republic. The hospitals, centers and dispensaries at the oblast level are located in Navoi city. One RCH is in each of the respective eight rayon centers, while NGMK has its own hospitals in Navoi city, Zarafshan city and Uchkuduk rayon center. The oblast-level facilities are relatively new in comparison with RCH's, reflecting the historical background of Navoi city. As for the primary level, currently 135 PHC facilities (*selsky vrachebny punkt,* SVP) are functioning in the oblast. SVP has been introduced throughout Uzbekistan according to the government's health reform policy mentioned above. SVP will eventually replace the former primary facilities in rural areas, namely, feldsher-midwifery posts (*feldshersko-accouchersky punks,* FAP), rural outpatient clinics (*selskaya vrachebnaya ambulatoriya,* SVA) and rural hospitals (*selskaya uchastkovaya bolnitsa,* SUB). All the existing SVPs in Navoi Oblast have been recently covered by the World Bank's Project.

The basic study targeted all these facilities in the oblast and the current situation of the service provision of health care has been analyzed as described in Chapter 4, Part II.