Republic of Ivory Coast

Data Collection Survey on Health Sector Policy for Universal Health Coverage toward Women, Children and Lower Income People in Ivory Coast
Final Report

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List of Abbreviations

ACT	Artemisinin-Based Combination Therapy
AFD	Agency for French Development (Agence France ç aise de Dévelopement)
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
AMD	Ward Maintenance Workshop (Atelier de Maintenance de District)
ANOPACI	Associacion Nationale des Organisation Professionnelles Agricoles de Ivory Coast
ARV	Antiretroviral Drugs
AVATT	African Vaccine Acquisition Task Team
BEmONC	Basic Emergency Obstetric and Newborn Care
CGRAE	Caisse Générale de Retraite des Agents de l'Etat
CHR	Centre Hospitalier Régional
CHU	University Hospitalier Universitaire
CHW	Community Health Worker
CIRES	Centre Ivoirien de Recherches Economie et Social
CMU	National Health Insurance (Couverture Maladie Universelle)
CNPS	Caisse Nationale de Prévoyance Sociale
CNS	National Security Council (Conseil National de Sécurité)
COVID-19	Coronavirus Disease 2019
CSR	Rural Health Center (Centre de Santé Ruaux)
CSU	Urban Health Center (Centre de Santé Urbain)
DCPEV	Direction of Coordination Expanded Programme of Immunization
DGBF	Direction Générale du Budget et des Finance, General Bureau of Budget and Finance (Ministry of Budget and National Portfolio)
DGPS	Directorate General for Social Protection (Direction Générale de la Protection Society, Ministry of Employment and Social Protection)
DGS	General Directorate of Health (Direction Gérale de la Santé)
DHIS2	District Health Information System 2
DHS	Demographic and Health Survey
DPBEP	Multi-Year Budget and Economic Plan
EmONC	Emergency Obstetric and Newborn Care
ESPC	Primary Institution (Établisment Sanitaire de Premier Contact)
FSU	Urban Health Facilities (Les Facilités Sanitaires Urbaines)
GAVI	Global Alliance for Vaccine and Immunization
GDP	Gross Domestic Product

GFF	Global Financing Facility
HAQ	Healthcare Access and Quality Index
HG	Hôpital Général
IDE	National Registered Nurse (Infirmiers Diplômés d'État)
IDSR	Integrated Disease Surveillance and Response
IHME	Institute for Health Metrics and Evaluation
IHR	International Health Regulations
IMCI	Integrated Management of Childhood Illness
IMF	International Monetary Fund
INHP	National Institute of Public Health (Institutes d'Hygiene Public)
IPS-CNAM	Social Welfare Institution-National Health Insurance Fund (Institution de Prévoyance Sociale-Caisse Nationale d'Assurance Maladie)
IPT	Intermittent Preventive Treatment
ITNs	Insecticide-Treated Mosquito Nets
JEE	Joint External Evaluation (of IHR core capacities)
LLIN	Long-Lasting Insecticidal Net
LMD	Licence-Master-Doctorat
MBPE	Ministry of Budget and National Portfolio Treasury and Budget Directorate General (Ministere du Budget et Portofoille d'etat)
MDA	Mass Medication (Mass Drug Administration)
MDR-TB	Multidrug-Resistant Tuberculosis
MEF	Ministry of Economy and Finance (Ministère de l'Economie et des Finances)
MEPS	Ministry of Employment and Social Protection (Ministère de l'Emploi et de la Protection sociale)
MMR	Maternal Mortality Ratio
MSHP	Ministry of Health (Ministère de la Santé et de l'Hygiène Publique)
MSHPCMU	Ministry of Health and Public Hygiene and Universal Health Insurance (Ministère de la Santé et de l'Hygiène Publique et Couverture Maladie Universelle)
NCDs	Non-Communicable Diseases
NPSP	Nouvelle Pharmacie de la Santé Public
NTDs	Neglected Tropical Diseases
OGD	Organismes Géstionnaires Délélégués
PAACA	Project on Sanitation and Environmental Improvement (Projet d'Assainissement et d'Améliation du Cadré de Vie d'Abidjan)
PANSS	Plan of Action on Health (Plan National de Sécurité Sanitaire)

PA-PS Gouv	Projet d'appui au programmatic social du Governmental
PASA	Programmatic Advisory Services and Analytics
PASS	Programme d'Appui aux Strategies Sociales
PCR	Polymerase Chain Reaction
PDRHS	Projet de Développement des Resources Humaines pour la Santé
PEPFAR	President's Emergency Program for AIDS Relief
PFE	Pratiques Familiales Essentielles
PFM	Public Financial Management
PIP	Public Investment Program
PMTCT	Prevention of Mother-to-Child Transmission
PND	Programme National de Développement
PNDS	Plan National de Développement Sanitaire
PNLP	Programme National de Lutte Contre le Paludisme
PNS	National Health Policy (Politique National de Santé)
PRDS	Programme Régional de Développement Sanitaire
PSGouv	National Social Developmetn Program (Programme Social du Governement)
RAM	Régime d'Assistance Médicale
RGB	Régime Générale de la Base
RR-TB	Rifampicin Resistant Tuberculosis
RDT	Rapid Diagnostic Test
SARA	Serivce Availability and Readiness Assessment
SBA	Skilled Birth Attendant
SFDE	National Registered Midwife
SNPS	National Social Security Strategy
SUCCESS	Scale Up Cervical Cancer Elimination with Secondary Prevention Strategy
TFR	Total Fertility Rate
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UPPH	Unité de Pilotage du Programme hospitalier
WB	World Bank
WHO	World Health Organization

1. Outline of information collection and confirmation survey

In the Republic of Ivory Coast, disparities have emerged in the development of health care systems within the country due to the North-South division caused by the civil war. As a result, the maternal mortality ratio in 2015 is 645 per 100,000 live births (average of 546 in sub-Saharan Africa)[1], the neonatal mortality rate in 2019 is 33 per 1,000 live births (average of 27 in sub-Saharan Africa), and the under-five mortality rate is 79 (average of 76 in sub-Saharan Africa)[2]. The basic health indicators are worse-off than those of neighboring countries. There are also problems with the government's budgetary measures for healthcare. In 2018, the ratio of healthcare expenditure to total government expenditure was only 5.4%, which was less than 15% required for the 2001 Abuja Declaration. As a result, the proportion of health expenditures borne by patients is high in this country, and the proportion has been around 40% in recent years against the background of the malfunction of the free medical care system and an increase in the number of medical services not covered by the free medical care system due to changes in the structure of disease.

Under such circumstances, the government of the country has set "the development of human capital and the promotion of social welfare" as one of the priority strategies in the National Development Plan (PND, 2016-2020) with the aim of improving the health of the people by increasing the frequency of the use of quality health and medical services, and expanding social security for the people, especially vulnerable groups, through the dissemination of universal health insurance (CMU) to cover all people. In addition, the National Social Development Plan (PSGouv), which was established in 2018 in conjunction with the plan, has positioned universal health coverage (UHC) as a priority, and has set a goal of reducing maternal and infant mortality rates and achieving 100% CMU coverage. Based on these plans, in parallel with the free medical care system for pregnant women and nursing mothers and children under five that has been in effect since 2012, the government began to provide medical care under the universal health insurance law (CMU law) approved by the Diet in December 2013 at more than 700 medical facilities nationwide since October 2019.

On the other hand, although the government is progressively promoting the provision of health and medical services to the people and vulnerable groups, there is a shortage of medical facilities and medical personnel who can provide quality health and medical services to the poor in particular, and the supply of basic medical equipment and essential medicines is still insufficient. Against this background, the infant and under-five mortality rates for the rich were 39 and 61 per 1,000 live births, respectively, while those for the poorest were 83 and 120 per

[1] MSHP(2021）Rapport final de l'evaluation externe du PNDS 2016-2020
[2] UNICEF (2021) The State of the World's Children 2021

1,000 live births, respectively[3]. In addition, due to insufficient reimbursement for medical care under the free medical care system, medical facilities nationwide are short of funds, leading to a chronic deterioration in the quality of the health care services provided. In addition, although the number of CMU subscribers is increasing, the number as of August 2020 is still 2.53 million, which is about 12% of the national population. It is an issue to promote the enrollment of the informal sector and the poor. However, the strategy for integrating the free medical care system and CMU, which are existing systems to promote the use of health care services, is unclear, and no budget plan has been formulated. To promote UHC, the country needs to improve the delivery and access of quality health services, and there is an urgent need to formulate specific strategies and action plans and to secure adequate budgets.

In addition, the new coronavirus infection (COVID-19), which continues to be endemic worldwide from the end of 2019 to the present day, has also had an enormous impact on Ivory Coast, further tightening the aforementioned vulnerable health systems (including health financing) and making it difficult for people to access health services.

<Outline of operations>

The purpose of this study is to collect and analyze information necessary for future cooperation projects, including development policy loans, taking into account the challenges facing the health sector in Ivory Coast. At the same time, through consultations between JICA and the relevant organizations of the Ivory Coast, this study aims to support activities for strengthening the ability to deal with COVID-19, which is an urgent issue, to improve economic and physical access to quality health services, and to formulate priority policy actions for improving health financing.

[3] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage

2. Current status and issues of health sector development and the role of JICA's proposed support

2.1. Current status and challenges of health sector development

2.1.1. Health condition of the people

(1) Demographic structure

Total fertility rate (TFR) in Ivory Coast has declined since 1990 but remains high. As shown in Figures below, the number increased by about 60% over 20 years from 16.45 million in 2000 to 26.38 million in 2020. This is higher than the world average growth rate of 27% for the same year[4].

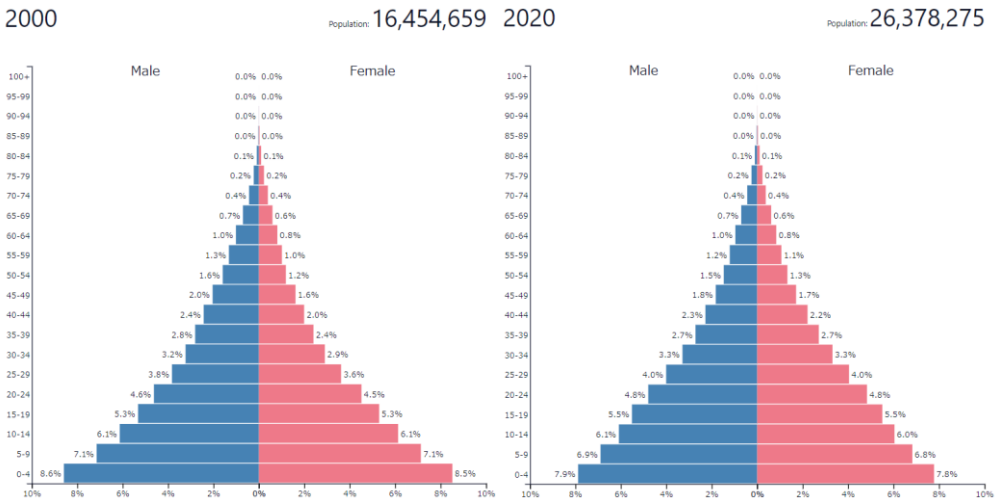

Figure 1: Population pyramids in 2000 and 2020 (left: 2000, right: 2020)

As shown in the figure below, the projected pyramid for 2040 will continue to be the Mt. Fuji shape, and the population is expected to continue to increase.

[4] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage

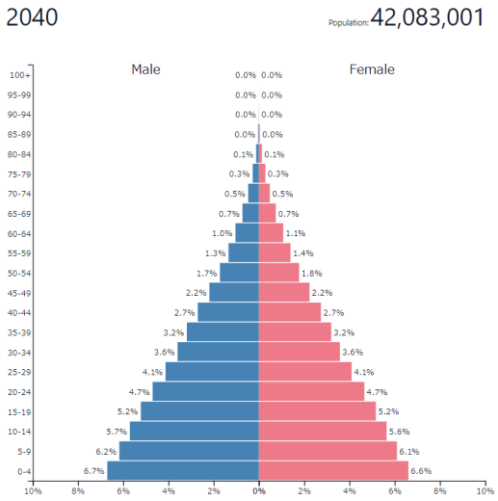

Figure 2: Population pyramids in 2040

Source: PopulationPyramid.net (2019) https://www.populationpyramid.net/ by age

(2) Disease structure

In Ivory Coast, infectious diseases, maternal and child health-related diseases, and malnutrition are the major causes of disability and death, accounting for 63% of the disease burden, down from 72% in 1990. HIV, tuberculosis and malaria together account for 24% of annual deaths, indicating that infectious diseases continue to be a major burden of disease. In addition, non-communicable diseases (NCDs) have been increasing due to urbanization and unhealthy lifestyles, resulting in a double burden of disease[5]. Maternal mortality, neonatal mortality, under-five mortality and other key health indicators are all worse than the Sub-Saharan average. At the same time, the table below shows that although the proportion of maternal and child health-related diseases and infectious diseases is on a decreasing trend in 2019 compared to 1990, the proportion of deaths due to NCDs is also increasing, while the proportion of deaths due to these diseases remains unchanged.

[5] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage

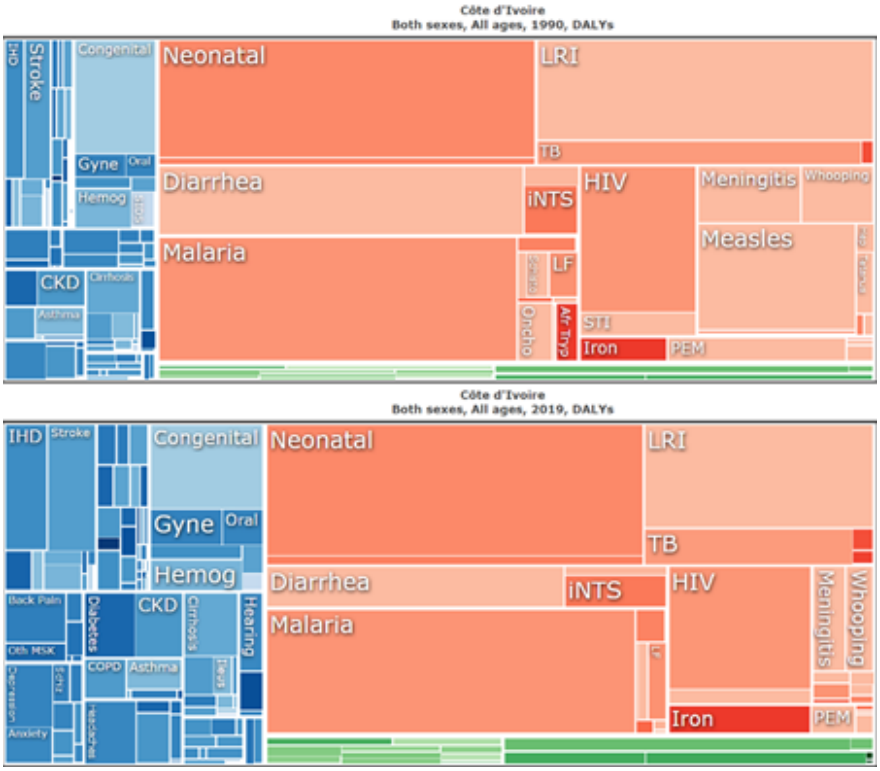

Figure 3: Disability-Adjusted Life Years (DALY) in Ivory Coast (1990-2019)

Source: IHME (2019) GDB-Compare, https://vizhub.healthdata.org/gbd-compare/

(3) Maternal and child health

It is described in detail in Chapter 6.

(4) Nutrition

Neonatal undernutrition reflects poor nutritional status in pregnant women. The national target（12%）was achieved in 2020 as the percentage of children weighing less than 2,500 grams at birth fell from 10.23 % in 2019 to 9.90 % in 2020. On the other hand, the rate of undernourishment at birth is high in Kabadougou Health District (14.73%), Bere Health District (13.07%), and Iffou Health District (12.70%), while it is low in Abidjan 1 Health District (7.49%), Abidjan 2 Health District (7.49%), and Grands Ponts Health District (7.60%), indicating regional disparities. The incidence of severe acute malnutrition among children under five years of age has declined from 11.7% in 2019 to 9.39% in 2020. However, the rate is 31.28% in Bounkani Health District and 1.19% in Agneby-Tiassa Health District. Agneby-Tiassa Health District shows a large regional gap[6].

In addition, the Ministry of Health and Public Hygiene and Universal Health Insurance

[6] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020

(Ministère de la Santé et de l'Hygiène Publique et Couverture Maladie Universelle, MSHPCMU) faces the triple burdens of malnutrition, vitamin and micronutrient deficiencies and overnutrition. Nutrition issues in health systems are low access to health services for prevention and treatment, including weak advertising and prevention activities, lack of training of healthcare workers for nutrition counselling, and lack of equipment and guidelines for monitoring growth in healthcare facilities. In addition, the lack of funding for nutrition interventions in health systems and the lack of multi-sectoral responses through vertically segmented policies have been pointed out. In addition, according to MSHPCMU, vitamin A supplementation (53%), growth monitoring (63%) and ORS/zinc administration (75%) were the least-provided services in child prevention and treatment services[7][8].

(5) Infectious diseases

As shown in Figure 3, infectious diseases continue to be a major burden of disease.

<Malaria>

According to MSHPCMU, the incidence of malaria decreased by 229 cases per 1,000 people in 2019 and by 24.5% in 173 cases in 2020. The National Malaria Programme (PNLP) distributed about 16 million long-lasting insecticide nets in large campaigns between 2017 and 2018. The coverage of the third dose of sulfadoxine pyrimethamine in pregnant women increased from 23 % in 2016 to 53 % in 2019, with improvements such as 93 % of malaria cases among children under age 5 being treated with ACT at public institutions. On the other hand, integrated vector control at the primary and tertiary levels of the health pyramid provides additional benefits[9][10][11][12].

In addition, MSHPCMU reports that 99% of health facilities provide anti-malaria services, but there is a shortage of intermittent preventive treatment (IPT) and microscopic diagnosis of malaria. In addition, the average capacity of 9 elements (existence of guidelines for malaria diagnosis and treatment; staff trained in malaria diagnosis and treatment in the last three years; guidelines for IPT; staff trained in IPT; capacity to diagnose malaria; existence of

[7] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[8] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[9] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020
[10] Since 2001, the WHO has recommended Artemisinin-Based Combination Therapy (ACT), which combines artemisinin derivatives with other antimalarial drugs, and is now the global standard for malaria treatment.
[11] Vectors are insects (mosquitoes, flies, kissing bugs, etc.) that transmit insect-borne diseases. By controlling these insects, they reduce diseases that are transmitted. In the case of malaria, the vector is the malarial protozoan mosquito.
[12] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020

at least two first-line antimalarial drugs in stock; availability of paracetamol; insecticide-treated nets) of health centres to manage malaria in all health districts is 77 %[13][14].

<HIV/AIDS>

The prevalence of HIV/AIDS in Ivory Coast was 2.5% (3.6% for women and 1.4% for men) in 2017. In recent years, there has been a 54% drop in new HIV infections between 2010 and 2019, a 52% drop in deaths and a 15.4% drop in mother-to-child transmission. Efforts in school health programmes for young people have also been successful. However, in 80 of 86 health districts the prevalence exceeds 1% and in Key population[15] it exceeds 5%[16]. The main tasks of the National Health Policy (Politique National de Santé, PNS) 2021-2025 are: 1) to cover Key population; and 2) to promote antenatal examination (ANC) and screening for HIV, syphilis and hepatitis in the early stages of pregnancy, while respecting human rights under strict supervision.

MSHPCMU points out that although HIV counselling and testing services are available in 76 % of health facilities, men's condoms and HIV care and support services are underserved, at 57 % and 48 %, respectively, and that rural areas (32 %) are particularly underserved than in urban area (71 %). Prescribing or follow-up antiretroviral drugs (ARV) is provided by 47% of institutions, which is also lower in rural areas (31%) than in urban areas (72%). Services related to mother-to-child transmission (PMTCT) are provided by 68 % of health facilities[17].

<Tuberculosis>

According to MSHPCMU, the tuberculosis (TB) notification rate in 2020 was 74.53 per 100,000 inhabitants. This is lower than the 83 reported in 2019. In 2020, coinfection with HIV accounted for 14.65%. To strengthen TB control, the government increased the number of GeneXpert units and strengthened the laboratory network. This increased the rate of treatment success from 81% in 2016 to 85% in 2019. Management of patients with resistant TB was improved by the introduction of electrocardiographs and audiograms. It was also strengthened in the community by detection of suspected cases and referral by community health workers.

[13] To prevent malaria transmission by administering malaria prophylaxis to pregnant women during regular obstetric clinic visits.
[14] MSHP (2016) Evaluation de la Disponibilité et de la Capacité opérationnelle des Services de santé (SARA)
[15] The key players in the fight against AIDS: drug users, men who have sex with men (men who have sex with men), and sex workers.
[16] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[17] MSHP (2016) Evaluation de la Disponibilité et de la Capacité opérationnelle des Services de santé (SARA)

In 2019, 99% of TB patients were tested for HIV, and 97% of coinfected patients received ARV therapy. However, some of these issues have not been diagnosed in the community, children are not notified of TB disease or are underdiagnosed, TB patients have a high mortality rate, inadequate diagnostic techniques, and delays in obtaining primary antituberculosis drugs[18][19][20].

According to MSHPCMU, TB control services are provided by only 17% of health facilities (26% in urban areas and 11% in rural areas)[21].

<Neglected tropical diseases (NTDs)>

In Ivory Coast, prophylactic chemotherapy has largely suppressed epidemics of lymphoid filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiasis and trachoma. NTDs, including African trypanosomes, bulli ulcers, and leprosy, are 0.92 cases per 10,000 inhabitants. Ivory Coast has provided free mass treatment as a countermeasure against NTDs, with a therapeutic coverage of 73.73% in 2019. On the other hand, the challenges include expanding diagnostic and early treatment strategies, case management, surveillance, and behavioural changes related to safe drinking water and sanitation[22].

<Potential epidemic infections>

Infectious diseases with epidemic potential (e.g., Ebola virus disease, deer virus infection, Lassa fever, and new-type coronavirus infection) are to be monitored regularly for early warning, case investigation, and management. Strengthening of surveillance and reporting systems, the ability to respond to providers and laboratory networks, and vector controls is required. In terms of health security, it has been pointed out that there are no plans for public health emergencies in border zones, the ports of Abidjan and San Pedro; that there are no priorities for risk mapping and allocation of public health resources at the provincial and health district levels; that there are multiple e-notification systems interfaces for human, animal and environmental diseases and public health events; that there is insufficient capacity for antimicrobial surveillance; that there is insufficient event-based surveillance capacity; and that training for integrated disease surveillance and response (IDSR) is insufficient. COVID-19 is described in detail in Chapter 3[23].

[18] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020
[19] Equipment that enables M. tuberculosis genetic testing in facilities without microbiological technicians. It is recommended by the WHO as a Point of Care (PoC) test because it is easy to operate.
[20] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[21] MSHP (2016) Evaluation de la Disponibilité et de la Capacité opérationnelle des Services de santé (SARA)
[22] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[23] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020

The Joint External Evaluation of the International Health Regulation (IHR) was conducted in December 2016. Based on the results, a Health and Security Action Plan (PANSS) was formulated. PANSS aims to prevent, control, and respond to the spread of infectious diseases both at home and abroad through appropriate action to address public health risks. A workshop was held in August 2021 to prepare for submission of an annual report based on the IHR's mandated self-assessment. As a result, the overall performance of PANSS in 2020 was 30% compared to 32% in the first half of 2021[24].

<Impact of COVID-19 on the countermeasure of three major infectious diseases and NTDs>

WHO hilighted the importance of maintaining essential health services even under the COVID-19 which causes a significant burden on the health systems. The current status of malaria, HIV/AIDS, tuberculosis and NTDs in Ivory Coast under the COVID-19 pandemic was summarized below.

With regard to malaria, it was predicted that at early pandemic stage a 75% reduction in distribution of Insecticide Treated Net (ITN) would lead to 23.2% increase of malaria morbidity and 111.4% increase of mortality. However, the government increased the budget for mosquito nets and rapid diagnostic kits (RDTs) even under the pandemic[25], and the number of mosquito nets distributed increased by 12 % in 2020. On the other hand, distribution of RDTs decreased by 25.1%[26]. In the present status, the malaria incidence has decreased by 24.5% from 229.8% (2019) to 173.43% (2020)[27].

Regarding HIV/AIDS, the number of screening facilities decreased by 3.4% from 2692 (2019) to 2600 (2020), and the number of diagnoses, screening and HIV positive case also decreased[28]. On the other hand, the positive percentage increased from 2.4% (2019) to 3.07% (2020).

Regarding TB, the number of diagnostic and treatment facilities increased by 6.55% from 336 (2019) to 358 (2020), however, the number of diagnosed cases decreased by 10.2% from 83/100,000 (2019) to 74.53/100,000 (2020)[29]. On the other hand, it was not specific for Ivory Coast, but a statistical report showed that the number of deaths by TB increased in the African region although the number of new cases declined in 2020[30].

[24] WHO (2021) Atelier d'Evaluation Annuelle des Performances du Plan d'Action National de la Sécurité Sanitaire (PANSS), de la Mise à Jour de la Cartographie des Partenaires Financiers et du Remplissage du Rapport Annuel de Capacité du Pays (SPAR)
[25] ALMA (2020) Ivory Coast ALMA Quarterly ReportQuarter four, 2020
[26] WHO (2021) World malaria report 2021
[27] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020
[28] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020
[29] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020
[30] WHO website,"COVID-19 pandemic slows progress against tuberculosis"

These results may indicate that the number of new patients seems to be declined in the short term due to the decline of test/screening for the above three major infectious diseases, following a lack of consultation and awareness-raising activities under the pandemic. In the long term, however, there is a possibility of increase in mortality since significant portion of people is unable to receive appropriate diagnosis and treatment.

Table 1: Changes in indicators of malaria, HIV/AIDS, and TB before and during COVID-19

	Indicator	2019	2020	Validity rate（%）
Malaria	No. of Mosquito nets distributed	1,410,391	1,579,505	+12.0%
	No. of RDTs Distributed	6,456,625	4,837,781	-25.1%
	Malaria incident（‰）	229.8	173.43	-24.5%
HIV/AIDS	No. of Screening Facilities	2692	2600	-3.4%
	No. of Consultations	12,828,217	12,366,885	-3.6%
	No. of Screenings	1,743,762	1,052,943	-39.6%
	No. of HIV positive	42,399	32,354	-23.7%
	HIV positive percentage (%)	2.4%	3.07%	+27.9%
Tuberculosis	No. of Tuberculosis diagnosis and treatment facilities	336	358	+6.55%
	No. of Tuberculosis diagnoses (per 100,000)	83	74.53	-10.2%

Source: Prepared by the survey team based on Raport annuel sur la situation sanitaire (RASS) 2020

Regarding NTDs, in April 2020, WHO issued a guidance to temporarily suspend community-based surveys, active surveillance and mass drug administration (MDA) campaigns of NTDs, which was sustained until July 2020, to encourage putting the priority on COVID-19 responses[31]. After that, MDA and surveyllance for lymphoid filariasis, onchocercia, trachoma, schistosomiasis, etc. resumed in Ivory Coast even under the COVID-19 pandemic, however, the number of new patients in 2020, except for yaws, has significantly decreased, which is assumed to be due to temporary suspension or delay.

https://www.afro.who.int/news/covid-19-pandemic-slows-progress-against-tuberculosis

[31] Kabore, A., Palmer, S. L.et al.(2021) Restarting Neglected Tropical Diseases Programs in West Africa during the COVID-19 Pandemic: Lessons Learned and Best Practices.The American Journal of Tropical Medicine and Hygiene.

Table 2: Trends in NTD incidence before and during COVID-19

Indicator (per 100,000 people)	2019	2020	Validity rate（%）
Bruli ulcer	4.6	0.88	-80.1%
Leprosy	0.02	0.015	-15.0%
Oncoselcasis	0.5	0.17	-66.0%
Schistosomiasis	0.08	0.07	-12.5%
Yaws	5.3	5.81	+9.62%

Source: Prepared by the survey team based on Raport annuel sur la situation sanitaire (RASS) 2020

<NCDs>

NCDs accounted for 23% of early deaths in 2000 and increased up to 37% in 2016. The major NCDs are ischemic heart disease, chronic respiratory disease, cancer, diabetes mellitus, and psychiatric disorders. Factors contributing to the increase in NCDs include lifestyle changes (physical inactivity, alcohol dependence, smoking). Since NCDs are not included in any of the benefit packages, more than 90% of the expenditures on NCDs are borne by the insurer[32].

To improve NCDs, the MSHPCMU worked to strengthen the capacity for screening and appropriate case management in health facilities, to establish 11 integrated diabetes and hypertension management units in state hospitals (CHRs), and to build radiation therapy centers. In addition, they reduced the cost of treating these diseases by subsidizing the cost of breast cancer and diabetes. The government also banned smoking in public. However, NCD countermeasures and prevention activities are still insufficient, especially at the primary level. NCD measures also boost national health care costs. As discussed later, the French Development Agency is considering encouraging improved lifestyles and supporting the strengthening of health financing by imposing sin taxes on tobacco, alcohol, etc[33].

According to MSHPCMU, diagnosis and treatment of diabetes are provided in 33% of health facilities, but the percentage varies by type of facility (100% for university hospitals (CHU), 100% for polyclinics, 86% for CHR/general hospitals, and 29% for primary facilities (ESPC). The rate is 56% in urban areas and 18% in rural areas. Similarly, diagnosis and treatment of ischemic heart disease is provided in 44% of health facilities but varies by region (64% in urban areas and 32% in rural areas) and by types of facility (CHU 100%, CHR/GR 87% and ESPC 41%)[34].

[32] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage
[33] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[34] MSHP (2016) Evaluation de la Disponibilité et de la Capacité opérationnelle des Services de santé

2.1.2. Health systems and public health services

The impact of the civil war has created disparities in the development of health care systems within the country. In particular, the WB analyzes: 1) lack of infrastructure and adequate staffing to cope with population growth; 2) low quality of services due to lack of skilled and motivated staff; 3) severe shortages of consumables, drugs and equipment; 4) concentration of resources in large cities such as Abidjan; 5) limited physical access to health facilities in some areas and inadequate funding for primary care; 6) lack of ownership and participation of beneficiary communities; and 7) limited linkages with the private sector as the main drivers of health systems[35].The current status and challenges of each component of the health systems are summarized below.

(1) Governance

Ivory Coast's health systems consist of the primary, secondary and tertiary levels. At the tertiary and central levels, the Minister's Secretariat and the General Directorate manage, and the major providers are tertiary hospitals, which provide diagnosis and treatment that is the target of referral from secondary facilities and cannot be performed at secondary levels. At the secondary and state levels, there are 33 provincial health offices, and the main service providers are state hospitals, the first referees from the primary level facilities, and diagnoses and treatments that cannot be performed at the primary level. At the primary and district levels, there are 113 district health offices responsible for health policy implementation. The main provider of services is the ESPC, which is an entry point for health systems. It provides simple prevention, treatment, education and health promotion services. There are more than 4,000 public and private facilities at three levels. In Ivory Coast, the private sector plays an important role in providing care, but its governance structure for oversight is not well defined and well regulated[36].

(SARA)

[35] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage

[36] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage

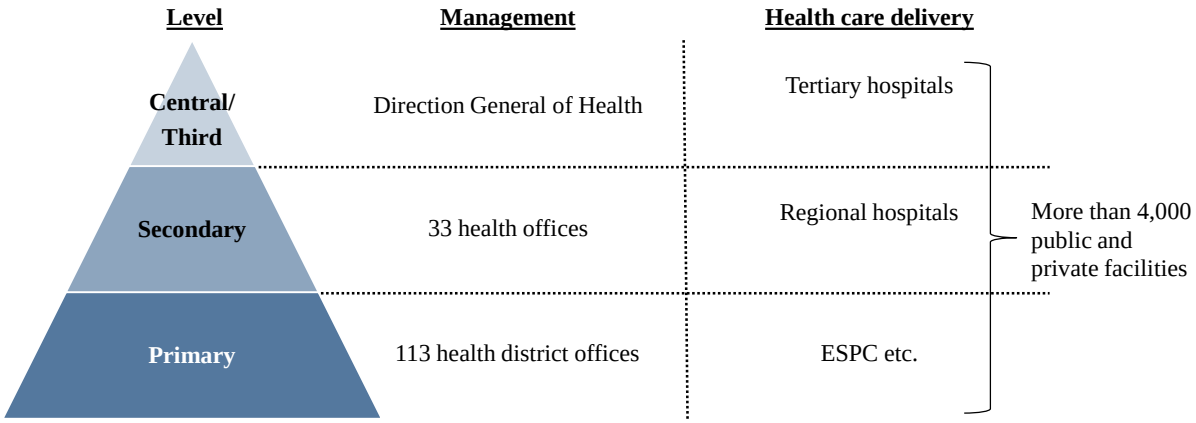

Figure 4: Health pyramid in Ivory Coast

Source: Prepared by survey team based on World Bank report

The decentralization process of health systems is ongoing. In 2016, a Provincial Health Development Plan (PRDS) was formulated with the participation of local stakeholders in 20 health districts, but the plan has not been implemented. Although some efforts have been made, the management of health districts has not been fully realized because of the lack of a policy document on decentralization of health sector, inadequate coordination of state and district directors' systems, and lack of leadership at each level of decentralized structure. Monitoring and supervision of health system performance will be carried out by national and state mechanisms in accordance with the PNDS 2016-2020 Monitoring and Evaluation Plan. However, the mechanism has not been established, and regular monitoring has not been conducted[37][38].

(2) Health financing

Health financing is described in detail in Chapter 5.

(3) Health workforce

The situation analysis of the health workforce highlights the disproportionate distribution of health workers, low retention rates in rural and remote areas, and lack of

[37] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020

[38] According to JICA Côte d'Ivoire Office, the administration and management at the central level is carried out by the ministry's office, the secretary's office, the central service and the health program in addition to the general health direction. As the service provision side, there are 2988 ESPCs at the primary level, 141 general hospitals, 17 regional hospital centers, and 2 specialized hospital centers at the secondary level, and Abijan Institute for Nuclear Medicine (IMENA), Alasan Watara National Radiation Therapy Center (CNRAO), National Blood Transfusion Center (CNTS), National Public Health Institute (LNSP), New Public Health Pharmacy (9 national specialized laboratories, etc.) at the tertiary level. The private sector contributes about 40% of service provision.

management of human resources in private health facilities. In order to improve this situation, the MSHPCMU recommends that the regulatory framework for managing health workforce migration across the country, incentivising poverty-stricken areas, public-private partnerships in the use of health workforce, and strengthening institutional frameworks to ensure the health and safety of health workforce should be strengthened through documents.

With regard to the deployment of health workers, recent recruitment has significantly improved the ratio of doctors, registered nurses (IDEs) and registered midwives (SFDEs). However, there are 0.78 health workers per 1,000 inhabitants, which is less than the 2.3 per 1,000 inhabitants recommended by WHO. As shown in the table below, for example, the ratio of physicians to population is lower in regions such as CAVALLY-GUEMON, GBOKLE-NAWA-SAN-PEDRO, PORO-TCHOLO-GO-BAGOUE, and HAUT-SASANDRA. There are still challenges in terms of loyalty and retention rates among healthcare workers in remote areas, and both mandatory measures and incentives are needed[39].

Table 3: Distribution of healthcare workers by health region (2017)

	Health Region	Number of populations covered per HCW		
		Physician	Nurse	Midwife[40]
1	ABIDJAN 1-GRANDS PONTS	7,790	3,332	1,400
2	ABIDJAN 2	5,266	3,300	1,245
3	AGNEBY-TIASSA-ME	8,922	1,992	1,246
4	BELIER	6,817	1,890	1,227
5	BOUNKANI-GON-TOUGO	14,971	2,799	2,185
6	CAVALLY-GUEMON	20,496	4,055	2,380
7	GBEKE	12,828	3,034	1,494
8	GBOKLE-NAWA-SAN-PEDRO	18,765	4,117	2,327
9	GÔH	12,116	2,337	1,368
10	HAMBOL	11,890	2,781	1,603
11	HAUT SASSANDRA	18,032	3,243	1,817
12	INDENIE DUABLIN	9,071	1,809	1,227
13	KABADOUGOU-BA-FING-FOLON	8,831	3,104	1,508
14	LÔH-DJIBOUA	16,472	2,671	1,402
15	MARAHOUE	17,623	2,856	1,904
16	N'ZI-IFOU	10,912	2,448	1,643
17	PORO-TCHOLO-GO-BAGOUE	18,760	3,954	2,550
18	SUD-COMOE	5,646	1,605	917
19	TONKPI	15,782	3,203	2,207

[39] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[40] Percentage of women of childbearing age

20	WORODOU-GOU-BERE	14,518	3,804	2,062
	Total	7,390	2,335	1,333

Source: Prepared by survey team based on Plan de Développement des Resources Humaines pour la Santé 2018-2022

In addition, the Health Human Resources Development Plan (PDRHS) 2018-2022 was formulated and the National Health Human Resources Investment Plan was formulated in accordance with the Plan. The Health Human Resource Development Plan aims to achieve equitable access to quality health care professionals for the people of Japan, and its policy pillars are (1) improved governance and financing, (2) capacity building, (3) rational deployment, (4) retention, and (5) collection and utilization of human resource data. In addition, the Health Human Resources Investment Plan is a detailed plan to materialize the Health Human Resources Development Plan.

As part of the initial education of healthcare professionals, the modules in INFAS have been revised to accommodate the LMD (license-master-doctorat) system[41]. On continuing education, 1,121 health managers and agents were trained through a capacity building program[42].

Health workforce management processes need to be optimized and a management system (talent recruitment and placement, work and skills management, contract management, staff management, and training) as the disparity of health workforce is a major challenge[43].

According to the World Bank, the national health workforce is directly managed by the Public Service Department, not by MSHPCMU, and the health districts and facilities are not authorized to hire or dismiss workers, thus limiting their ability to address potential quality issues at the facility level[44].

The Community Health Strategy 2017-2021 defines the role of community health workers (CHWs) and includes the provision of promotion services (e.g., basic family health behaviors, nutrition, sanitation, safe drinking water use, family planning services), prevention services (e.g., basic family health behaviors, nutritional interventions, hygiene interventions, active screening for chronic diseases such as hypertension, diabetes, and HIV), and treatment services (e.g., integrated management of diseases of newborns and children (e.g., malaria,

[41] A higher education system consisting of Licence (Bachelor), Master and Doctorat (Doctorate) programs adopted in EU countries and other countries. According to the Ministry of Higher Education and Scientific Research, the LMD system is designed to meet the need for higher qualifications, increase the internal efficiency of education, manage the supply of education, and develop lifelong learning.
[42] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[43] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[44] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage

respiratory infections, diarrhoea) and monitoring and management of tuberculosis treatment at the community level). In addition, CHWs will provide community-level disease surveillance through early warning systems for infectious diseases. At present, however, this strategy has not been implemented[45]. CHWs in Ivory Coast are not nationally qualified.

(4) Utilization of health information and ICT

In Ivory Coast, the ICT sector accounts for 7-8% of GDP, 90% of the population owns mobile phones, and Internet use is spreading rapidly. On the other hand, the digitization of public services has been delayed, and the government is promoting the digitization of health care by advocating "Integration of ICT use in all areas of people's lives" as a policy of PND 2016-2020.

The regional health information system 2 (DHIS2) platform was introduced in 2013 and is currently being deployed in all health districts and facilities. At the primary site, data should be entered using a paper-based form and sent to the ward by the 15th of the following month. Data are sent from the ward to the national level. However, because of the large number of indicators, they are burdened by health workers and the quality of the data is problematic.

One of the challenges related to health information is that the National Health Information System is not integrated and not available for planning and decision making. This requires the extension of DHIS2 to all ESPCs, public, private, community, and other health facilities, the interoperability of various health data management software, the timely generation of health status annual reports (national and regional) and health cards, and the development of adequate infrastructure to protect data and its administrative equipment[46].

Use of ICT for training and telemedicine of healthcare workers. According to PNDS2021-2025 (draft as of October 2021), COVID-19 reduced the burden on health care by supporting people in remote areas by training healthcare professionals using ICT and providing continuous services to specific patients with chronic diseases. WHO is helping the National Institute of Public Health to build an e-learning platform (planned launch at the end of September 2021) primarily to combat COVID-19. It is also used to train health personnel, including those for maternal and child health, enabling the training of 100,000 personnel in 10 days.

In addition, the Ministry of Health formulated the National Telemarketing Plan (Plan National de Telemedecine 2021-2025 (successor to PNT 2019-2023)), which focuses on

[45] World Bank (2020) Health Systems Assessment for Côte d'Ivoire Accelarating Reforms toward Universal Health Coverage
[46] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020

remote medical care from secondary and tertiary medical institutions to primary medical institutions, continuous monitoring of maternal and child health and chronic diseases, and implementation of advanced telemedicine (mainly specialized medical care in emergencies). On the other hand, there are various issues for social implementation, such as infrastructure development for hospitals and healthcare centers, introduction of equipment, human resources development, monitoring and evaluation after the introduction of telemedicine, and implementation of pilot projects.

(5) Medical facilities, equipment and pharmaceuticals

The government and development partners are working on a large-scale rehabilitation programme for health infrastructure. In terms of infrastructure, between 2012 and 2019, 10 general hospitals were constructed, 22 regional hospitals (CHRs), 78 general hospitals and 233 urban and rural health centres were rehabilitated. The total number of ESPC increased from 2,023 in 2016 to 2,252 in 2017 and 2,705 in 2019, of which rural facilities accounted for 73.03%. The ESPC population ratio increased from 0.9 per 10,000 population in 2017 to 1.05 per 10,000 population in 2019. Health service utilization (outpatient visits) increased from 44% in 2012 to 69% in 2018[47]. Management and maintenance of infrastructure, equipment, and technical equipment involves six state equipment, materials, and maintenance centers (CREMM), three district maintenance workshops (AMD), and three newly established CREMMs (Abidjan, Bouaké, and Korhogo)[48]. The Direction of Infrastructure, Equipement and Maintenance (DIEM) lacks budgets for the maintenance of old infrastructure and equipment and does not have tools for real-time management of infrastructure and equipment. In addition, DIEM has reorganized its organization this year, and has changed its duties and adopted new procedures. Therefore, capacity building in response to these changes is an urgent issue[49]. In addition, the DIEM considered reorganization within FY2021; as of February 2022, no reorganization has been implemented yet, but there will be changes in missions and adoption of new procedures, and capacity building to respond to these changes is an urgent issue.

According to the 2017 survey, 45% of primary and secondary facilities lacked electricity, 35% lacked water, and 32% lacked both. According to the Serivce Availability and Readiness Assessment (SARA), the average capacity of health care facilities is 57% in five categories. The breakdown is 81% infection prevention, 73% basic equipment, 28% essential drugs, 57% comfort, and 47% diagnosis. 22 % of facilities had necessary items to prevent

[47] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[48] According to the JICA Cote d'Ivoire office, as of the end of February 2022, the CREMM in Bouaké is not yet installed and the CREMM in Korhogo is not yet operational.
[49] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020

infection, and only 4% had necessary equipment for diagnosis. On the other hand, the situation varies depending on the level, with tertiary hospitals having a high capacity of 91% compared with 55% of the operation capacity of primary hospitals. Primary facilities were also less capable of providing general health services than secondary facilities (56% vs. 70%). Drug and supply chain inefficiencies and out-of-stock conditions are significant, and the government is poorly controlled. The new Public Health Pharmacies (La Nouvelle Pharmacie de la Santé Publique, NPSP) procure, store and distribute pharmaceuticals to all public facilities. The List of Essential Drugs prioritizes generics, and the inclusion criteria are based on safety, therapeutic value, and price, but this list has not been updated recently. Drugs are available in the private sector, but they are expensive, and even generic drugs are seven times more expensive than international standards[50].

(6) Quality of health care services

The MSHPCMU adopted the National Quality Improvement Policy Document (PNAQS) to improve the quality of health care services. The document defines a framework for improving service quality with a view to providing care, expanding and strengthening free health care, and increasing access to services[51]. Ivory Coast ranks 187th out of 195 countries in terms of the number of deaths avoidable if appropriate care is provided, according to the Health Care Access and Quality Index (HAQ) of the Institute of Health Evaluation[52].

2.1.3. Medical security system

Medical security system is described in detail in Chapter 7.

2.1.4. Progress of SDG3

Ivory Coast was unable to meet any of the health related MDGs (Goals 4, 5 and 6). Accordingly, based on the lessons of the MDGs, specific initiatives to achieve SDG3 "Ensure healthy lives and promote welfare for all people of all ages" have been incorporated into policy documents such as PNDS 2016-2020, multi-sector nutrition programs, Regional Health Strategic Plan 2017-2020, HIV/AIDS measures in the workplace, the Strategic Plan for Monitoring and Review of Maternal and Infant Mortality, and the Health Human Resources Development Plan 2018-2022. Issues addressed during the evaluation include: 1) improving the effectiveness of universal health insurance; 2) strengthening national child health and nutrition programmes to meet child needs; 3) strengthening expanded immunization programmes; 4)

[50] World Bank (2020) Health Systems Assessment for Ivory Coast
[51] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[52] World Bank (2020) Health Systems Assessment for Ivory Coast

improving coverage and quality of health services, particularly in rural areas; 5) increasing access to health centres in poverty, rural, peri-urban and crisis-affected areas to enhance health system efficiency; 6) improving the proportion of per-capita doctor, reproductive-age midwives, nurses and community health workers per village; 7) accelerating national responses to HIV/AIDS, both in treatment and prevention of mother-to-child transmission of HIV; and 8) reducing pregnancy in schools[53].

[53] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020

3. Current status and challenges regarding COVID-19

3.1. Current status of COVID-19 and countermeasures

In Ivory Coast, countermeasures were taken by the Conseil National de Sécurité (CNS) after the first case was notified in March 2020, and a state of emergency (L'état d'urgence) was declared in March 2020 to contain the center of the epidemic in the Greater Abidjan area. In addition, 13 screening centers have been established in the Greater Abidjan and measures have been taken to isolate infected persons, provide treatment, and establish a follow-up system. As of January 28, 2022, the total number of infected people is 80,487 and the total number of deaths is 782.[54] In December 2021 alone, the number of infected people reached about 10,000 due to the outbreak of the Omicron strain. The number of deaths was about 70 from December to January, which is a low percentage compared to the number of infected people. According to the CNS report, the number of infected people increased sharply in August 2021 due to the arrival of the third domestic wave of the delta strain and the increase in human flow due to the summer vacation, resulting in 112 deaths in August and 181 deaths in September, accounting for about 40% of the total number of deaths in the two months.[55]. In addition, most of the deaths were unvaccinated. According to the World Bank's report of the same year, the COVID-19 pandemic took a heavy toll on the country's economy, and the GDP growth rate has been revised downward from about 7% before COVID-19 to about 1.8% now.

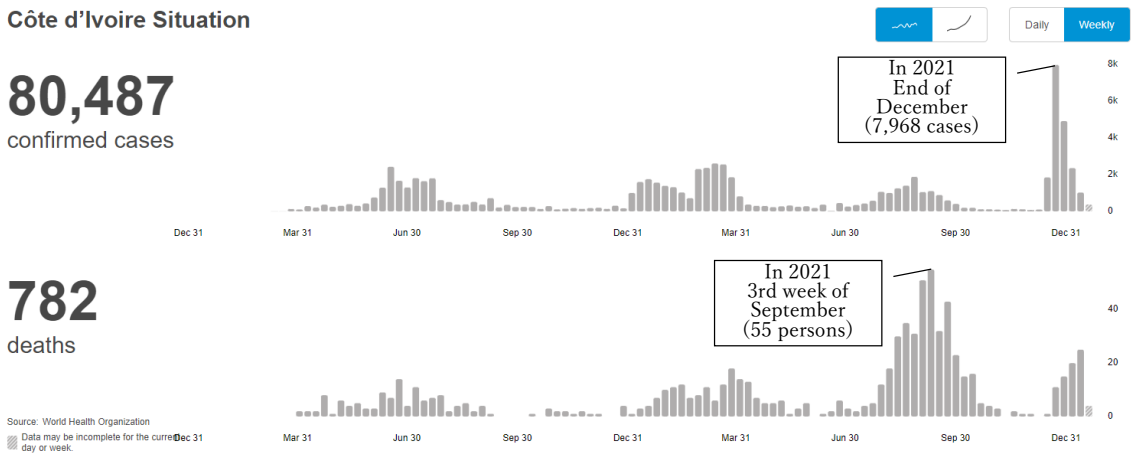

Figure 5: Transition of COVID-19 infection and death in Ivory Coast

Source: WHO Coronavirus (COVID-19) Dashboard

[54] WHO (2021) WHO Coronavirus (COVID-19) Dashboard

[55] Le Conseil National de Sécurité, Communiqué du Conseil National de Sécurité 9 Sep 2021, https://www.gouv.ci/doc/1631215316Communique-du-Conseil-National-de-Securite-jeudi-09-septembre-2021.pdf

In 2020, 43 of 113 health districts (38% of the total) had a cumulative prevalence of less than 5%, while 39 (35%) had a cumulative prevalence of more than 10% and the Greater Abidjan had a high prevalence.

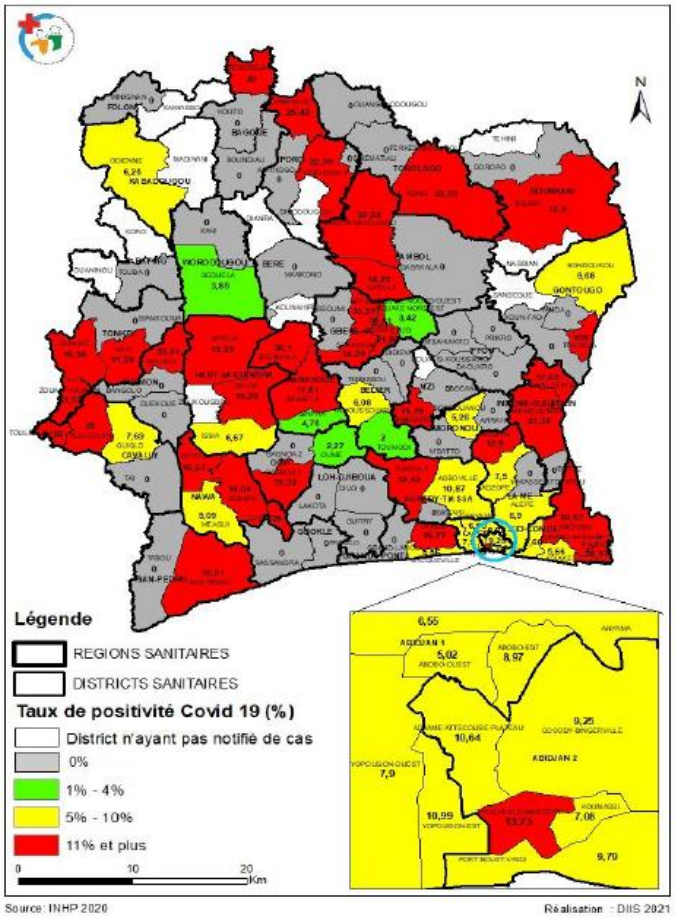

Figure 6: COVID-19 cumulative positive rate by region in Ivory Coast, 2020

Source: MSHP (2021) RASS2020

3.2. Vaccine sufficiency

The MSHPCMU's national plan for vaccination targets approximately 19.65 million people, or 69.3% of the total population of 28.35 million, and requires 43.675 million doses of vaccine for two doses. The goal is to complete vaccination of 70% of each target by the end of 2021. Targets are divided into phases as follows[56]:

[56] MSHP (2021) Plan National de Vaccination et de Deploiement des Vaccins Contre la COVID-19 en Ivory Coast

- Phase 1 (3% of the total population): healthcare workers, security and defense forces, teachers, etc.
- Phase 2 (17% of the total population): people aged 50 years or older, people with underlying diseases, etc.
- Phase 3 (49% of total population): 16–49-year-olds

According to the CNS, large-scale vaccination campaigns are being conducted to vaccinate at least one of the targets listed above by October 15, 2021, targeting those at highest risk (healthcare workers, security forces, teachers, judicial officials, food and beverage and hotel workers, persons with underlying diseases, and persons aged 60 years or older). Vaccines can be obtained from the COVAX Facility, from the World Bank, from donations from third countries, or from domestic purchases. The CNS has received 2,577,700 doses of vaccine to date, including 1,180,530 doses of Pfizer vaccine through the COVAX facility on August 20, 2021, and 100,800 doses of Johnson & Johnson vaccine through the AVATT facility on September 2. Approximately 20% of the 12,311,030 orders are received. Only about 6% of the 43,675,300 doses required for all subjects have been received. However, there are plans to supply vaccines from the World Bank and the New Public Health Pharmacy and the World Bank has purchased 5 million vaccines as of October 2021.

According to a CNS conference report on January 13, 2022, 7,776,722 doses of vaccine were administered as of January 11, of which 2,271,771 received two doses. In the Greater Abidjan, which accounts for 95% of the COVID-19 cases, 55% of the population received the first dose and 34% received the second dose. Vaccines have also been procured on an ongoing basis, with 16.5 million doses reported to date[57].With the aim of promoting vaccination, a different type of vaccination-AstraZeneca for the first time and Pfizer for the second time-will be approved. Vaccination is conducted in all 113 health districts in Ivory Coast.

Table 4: Estimated number of COVID-19 vaccines required

Total population	Source of vaccine	Number of patients	Number of vaccines (2 doses)
28,349,073	COVAX:20%	5,669,815	12,611,600 times
	Other: 49.3%	13,976,093	31,063,700 times
Total	69.3%	19,645,908	43,675,300 doses

Source : MSHP (2021) Plan National de Vaccination et de Deployement des Vaccines Contre la COVID-19 en Côte d'Ivoire

[57] CNS (January 14, 2022), https://www.gouv.ci/_actual ite-article.php?recordID=13026&d=1

Table 5: COVID-19 vaccine supply status

Supply date	Supplier	Vaccine type	Number of vaccines (number)
February 26, 2021	COVAX	AstraZeneca	504,000
From April 2021 onward	COVAX	AstraZeneca	272,250
From April 2021 onward	COVAX	Pfizer	100,620
From April 2021 onward	India	AstraZeneca	50,000
From April 2021 onward	China	Sinopharm	100,000
August 20, 2021	COVAX	Pfizer	1,180,530
September 2, 2021	AVATT	Johnson & Johnson	100,800
		Subtotal	2,308,200
		Unknown	269,500
		Total	2,577,700

Source : CNS, "Communiqué du Conceil National de Sécurite", Republique de Côte de d'Ivoire, "Plan opérationnel de vaccination contre la COVI-19 dans le cadré de la liposte contre la maladie à coronavirus en Côte de d'Ivoire "

In addition to the vaccine supply described above, the following supply plans are described. The source of the 16.5 million doses of the vaccine received is unknown. The latest plan is the final adjustment within the Ivory Coast government for the publication of the 2022-2023 vaccine supply plan.

Table 6: The project for the supply of COVID-19 vaccines (as of February 2021)

Date	Designation	Source/Origine	Quantité	Total
July 2021	Astrazeneca	NPSP	500.000	768.800
		France (COVAX)	268.800	
August 2021	Astrazeneca	NPSP	500.000	855.000
		COVAX	355.000	
September 2021	Astrazeneca	Banque Mondiale	2.000.000	2.000.000
November 2021	Johnson&Johnson	Banque Mondiale	1.000.000	1.000.000
December 2021	Johnson&Johnson	Banque Mondiale	1.000.000	1.000.000
January 2022	Johnson&Johnson	Banque Mondiale	1.000.000	1.000.000
Quantité Total Attendue				6.623.800

Source : Republique de Ivory Coast, "Plan opérationnel de vaccination contre la COVI-19 dans le cadré de la liposte contre la maladie a coronavirus en Côte d''Ivoire"

3.3. Resources of COVID-19 and donor trends

The primary budget for vaccination is estimated to be 104,217,888,692 FCFA (US$194,944,816), of which about 83% is for the purchase of vaccines and related materials and about 17% is for the operation cost. The COVAX Facility will support 24,646,708,455 FCFA (US$46,068,614) which represents 24% of the total budget. As part of the COVID-19 Strategic Preparedness and Response Plan (SPRP), a multi-stage program with the World Bank is under way to support 28,137,568,263 FCFA (US$50,516,281), which represents 27% of the total budget, to cover additional vaccines and operational costs. About half of the remaining budget will be financed through collaboration with institutions such as the AfDB, ADB, ECOWAS, and USAID. The second budget will be considered based on the results of the first budget.

Table 7: Primary budget breakdown of vaccination campaigns

	Item	Total amount (FCFA)	Total amount (USD)*	Total amount (yen)
1	Program management and coordination	75,955,000	142,078	14,431,450
2	Planning and preparation	85,839,500	160,567	16,309,505
3	Social mobilization and consultation	1,812,904,417	3,391,129	344,451,839
4	Training and conferences	609,158,317	1,139,461	115,740,080
5	Preparation of documents	364,157,482	681,175	69,189,922
6	Recruiting of staff	155,259,000	290,420	29,499,210
7	Cold-chain equipment	6,553,610,350	12,258,859	1,245,185,967
8	Implementing and supervising organization	4,300,178,046	8,043,700	817,033,829
9	Equipment for vaccination	3,250,963,927	6,081,092	617,683,146
10	Waste treatment	78,390,858	146,634	14,894,263
11	Control of vaccination adverse reactions	376,975,275	705,151	71,625,302
12	Purchase of vaccines	86,276,240,869	161,384,059	16,392,485,765
13	Vaccine introduction process evaluation	139,127,825	260,246	26,434,287
14	Impact assessment of vaccination	139,127,825	260,246	26,434,287
	Total	104,217,888,692	194,944,816	19,801,398,851

※1 USD = 534.602 FCFA, 1 JPY = 5.193 FCFA (January 2021)

Source: MSHP (2021) RAAS 2020

The impact of COVID-19 has forced many activities in the country to stagnate and has

had a significant impact on the economy of Côte d''Ivoire. In March 2020, the local government launched a 95.88 billion FCFA (approximately US$170 million) aid package for health measures for COVID-19, which was used to build a system to control and isolate infected people and purchase medical equipment. Subsequently, an economic assistance plan of 1.7 trillion FCFA (about US$3 billion) has been formulated to support the poor and businesses[58]. Specifically, based on the three pillars of economic, social, and humanitarian support measures, the government is implementing policies such as support payments to private companies, deferral of tax payments and social security contributions, and extension of the deadline for payment of infrastructure fees such as electricity and water. To make up for the lack of financial resources, the government is issuing government bonds in regional financial markets and raising funds from the international community, including the IMF and the World Bank.

In collaboration with donors, in April 2020, the IMF approved a loan of US$886.2 million to Côte d''Ivoire, and the World Bank approved a loan of 117.7 billion FCFA[59]. In June 2020, the AfDB provided a loan of €75 million[60]. In addition, the AfDB provided €1.5 million for the APHRO-CoV project in five countries, including Ivory Coast, to strengthen the reference system for early diagnosis of COVID-19 and coordination among medical institutions[61]. The World Bank is supporting COVID-19 surveillance and vaccine purchase within and outside these budgets. (See Chapter 4, 4-1(2), World Bank, for details.).

Table 8: Donor financial support (partial)

Item	Total amount (each currency)	Total amount (USD)	Total amount (yen)
IMF	-	886,200,000	92,164,800,000
World Bank	FCFA117,700,000,000	220,160,000	22,363,000,000
AfDB	EUR75,000,000	86,560,125	9,472,500,000
Total		1,192,920,125	124,000,300,000

※1 USD = 104.29 JPY, 1 FCFA = 0.19 JPY, 1 EUR = 126.3 JPY (January 2021)

Source: each organization's website

3.4. Sufficiency of cold chains and test kits

Vaccine storage areas are set up by the DCPEV (Direction de coordination program élargie de vaccination), the INHP (Institut National d'Hygiene Publique), and districts.[62] The

[58] Treasury, https://finances.gouv.ci/actual ites/65-contenu-dynamique/actuarite/720-point-des-actions-governmentals-aux-senates
[59] IMF, Country Report Ivory Coast
[60] AfDB, Project Appraisal Report
[61] AFD, APHRO-CoV, https://aphro-cov.com/le-projet/
[62] CI, Operational plan for vaccination against COVID-19 as part of the response to coronavirus disease in Côte d'Ivoire (February 2021)

vaccine cold chain is controlled by DCPEV, and there are sufficient cold rooms and cooler containers for DCPEV and INHP. However, insufficient storage capacity of refrigerators in each area is a problem. Out of 113 health districts, 110 districts have insufficient storage capacity, and an additional 1,641 refrigerators (in value of US$8,802,057) are required. Strengthening cold-chain facilities is a challenge for the development of medical facilities at the district level rather than at the national or regional level.

Vaccine inventory is managed by the SMT and SaH Analytics software, and damaged vaccines are returned to DCPEV. In addition to vaccination plans, vaccination procedures, vaccination training, safety and risk management, etc. are described in the vaccination operation plans.

The CNS also aims to further strengthen PCR testing and free antigen testing at public and private medical institutions. In the interview with DGS, the survey team commented that they expected JICA to provide support for PCR testing and antigen testing kits. With regard to antigen test kits, with the support of the German Ministry of Economic Cooperation and Development, Das Labor in Germany established the first production plant for the COVID-19 antigen test kit in Africa in the special economic zone of Grand Basham, 30 kilometers southeast of Abidjan. On August 13, the operation was officially approved and started[63].

3.5. Impact of spread of COVID-19 on the health sector

One of the main impacts of the spread of COVID-19 has been a decline in the use of health care services. According to the MSHPCMU, from March to April 2020, when the outbreak was confirmed, the use of health care services declined by more than 50%, due to people's perception of health care facilities as the center of infection, and a ban on gatherings of more than 50 people, which led to a decrease in the number of medical visits by appointment only[64]. In response to this situation, training of medical personnel and public awareness campaigns are being conducted to reassure users of medical services.

Due to economic deprivation caused by COVID-19, vulnerable groups tended to allocate more money for food than for medical care and relied on self-medication for prevention and treatment related to COVID-19. In a survey conducted by MSHPCMU, WHO and other organizations, 144 (18.3%) of 788 HIV patients with reduced income reported that they had difficulty in accessing HIV prevention and care services[65]. Thus, the direct and indirect effects of COVID-19 have created challenges in access to health care services.

[63] JETRO, https://www.jetro.go.jp/b Iznews/2021/09/6eca4959bcdd304f.html
[64] CI, USAID, UNICEF, Analysis Quality: Maladie à Coronavirus (COVID-19) en Ivory Coast
[65] MSHP, DIIS, WHO, Fonds Mondial, PEPFAR (June 2021), Évaluation des effets de la crise sanitaire COVID-19 sur l'offre et la demande des services VIH en en Ivory Coast

4. Trends of development partners in the health sector and JICA's support overview

4.1. Development Partner Support Trends

The information obtained from the website and the information obtained through the interview up to December 2021 are summarized below.

(1) World Health Organization (WHO)[66]

1) Overview of Cooperation

The Country Office was established in 1961. In line with the PNDS in Ivory Coast, Japan has formulated and provided support for the WHO's country strategy (five years). Major areas of assistance include health system strengthening and governance, public health crises (including infectious diseases and non-communicable diseases), and maternal and child health. It also coordinates with development partners to avoid duplication and promote more effective cooperation.

2) Major donor in Ivory Coast

Partners through multilateral health financing include the World Bank and the IMF, while bilateral aid partners include France and Japan. Vaccinations include GAVI, PEPFAR, and the Global Fund for HIV/AIDS, tuberculosis, and malaria. In maternal and child health, WHO supports the improvement of service quality. In addition, the donor map for 2018 has not been shared as of the end of February.

3) Views on UHC Issues

Physical access is the biggest challenge, but the poor do not have economic access and most of the population does not have insurance. The balance between primary and tertiary level facilities is important because large-scale construction of hospitals requires the allocation and maintenance of human resources.

4) Maternal and Child Health

Low quality of service is a major issue, and quality will be improved by increasing human resources and facilities. In particular, there is a shortage of specialists (physicians capable of caesarean section and obstetricians and gynecologists) and they are unevenly distributed in urban areas, so the national government is making efforts to improve the quality of services and reduce the mortality rate of mothers and

[66] Interview survey with WHO officials (September 28, 2021)

children by assigning specialists to rural areas.

5) UHC monitoring

A WHO-funded study was conducted in 2015 to determine the UHC metrics, and a study to monitor UHC progress is planned and will begin shortly. The next version of SARA is expected to start early 2022[67].

6) COVID-19 and ICT

WHO supports the National Institute of Public Health in building an e-learning platform for corona countermeasures, but the survey team was unable to receive any response to several requests for opinions on the idea of using ICT for COVID-19 countermeasures.

(2) World Bank[68]

1) Overview of Cooperation

- At present, the core of the World Bank's cooperation is the Strategic Purchasing and Alignment of Resources and Knowledge in Health Project (SPARK-HEALTH), which has been implemented in a six-year plan from 2019 to 2019 with the aim of providing quality health services that contribute to reducing maternal and child mortality. The budget is US$200 million from IDA (loans) and US$20 million from GFF (grants). US$118 million has already been disbursed. Additional budgets planned for 2022 and beyond are expected to be used to strengthen CMU. It consists of the following four components:
  - (i) Strategic Purchasing: Performance-based financing (PBF), promotion of CMU, support for reforms and capacity building.
  - (ii) Strengthening health systems to improve governance: rehabilitation of facilities and equipment, sanitation; reproductive health and nutrition; strengthening health workforce; and strengthening governance. Regarding the health workforce, based on the results of the survey conducted by the Department of Health Human Resources in 2020, it supports the training at the undergraduate level, equitable deployment, and retention of health workforce. In regard with governance, it supports strengthening health information systems and digitalization. Electronic Medical Records will

[67] This is considered to follow the Global Monitoring Report on Financial Protection in Health (2019), but confirmation is required.
[68] Interviews with World Bank officials, October 15 and December 7, 2021.

be introduced in all regional and district hospitals and will be introduced in primary care facilities. Telemedicine has also been studied.

(iii) Project management

(iv) Contingencies, Emergencies, Response to Epidemics (CERC): The World Bank has introduced an immediate emergency response component in all projects and spent US$40 million in Ivory Coast in response to COVID-19 from May 2020 to June 2022.

- Operational costs of $175 million are required for the purchase and distribution of COVID-19 vaccines, and the funding gap is US$61 million with the second additional loan (scale-up of vaccine distribution, establishment of cold chain systems including refrigerators, infrastructure). The World Bank's support for response to COVID-19 is as follows:

(i) CERC: Immediate response in (iv) of SPARK-HEALTH was performed when the first case of COVID-19 positive was reported.

(ii) COVID-19 Emergency Preparedness and Response Project (Parent Project): Assistance of US$35 million is under way between May 2020 and June 2022 to strengthen surveillance. 1) Early detection of infection, case management, infection control measures (US$93.6 million), 2) communication and community participation to address vaccine aversion (US$1.9 million), and 3) project management (US$4.4 million), including digitization of vaccination campaigns (e-platform development).

(iii) Additional financing for COVID-19, which supports the purchase of vaccines and operating costs. US$100 million is expected from May 2021 to June 2022. 5.6 million people (19% of the population) will be vaccinated. As of October 2021, 5 million doses of vaccine had been purchased (US$51 million). The vaccines for Sinopharm were purchased through COVAX and the vaccines for Johnson & Johnson through the African Vaccine Procurement and Immunization Task Team (AVATT).

(iv) 2nd Additional Financing for COVID-19: Prepared with the Asian Infrastructure Investment Bank (AIIB). The World Bank will contribute US$14 million, and AIIB will contribute US$100 million (a mix of grants and nonconcessional loans). It aims to strengthen the system while procuring and distributing vaccines, including the introduction of mobile clinics for community vaccination campaigns, routine vaccination services for rural areas, and the provision of telemedicine. It will be approved in January 2022.

- PASA (Programmatic Advisory Services and Analytics) provides technical and operational support to improve the quality of health services, increase resource mobilization, and achieve equitable and efficient use of resources for health. US$800,000 over three years from October 2020.

2) Relationship between the PBF program and the CMU

SPARK was launched in 2016 to improve the quality of care, enhance the autonomy of health facilities, and motivate health facility staff. Initially, 18% of health districts were covered, but this was extended to 60%. In addition, health facilities have achieved results such as opening of bank accounts and the ability to receive funds directly. Each health facility is required to develop a business plan and deliver results accordingly. A quarterly NGO reviews the outcomes of health facilities and pays them accordingly. Half of the payments are for staff motivation (bonuses) and half for strengthening health facilities. In some cases, motivation has been reduced to 30-40 percent, with the rest being used to strengthen health facilities. In 2022, PBF will be extended to all health districts. At present, the Bank's financial support is significant, but it plans to be financed by the government in the future.

3) Concept of CMU issues

CNAM as a purchasing agent is the implementing agency of MEPS, but the parties involved in the CMU have not been coordinated as the provision of health services is implemented by MSHPCMU including Gratuité Ciblé, a free medical service. CNAM also operates two schemes, managing resources and regulating. On the other hand, it is an external organization and does not have a political coordinating function. In the past, the Prime Minister's Office formed a steering committee composed of 110 stakeholders, but it did not function. Until now, neither MSHPCMU nor the focal point had been in place. Operational challenges include limited benefit packages, lacking coverage for preventive care, diabetes and hypertension, and CMU for civil servants who do not truly need CMU for vulnerable populations[69]. To this end, the World Bank will encourage the restructuring of the CMU program beyond 2022.

4) View on the use of digital health

[69] It is pointed out that while civil servants, salaried employees, self-employed and others are enrolled in the CMU, most payments are made to civil servants. Health insurance for civil servants is handled by MUGEF-CI, the Civil Servants Mutual Aid Association, while CNPS handles private salaried employees and CNAM handles the rest.

In part because the Minister of Health has made the digitization of health a priority, the World Bank will provide additional loans to support digital health as part of its efforts to improve governance. Specifically, support for the establishment of data centers, etc. All PBF, private facility and CMU data will be integrated as an e-Health system.

(3) African Development Bank[70]

1) Overview of Cooperation

There are no health-specific projects, but the following four programmes include health components.

(i) Abidjan Sanitation and Living Environment Improvement Project (Project d'Assainissement et d'Amélioration du Cadré de vie d'Abidjan, PAACA): Addressing water-borne diseases and building health centres.

(ii) Productive Social Nets Project (Projet de filets sociaux productifs): social protection (including the construction of 11 social centres), youth employment and the construction of 40 rehabilitation centres. Training for health workers on maternal and child health and feasibility studies to develop a database of 96 social centres were also conducted. For social management, the survey also covers the elderly. Total aid amounts to 11-12 million Euros.

(iii) Projet d'appui au programmatic social du Gouv (PA-PS Gouv) started as a World Bank project and the AfDB joined the project. The EU and UNICEF are also supporting this initiative. The World Bank supports totals 79 million Euros in 2019 and 75 million Euros in 2020. It targets 100,000 households. It also supports the establishment of the Village Saving Association, which supports parents with school-age children, with a total of 250,000 households. In 2020, the company began providing funds to small and medium-sized enterprises in response to COVID-19. Although not directly connected with UHC, strengthening infrastructure will lead to better environment and stronger capacity.

(iv) Economic and Social Reform Support Programme (Programme d'appui aux reformes et sociales, PARES) Phase 1 (2019-2021) and Phase 2 (2022-): Program loans to support the agreed policy matrix with general financial support. Part 2 sub-components of the expected outcomes include support for strengthening social inclusion, in which strengthening of social protection and social insurance management is required. The policy matrix includes the

[70] Interview survey with AfDB officials, 21 September 2021

Hospital Reform Act and the Act on the Establishment of Social Insurance for Self-Employed Persons (sole proprietors). At present in Phase 2, consideration is being given to the adoption of the COVID-19 vaccine roll-out plan and the promotion of the Hospital Reform Law implementation details.

2) View on UHC Issues

There are problems in coordinating government organizations such as the Ministry of Social Security and MSHPCMU, and in identifying the needy (i.e., those who are exepmpted from charge). Improving the quality of infrastructure, equipment support, and care is also important. There are also issues in dealing with the informal sector in the free medical care system. Improvement of access in rural areas is also an important issue. It is necessary to identify needs and identify health centre sites. He said construction of rehabilitation centers and provision of medical equipment are also important. Health districts should be strengthened through decentralization. Health system challenges include the training of medical personnel (including the use of digital health) and the improvement of access to essential drugs. The accountability of healthcare professionals should also be improved.

3) Views on the use of digital health to achieve UHC

The view is that digital health can reduce the paperwork of healthcare professionals and can be used to train and telemedicine healthcare professionals in remote areas, to monitor prescription medications for patients, and to improve awareness of promoting the use of health services. Especially important under corona. The transportation of medicines, blood and vaccines through drones is also required.

4) Indicators of loan projects, including health

There are output indicators, such as the number of health centres constructed and the number of health workers trained, but there are no impact indicators (the number of health centre users and the level of skill development of health professionals). Health is a sub-component of the project hence less focused.

(4) French Development Agency (AFD)[71]

1) Overview of Cooperation

Ongoing assistance of 200 million Euros (100 million Euros for government loans and

[71] Interview survey with AFD officials (September 6, 2021)

the rest for grants from France) is addressing the following three challenges:

(i) Strengthening Health Systems: Establishment and rehabilitation of hospitals and establishment of blood centers (mainly in the northwest), Completion of rehabilitation of hospitals (San Pedro, Spray, Toque, and Gicro) by 2022, two of the four hospitals (Odiennuen, Tingula, Munduk, and Tonda) originally targeted have been studied. In addition, eight hospitals in the Greater Abidjan Region will be selected by consultants. JICA's support for maternal and child health may be linked to AFD's efforts to strengthen healthcare services.

(ii) Strengthening the Pharmaceutical Sector: Supporting the Government Certification Body (IFP, Central Pharmacy, MBSP, DAP, ANSP, and National Transfusion Center)

(iii) Human resource development for health in INFAS for infrastructure development and strengthening of education system, training support, diploma development, and hospital reform (reflection of decentralization)

In addition, as a countermeasure to COVID-19, inspection measures were strengthened in cooperation with the Pasteur Institute, and financial support was provided. Of the 100 million Euros (loan), 18 million Euros were allocated for COVID-19 measures.

The French government and the government of Ivory Coast are currently negotiating on the next support of one billion Euros.

2) View on UHC Issues

(i) Improve the quality of healthcare services by implementing a private loan project (IPPH) together with a project through AFD to improve the quality of healthcare services at each healthcare facility (in particular, ensuring the quality of private hospitals, where half of the people do not have any regulations).

(ii) Infrastructure development and human resources development: Support for training of hospitals and medical professionals, strengthening of skills in line with international standards, and support for international and national medical institutions (due to lack of autonomy and medical planning).

(iii) Strengthening Decentralization: Health Care Master Plans (including public, private, and referral systems) are not available for each health region (there is no master plan for which patients should receive treatment and where in each health region; there is no vision for where to build hospitals; only Anibijasa has PDRS); and in 2019, a general strategy was developed but is still in the process of finalization. The government of France and the local government

are now in the process of discussing decentralization policies for human resources development.

(iv) Insufficient donor-government collaboration

(v) Treatment of healthcare professionals: No special salary for a specialised physician. In addition, there is insufficient allowance for doctors to be assigned to rural areas (remote areas).

(vi) Consideration of UHC financing model: Introduction of insurance premiums in informal sector and taxes (tobacco, alcohol, etc.) are under consideration.

3) Maternal and child health

The problems include the aging of hospitals, the lack of regional organizations to train healthcare professionals, the lack of appropriate organizations for financial management, and the quality of services provided by public and private hospitals.

4) Hospital Reform

The hospital reform is set to be implemented in 2019. The aim is to improve hospital operations, including collaboration between different hospitals (university hospitals and general hospitals, health state hospitals and health facilities).

5) Support Needs

There is insufficient support for human resources development, and the government expects to invest in local universities by 2025. Human resources development is necessary to improve the quality of healthcare services. At present, human resources development and the quality of services have not been secured in line with infrastructure investment.

6) Possibility of collaboration with JICA

JICA and AFD may be able to collaborate in joint investment for infrastructure development (hospital renovation) and maternal and child health measures. In particular with the construction of mother and child building in CHU Buake, the MSHPCMU wants a facility similar to CHU Cocody supported by JICA, but since the amount of money is large, they wish to discuss the possibility of co-financing with JICA.

(5) Expertise France[72]

1) Overview of Cooperation

We are working to eradicate cervical cancer through the Scale Up Cervical Cancer Elimination with Secondary Prevention Strategy (SUCCESS). Cervical cancer is a problem in low-and middle-income countries but can be cured by vaccination and early detection. WHO's strategy is to work in line with 90% Vaccination, 70% Screening, 90% Treatment by 2030. Collaboration with WHO, Unitaid, JHPIEGO (U.S. NGO), UICC (International Union for Cancer Control), etc. SUCCESS is also active in Burkina Faso, Guatemala and the Philippines. The cost of testing and treatment is borne by the project. Whether cervical cancer will be covered by CMU is uncertain.

2) Health Financing

WHO has organized a health financing working group, which was scheduled for consultation with development partners in April 2021, but could not be held. In addition to the French-affiliated institutions, the World Bank and USAID are also participating. Although the government has called for UHC, it has not identified a path to strengthening health resources. There are no strategies for the four dimensions of health financing, including revenue raising, purchasing, pooling, and packing, and the government's approach is questionable. For example, cancer screening may be included in the basic package as recommended by WHO, but it is not included in the basic package, and the services that people want may not be included in the current package. It is also unclear whether CNAM is a single purchasing agent in parallel with the free medical care system.

3) View on CMU

The CMU is not functioning in substance. Although the system was started in November 2019, there are also reports that the patient's burden at the point of care remains unchanged. The current premium of 1,000 FCFA per month is the same and insufficient for all income groups, and there are problems with regressiveness.

4) Strengthening Infrastructure

It is necessary to strengthen the healthcare centers in the regions expected by the government. However, the current status of the facilities is not sufficiently understood.

[72] Interview Survey with Expertise France Participants (September 15, 2021)

The latest version of SARA is required. It should also strengthen not only medical facilities but also healthcare systems. Achieving UHC needs to be considered from a long-term perspective and aligned with other sources of funding to ensure sustainable support. They are willing to cooperate with JICA's infrastructure support through loans with their support in software.

5) Example of ICT utilization

The SUCCESS project employs a DHIS2 track system. It sends audit results, reminders for primary and secondary screening, etc. using SMS. In Ivory Coast, the national coverage of SMS exceeds 60%, indicating an interest in data integration, but privacy protection needs to be considered.

(6) Programme d'Appui aux Strategies Sociales (PASS)[73]

1) Overview of Cooperation

PASS is conducting advocacy activities to improve the health sector and support UHC in Ivory Coast. Specifically, it is supporting community health through decentralized health facilities, using health centers as pilots. It has been shown that discretionary facilities work very well in comparison to public sector health centers, which face major challenges in terms of human resources, infrastructure facilities and quality.

2) UHC issues

At present, 10% of the population in the formal sector is covered by health insurance, but the informal sector in both urban and rural areas, which is a majority, is not protected. CNAM membership has begun, but it is not yet in operation. As for community health, the company has established a platform in collaboration with CNAM, Association Nationale des Organisation Professionale Agricoles des Ivory Coast (ANOPACI), Centre Ivorien de Recherches Economie et Social (CIRES) to promote CNAM membership in rural areas. The CNAM included the government, and the official notification was issued in June 2008, and CNAM members from three groups-sugar cane, palm oil, and cottonseed producers-were joined, but were difficult. The premium of 1,000 FCFA per person per month is equivalent to 7-8 household members. The poverty line is about 200,000 FCFA per year[74], but for a family of seven,

[73] Interview Survey with PASS Staff (September 24, 2021)

[74] To be precise, the international poverty line is 473 FCFA/day (172,645 FCFA/year) and the national poverty line set by Ivory Coast is 269,075 FCFA/year. These are basaed on 2015 data. Given the economic growth since then, it is likely that the number of poor people has declined significantly.

84,000 FCFA will pay premiums. Second, the three groups were easier to organize for export crops, but they did not include other smallholder food producers. Problems in the quality of medical care can also be pointed out. People don't think they can get the services they pay for insurance. However, the platform believes CMU is a financial tool and should improve quality and access.

3) Relationship between CMU and the health system

The MSHPCMU's health system consists of about 20 vertical programs that lack discretion in health facilities and health districts to meet local health needs. Decentralization and decentralization are considered effective for this purpose. Currently, there is almost no discretionary power for district level officers, but by giving them discretionary power, it is possible to respond to local needs and assign personnel to remote areas. In the context of community health, it is decided to empower each health facility, but the results are limited because resources are not discretionary. Policy consultations are held with the Ministry of the Interior, which is in charge of decentralization. The Government's current approach is to implement PFM reforms, and there are many changes in the health sector.

4) Infrastructure Investment

The government is proceeding with a huge project of hospital infrastructure called UPPH (Unité de Pilotage du Programme Hospitalier), but the governance of public health facilities is very weak because of the lack of discretion. In addition, there are many cases in which personnel are not dispatched or are absent even if they are stationed permanently. It is useless to build only the infrastructure because there is no trust.

(7) Global Financing Facility (GFF)[75]

1) Overview of Cooperation

Started activities in the country in 2018. This is a major funding platform to support the Global Strategy for Women's and Children's Health (Every Woman Every Child) to improve reproductive health and the health and nutrition of mothers, children and adolescents. It supports policy formulation and implementation in the country, mobilizes results-based resources, and promotes partnerships through multi-

However, it is understandable that health insurance spending has a significant impact. (In the event of actual illness, they pay an additional 30% of the cost over the counter.)

[75] Interview survey with GFF officials (December 3, 2021)

stakeholder platforms. Specific activities are as follows.

- Operation of Plateform National de Coordination du Finance de la Santé (PNCFS), a platform for coordinating, effective activities and monitoring of health sector stakeholders
- Development of investment plans for domestic and external financing in the health sector
- Health financing reforms in line with investment plans
- To monitor the implementation of investment plans

2) UHC issues

In addition to the government's annual health spending of around 7 percent (the Abuja Declaration target of 15 percent), most of this is spent on the third level of health service enhancement. Therefore, the development of primary health services, especially health facilities, is an urgent issue. In addition, many health facilities that have been renovated are unable to provide services because of equipment updates. In addition, the government is committed to public financial management (PFM) reforms, and if they succeed, efficient fiscal management can be expected.

3) PNCFS

The PNCFS was essentially suspended after the death of the former prime minister. Against this backdrop, the new prime minister has promised to resume activities, and specific related meetings are expected to be held during FY2021. The PNCFS is composed of four major constituencies: the Ministry of Health, other relevant ministries, the private sector, and civil society.

(8) U.N. Population Fund[76]

1) Overview of Cooperation

- In Ivory Coast, eight programs are being implemented in the following four areas: 1) reproductive health; 2) support for children and adolescents; 3) support for women; and 4) support for communities. Specifically, it promotes sexual and reproductive health and family planning, encourages communities, fosters human resources to improve the quality of health services, and provides sexual education to youth and youth. Specific activities of the Five-Year Plan (Plan Results: 1:2021-2025 on sexual and reproductive health) are as follows:

[76] Interview survey with UNFPA officials (November 26, 2021)

- Family planning promotion: The number and timing of pregnancies are not properly controlled. It also promotes family planning to reduce maternal mortality.
- Continuing education for midwives, supporting midwifery mentoring. The limited space for internships is a challenge.
- Inter-institutional network support: Creates a medical institution with the Center of Excellence function from which other medical institutions can be mentoring. The same applies to the distribution of drugs.

2) UHC issues (mainly in the field of maternal and child health)

- Three issues related to medical personnel are as follows:
  - The disproportionate assignment and low quality of healthcare workers: I believe that the small number of locally assigned healthcare workers can be solved by providing incentives for local assignments.
  - Insufficient continuous learning to strengthen the capacity of health workers: There are specialized educational institutions to train doctors, midwives, and lab personnel, but opportunities to continue learning are limited after the medical staff start working.
  - Healthcare professionals are not well specialized: although there are general practitioners, there are only a limited number of gynecologists, and there are insufficient physicians who can address maternal mortality prevention and fistula.
- Maternal deaths in rural areas are often not reported to the central government, and there is a gap between estimates by international organizations and the maternal mortality ratio published by the Ministry of Health. UNFPA provides training to community health workers (CHW) and tells them to report death cases.
- The government recommends that children stay in medical facilities for 72 hours after delivery, but there is only one bed in rural medical facilities, and if delivery is repeated, the woman may be forced to leave the hospital within 72 hours to give up her bed to the next woman.

3) COVID-19 compatible

- It has been in action since the beginning of the Pandemic in March 2020. At the time, HCWs sometimes abandoned their jobs for fear of their own infection, encouraging them to provide and continue with training. They encouraged residents who tended to walk away from medical institutions to use medical facilities. It has also contributed

to controlling the number of new HIV infections by using religious leaders with influence in the community to prevent infections and encourage vaccinations in the community. On the other hand, they recognize that the amount of vaccine is still not sufficient.

4.2. Overview of JICA's Assistance

As of July 2017, the formation of a program aimed at supporting the achievement of a state where "women and children, including the poor, have access to quality maternal and child health services (antenatal care, delivery, and newborn care) when they need it, at a cost they can afford" was considered. The program, targeting the poor Abobo district of Greater Abidjan, consists of the construction of the Maternal and Child Health Center at Cocody University Hospital (grant assistance), a technical cooperation project to strengthen continuum of care for pregnant women and newborns, a technical cooperation project to support the medical security system, the dispatch of program advisor, and the provision of development policy loans. The aim was to contribute to UHC by providing both supply-side and demand-side support. At present, the technical cooperation project "Project for Improving Continuum of Care for Mothers and Newborns" is being implemented with the same objective.

Table 9: JICA's cooperation in the health sector (from 2015 onward)

Year of implementation	Scheme	Project title	Overview	Amount of cooperation (Unit: 100 million yen)
2021	Grant aid	The Project for Strengthening Border Management Capabilities to Respond to Public Health Crises Including Pandemic Coronavirus Infections (through IOM)	Develop basic public health facilities and related equipment, including countermeasures against new-type coronavirus infection, on the border in West Africa, the Major International Economic Corridor.	5.44

2019-2024	Technical cooperation	Improvement of maternal and newborn continuum of care	Formulation of a maternal and neonatal care model, reflection on national guidelines, implementation and verification of the model, and integration into the health workforce education in Ivory Coast will improve the quality of maternal and neonatal care in the targeted health facilities and increase the use of facilities by patients, thereby contributing to the reduction of maternal and neonatal deaths in the targeted health facilities.	6
2019	Grant aid	The Project for Improvement of Cocody University Hospital for Improvement of Maternal and Child Health Service in Greater Abidjan	Expansion of obstetrics, neonatal care, and equipment at Cocody University Hospital	41.63
2018-2020	Technical cooperation	Ministry of Health Advisor	Advice on health policy, project formulation, and coordination with other development donors	NA
2017	NA	Poverty identification study	A study to identify the poorest population in collaboration with the World Bank	NA
2015-2019	Technical cooperation	Project for Reinforcement of Human Resource Management Network	Strengthening the organization of the Health Human Resource Management Network, which was established mainly by members who participated in a training course in Japan on health human resource management common to French-speaking African and strengthening the health human resource	NA

			information management systems of member countries, thereby promoting the sharing of good practices among member countries and contributing to the improvement of health human resource management.	

Source: Prepared by the research team based on information on JICA's website.

5. Results of information compilation and challenge analysis on health sector policies, budget planning, and fiscal gaps

5.1. Health sector policy

<Health administration>

Following the cabinet reshuffle in April 2021, the former Ministry of Health was renamed as the Ministry of Health and Public Hygiene and Universal Health Insurance (MSHPCMU), and it was announced that the MSHPCMU would be in charge of the Universal Health Insurance (CMU). Normally, after the announcement of the reorganization, a decree concerning the responsibility coverage and organizational chart is promulgated, and then the scope of jurisdiction is transferred. Therefore, it is expected that the organizational chart incorporating the departments under the jurisdiction of the CMU should be released along with the promulgation of the decree. The organizational chart as of January 2022 is shown in the figure below[77].

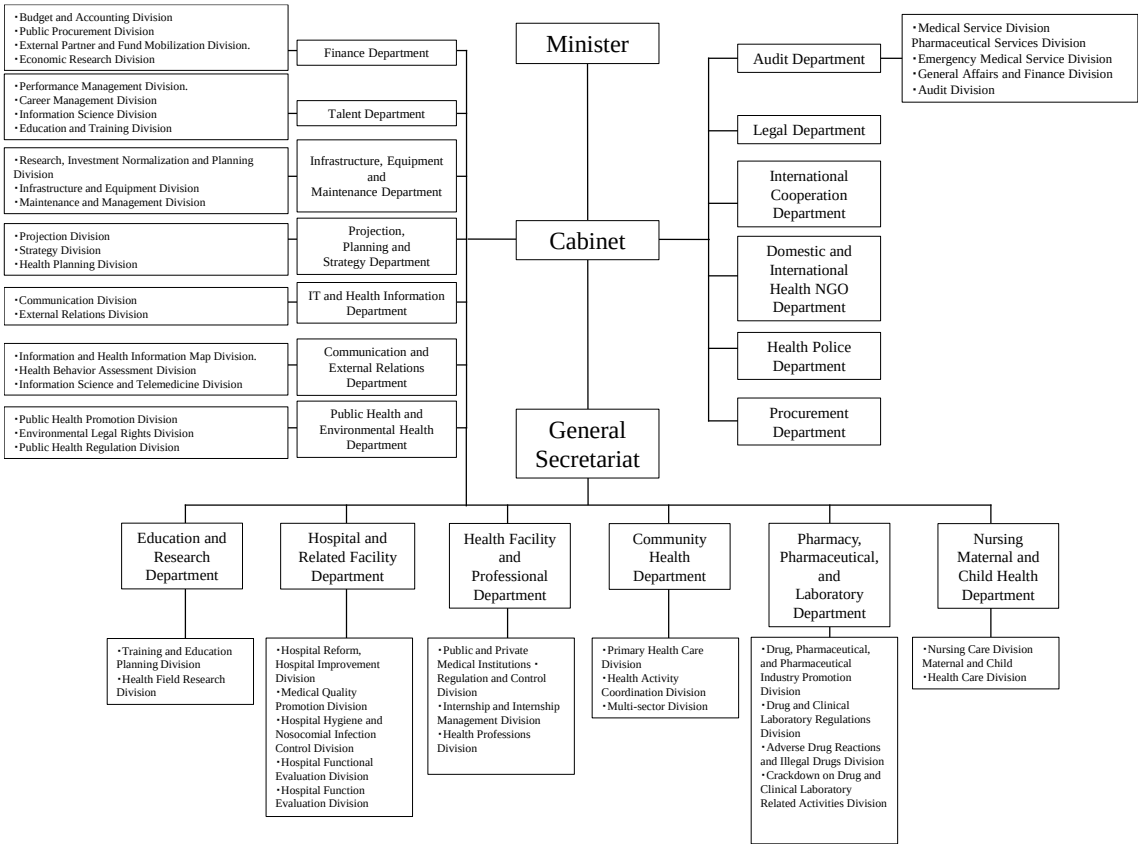

Figure 7: Former ministry of health organization chart (as of January 2022)

Source: Prepared by survey team from MSHPCMU website

[77] Interview survey with MSHPCMU officials (October 1, 2021)

< Development policy and plan >

The National Development Plan (PND2016-2020) advocates the promotion of "human capital development and social welfare" as one of its priority strategies. It advocates the improvement of public health by increasing the frequency of the use of high-quality health care services and the expansion of social security to vulnerable groups, particularly the public, through the diffusion of CMU to cover the entire population. Furthermore, the formulation of the following PND2021-2025 has been delayed due to COVID-19 and is in the process of approval within the government. In addition, the National Social Development Plan (Programme Social du Gouvernement 2018-2020, PSGouv), enacted in 2018, identifies universal health coverage (UHC) as a priority agenda, with the goals of reducing maternal and infant mortality and achieving 100% CMU coverage. In this context, the National Health Development Plan 2021-2025 (PNDS 2021-2025), which is described in the following section, is expected to reflect the policy of expanding health services and social security for vulnerable groups. Other major development policies and plans are outlined in the table below[78].

Table 10: Major development policies and plans

Development policy and planning	Overview
National Development Policy (PND 2016-2020)	The five pillars of the policy are: 1) improving the quality of state institutions and governance, 2) accelerating the development of human capital and social welfare, 3) transforming the structure of the economy through industrialization, 4) harmonious infrastructure development and environmental protection, and 5) strengthening regional integration and international cooperation.
National Health Development Plan (PNDS 2016-2020)	The six pillars of the policy are 1) strengthening governance and leadership of the health system pyramid, 2) improving domestic and international financing of the health system, 3) improving the provision and utilization of quality health care services, 4) reducing death and morbidity from major diseases by 50% before 2020, 5) improving maternal and child health, and 6) promoting public health and prevention.
National Social Security Strategy (SNPS 2013)	The strategy aims to strengthen the capacities of vulnerable groups and gradually build a social security system that enables the population to manage risks. The five pillars of the policy are: 1) improving the living standards of the poorest people; 2) accessing basic social services and investing in human capital; 3) preventing abuse, violence, exploitation, discrimination, and exclusion; 4) promoting higher levels of social security; and 5) strengthening the institutional framework, administrative capacity and financing of social security.

[78] Interview survey with MSHPHCMU officials (October 1, 2021)

Health Human Resources Development Plan (PDRHS 2018-2022)	The plan aims to achieve equitable access to quality health care professionals for the people. The pillars of the policy are: 1) improved governance and financing, 2) capacity building, 3) rational deployment, 4) retention, and 5) collection and utilization of human resource data.
Health Investment Plan (Financement de la santé, Dossier d'Investissement 2020-2023)	This plan is an investment plan based on the National Development Plan and the National Health Development Plan. It mainly focuses on investment plans to strengthen health financing, address economic risks through the health insurance system, improve access to quality maternal, newborn and infant services, and strengthen health governance.

Source: Prepared by survey team based on various materials

<National Health Development Plan 2021-2025 (PNDS 2021-2025)>

As of October 2021, the MSHPCMU's National Health Development Plan 2021-2025 (PNDS 2021-2025) is in the process of development. The plan is in approval stage within the government and although it is tentative, it is expected to have the following content. The vision of the plan is to "realize a Ivory Coast where the health and well-being of the population is maximized through a robust health system that is efficient and accessible to all citizens," and the overall goal is to "improve the health status of the population. The strategy's medium-term objectives are: 1) to improve health governance, 2) to strengthen the supply of and access to health services for the population, and 3) to strengthen disease prevention and control. The strategic axes and expected individual results are shown in the table below.

Table 11: Strategic axis and expected results of PNDS2021-2025

Strategic Axis 1 : health governance	Outcome 1: Ensure efficient and inclusive leadership, management and financing of health system stakeholders at central and local levels	Results 1.1: Strengthening the capacity of health system stakeholders to develop and implement policies, standards and regulations
		Results 1.2: MSHPCMU has the capacity for leadership, coordination, regulation of the health pyramid at various levels, and effective coordination with the private sector, local governments, civil society and development partners.
		Results 1.3: Improving the capacity of central and local health system stakeholders to effectively mobilize and manage financial resources
	Outcome 2: Appropriate use of health information through planning, monitoring and evaluation	Results 2.1: Improving the capacity of national, private, NGO and other stakeholders at the central and local levels to produce and manage quality health information.

	systems for decision-making on the effective implementation of health interventions	Results 2.2: Strengthening the capacity of health system central and operational levels to plan, monitor and evaluate health activities
		Results 2.3: Strengthening the capacity of health system research and innovation development
Strategic Axis 2: Providing high-quality services	Outcome 3: Ensure that health systems adequately invest in quality health services accessible to the population	Results 3.1: Health systems have adequate quality, equitably distributed and motivated human resources
		Results 3.2: Health systems have adequate infrastructure and facilities at all levels of the health pyramid and are maintained in good condition
		Results 3.3: Strengthening the health system's capacity to increase access to adequate and quality health products
	Outcome 4: Health systems provide better care for specific priority groups	Results 4.1: Developing health systems that delivers integrated services tailored to the needs of mothers, newborns and children
		Results 4.2: Developing health systems to provide integrated and appropriate services to adolescents and young people
	Outcome 5: Health systems ensure better prevention and control of diseases	Results 5.1: Developing health systems for effective management of infectious diseases
		Results 5.2: Developing health systems to effectively address non-communicable diseases
		Results 5.3: Developing health systems for effective management of neglected tropical diseases
		Results 5.4: Improving facilities for infectious disease control and medical and pharmaceutical waste management at medical facilities
		Results 5.5: Improving the capacity of stakeholders at all levels of the health pyramid to manage the quality of care
		Results 5.6: Strengthening the capacity of health systems to deliver quality nutrition services
	Outcome 6: Health systems ensure effective response to public health emergencies	Results 6.1: Health systems have the capacity to prepare for emergencies and preventing public health crises
		Results 6.2: Health systems have the capacity to detect and respond to public health emergencies at an early stage

		Results 6.3: Health systems have enhanced capacity to ensure continuity of essential health services in emergencies
Strategic Axis 3: Use of Health Services	Outcome 7: People, especially the most vulnerable, use quality health services and take appropriate action to promote their health	Results 7.1: Individuals and communities have knowledge, skills and resources for disease prevention
		Results 7.2: The population, especially the most vulnerable, has the capacity to access enhanced quality health services
		Results 7.3: The population, especially the poorest, has social protection mechanisms and means to address the risk of disease and to access quality care
		Results 7.4: Local governments, local organizations and health workers have the capacity to prevent enhanced disease, promote health and access to quality health services.

Source: Prepared by the survey team based on the preliminary PNDS 2021-2025

PNDS 2021-2025 sets the baseline indicators and targets as shown in the table below. With regard to the key target values, CMU coverage (the number of people insured in relation to the total population) has been set, with a target value of 32% in 2025, compared to the baseline indicator of 11% in 2020[79]. On the other hand, since some of the indicators and target values are still under consideration and development, it is necessary to wait for the publication of the final version of the PNDS 2021-2025 to confirm the details[80].

Table 12: Baseline indicators and targets for PNDS2021-2025[81]

Indicator	Base year	Baseline	Target by 2025	Index's source
Life expectancy	2020	57	62	Profil Pays OMS
Maternal mortality ratio per 100,000 live births	2020	614	377	EDS 2012
Incidence of TB (per 1000 population)	2020	137	96	Rapport d'activité PNLT

[79] The target is 14% (2021), 18% (2022), 23% (2023) and 28% (2024).
[80] As of January 2022, no definitive edition has been identified.
[81] "-" in the table indicates missing data. Baseline indicators are generally cited from international organizations and government statistics. Setting indices are drafted and may be added to or modified in the future.

Prevalence of acute respiratory infections younger than 5 years	2020	3.6	2.3	Rapport d'activité PSME
Incidence of malaria per 1,000 population	2020	173	141	RASS 2020
Number of new HIV cases	2020	10,631	3,189	Spectrum 2020
Under-five mortality rate per 1,000 live births	2020	96	60.5	-
Growth impairment rate of children under five years	2016	21.6%	18%	EDS/MICS 2016
Percentage of infants with low birthweight	-	14%	8.5%	-
Prevalence of sexually transmitted diseases in adolescents and young adults	2020	1.5%	0.56%	Rapport d'activité PNSSU-SAJ
Number of pregnancies among adolescents and young children	2020	5,430	1,779	Rapport d'activité PNSSU-SAJ
Outcome 1: Ensure efficient and inclusive leadership, management and financing of health system stakeholders at central and local levels				
Enactment and enforcement of health-related laws	-	-	-	-
Annual growth rate of the MSHPCMU budget	2020	-16%	15%	-
Public health expenditure as a percentage of GDP	2018	1.27%	5.32%	CS[82]
Percentage of national budget allocated to health	2018	7.43%	8%	CS
Direct expenditure of households on medical care (percentage of medical care expenditure in households)	2018	39.43%	20%	CS
Percentage of documents related to the application and implementation of reforms in the health sector identified in the PNDS	-	-	-	-
Percentage of local governments with development plans, including specific activities for prevention, promotion and use of health services	2020	100%	100%	Rapport d'activité DGDDL
Outcome 2: Appropriate use of health information through planning, monitoring and evaluation systems for decision-making on the effective implementation of health interventions.				
Score for use of health data	-	-	-	-
Percentage of performance indicators in PNDS 2021-2025 that achieved their targets	-	-	-	-
Percentage of output indicators for PNDS 2021-2025 that achieved goals	-	-	-	-

[82] Government statistics

Outcome 3: Ensuring that health systems adequately invest in health services accessible to the quality population				
Percentage of people living within 5 km of the health facilities	2020	70.17%	80%	RASS 2020
Percentage of hospitals meeting functional criteria	-	-	-	-
Percentage of private accredited health facilities	2020	-	-	-
Density of HCWs/residents	2020	8.57%	11.91%	RASS 2020
Outcome 4: Health systems provide better care for specific priority groups				
Percentage of under-fives with cured malnutrition	2020	86%	95%	Rapport d'activité PNN
Percentage of women of childbearing age receiving iron and folic acid supplementation	-	-	-	-
Percentage of antenatal care during the first trimester	2020	33.88%	46.38%	Rapport d'activité PNSME
Ratio of unmet needs to family planning	2020	21.5%	13.3%	Rapport d'activité PNSME
Percentage of fulfilled needs to obstetric complications in health-care facilities	2020	11.1%	68%	Rapport d'activité PNSME
Percentage of women receiving post-natal care (within 72 hours)	2020	83.2%	89.1%	Rapport d'activité PNSME
Rate of mother-to-child transmission of HIV, including breastfeeding period	2020	7.06%	2%	Spectrum
Proportion of children under five years with diarrhoea treated with ORS plus zinc	2018	18%	10%	Plan strategique PNSME, 2021-2025
Coverage of DTP-HepB-Hib vaccine	2020	90%	100%	Rapport d'activité DC-PEV
Coverage of measles and mumps vaccine	2020	86%	100%	Rapport d'activité DC-PEV
BCG vaccination coverage	-	-	-	-
Percentage of children under five years who are assessed for nutrition	-	26%	70%	Rapport d'activité PNN
Modern contraceptive prevalence	2020	21%	40.5%	Plan strategique PNSME, 2021-2025
Percentage of children under one year who were lost to follow-up in immunization programmes	2020	13%	4%	Rapport d'activité DC-PEV
Outcome 5: Health systems ensure better prevention and control of diseases				
Percentage of HIV-infected persons who	2020	84%	95%	Rapport

know their HIV status at the end of the reporting period				d'activité PNLS 2020
Percentage of children and adults receiving ARV treatment among all HIV-infected persons who know their HIV status at the end of the reporting period	2020	78%	95%	Rapport d'activité PNLS 2020
Percentage of HIV-infected persons receiving antiretroviral therapy who were undetected	2020	82%	95%	Rapport d'activité PNLS 2020
Success rates for patients with new or recurrent TB disease (cured/completed)	2019	84%	90%	Rapport d'activité PNLT
Rate of treatment success for patients with rifampin-resistant (RR-TB) and multidrug-resistant (MDR-TB) tuberculosis	2019	74%	84%	Rapport d'activité PNLT
Proportion of patients with new or recurrent HIV-positive TB who received antiretroviral therapy during treatment for TB	2019	96%	100%	Rapport d'activité PNLT
Percentage of women aged 25 to 49 who test positive for cervical cancer	2017	0.597	0.7	Rapport d'activité PNLCa
Number of patients with multidrug-resistant/rifampin-resistant TB (initiation of second-line therapy)	-	-	-	-
Notification rate of patients with viral hepatitis (index for management of patients with viral hepatitis)	-	-	-	-
Percentage of at-risk households protected by indoor residual spray (coverage of support for infectious disease control)	-	-	-	-
Percentage of medical institutions meeting or exceeding 80% of quality standards	-	-	-	-
Number of patients with NTD receiving prophylaxis	2020	-	500	Rapport annuel des programmes MTN
Percentage of NTD patients requiring clinical management who are receiving care or treatment (NTD-PC therapeutic coverage)	2020	-	-	Rapport annuel des programmes MTN
Percentage of medical institutions with a patient satisfaction level of at least 60% and engaged in the quality improvement process	-	-	-	-
Proportion of properly managed malaria patients	-	-	-	-
Drop-out rate in immunization expansion	2020	10%	5%	Rapport

plans				d'activité CNAM
CMU coverage ratio (the number of insured persons in the total population)	2020	11%	32%	Rapport d'activité DC-PEV 2020
Outcome 6: Health systems ensure effective response to public health emergencies				
19 levels of required capacity under the International Health Regulations (IHR)	2019	19%	70%	Rapport de l'évaluation à travers l'outil Remap
Outcome 7: People, especially the most vulnerable, use quality health services and take appropriate action to promote their health				
Proportion of households with access to safe water	2016	8.9%	10.2%	MICS 5
Percentage of people who slept the day before using mosquito nets	2019	63.2%	80%	Rapport évaluation post campagne
Proportion of households using sanitary toilets	-	-	-	-
Proportion of people forced to live outdoors	-	-	-	-
Percentage of children under six months who are primarily breastfed	2016	23.5%	72%	Rapport d'activité PNN
Percentage of CMU insured persons who never received the benefits expected during the period covered	2020	-	-	Rapport d'activité CNAM
Percentage of households implementing « Les Pratiques Families Essentials (PFE) »	-	-	-	-
Unmet needs for utilization of health services	2016	-	-	MICS 5

Source: Prepared by the survey team based on the preliminary PNDS 2021-2025

5.2. Budget planning

1) Health financing status

The main health financing indicators for Ivory Coast and neighboring countries and regions are shown in the table below. As discussed in Chapter 1, the share of government health expenditure in government spending (indicator (iv)) is low and does not reach the 15 percent declared in Abuja. This implies that the health sector is still not a high priority in government spending. As for current health expenditure (indicator (i)), it is in the low 4% range as a percentage of GDP. This is comparable to the average for low- and middle-income countries, but lower than the average for sub-Saharan Africa and Kenya. The same trend can be seen in the government's health expenditures: indicators (2), (3), and (4) are higher than in Senegal, but the self-payment rate and expenditures from sources other than the government

(indicators (5) to (8)) are higher than in other countries.

According to JICA's survey in Senegal, the values for achieving UHC are as follows: indicator (5) is less than 20% (39.43 in Ivory Coast), government health expenditure as a percentage of GDP is more than 5% (indicator (2), 1.21 in Ivory Coast), and government health expenditure per capita is $86.3 (indicator (3), 20.71 in Ivory Coast). 71). Ivory Coast does not meet either of these targets, and is in need of government fiscal mobilization and prioritization of the health sector.

Table 13: Health Financing Indicators (2018)

INDICATORS	IVORY COAST	SENEGAL	KENYA	SUB-SHARA AFRICA	LOWER MIDDLE INCOME COUNTRIES	LOW INCOME CONTRIES
(1)**CURRENT HEALTH EXPENDITURE (CHE) AS % GROSS DOMESTIC PRODUCT (GDP)**	4.19	3.98	5.17	5.16	4.1	5.23
(2)**DOMESTIC GENERAL GOVERNMENT HEALTH EXDPENDITURE AS % OF GDP** (%)	1.21	0.95	2.18	1.92	1.47	1.12
(3)**DOMESTIC GENERAL GOVERNMENT HEALTH EXPENDITURE (GGHE-D) PER CAPITA IN US$**	20.71	14.00	37.24	30.25	35.35	7.19
(4)**DOMESTIC GENERAL GOVERNMENT EXPENDITURE ON HEALTH EXPENDITURE (GGHE-D) AS % OF GENERAL GOVERNMENT EXPENDITURE (GGE)**	5.07	4.26	8.55	n/a	5.62	n/a
(5)**OUT-OF-POCKET (OOPS) AS % OF CURRENT HEALTH EXPENDITURE (CHE)**	39.43	55.89	23.62	33.39	51.23	43.41
(6)**DOMESTIC PRIVATE HEALTH EXPENDITURE (PVT-D) AS % CURRENT HEALTH EXPENDITURE (CHE)** (%)	58.87	62.50	42.35	51.41	61.15	49.73
(7)**VOLUNTARY HEALTH INSURANCE (VHI) AS % OF CURRENT HEALTH EXPENDITURE (CHE)**	7.49	4.21	9.78	n/a	n/a	n/a
(8)**EXTERNAL HEALTH EXPENDITURE (EXT) AS % OF CURRENT HEALTH EXPENDITURE (CHE)**	12.32	13.72	15.51	12.26	2.66	29.5

(9)**SOCIAL HEALTH INSURANCE (SHI) AS % OF CURRENT HEALTH EXPENDITURE (CHE)**[83]	1.20	3.52	12.42	n/a	n/a	n/a

Source: Prepared by survey team based on (1)~(8)Worldbank database（2022） https://data.worldbank.org/topic/health , (9) Compiled by the research team from the WHO database World Health Organization Global Health Expenditure database

In Ivory Coast, the government's budgetary allocations to the health sector have remained at low levels for a long time. Since the end of the civil war, the government has implemented initiatives such as free health care programs and CMUs and is now attempting to increase health spending. Table 14 and Figure 8 show per capita current health expenditure (CHE), domestic government health expenditure (GGHE-D), and out-of-pocket expenditure (OOPS), each in per capita dollars. It can be seen that while health expenditures have increased in recent years due to government efforts, and recurrent expenditures have also increased, there has not been much progress in reducing co-payments.

Table 14: Time series of per capita health expenditure in US dollars

INDICATORS	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CURRENT HEALTH EXPENDITURE (CHE) PER CAPITA IN US$	74.05	74.29	76.09	72.76	80.53	63.51	67.48	69.77	72.17	75.09
DOMESTIC GENERAL GOVERNMENT HEALTH EXPENDITURE (GGHE-D) PER CAPITA IN US$	9.85	9.80	12.82	14.24	16.78	15.87	17.33	20.04	20.98	21.84
OUT-OF-POCKET EXPENDITURE (OOPS) PER CAPITA IN US$	43.33	43.99	40.17	40.86	41.19	27.05	27.00	27.36	28.35	28.00

[83] The share of social insurance in current health expenditure in Côte d'Ivoire is the same as the share of compulsory insurance in current health expenditure, which can be obtained separately from the WHO database. It is therefore assumed that compulsory CMU schemes are captured in this indicator. This indicator increased by one percentage point when the CMU pilot was launched in 2017.

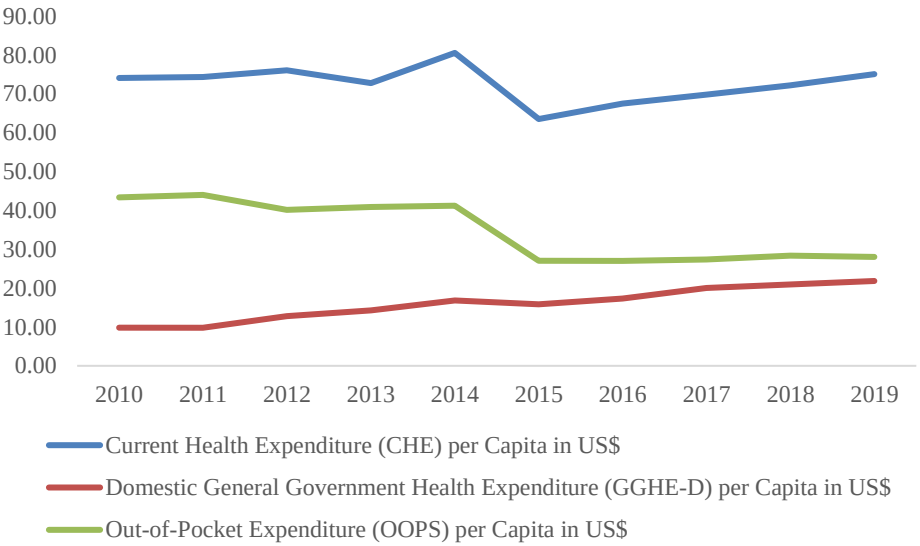

Figure 8: Figure Time series of per capita health expenditure

2) Preparation of medium-term and annual budgets

Resources need to be mobilized to support the development policies and plans described in Chapter 5-1. For the health sector, the medium-term investment plan, the Health Investment Plan (Finance de la santé, Dossier d'Investment: DI), includes the cost estimation (costing) of the measures and is a tool for mobilizing resources both internally and externallyfor the sector.

The actual budget allocation is led by the Ministry of Economy and Finance (MEF) and the Ministry of Budget and State Portfolio (MBPE) as a government-wide process including other ministries. Based on the macro-framework, which takes into account domestic and international resource forecasts such as revenues for the fiscal year concerned, and the medium-term expenditure framework, which is a tool for the allocation of limited resources based on macro-economic conditions, the ministries negotiate their budget as a government-wide process. Specifically, the MSHPCMU prepares an expenditure plan as a rolling plan based on this medium-term expenditure framework and requests an annual budget with a medium-term perspective. The figure below shows the relationship between each plan in the budget process.

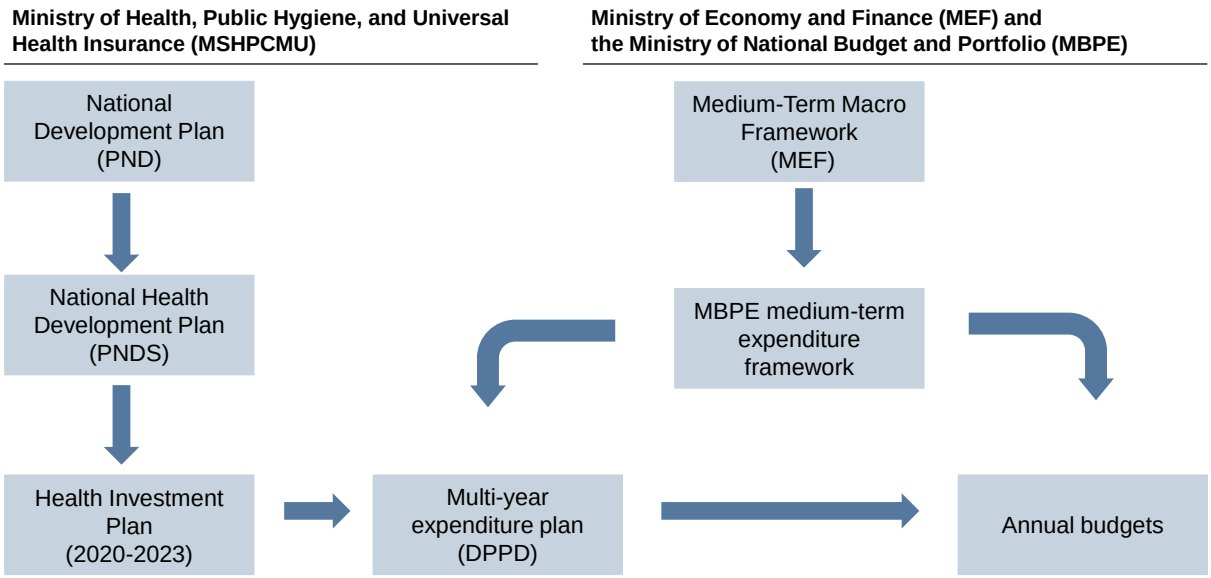

Figure 9: Relationship between plans in the budgetary process

Source: Compiled by the research team based on data from the Ministry of Budget and National Portfolio

The fiscal year for Ivory Coast is from January to December. The table below shows the schedule of budget formulation. For the annual budget for the next year in a shorter term, following the issuance of the guidance on budget ceiling by the Prime Minister, each ministry will prepare its annual and medium-term expenditure plan (Item 8 in Table 15). In particular, policy actions need to be positioned clearly in these budgets either in the next fiscal year or thereafter.

Table 15: National budget formulation schedule for Ivory Coast

	Budgeting steps	**Schedule**	**Responsible ministries and agencies**
1	Formulation of the Public Investment Plan (PIP) 2022-2024	Until April 30, 2021	(Ministry of Development and Planning)
2	Medium-Term Macroeconomic Framework 2022-2024	Until May 4, 2021	General Directorate of Economy, Ministry of Economy and Finance (MEF)
3	Formulation of medium-term budget framework 2022-2024	By May 18, 2021	General Directorate of Budget and Finance, (DGBF), Ministry of Budget and State Portfolio (MBPE)
4	Formulation of the Multi-Year Budget and Economic Plan (DPBEP) 2022-2024	By May 27, 2021	DGBF

5	Review and adoption of the Multi-Year Budget and Economic Plan (DPBEP) at the Ministerial Conference	By June 2, 2021	Cabinet Meeting
6	Holding a debate on budget proposal (DOB)	By June 16, 2021	MBPE/Parliament (Ministry of National Budget and Portfolio, Parliament)
7	Notification of budget ceiling through the Prime Minister's framework document	By June 23, 2021	Prime Minister's Office
8	Discussion by ministries, agencies, and local governments by sector	July 6-16, 2021	Ministry and Agencies
	Ministries and agencies submit multi-year expenditure plans (DPPDs) to the Ministry of Finance and Budget.	July 22, 2021	
	Preparation and submission of investment budget allocation plan for local governments	August 16, 2021	Decentralization and Development General Bureau, Local Governments
9	Holding budgetary meetings	July 26 to August 27, 2021	DGBF/ Ministries and Agencies
10	Ministerial Meetings	September 6-17, 2021	(Minister, Representative of the Ministry of National Budget and Portfolio
11	Review and Adoption of Budget Bills at the Ministerial Conference	From September 21 to 29, 2021	Cabinet Meeting
12	Submission of the draft budget to the Parliament	By October 14, 2021	Government General Secretariat
13	Budget execution	10th January 2022	DGBF (Department of Finance and Budget, Ministry of National Portfolio)

Source: Compiled by the survey team based on data from the Ministry of Budget and National Portfolio

The health budget includes the MSHPCMU and the health services of other ministries (e.g., military and education ministries). The figure below shows the final budget for 2015-2019.

Table 16: Government health budget 2015-2019 (FCFA)

	2015	2016	2017	2018	2019
Health budgets	**268,453,473,655**	**294,514,500,797**	**321,979,382,445**	**307,055,182,836**	**354,561,088,678**
MSHP CMU	247,334,649,045	272,990,963,684	305,266,489,763	295,479,029,922	343,904,656,686
(%)	92.13%	92.69%	94.81%	96.23%	96.99%
Year	-	110%	112%	97%	116%

over year					
Other ministries and agencies	21,118,824,610	21,523,537,113	16,712,892,682	11,576,152,914	10,656,431,992
(%)	7.87%	7.31%	5.19%	3.77%	3.01%

Source: Interview with Directorate of Financial Affiairs (DAF), MSHPCMU

5.3. Financial gaps analysis in the health sector

The Ivory Coast government does not publish data on annual fiscal gaps of Health sector. According to the MSHPCMU, it is possible to estimate gaps in the budget or finances through simulation, but in the end, the gap will deviate from the actual situation. The MSHPCMU also points out that it is impossible to accurately create gaps because the current government's plan, PNDS does not analyze routine operating costs. Therefore, it is not possible to discuss financial gap based on official data. However, this study requires identifying fiscal gaps as a way of ascertaining the need for assistance and examines how the government is considering financing for the government's medium-term plan. The main analysises on the financial gap of this study are on 1) the financial gap in the general budget, 2) the financial gap in the health sector, 3) the financial gap in countermeasures such as vaccines against COVID-19, and 4) long-term perspectives in health financing and its gap.

1) Financing gap in general public finance

Financial gaps in government finances can be estimated by referring to the government's medium-term fiscal framework. According to the AfDB, the financial gaps between 2021 and 2023 are as follows.

Table 17: Government fiscal fund gap in Ivory Coast (in billions of FCFA)

	2021	2022	2023
Overall budget balance	**- 1,775**	**-1,582**	**-1,352**
Domestic funds	219	4	192
External financing	1.303	751	703
Financing gap	***244***	**812**	**815**
Expected funding from Financing Partners (WB, AfDB, Bilateral donors)	***244***	**0**	**0**
Funding gap	**0.00**	**812**	**815**

Source: Interview with the African Development Bank, December 2021

In 2021, there would be a deficit of 1,775.4 billion CFAF. This will be financed

mainly by domestic and external borrowing, with a funding need of 243.6 billion FCFA. The World Bank, the African Development Bank, KfW, and other bilateral donors will support this financial gap in 2021. The tendency after 2022 will be same; a financial gap of about 810 billion FCFA (¥160 billion) is forecasted. From macro perspective, there will be a considerable scope for financial support.

2) Medium-term fiscal gap

The government's Health Investment Plan (Finance de la santé, Dossier d'Investment 2020-2023) estimates the necessary costs of implementing measures. In the Health Investment Plan, the total amount required for the investment projects is estimated to be 1,413 billion FCFA, while identifying priorities in the health sector.

Table 18: Financial gap in Health Investment Plan (Unit: million FCFA)

Priorities of the investment programme:	2020	2021	2022	2023	Total
Mobilising communities	12,804	5,070	5,859	8,011	31,745
Increasing/deploying human resources for health in an efficient manner	28,074	8,415	1,387	113	37,989
Mobilise the private sector	2,472	1,648	1,621	393	6,134
Ensuring the quality of primary health care	301,212	189,852	189,354	188,634	869,052
Provide quality medicines at an affordable cost	130,783	55,967	37,592	36,352	260,694
Improve the quality of data for decision making	52,425	37,187	12,859	13,218	115,690
Increase/use health resources efficiently	19,643	14,236	26,191	31,948	92,018
Total	547,413	312,375	274,864	278,669	1,413,321

Source: Prepared by the survey team from MSHPCMU (2019) Financement de la Sante

The underlying scenario assumes that the Government of Ivory Coast will continue to play a leading role, with a 5% annual increase in the health budget and 25% of this budget allocated to investment priorities. The government will invest 354 billion FCFA to the health sector in this scenario. However, the scenario assumes that the support of technical and financial

development partners is unpredictable. Thus, an analysis of the funding gap would require additional mobilization of 1059 billion FCFA over four years for national priorities. This is a scenario based on a number of assumptions, which do not need to be seen as absolute, but demonstrates that an increase in the government budget is essential for the government to carry out its priorities. Additionally, continued involvement of development partners and increased efficiency in priorities are also considered necessary.

Three scenario analyses are conducted in the investment plan: reference (status quo), realistic, and optimistic. The first 'reference' scenario reflects the situation as same as in 2019, assuming that government funds allocated to the health sector continue to increase from the level of 5 percent, and that development partners continue to support health at least as high as in 2019. The financial partner will support government to invest 842 billion FCFA and remaining financial gap will be 217 billion FCFA.

The second scenario reflects a commitment to increase the government's annual national budget for health by 15% and assumes that development partners will continue to provide support at the same level as in 2019, making it the most realistic scenario for investment planning from the Government point of view. The realistic scenario proposes that the Government will invests 452 billion FCFA in four years and the amount of investment from development partners will remain at the same level as 842 billion FCFA for the same period. In this scenario, the 118 billion FCFA gap remains to be filled.

The third scenario, based on more optimistic assumptions, states that national budgets will increase by 25 percent annually, and development partners continue to support health on at least the same level as in 2019. During this period, state contributions to FCFA amounted to 568 billion and contributions to FCFA by development partners amounted to 842 billion. Only Scenario 3 covers the investment needs of this investment plan.

It should be noted that this investment plan was formulated in April 2019, before the impact of COVID-19 began. Since the government has not announced an update on the funding gap in the investment plan, the details including the donor funding are unclear. Therefore, the data should be understood as suggestive.

3) Measures including COVID-19

The impact of the COVID-19 pandemic on the Ivory Coast economy has been significant. The real GDP growth exceeding 6% in 2018 slowed down to be 2% in 2020. The government's emergency response to COVID-19 was equivalent to 1.4% of GDP. The breakdown of 1.4% is 0.3% for health monitoring, 0.9% for emergency economic measures, and 0.3% for tax deferral. In any case, the government's financial resources will spend a significant amount toward COVID-19 measures. The impact of the government's emergency response on

the above investment plan needs to be assessed, though the government has not yet provided an analysis up to date.

The government is trying to acquire vaccines to target 70% of the population that acquires herd immunity against COVID-19. The World Bank that is involved in the vaccine delivery program as discussed in Chapter 4-1 (2), will provide additional funding from emergency support component of the SPARK-Health Project, the COVID-19 Emergency Response Project and its additional funding in coordination with the AIIB, will be ready to support 70% of the population, according to the Bank's estimates. However, there is no plan for vaccination for the remaining 30% of population or younger people, and new needs such as boosters, new variants, etc. Therefore, there will be a funding gap for vaccine supply as well. The situation surrounding COVID-19 and vaccination is rapidly changing so, budgetary information from the government and donor support measures will need to be collected and updated on considering any support.

4) Long-term perspective

In terms of health financing in Côte d'Ivoire, the government budget is in need of an increase in the medium to long term, but the consensus on how to to achieve this is not clear. In 2015, the MSHPCMU (then the Ministry of Health and AIDS Control) prepared a health financing strategy that outlines strategic areas for universal health coverage, including (1) mobilizing adequate resources for UHC, (2) protecting the population from financial risk through resource pooling, (3) improving resource allocation for the provision and purchase of quality health services, (4) improving the availability of quality and equitable service delivery, (5) Capacity building of stakeholders on UHC, and (6) Monitoring and evaluation. In particular, the core of the strategy is to share awareness of the issues with stakeholders in order to mobilize the budget in strategic area (1), and to establish institutions, especially the CMU system in strategic area (2).

Since this strategy was prepared in 2015, it does not reflect the awareness in social spending resulted from implementation of PS-Gouv, and successful pilots of CMU. In fact, MSHPCMU officials have acknowledged the need to update this strategy as it has been a long time since it was developed.

Currently, the initiative to find a long-term vision for health financing is the National Platform for Health Financing (Plateforme Nationale de Coordination du Financement de la Santé, PNCFS), established in April 2019. The PNCFS was established at the initiative of the Prime Minister with the support of the GFF to coordinate and monitor internal and external initiatives to improve health financing and implement health sector strategies. A steering committee chaired by the Prime Minister's Office oversees the overall operation, while the

MSHPCMU is in charge of running the technical secretariat. Under the steering committee, four technical working groups have been established: (1) Promoting universal health coverage and PBF, (2) Reforming hospitals and starting operation of health districts, (3) Improving financing efficiency and securing internal funds, and (4) Monitoring and evaluation. The PNCFS was established and started meeting in April 2019, but its activities stalled for a while due to the global pandemic of the new coronavirus soon after. The PNCFS was established and began meeting in April 2019, but soon became inactive due to the global pandemic of the new coronavirus, and government meetings resumed in September 2021 and again in December 2021. Through this reactivation, discussion at PNCFS needs to contribute formulating a long term perspectives in health finanicng toward UHC as well as consusensus to promoting reforms.

6. Organizing information and analyzing issues on maternal and child health

6.1. Maternal death, stillbirth, neonatal death, infant death and under-five death

The Maternal Mortality Ratio (MMR) is still high in Ivory Coast with 645 deaths per 100,000 live births in 2018. [84] Meanwhile, according to RASS by MSHP (2021), 966 maternal deaths per 697,473 live births were reported in 2020, equivalent to 138.50 deaths per 100,000 live births, whish is down from 150.10 in 2019.[85] This number is largely less than the MMR estimates published by international organizations, possibly because, as noted in the same report, there were regions where maternal deaths had not been reported. According to the PNDS Assessment Report by MSHP (2021), although legislation was enforced in August 2019 to address the surveillance and review of maternal deaths, only 20% of cases of maternal deaths were reported in 2019 due to insufficient functioning of central and local governments[86] and inadequate cooperation in community surveillance.[87]

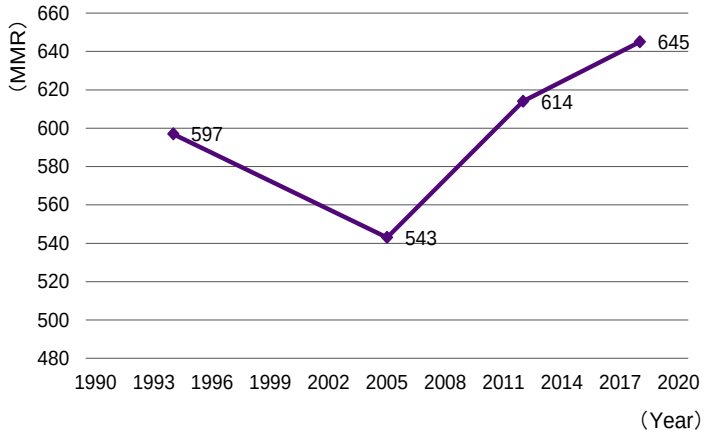

Figure 10: Changes in maternal mortality ratio per 100,000 live births from 1994 to 2018

Source: Prepared by the survey team based on PNDS Assessment Report by MSHP (2021)

By health region, Kabadougou (531.23 deaths per 100,000 live births), Gbêkê (317.60 deaths), and Bélier (241.54 deaths) have high maternal mortality rates. In Folon, N'Zi and Worodougou, no cases of maternal death have been reported[88].

[84] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[85] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020
[86] According to the JICA Ivory Coast office, renovation is planned in the future.
[87] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[88] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020

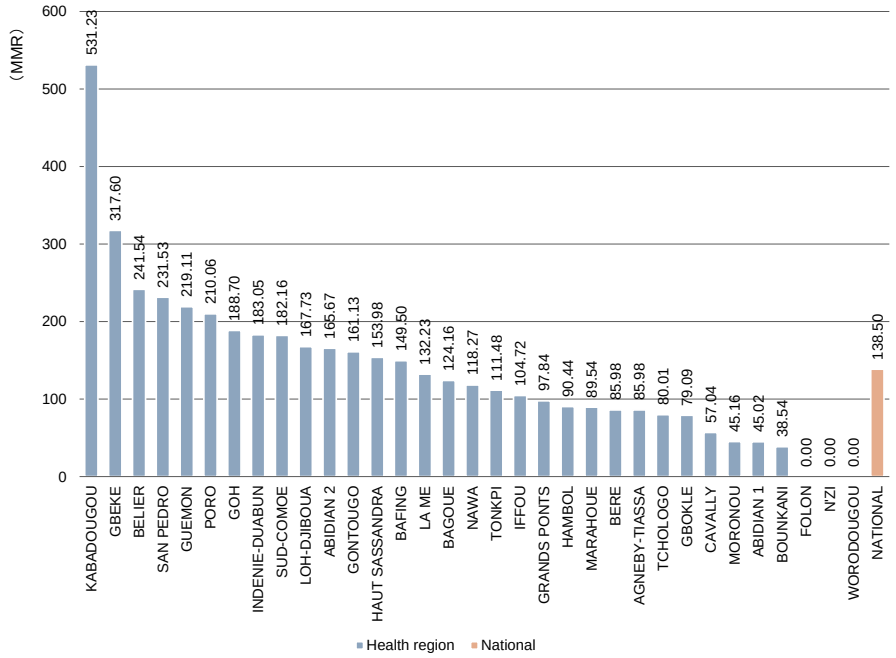

Figure 11: 2020 Maternal mortality ratio per 100,000 live births registered by health region

Source: Prepared by the survey team based on MSHPCMU (2021) RASS2020

By health district, the highest maternal mortality rates are found in Bouake northwest (1833.90 deaths per 100,000 live births), Odienné (669.76 deaths), and Cocody Bingeville (534.42 deaths). On the other hand, the lowest were Ouangolodougou (24.37 deaths), Guitry (19.36 deaths), and Méagui (14.56 deaths). No maternal deaths were reported in 28 health districts during the year 2020.[89]

[89] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020

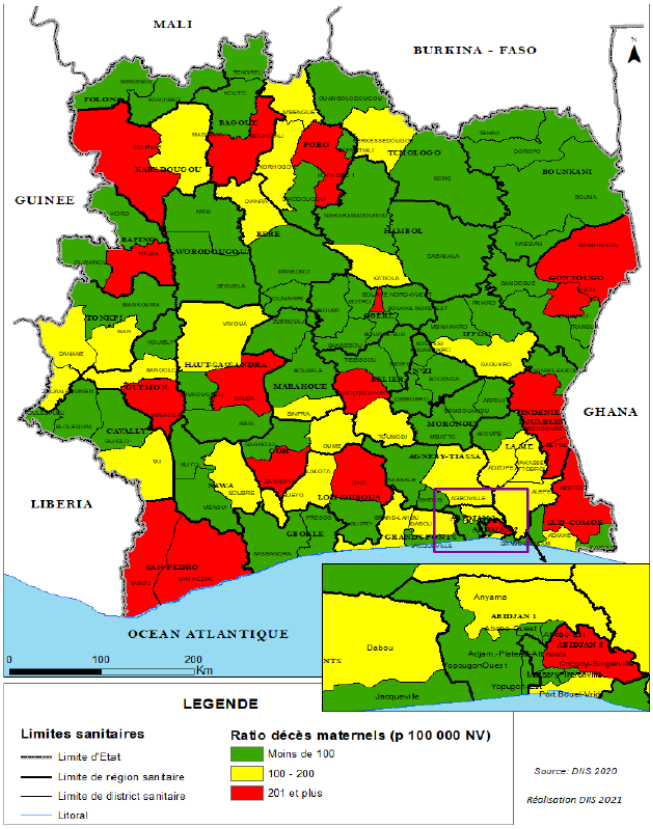

Figure 12: 2020 Maternal mortality ratio per 100,000 live births by health district

Source: MSHPCMU (2021) RASS2020

Regarding stillbirths, out of 697,473 births registered in public facilities in 2020, 21,127 were stillbirths, 3.03%, which is almost the same as 3.0% in 2019. The health regions with the highest rates of stillbirth are Haut Sassandra (4.60%), Tonkpi (4.52%), and Kabadougou (4.52%). Those with the lowest rates are Abidjan2 (1.74%), Gbèkè (1.71%) and Abidjan1 (1.69%).[90] They tend to differ slightly from the above-mentioned states with high maternal mortality ratios.

[90] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020

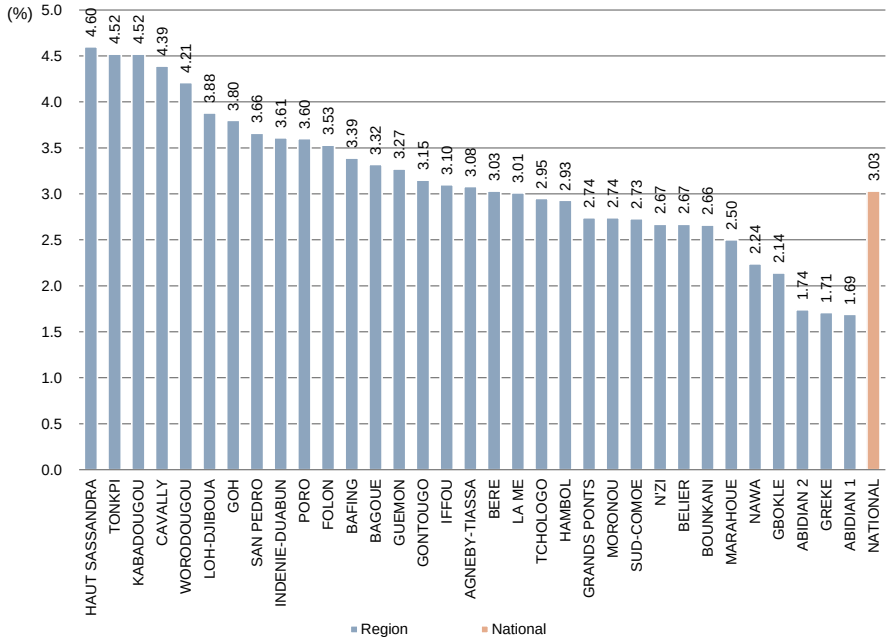

Figure 13: Percentage of stillbirths by health region in 2020

Source: Prepared by the survey team based on MSHPCMU (2021) RASS2020

When it comes to health district, the highest percentage of stillbirths was found in Guiglo (8.04%), Man (6.51%), and Daloa (5.47%). The lowest percentages were found in Tehini (1.06%), Bouake-sud (1.04%), and Bouake nor-ouest (0.92%).[91]

[91] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020

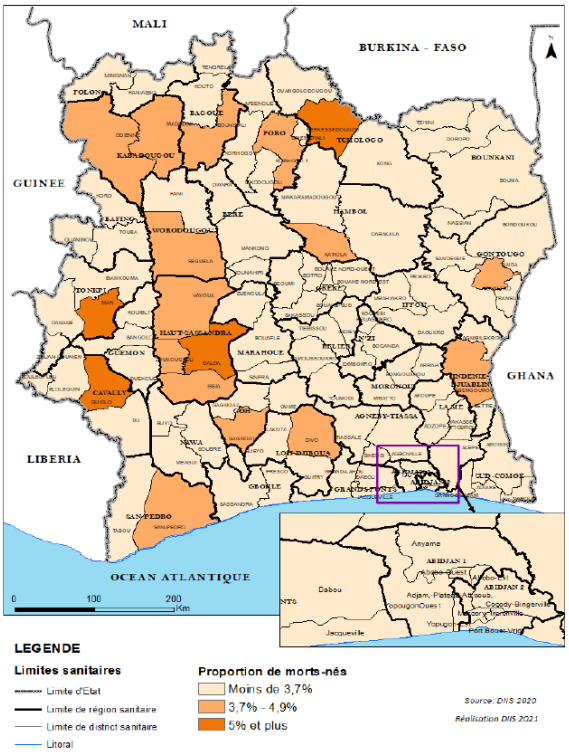

Figure 14: Percentage of stillbirths by health district in 2020

Source: MSHPCMU (2021) RASS2020

Using data from the Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) cited in the PNDS Assessment Report by MSHP (2021), the under-five mortality rate has declined from 181 deaths per 1,000 live births in 1999 to 96 per 1,000 in 2016, but still exceeds the Sub-Saharan Africa average (78 deaths). The infant mortality rate fell from 112 in 1999 to 60 in 2016 and the neonatal mortality rate from 62 in 1999 to 33 in 2016. The neonatal mortality rate accounts for about half of the infant mortality rate and about one third of the under-five mortality rate[92], which means that newborn care may need to be strengthened to reduce child mortality as a whole.

[92] MSHP (2021) Rapport final de l'evaluation externe du PNDS 2016-2020

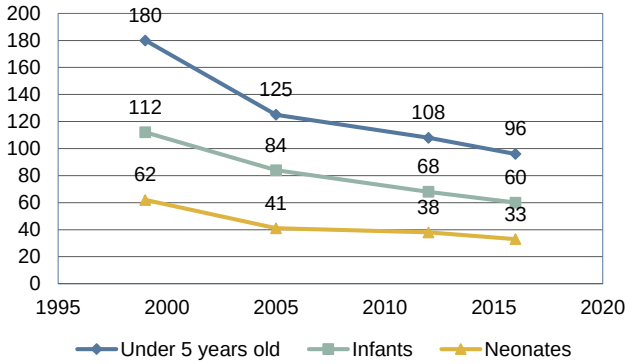

Figure 15: Changes in child mortality rates from 1999 to 2016

Source: Prepared by the survey team based on PNDS Assessment Report by MSHP (2021)

The PNDS Assessment Report by MSHP (2021) points out the following six fundamental causes of maternal and under-five mortality.

(1)	High incidence of early pregnancy
(2)	Lack of access to quality family planning, prenatal care and postnatal care services
(3)	Inefficient referral and obstetric complication management
(4)	Integrated Management of Childhood Illness (IMCI) and lack of access to services related to childhood HIV
(5)	Lack of access to quality nutrition
(6)	Insufficient access to safely managed water, sanitation and sanitation services

Source: MSHP (2021) PNDS Assessment Report

6.2. Availability of maternal and child health services

In the country, maternal and child health services with quality is not sufficiently utilized. According to the PNDS Assessment Report by MSHP (2021), only 33.5% of pregnant women in RASS 2019 received a first antinatal check-up in the first trimester. Although the percentage of pregnant women who received four or more antinatal checkups has increased from 38.2% in 2015 to 40.9% in 2019, there is an issue with the high drop-out rate (57.7%), which is the percentage of pregnant women who received the first antenatal checkup but did not continue until the fourth checkup. The drop-out rates vary by region, with 70.5% for Hambol, 71.7% for Kabadougou, Folon, and Bafing, and 77.4% for Worodougou Béré, compared with 40.9% for Abidjan. Although the rate of postnatal chekups increased from 17.61% in 2015 to 38.20% in 2019, there is a regional gap as well. The institutional delivery rate by skilled birth attendants (SBA) increased from 59.4% in 2012 to 64.1% in 2018. However, the SBA assisted delivery rate is 92.2% in urban areas while that in rural areas is 61.3%. Futuremore, Abidjan has a high rate of 94.4%, while the rate in the western region is 59.4% and that among women in the

low-income group is 48.8%. [93]

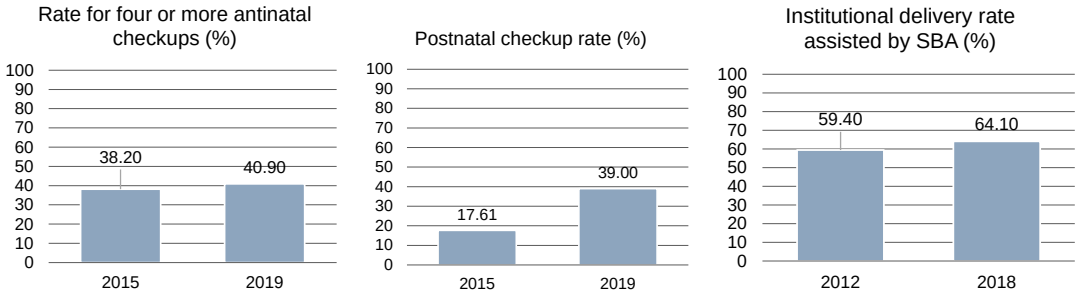

Figure 16: Maternal and child health service utilization rates (comparison between 2012/2015 and 2019)

Source: Prepared by the survey team based on PNDS assessment Report by MSHP (2021)

The impact of COVID-19 pamdemic on the utilization rate of maternal and child health services is considered to be limited as long as seeing publicly announced figures. Various measures are being continued regardless of the pandemic since maternal and child health is a priority issue for the government. For example, in 2020 after the pandemic, the percentage of pregnant women receiving one or four antenatal checkups and deliveries assisted by SBA increased slightly compared with the rate in 2019 before COVID-19.[94] On the other hand, interviews with several aid agencies have revealed that residents are hesitant to use healthcare services because of fear of infection, so the situation will need to be monitored closely in the future as well.

[93] MSHP (2021) Rapport final de l'évaluation externe du PNDS 2016-2020
[94] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020

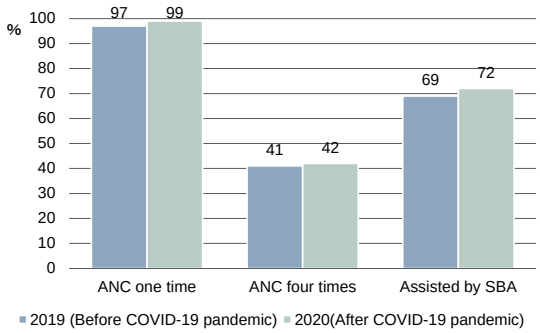

Figure 17: Maternal and child health service utilization rates (comparison between 2019 and 2020)

Source: Prepared by the survey team based on RASS2020 by MSHPCMU (2021)

As for human resources in charge of maternal and child health, the percentages of healthcare facilities with one or more midwives, state-certified nurses, and general practitioners are high with 99%, 97%, and 96%, respectively. However, since specialist staffing is limited to high-level health facilities, only 13% of facilities have surgeons and pediatricians, and 22% have obstetricians and gynecologists. Furthermore, only 34% of staff have been trained in neonatal resuscitation in the past two years.[95]

The most common health services available in institutions are family planning services (88%), maternal care (88%) and child immunization (82%). On the other hand, the proportion of institutions with the necessary equipments to provide 76ertain care tends to be low; basic obstetric care (59%), comprehensive obstetric care (60%) and care for child prevention and treatment (53%). When it comes to Basic Emergency Obstetric and Newborn Care (BEmONC), the services that were most commonly provided among the 19 packages were delivery services (85%), cord hygiene (84%), early and exclusive breastfeeding (84%), and cold protection, vaginal delivery support and oxytocin to prevent postpartum bleeding (83%). On the other hand, the services not provided were corticosteroid use during preterm delivery (14%), neonatal resuscitation (21%), and parenteral administration of anticonvulsants (25%). Cesarean section and blood transfusion are available in all tertiary care facilities and 64% of secondary care facilities.[96]

6.3. Maternal and child health issues

Maternal and child health is recognized as one of the priorities of the government, and

[95] SARA (2016) Evaluation de la Disponibilité et de la Capacité opérationnelle des Services de santé
[96] SARA (2016) Evaluation de la Disponibilité et de la Capacité opérationnelle des Services de santé

several donors who we conducted the interviews also expressed similar views. According to the Assessment Report by MSHP (2021), the main challenges in the field of maternal, newborn and child health are as follows:

(1) Development of legislation on reproductive health
(2) Emergency Obstetric and Newborn Care (EmONC), family planning, fistula and strengthening the capacity of service providers for neonatal management
(3) Operation of the national policy on delegation of tasks to community health workers (CHW) responsible for family planning and maternal and child health service delivery
(4) Implementation of the 2020-2023 Investment File
(5) Revitalization of the maternal, newborn and infant mortality rate task force
(6) Increased provision of quality services in health centres
(7) Expanding the scale of implementation of Basic Emergency Obstetric and Newborn Care (BEMONC) as a national priority

Source: MSHP (2021) PNDS Assessment Report

JICA's current project "Project for Improving Continuum of Care for Mothers and Newborns" supports the effective and efficient operation of the medical security system, which targets the Greater Abidjan Region and enables the provision of necessary medical services without undue burden on users. It also focuses on the establishment of continuous maternal and newborn care and aims to promote UHC by strengthening the referral system from communities and primary care facilities to tertiary care facilities, strengthening and promoting the use of health service delivery systems at all levels. Once a model for UHC promotion in the region has been established, regional deployment will be requred to reach more marginalized populations in rural areas. In doing so, the model of urban areas will be modified according to the actual conditions of the rural areas to be deployed, and the roadmap for sustainable development will be presented. Issues related to maternal and child health raised during the interviews with donors, including Japanese experts, are as follows.

Table 19: Results of interviews on maternal and child health issues

Donor/program	Issues concerning maternal and child health
Project for Improving Continuum of Care for Mothers and Newborns by JICA	・ There is no integrated policy for maternal and child health in Ivory Coast. ・ Activities are carried out in a sectionalized manner, making it difficult to grasp the overall picture of budget and activities. ・ Black boxing with uncertainty about how planned things are executed ・ Be evaluated only by the budget execution rate.
World Health Organization	・ The absolute number of physicians and gynecologists who can perform cesarean section is insufficient. ・ Healthcare professionals are unevenly distributed in cities.
African Development Bank (AfDB)	・ Insufficient accountability of healthcare professionals. ・ There is a gender gap.

French Development Agency (AFD)	・ Hospitals are old. ・ Lack of training for healthcare professionals due to the insufficient regional organizations. ・ There is no adequate financial management organization. ・ Low quality of services in public and private hospitals.
United Nations Population Fund (UNFPA)	・ Disproportionate distribution and low quality of healthcare workers. ・ Insufficient continuing learning to strengthen the capacity of health workers. ・ The specialization of healthcare professionals is not advanced. ・ Maternal deaths in rural areas are not accurately reported to the central government. ・ Rural health facilities have limited number of beds, and if delivery is repeated, a woman is forced to leave the hospital within 72 hours.

Source: Prepared by the survey team based on interviews with aid agencies

6.4. Challenges and improvements in maternal and child health services (cesarean section)

According to the national statoistics in 2020, there are 1.40 doctors per 10,000 population, 2.36 nurses per 5,000 population and 3.05 midwives per 3,000 women of childbearing age in Ivory Coast, which meets the WHO recommends (1 doctor per 10,000 population, 1 nurse per 5,000 population and 1 midwife per 3,000 women of childbearing age)[97], however, there is a large gap in the allocation of personnel by region[98]. As described in 6-2, only 22% of all hospitals have obstetricians and gynecologists, and the shortage of obstetricians and gynecologists in rural areas is a serious problem.

In 2020, the caesarean section rate increased slightly from 3.59% in 2019 to 4.33% in 2020, which is below the national target of 4.5%[99]. Regional disparities are also large. When examining the rate of cesarean section by region, only 15 out of 33 regions exceed the national target, and there is a large difference between the top three regions; Sud-Comoe (8.20%), Agneby-Tiassa (7.39%) and Belier (7.10%), and the bottom three regions; Folon (0.00%), Bere (0.10%) and Gbeke (0.67%). No cesarean section was performed in Folon because there was no operating room.

[97] However, WHO has identified, in 2006, that 2.3 doctors, nurses and midwives per 1,000 population are needed and the Sustainable Development Goals (SDGs) also aim for 4.45 doctors, nurses, and midwives per 1,000 population by 2030 (Source: WHO (2016) Health workforce requirements for universal health coverage and the Sustainable Development Goals. https://apps.who.int/iris/handle/10665/250330). Based on national statistics for Ivory Coast in 2020, the number of doctors, nurses, and midwives per 1,000 population was 0.85 (According to the report, we calculated that there were 0.14 doctors, 0.47 nurses, and 0.24 midwives. Women of childbearing age were calculated as 24% of the country's total population of 22,671,331). In this sense, the number of nurses, midwives, and midwives has not yet reached the WHO standard or SDG target.

[98] MSHP (2019) Politique Nationale de Délegation des taches en Santé de la reproduction/ planification familial

[99] MSHPCMU (2021) Rapport annuel sur la situation sanitaire (RASS) 2020

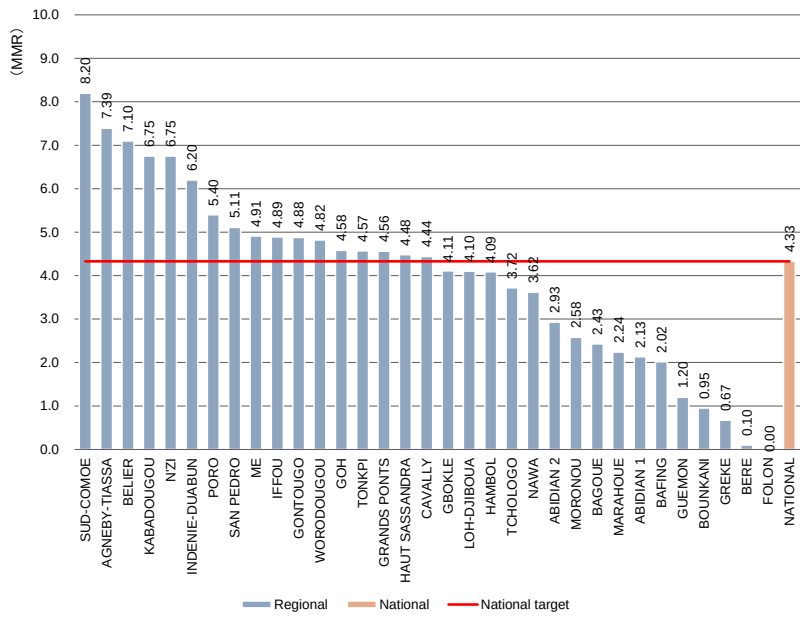

Figure 18: Percentage of caesarean sections by health region in 2020

Source: Prepared by the survey team based on MSHPCMU (2021) RASS2020

Furthermore, when the rate of cesarean section is classified into health districts, only 38 of the total 113 health districts have achieved the national target. Dimbokro (16.94%), Katiola (14.67%) and Anyama (14.44%) are high, but the rate of the lower three districts in Bocanda (0.02%) and de Zouan-Hounien (0.09%) et de Mankono (0.18%) are less than 1%.

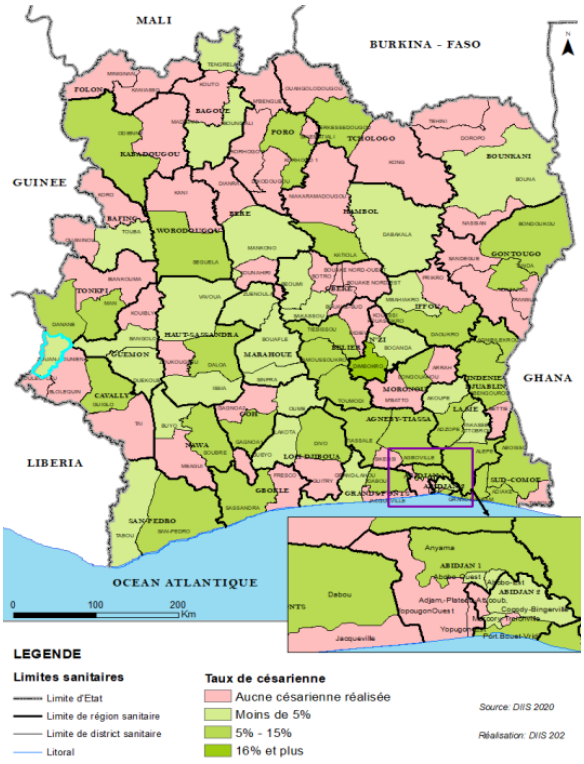

Figure 19: Percentage of caesarean sections by health district in 2020

Source: MSHPCMU (2021) RASS2020

According to WHO (2015) [100], the increase of the pesenrtage for cesarean sections, up to 10 percent of all births, are effective in reducing maternal and neonatal deaths[101]. However, the rate of cesarean sections in the country is well below this 10 percent, especially in rural areas. Behind this, there is the fact that cesarean section by general practitioners is not permitted by the law of the country, and it is pointed out in interview with the World Bank that many women who require cesarean section are not eligible for cesarean section even if they are transferred to hospitals where only general practitioners are available.

To improve this situation, the MSHPCMU formulated the "national policy on reproductive health/family planning (Politique National de Délegation des taches en Santé de la production/ Planning Family)" in 2019.[102] In 2021, DIMBA PIERRE N'GOU in MSHPCMU also announced its commitment to implementing the policy and formulated a plan to respond to the emergencies in obstetrics and gynecology for the period 2022-2024. In order to bridge the

[100] WHO (2015) WHO statement on caesarean section rates https://www.who.int/reproductivehealth/publications/maternal_perinatal_health/cs-statement/en/

[101] However, WHO does not state that thare is an appropriate "rate" of cesarean section. Rather, WHO mentions that cesarean section should be provided to all women who require it.

[102] MSHP (2019) Politique Nationale de Délegation des taches en Santé de la reproduction/ planification familial

regional gap between specialists (obstetricians and surgeons), this plan has decided to delegate tasks such as the implementation of cesarean section and other surgical procedures by general practitioners as a national policy. It aims to enable 150 general practitioners to provide quality services in obstetric, gynecologic, neonatal emergencies (caesarean and cardiac arrest) and surgical emergencies (hernias and appendicitis) by 2024. In addition, because the establishment of monitoring and evaluation systems is necessary in connection with the delegation of duties, a variety of actions have been organized, such as setting up the meetings to exchange opinions and training programs for each ministry and agency for the purpose of certifying the qualifications of practitioners.

Moreover, the MSHPCMU established "sexual and reproductive, maternal, newborn, and child health standards and protocols (Normes et Protocoles en Santé sexuelele reproductive, maternelle néonatale et infantile)" in 2021, which would be the standard for high-quality delivering services[103]. In Ivory Coast, the first document on family health policy, standards and procedures was prepared in 2008 and is continuously updated. The revised 2021 edition includes approaches and manuals on reproductive health issues, and various indicators such as implementation rates of cesarean section, and methods for calculating maternal mortality ratio.

[103] MSHP（2021）Normes et Protocoles en Santé sexuelele reproductive, maternelle néonatale et infantile

7. Medical security: information and analysis of issues

7.1. Outline of the medical security system

In Ivory Coast, from a health security perspective, the high out-of-pocket expenditure to health care has been a challenge. As shown in Table 13 in Chapter 5, out of pocket expenses as a percentage of current health expenditure remain high, and in relation to one of the indicators for achieving UHC, the percentage of the population with health-related expenditure as a percentage of household expenditure or income is 12.4% (2015), which is similar to the global average of 12.7% (2015). In relation to "percentage of population", the percentage of the population with health-related expenditure above 10% is 12.4% (2015), which is similar to the global average of 12.7% (2015) and higher than the African regional average of 7.3% (2015). The poverty rate due to out-of-pocket health care costs is also 2.25% (2015) in Ivory Coast, using a poverty line of $1.90/day, higher than the global average of 1.4% (2015) and the African regional average of 1.5% (2015)[104]. Reducing this burden on households, in particular reducing risk and easing the cost burden on the poor, has been a major goal in the development of the health care system in Ivory Coast.

After the presidential election in 2010, there were attempts to introduce a free health care system[105], and afterwards a more financially sustainable system for a wider group of beneficiaries. The results and the promotion of universal health insurance health coverage have been a priority for the President during the 2020 elections.

In recent years, Ivory Coast has been oriented towards social spending. The vision is expressed in the Programme Social du Governement 2019-2020 (PSGouv). PSGouv advocates the strengthening of the President's social dimension of policy implementation. Preparations began in 2018 and progress was made between 2019 and 2020 as a program to advance improvement and development in the following five areas: 1) ealth and social protection; 2) education; 3) acess to basic services; 4) empowerment of women and youth; and 5) improvement of living standards in rural areas. In the area of health and social protection, four priorities have been identified, namely, strengthening of free medical programs, strengthening of the Expanded Programme on Immunization (EPI), phased implementation of the universal health insurance (CMU)[106], and cash transfer system as a social safety net. In this way, moves to

[104] WHO (2019) Global monitoring report on financial protection in health 2019 9789240003958-eng.pdf

[105] After the political crisis of 2011, free healthcare was introduced, but only for a limited period of 10 months. This was followed by the introduction of specific free health care in 2012 for pregnant and nursing mothers, children under five, and malaria for the entire population. USAID(2014) Measuring and Monitoring Progress Toward Universal Health Coverage: A case study of Cote D'Ivoire

[106] In this report, the French term Couverture Maladie Universelle (CMU) is used as a translation for universal health insurance, although CMU is sometimes translated as universal health coverage. The CMU implemented by CNAM in Côte d'Ivoire aims to provide health insurance to all citizens, and therefore universal health insurance is the appropriate term for this report.

promote health security and social protection have been strengthened within the larger framework.

In Ivory Coast, the system of medical security is basically being developed through the social insurance system as the Courture Maladie Universell (CMU), which means universal health insurance. On the other hand, the Ministry of Labor and Social Protection (MEPS) bears insurance fees for destitute groups[107] in CMU, and although it is independent of CMU, the free medical care system for specific population groups or medical needs is implemented under the budget of MSHPCMU, so in addition to the social insurance, internal revenue is spent to consistute Ivory Coast's medical security. According to the governemnt officials (both MEPS and MSHPCMU) it is confirmed that the government intends to unify thse pararell health securty system into the CMU[108]. In addition to the CMU, Ivory Coast has a separate system of social security for civil servants, the Mutuelle générale des fonctionnaires et agents de l'État de Côte d'Ivoire (MUGEF-CI). Other traditional health insurance providers include the National Social Security Fund for Private Salaried Employees (Caisse Nationale de Prévoyance Sociale: CNPS), which is mainly responsible for the welfare of private salaried employees (see table below). In addition, there are private mutual aid societies and insurance companies, which collectively make up the health security system.

7.2. Schemes in medical security

Health care medical security and coverage in Ivory Coast consists of several schemes implemented by different institutions, as described in chapter 7-1. The main systems is summarised below.

Table 20: Comparison of Medical Security Schemes

SCHEME	**(1)CMU BASE GENERAL SCHEME（RGB）**	**(2)CMU MEDICAL ASSISTANCE SCHEME（RAM）**	**(3)SOCIAL SECURITY FOR CIVIL SERVANTS**	**(4)SOCIAL SECURITY FOR PRIVATE SALARIED EMPLOYEE**	**(5) TARGETED FREE MEDICAL PROGRAM**
TARGET	All Citiziens (except	Destitute who are considered to	Civil Servants and Agents	Salaried Employee	Pregnant and nursing women,

[107] In this report, the French term Couverture Maladie Universelle (CMU) is used as a translation for universal health insurance, although CMU is sometimes translated as universal health coverage. The CMU implemented by CNAM in Côte d'Ivoire aims to provide health insurance to all citizens, and therefore universal health insurance is the appropriate term for this report.
Population groups unable to pay insurance premiums. It is defined separately from the group below the poverty line (the poor), as defined in household surveys, and is therefore reported in this report as the Destitute.

[108] Interview with MSHPUHC and MEPS

	destitude who can participate in RAM)	be difficult to pay insurance contribution to RGB)			Under 5 chlidren, malaria patients and patients with acute illness
IMPLEMENTING AGENCY	IPS-CNAM	IPS-CNAM	MUGEF- CI	IPS CNPS	MSHPCMU
FINANCIAL RESOURCE	Insurance Contribution (Compulsory)	Tax (Subsidies from MEPS）	Tax and contrbution from salary of the civil servants	Employer and Employee	Budget of MSHPCMU
RESOURCE POOL	Fund in CNAM	Fund in CNAM	Pooled fund in MUGEF-CI and CNAM	Pooled fund in CNPS and CNAM	Tax
PURCHASING					
PACKAGE	See Table 21	Same as RGB	Services under MUGEF-CI in addition to CNAM (RGB)	Services under CNPS in addition to CNAM (RGB)	Maternity Services (including Caesarean section), Treatment of children under five, and malaria
SERVICE PROVISION	CNAM's accredited public health facilities and private facilities with public objectives, pharmacies	Same as RGB			Public Facilities
PAYMENT METHOD	The patients need to pay 30% of regulated price of medical services. Facility receives remaining 70% from CNAM.	Patients under RAM will reveive care without payment. The facilities will reveive reimibursement from CNAM.			Patients will reveive free service. Facilities will receive reimbursement from MSHPCMU.

Source: Survey team

(1) CMU General Base Scheme

The CMU General Basic Scheme (Régime Général de la Base: RGB) and the Medical Assistance Scheme (Régime d'Assistance Médicale: RAM) are both administered by IPS-CNAM. Under the General Basic Scheme (RGB), by contributing 1,000 FCFA per person per month, Ivorians become a member, and by taking their cards to a CNAM-accredited medical facilities (public or private with a public mission), one can receive medical service by paying 30% of the government's official prices for eligible medical treatments and medicines at the facility. The CNAM will then pay 70% of the cost to the medical facilities.

The coverage of medical treatment under the RGB of CMU is summarised in the

following Table 21.

Table 21: Medical Services under CMU

<table>
<tr><td>Medical Facilities</td><td>Public faciliteis and private facilities with public objectives (Total 950) and CMU registered pharmacies (Approximately 950)</td></tr>
<tr><td>Target populations</td><td>All Ivorian national
(CMU is in the process of general dissemination to include all Ivorians.</td></tr>
<tr><td>Insurance contribution</td><td>1000FCFA per person per month (approximately 1.5 Euro)</td></tr>
<tr><td>Clinical practice</td><td>① Clinical practice
Medical consultation, treatment, surgical procedures (to CMU-coveredpathology), hospitalization, oral care and cesarean section and delivery of radiological diagnosis, follow-up, blood transfusion, medical biology, medical imaging

② Price
The fees vary according to the category to which the health facility belongs

<table>
<tr><th>Type of facilities</th><th>General practicioner (FCFA)</th><th>Medical specialist (FCFA)</th></tr>
<tr><td>Rural Health Center (CSR)</td><td>100</td><td></td></tr>
<tr><td>Urban Health Center (CSU)</td><td>500</td><td>500</td></tr>
<tr><td>Urban health facility (FSU)</td><td>500</td><td>500</td></tr>
<tr><td>General Hospital (HG)</td><td>1,000</td><td>2,000</td></tr>
<tr><td>Community hospital (CHR)</td><td>1,500</td><td>2,500</td></tr>
<tr><td>University Hospital (CHU)</td><td>5,000</td><td></td></tr>
</table>

Medical treatment
In accordance with Decree No. 2016-865, the medical and biological practice generic nomenclature of Ivory Coast (NGAMBCI) defines the cost of medical practice.
Hospitalization
Hospitalization fees are based on the level of the category to which the health facility belongs.

③ Medicine
Drugs subject to CMU are also specified as follows. Analgesic antipyretics, steroidal anti-inflammatory agents, non-steroidal anti-inflammatory agents, anti-anemia agents, anti-asthma agents, antibiotics, anticoagulants, anticonvulsants, anti-emetics, antifungals, anti-gout agents, anti-hemorrhagic agents, anti-non-hypnotics, antihistamines, anti-cough agents, antihypertensives, anti-malarials, anti-parasitic agents, anti-septic agents, anti-convulsant/muscular agents, anti-ulcer agents, keratolytics, scar formers, mydriatics, infusions, sympathomimetics</td></tr>
</table>

Source : Prepared by Survey Team based on CNAM(2019) Actes et Tarification de la Couverture Maladie Universelle

According to the interviews, the scope of the CMU is narrower than the WHO recommended essential package, and it is determined by balancing the necessary disease with the cost and thus excluding chronic diseases. The same scope is specified for medicines. This scope set by CMU was developed through consultation among various stakeholders including government, private sectors, civil organisations and reviewed every two years.

(2) Medical Assistance Schme (RAM)

The Medical Assistance Scheme (RAM) is a government scheme that provides financial assistance to those in need. Households unable to pay premiums are eligible for RAM if they qualify through a Proxy Means Testing process and are exempt from monthly premiums and direct payments to facilites. CNAM estimates that there are just under 3 million people in need and plans to identify and register them by 2024. As of the end of August 2021, about 35% of this target, or 1 million people, have been identified for RAM.

(3) Health insurance for civil servants

The scheme for civil servants is administered by the Mutuelle générale des fonctionnaires et agents de l'État de Côte d'Ivoire (MUGEF-CI) and covers civil servants, local government employees, military and police personnel and their retirees. Originally covering medicines, dentistry and vision correction, the additional scheme will provide access to a wider range of medical services.

(4) Health insurance for private salaried employees (social insurance)

For private salaried employees, the Caisse Nationale de Prévoyance Sociale (CNPS) has traditionally acted as a health insurance scheme. Companies are required to register their salaried employees and pay a premium of 14% of their salary to the fund. （The employer-employee ratio is 55%:45%.) In 2020, there will be 39,000 employers and 863,000 salaried employees.

(5) Free medical care system

Prior to the launch of the universal health insurance system, CMU, the government has been implementing a free medical care system since 2012 to reduce the burden on maternal health and some tafgeted diseases. This free medical care service called ‘Gratuite Ciblee’ is provided for free delivery (including routine checkups and cesarean section) and under-five care, and treatment of Malaria.

However, according to the World Bank (2020), the free health care system is inefficient and did not work as expected. The report notes that under-budgeting, delays in budgetary allocations, and stockouts of medicines hinder efficiency. This free medical care system has also reported adverse effects, such as an increase in congestion caused by users who

cannot expect to receive medical care in the primary care facilities without referrals to the higher care facilities.

Government underbudgets have also been identified. According to the government, it is estimated that the direct cost alone is 41.5 billion FCFA (excluding CMU) for the implementation of the free medical care system. As shown in the table below, the budget for the past three years is about 15 billion to 18 billion FCFA, and the budget allocation is insufficient.

Table 22: Free health care budget

(Million FCFA)

	2018	2019	2020	2021	2022
MATERNITY EXPENSES	4,795	4,850	5,800	5,850	5,850
CAESAREAN SECTION EXPENSES	4,644	4,650	5,650	5,650	5,650
COST OF MALARIA TREATMENT	4,550	4,800	5,850	5,800	5,800
OTHER FREE MEDICAL CARE SYSTEM	700	700	700	700	700
TOTAL	14,688	15,000	18,000	18,000	18,000

Prepared by survey team based on data from MSHPCMU, Budget (2021, 2022)

7.3. The situation of CMU

(1) Status of CMU registration

As of September 2021, there were 3,175,000 people registered in the CMU system, 12% of the total population. Of this number, 2,091,000 (70%) have been issued with a registration card (to be taken and presented when receiving services at CNAM registered facilities) and 140,000 have actually received services.

The evolution of the number of registered users is shown in Figure 20 and the breakdown by category at the end of September 2021 is shown in Figure 21. This categorical classification is based on the socio-professional classification (categories socio-pforessionelle) used by CNAM. The number of registrations is dominated by "informal independent self-employed (Profession liberale informel)", students and other qualified freelancers (Autro ayant droit). Unfortunately, the definitions of this socio-occupational classification were not available, so it is not clear where the agricultural workers described by the CNAM are classified, but it is thought that they are either "informal independent self-employed" or "qualified self-employed". There has also been an increase in the number of people registered who are assumed to be salaried employees (10%), civil servants (6%) and their families (housewives and students). The deprived group accounts for 2% of the registered population.

On the other hand, the beneficiaries of the actual treatment and provision of medicines are mainly civil servants (52% of the subsidies for the purchase of medicines and 35% of the

treatments are for civil servants). In this respect, there is a discrepancy between the expectations of being universal health coverage and the reality.

There are a number of reasons why registration has been slow. Firstly, many rural populations do not have the required documents, such as birth certificates. There are delays in issuing and distributing the CNAM registration cards from the contractors. There are also reports of limited incentives for citizens who is not satisfied with limited benefit packages available, difficulty in access the treatment they want, and not-enough accredited facilities or poor services.

Regarding RAM schemes, there are 40,000 cardholders and 1,600 actual service beneficiaries as of September 2021. There are some cases in which cardholders are denied services because information on RAM, which are special scheme for destitute people are not know at the facility.

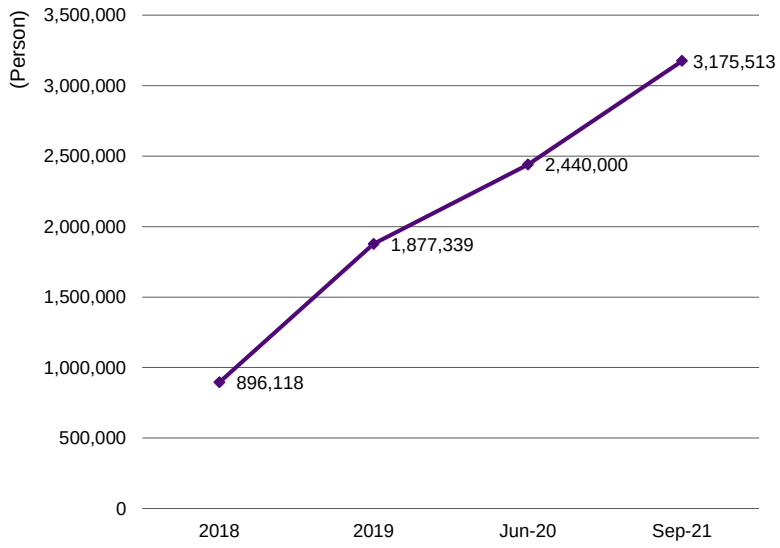

Figure 20: Changes in the number of registered CNAM members

Source: Compiled by the research team based on the World Bank's questionnaire to CNAM (September 2021)

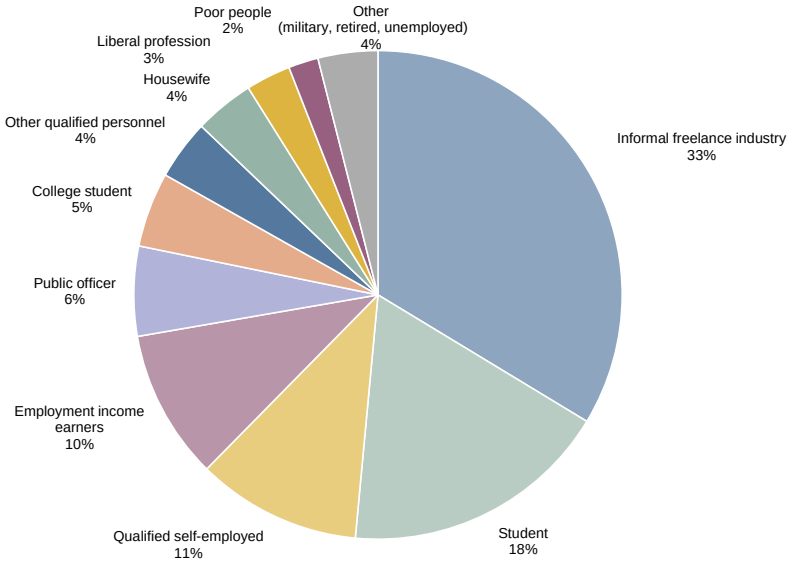

Figure 21: CNAM members by category

Source: Compiled by the research team based on the World Bank's questionnaire to CNAM (September 2021)

(2) CMU implementation structure

1) Ministry of Employment and Social Protection

In Ivory Coast, the MSHPCMU is in charge of the formulation and implementation of policies for medical services, while the General Directorate of Social Protection (DGPS) of the Ministry of Employment and Social Protection (MEPS), is in charge of the IPS-CNAM, which is the implementing agency of CMU. The organization chart of MEPS is shown below.

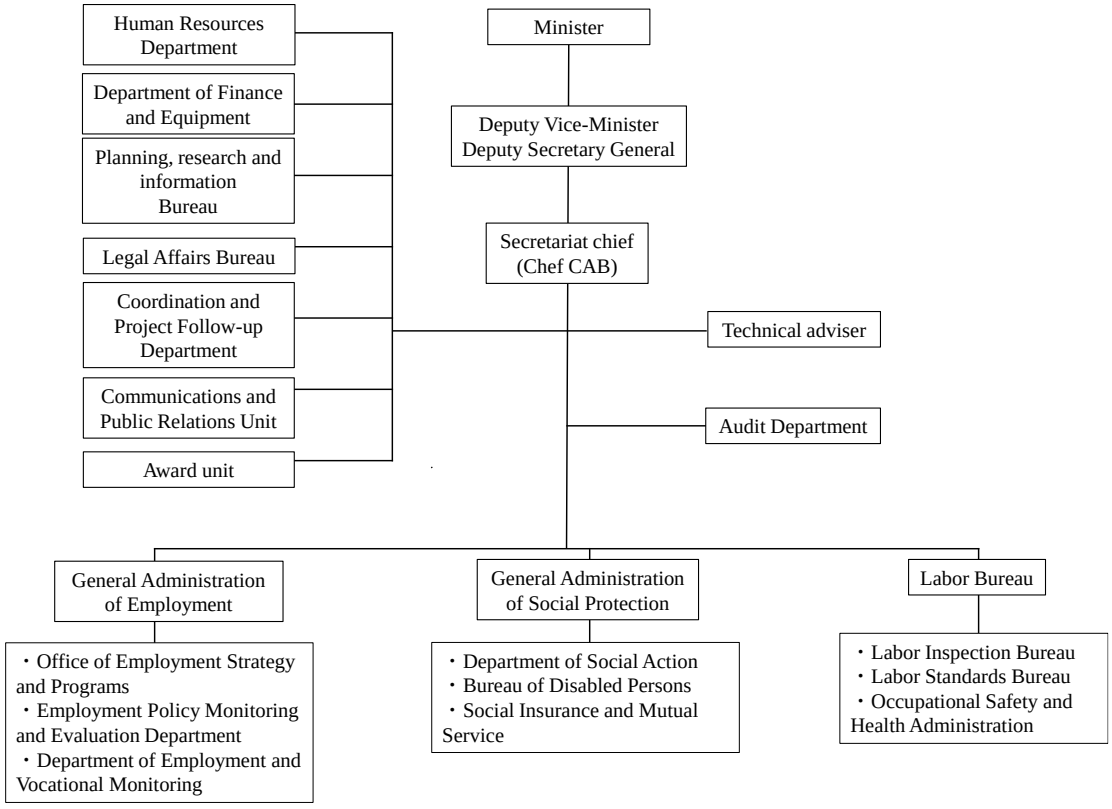

Figure 22: Organization of the Ministry of Employment and Social Protection

Source: Prepared by survey team based on MEPS website

The Government's Multi-Year Expenditure Plan and Performance Projection Report (Documents de Programmation Pluriannuelles des Depenses Projets Annuels de Performance: DPPD-PAP) states that by 2024, in coordination with the relevant ministries The Directorate General of Social Protection, in coordination with the relevant ministries, will be responsible for the promotion of CMU, including public information, promotion of registration, collection of premiums, management of funds, development of schemes, management of programmes for the needy and coordination between schemes. FCFA) and for the management of the RAM (12.7 billion FCFA per year).

In terms of strengthening the implementation of CMU, the former Ministry of Health and Public Health is to be reorganised as the Ministry of Health and Public Health Universal Health Coverage in the first half of 2021, and MSHPCMU is expected to play a role in the administration of CMU (see Chapter 5-1).

2) Organization, mandate, governance and financial situation of the implementing agency IPS-CNAM

The National Health Insurance Fund (Institution de prevoyance sociale – caisse

nationale d'assurance maladie) was established under the decree of 25 June 2014 (No. 2014-395) based on the CMU Act (No. 2014-131 of 24 March 2014). IPS-CNAM is entrusted with its some functions to the CNPS (Caisse National de Prévoyance Society), the National Social Security Fund, the CGRAE (Caisse Générale de Retiree Des Agents de l'Etat National Retirement Fund), mutual aid, private insurance and other commissioned management agencies (Organisms Géstinioniires Délégueégués (OGD)) to manage and regulate the universal health system in Ivory Coast and to keep the organization sizable. The consigned business is broadly classified into the following types.

i) Functions solely related to coverage and repayment of contributions to CNAM

ii) Functions related to service management (medical care management, invoice clearing, payments to health care providers)

The organizational chart of IPS CNAM is presented as in Figure 23.

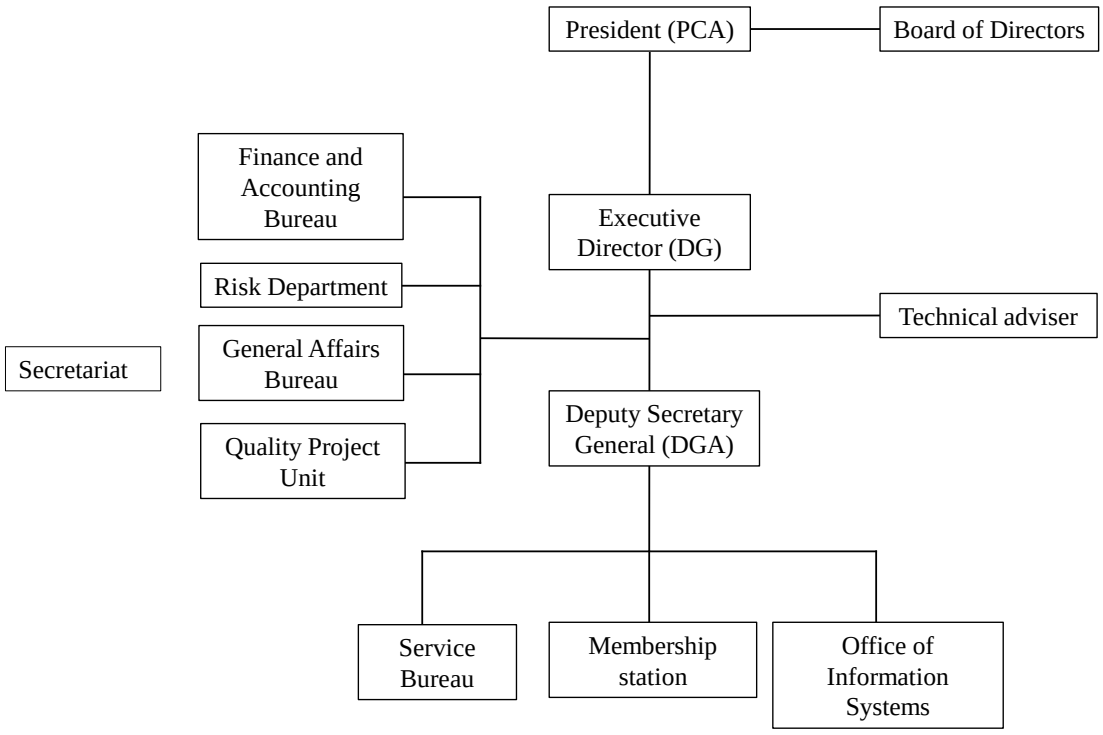

Figure 23: Organizational chart of CNAM

Source: IPS-CNAM website

The financial situation of IPS-CNAM is not publicly available. Information on projected income and expenditure for the three government-owned social welfare organisations is available from the Multi-Year Economic Budget Plan (DPBEP) 2021-2023 and 2022-2024 as presented in Table 23. This includes projections of the IPS-CNAM, which confirms the policy

and provides some information on the current situation. The Government's current view is that the surplus will be maintained, as the plan anticipates growth in premium income, from activities to promote enrolment in the General Basic Scheme (RGB), while at the same time claims payments are expected to grow at a comparably low rate. However, this surplus is expected to be constrained in subsequent years by payment growth, inflation and other factors. The financial plan will need to be reviewed annually as it becomes less certain in later years. The Government's risk analysis[109] also recognises that the current surplus is balanced and stable, but that there is a risk of long-term imbalance due to the high cost of health services relative to the premiums paid by the insured. However, the current recognition is that the risk is low, with a premium of 1,000 FCFA per person and a limited number of medical services in the CMU to keep claims payments sustainable.

Table 23: Financial Plan of CNAM

Billion FCFA

Cnam Financial Plan	*2020*	*2021*	*2022*	*2023*	*2024*
Total Revenue	38.6	33.2	44.1	54.8	65.5
Technical Income(C)	33.6	29.3	39.8	50.2	60.6
RGB Income from premium	26.4	20.6	27.1	33.9	41
RAM Subsidy	8.7	8.7	12.7	16.3	19.6
Subsidy to organisation	3	3	3	3	3
Financial income	0.5	0.9	1.3	1.6	1.9
Total Expenditure	30.3	20	20.5	33.7	50.1
Insurance payment (P)	23.2	12	12.5	23.7	38
Operational expenses	7.1	8	8	10	12.1
Technical Income (C-P)	10.4	17.3	27.3	26.5	22.6
Balance	8.3	13.2	23.6	21.1	15.3

Source：Prepared by survey team based on DPBEP2021-2023 and 2022-2024

3) Issues in the promotion of medical security

Issues to be addressed in promoting medical security or CMU are as follows.

- CMU steering agencies remain unclear

The 2014 Act on the establishment of the universal medical coverage system (2014-131) and the 2014-395 Decree on the establishment of the CNAM stipulate that CMU is under the jurisdiction of MEPS and CNAM. On the other hand, in 2021, the former Ministry

[109] Government of Ivory Coast, (2021) Declaration sur les risques budgetaires 2022-2024

of Health and Public Hygine was renamed the Ministry of Health, Public Hygiene and Universal health insurance (MSHPCMU), and as of the end of November, the organization is in the process of being changed to include directorate for CMU. Even earlier, since CMU was originally one of the commitments made by the current president in the previous presidential election, Prime Minister at that time, Mr. Coulibaly initially took the lead in making coordination by establishing focal points in the Prime Minister's Office. However, with the passing of the prime minister, when the cabinet was changed, Mr. Kamara, who had been coordinating as a special advisor under the former prime minister, became the minister in charge of labor and social protection. As a result, this focal point has been disfuctional because "there is no longer a need to be in the Prime Minister's Office."

Currently, while the development of CMU is still in progress, the who will take the lead of coodinating among government stakeholders in implementing CMU is not very clear. While the role of MEPS is important from the perspective of medical security and social protection, it is expected that MSHPCMU will play a more active role now that CMU has been added to the name of the Ministry of Health. On the other hand, interviews with MSHPCMU indicate that "the role remains the same as before, but the name has been changed to deepen the promotion of CMU in terms of medical services." It is not clear how the inter-ministerial coordination will be carried out in the future, as it does not necessarily express the intention to lead CMU policy. The World Bank is aware of this leadership challenge and will encourage the necessary restructuring of the CMU system in the context of future support and policy dialogue.

- CNAM’s strategy to expand membership and regions is unclear.

CNAM has two schemes, RGB and RAM, but the expansion of the regular scheme (RGB) for members paying premiums is urgently required to establish sound financial base for a universal insurance system. After pilot stage for student and completing the enrollment of public servants and the formal sector (salaried workers), the expansion to cover the informal sector is being promoted. It also promotes membership in specific functional groups (farmers as well as palm palm, sugar cane and cotton seed growers). However, the participation of workers in the informal sector and rural areas, which account for the majority of employment, is not progressing, and the rate of increase of members is slower than expected.

There are many challenges; the burden of insurance premium of CFAF 1,000 per head per months seems reasonable for workers in formal sector, however, if the family size is large, which is ofthen the case in rural area, the burden for bread earner of the family may be excessive. Also from MSHPCMU point of view, there are still problems on the supply side

(insufficient health facilities and of poor quality) Improvements in health systems are difficult to make in the short term, so there is a need to articulate a policy for scaling up the memberships.

- Delay in enrollment of destitute people

In the other CMU scheme, RAM, both the number of registrants and the number of beneficiaries is stagnant. Methods for identifying vulnerable groups were developed with the support of the World Bank. The results of proxy mean testing (a method of scoring social programs by taking into account the weight of observable indicators, such as wealth status and family structure) are identified after being certified by community leaders and social centres (MEPS's local contacts). In this regard, CNAM has time-bound targets to to identify 2.5 million by 2024. Nevertheless, there is little reason to believe that the number of vulnerable people is about 3 million[110]. Since vulnerability or poverty may be transient, dynamic aspects such as those that become poor or those that graduate from the poor need to be considered and monitored. The cost of this identification and monitoring will be an issue for the future. In addition, the temporal gap between card issuance and distribution is also the issue of RAM. In rural areas, many do not have identification cards or birth certificates for making CNAM membership cards. For this reason, the Ministry of Justice and the Ministry of the Interior have to work together to implement measures to enable the issuance of cards at the same time as issuing identification cards, and these measures are currently being implemented.

- CNAM is a relatively new organization with uncertainty about its capabilities

CNAM is a relatively neworganization established in 2014. It manages and regulates the universal health care system by 12 directors (directors are from MEPS, MEF and MSHPCMU, and private sectors) and seven functional directorates. It also manages the organizations which CNAM outsource their operations. On the other hand, the system has only just been developed and put into practice, and although large-scale dissemination activities are being carried out to increase the number of members, there is a perception[111] that even CNAM members cannot receive its benefit., so there is a possibility that the

[110] There are multiple ways to measure poverty or to identify and define the poor. If poverty is defined as below the widely used international poverty line (consumption of $1.9 per day), the poverty rate is 39.5% (2018) (https://data.worldbank.org/ indicator/). It should be noted that the population below the poverty line is larger than the population covered by the CNAM RAM, and there is no discussion or direction on how to provide health care coverage for the population below the poverty line who are not covered by the RAM.

[111] Comments from non-member ivorian and staff of donor agencies

operation is not being thoroughly implemented. A company named SNEDAI which receives contract of issuance of health insurance cards and has concluded a seven-year contract for the issuance of health insurance cards from 2015. Since the contract will expire in 2021, it needs to be renewed. However, since the government has directly contracted and implemented the contract, IPS-CNAM needs to be secure additional budget from the government. According to IPS-CNAM, an budget of 4 billion FCFA is required annually, including personnel costs of 280 persons, and the current operating budget is 7-8 billion FCFA per year. The current situation is difficult, and the financial capacity is limited, so updating is an issue.

As the number of members of CNAM expands, the management of organizational operating costs and insurance premiums will also become a major issue. However, as the roadmap is not clear, a plan to strengthen these finances will be necessary. At present, the IPS-CNAM seems not be active in disclosure of information. There is not annual report on their web site and the survey team's attempt to be avail of such information was failed. Capacity building is also necessary to build credibility. As these institutional and operational challenges remain, the need for strengthening is high.

In the medium term, the Government is concerned about the risk of over-consumption of medical services (i.e. the risk that medical institutions will provide excessive medical services for the sake of income from CNAM) and fraudulent claims for services. There is a need to monitor medical institutions, and the study of how to do this is an urgent issue. There is also a need to improve organisational capacity to deal with technical and political issues such as the appropriateness of current premiums (the appropriateness of the amount and nature of care covered, the regressive nature of per capita premiums, and the need to address the demand for greater coverage of care).

8. Proposed policies and actions for the health sector, proposed indicators to measure the effectiveness of the actions

8.1. Proposed policies and actions

At the start of this survey, it began to consider policies and actions with the objective of strengthening the infrastructure to support services, improving the quality of services, and improving governance, as well as contributing to the achievement of UHC by building resilient health systems. However, in consideration of the situation in Ivory Coast where the enormous impact of the spread of COVID-19 infection since the end of 2019 has been felt, its policy was changed to focus on strengthening the capacity to respond to COVID-19. Ivory Coast side agreed with the change, stressing the importance of strengthening health systems by strengthening the capacity to respond to COVID-19, considering the financial gap and vaccine avoidance issues in the response to COVID-19, as well as the impact of COVID-19 on health systems and the use of health services. After repeated discussions between Ivory Coast and Japan (JICA review missions and consultants), the draft policy matrix of the COVID-19 Emergency Loan for Crisis Response Support was agreed. The objective is to achieve a resilient health system by strengthening the capacity of the health sector to respond to new strains of coronavirus (COVID-19), improving economic and physical access to quality health care services, and smoothly implementing policies to improve health financing, thereby contributing to promoting economic stability and development efforts in Ivory Coast.

The agreed policy matrix maintains the three pillars of "Strengthening control and prevention of diseases," "Improving access to quality care," and "Strengthening governance and health finance," which were originally proposed by Ivory Coast. These pillars are also consistent with the orientation of the PNDS 2021-2025 strategy (medium-term goal) of strengthening disease prevention and control, strengthening the provision and access of health services to the population, and improving health governance.

"Strengthening control and prevention of diseases" includes actions to strengthen the capacity to respond to COVID-19, but at the same time includes actions to strengthen the capacity to respond to other pandemics not limited to COVID-19. NCDs were included as a policy area of " Strengthening control and prevention of diseases" on the grounds that NCDs are becoming more serious in the country and is also essential to prevent COVID-19 from becoming serious.

With regard to the "improving access to quality care," the major issues are the poor health infrastructure and poor quality of human resources, especially in rural areas. Improvement of quality and access to these services are essential for capacity building of the COVID-19 response, and at the same time, it is important for COVID-19 to maintain the

provision of normal health services. Therefore, the matrix incorporated actions corresponding to related policy areas. With regard to DIEM in particular, it will be urgently needed to strengthen the capacity to carry out new tasks and new procedures following the organizational restructuring under preparation since 2021.

“Strengthening governance and health finance” organized and addressed policy areas and actions to strengthen health region and district capacity, health financing, and health care systems in accordance with decentralization. Governance and finance are also urgently and continuously needed to support the aforementioned “97trengthening control and prevention of diseases” and “improving access to quality care.”

8.2. Proposed indicators for measuring the effectiveness of actions

The indicators for the policy area "strengthening control and prevention of diseases" were: 1) coverage of the new corona vaccine; and 2) the number of trained health districts based on the revised training plan for the Infectious Disease Prevention and Control Team. This is because the strengthening of disease control requires not only the strengthening of COVID-19 response but also the capacity to respond to other pandemics. With regard to the indicator 1), the baseline value is 9% as of November 2021, and the target value is set at 70% which is the national target. With regard to the indicator 2), the baseline value is zero and the target value is 113 which is the total number of health districts.

With regard to the policy area "improving access to quality care," four indicators are set out in PNDS2021-2025. Of these, baseline values and target values are set for "the proportion of the population living within 5 km of the available health facilities" and "the density of health workers/residents." The indicator for the policy matrix is “proportion of the population living within 5 km of the available health facilities”, with the baseline value of 70% and the target value of 75%. The target is 5% below the target of 80% for PNDS 2021-2025. This is because PNDS 2021-2025 aims to achive in December 2025, while that of the policy matrix is expected to be achieved by December 2022.

Two indicators are set for policy area “strengthening governance and health finance”; 1) the number of health district teams trained in the standard functioning of health districts; and 2) the share of the health sector budget in the total government budget. The target value in 1) is set at 113 which is the total number of health districts, and 2) the baseline value is 6.1% and the target value is 7.0%. The 97aseline value of PNDS2021-2025 is 7.43% and the target value is 8.0%, respectively, are revised downward.

This policy matrix consists of two tranches. As of the end of February 2022, the relevant data on the means of achieving the policy actions for the first tranche is being prepared.