REPUBLIC OF CAMEROON
Peace-Work-Fatherland

Ministry of Economy, Planning and Regional Development

REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie

Ministère de l'Économie, de la Planification et de l'Aménagement du Territoire

Public Expenditure Tracking Survey in the areas of Health, Nutrition, Water-Hygiene-Sanitation and Education

Final Report

Health Component

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unicef
pour chaque enfant

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ACRONYMS AND ABBREVIATIONS

CENAME	National Supply Centre for Essential Drugs and Medical Consumables
DH	District Hospital
DHS	District Health Service
DRFP	Department of Financial Resources and Property
EA	Expenditure Authorisation
EPI	Expanded Programme on Immunisation
GESP	Growth and Employment Strategy Paper
HF	Health Facility
HIPCI	Heavily Indebted Poor Countries Initiative
IHC	Integrated Health Centre
IMF	International Monetary Fund
LL1	First level of leakage
LL2	Second level of leakage
LL3	Third level of leakage
LL4	Fourth level of leakage
MDG	Millennium Development Goals
MINEDUB	Ministry of Basic Education
MINEE	Ministry of Water Resources and Energy
MINEPAT	Ministry of Economy, Planning and Regional Development
MINESEC	Ministry of Secondary Education
MINFI	Ministry of Finance
MINSANTE	Ministry of Public Health
NEDSS	National Essential Drug Supply System
NGO	Non-Governmental Organisation
NIS	National Institute of Statistics
NMCP	National Malaria Control Programme
NTU-PBF	National Technical Unit-Performance Based Financing
PB	Procurement Board
PBF	Performance Based Financing
PETS	Public Expenditure Tracking Survey
RDPH	Regional Delegation of Public Health
RFHP	Regional Fund for Health Promotion
RTG-EPI	Regional Technical Group - Expanded Programme on Immunisation (RTG-

	Expanded Programme on Immunisation)
SDGs	Sustainable Development Goals
SMC	Sub-Divisional Medical Centre
TD	Tender Documents
TFP	Technical and Financial Partner
ToR	Terms of Reference
UNICEF	United Nations Children's and Emergency Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organisation

FOREWORD

The Government of the Republic of Cameroon through the Ministry of Economy, Planning and Regional Development (MINEPAT), Ministry of Finance (MINFI), Ministry of Public Health (MINSANTE), Ministry of Basic Education (MINEDUB), Ministry of Secondary Education (MINESEC) and Ministry of Water Resources and Energy(MINEE) has decided, for the year 2018, to conduct a study to track public expenditure in the areas of health, education, nutrition and water-hygiene-sanitation (PETS3), with technical and financial support from UNICEF. The National Institute of Statistics, whose missions are, among other things, to make available the statistical data and indicators necessary for economic and social management, was involved for technical coordination of the study.

The study to track public expenditure aims to provide the Cameroonian Government and partners involved in the Health, Nutrition, Education and WASH sectors with the information needed to objectively assess the performance of public expenditure in these four areas during the 2017 financial year. It is subsequent to the first two carried out in 2003/2004 and 2010 which covered only the health and education areas. PETS3 study targets specific budget lines to be tacked in the above-mentioned areas. It is also important to underline that this study is conducted in a context marked by the transfer of some skills in education, health and WASH, to regional and local authorities.

The study was carried out with the sustained participation of the relevant ministries, namely MINSANTE, MINEDUB, MINESEC, MINEE and MINDDEVEL, and cross-cutting ministries involved in the public expenditure system, especially MINFI and MINEPAT. All these ministries were strongly involved in all phases of the operation, from design to publication of results.

The Government extends its gratitude to UNICEF for its multifaceted and continuous support in the implementation of public policies in Cameroon. The Ministry of Economy, Planning and Regional Development would like to extend its appreciation to the actors in the public expenditure chain for the reception reserved for its data collection teams and for the information provided.

The Minister of Economy, Planning and Regional Development

EXECUTIVE SUMMARY

The third Public Expenditure Tracking Survey (PETS3) in the health sector covered a sample of category 4, 5 and 6 health facilities (HFs) for the 2017 financial year. These included District Hospitals, Sub-Divisional Medical Centres and Integrated Health Centres. The study made it possible to collect information on the (i) operating and investment budget allocation; ii) system through which these resources are channelled from the central level to health care and providers; iii) management of these resources; iv) management of drugs and vaccines, as well as v) regular attendance of staff on duty in the HFs.

Operating and investment budget allocations

In the State budget allocation to the Ministry of Public Health in 2017, 38.16% of its operating budget was spent on the acquisition of goods and provision of services. Regarding its investment appropriations, 2.5% was used for acquisition of medical equipment, construction of health centres and hospital buildings.

HFs budget resource system

As in all public entities, the expenditure system comprises, in addition to the Minister of Finance, who is responsible for making appropriations available to senior authorising officers and budgetary regulation, authorising officers, financial controllers and public accountants. The procedure for the implementation of public expenditure follows four stages, three of which are the responsibility of the authorising officer (commitment, validation and scheduling) and one of the accounting officer (payment).

Management of budgetary resources

Monitoring of budget resource management has shown that, from the top to the bottom, managers have less and less information on the operating and investment budget as one gets closer to the base. Over a quarter of health facility managers said they had no information on the management of the operating budget allocated to their structure in 2017. Most of them are newly promoted officials.

It was also observed that 33% of HF managers who withdrew their expenditure authorisations for the operating budget did not commit it. In the opinion of 61.3% of HF managers, Financial Controllers are still primarily responsible for delays in the withdrawal, commitment and scheduling of expenditure authorisations. These delays have negative effects on the commitment and scheduling of the said expenditure authorisations.

Budget implementation

In the sample health facilities, the implementation rate based on commitment and/or scheduling of the operating budget was 90%. With regard to the investment budget, the overall commitment-based implementation rate in 2017 was 92%. About 90% of health facilities HFs executed their expenditure authorisations on time.

Losses registered by managers

Losses reported by HF managers are bribes paid either to take possession of their expenditure authorisation or for the processing of the file in the financial control service, etc. 80% of managers said they had been forced to pay bribes when executing their expenditure authorisation for the acquisition of goods and provision of services (taking possession of their EAs, committing and/or receiving payment).

Transparency and Governance

36% of managers said they had no documents that track budget expenditure. For those who reported they had them, they were either poorly kept or incomplete. Some said these documents were taken away by their predecessors.

Drug inventory management

83%) of HF managers reported that good distribution practices and drug management/storage standards at central and intermediate levels are respected. Stock-outs are rare especially for the five drugs studied (ACT for children, ORS/ZINC, IPT, ARVs for children and ARVs for pregnant women, Amoxicillin (capsules/tablets/syrup)). The various antimalarial tracer products had a use rate of more than 70%, as well as for antibiotics (above 81%). Drug prices are displayed in the most of HFs and about 82% of the managers of these HFs reported having documents that track the management of drug inventories in 2017.

Losses in drug inventory management

The loss recorded in drug management was observed at all levels of the supply chain. These losses were related to the poor conservation of drugs, untimely power cuts and narrowness of storage space. The loss rate recorded in 2017 is 2% in the RFHP for antimalarials and 10% in HFs for the drugs tracked.

Management of vaccine inventories

The EPI supply chain is identical regardless of the source of funding for acquisition of vaccines (STATE, UNICEF, WHO, GAVI, etc.). In 2017, the EPI transferred 2,180,028 vials of antigens to its RTGs.

Over 70% of intermediate health services (RTG-EPI) and over 80% of HFs reported that they had met predefined standards for vaccine storage and packaging.

Management of vaccine stock-outs and transparency

Stock-outs of antigens varied from one structure to another, and from one antigen to another. 59.6% of DHSs surveyed reported they had vaccine stock-outs in 2017. Over 50% of HFs reported stock-outs for BCG and RM antigens. The number of stock-out days ranged from 19 to 92 days at the central level (EPI) and from 27 to 79 days in the HFs. 83% of health facilities reported that they had documents that track the management of vaccine inventories.

Losses in vaccine management

Vaccine losses have been recorded throughout the chain for several reasons and vary by antigen: tainted antigens (86.64%) for OPV at the central level, poor conservation and expiry (11.09%) for the antigen RM (Rubella-Measles) at the RTG-EPI, difficulties in accessing certain areas for the administration of vaccines. At the level of the HFs, losses are 9.7% for penta 3 and 33% for BCG.

Attendance of staff on duty in the HFs

The study showed that out of 100 staff supported in 2017 by the State budget, 8 were not regularly at their duty stations in the HFs.

Main difficulties in budget implementation and management of drugs and vaccines

Difficulties relating to the expenditure system

The main difficulties in budget implementation are related to the late arrival of expenditure authorisations, lack of training of authorising officers in financial management, poor governance practices (bribes), difficult access to management information as well as statistical information, as a result of: (i) refusal, absence or lack of archiving of management information, (ii) respondents' apprehension about the use of individual data collected by the structures in charge of statistics.

Difficulties encountered in the management of drug and vaccine inventories

The main problems in drug management are: the inadequate storage conditions for drugs and vaccines (insufficient and inadequate); difficult access to some areas which limits the safe channelling of drugs and vaccines; delivery of drugs and vaccines with close expiry dates; lack of

qualified staff for inventory management; lack of suitable and certified cold chain equipment (refrigerator, cooler); untimely power cuts, etc.

Measures to overcome difficulties

As part of the improvement of the system for the management of financial resources and of drugs and vaccines, the recommendations made are aimed at:

- ✓ Meeting the deadlines for transmission of expenditure authorisations (EAs) at all levels;
- ✓ Building the capacities of managers at all levels on the maintenance of accounting documents and archiving of management information;
- ✓ Ensuring that the technical handover is effective before the administrative handover whenever a manager is transferred or retires and recalling the requirement to compiling archives and management documentation in order to ensure the continuity of public services in financial and accounting management;
- ✓ Introducing the imprest procedure in the execution of the expenditure at the local level in order to avoid losses;
- ✓ Computerising systematically budget implementation procedures at the operational level.

In addition, to ensure good management of drugs and vaccines, it is imperative that:

- ✓ health facilities be provided with standard-compliant storage facilities;
- ✓ HFs be provided with alternative sources of electricity;
- ✓ The archiving system be improved and inventory sheets be systematically updated;
- ✓ Qualified staff be recruited for good management of drugs and vaccines;
- ✓ Capacities of health staff be strengthened on the inventory management process at all levels.

CHAPTER 1: PRESENTATION OF THE STUDY

1.1 BACKGROUND AND JUSTIFICATION OF THE STUDY

Between 2003 and 2004, and in 2010, the Cameroonian Government carried out the study on the tracking of public expenditure in the areas of health and education. In view of the relevance of the results obtained, it was recommended that this study be sustained by extending it to all priority areas. MINEPAT, MINFI, MINSANTE, MINEDUB, MINESEC and MINEE have decided, in 2018, with UNICEF's support, to conduct a study on the tracking of public expenditure in the areas of health, nutrition, water-hygiene-sanitation and education.

Studies on the tracking of public expenditure in social sectors, referred to as Public Expenditure Tracking Survey (PETS), have been initiated in several developing countries by the World Bank to better analyse the links between public expenditure and results in the relevant sectors. Most of them were motivated by findings on the low impact of increased public expenditure on results in the targeted sectors.

This technique makes it possible to track, step by step, the flow of resources at all levels of government (central, devolved and decentralised) in order to quantify the share of budgetary resources that actually reach the final providers. By collecting and comparing data at several levels (from central government to the most peripheral levels such as health centres and schools and local administration), the PETS makes it possible to determine the resources diverted from their original destinations.

The PETS 3 study comes at a time when the Ministry of Public Health has just adopted its second Sectoral Health Strategy (2016-2027). The evaluation of the previous 2001-2015 strategy showed, among other things, that the efforts of the Government and its national and international partners have, in general, improved the health of populations.

However, there have been a number of significant weaknesses relating to legislation, regulation and policy, budget/expenditure, management (planning, management, monitoring and monitoring/evaluation), etc. The health sector's diagnosis showed:

- Insufficient high-level political commitment with regard to the percentage of State funding allocated to the health sector (approximately 4.76% according to the 2017 Finance Bill, as against 15% recommended by the Abuja Declaration);
- Lack of an integrated approach and adequate coordination in funding management (existence of multiple health funding schemes - 28 counted in 2013);
- Low level of information on the funding deployed in the sector (that of the private sector, that of partner administrations providing health care and services, as well as that of regional and local authorities);
- Weakness of the monitoring/evaluation system and inadequacies in the coordination of interventions resulted in the duplication of resources and inefficiency observed;
- Financial productivity of health facilities is insufficiently monitored to facilitate the optimal use of public funding;
- Health system does not yet provide protection against disease risk to the entire population; Direct payments (95% of private health expenditure) are still the main method of acquiring care;
- Persistence of corruption in public services in general is still a burden that makes it difficult to use resources efficiently;

- Poor accessibility to drugs by patients;
- Lack of storage space for drugs and vaccines at the level of health structures;
- Many drugs acquired in health facilities do not benefit patients and there are continuing stock-outs in this sector, suggesting a loss of essential drugs;
- Regular expiries of drugs and vaccines due to failure to control inventory management.

1.2 OBJECTIVES OF THE STUDY

1.2.1 General objective

The study aims to provide the Cameroonian government and partners involved in the areas of Health, Nutrition, Education and WASH with the information needed to objectively assess the performance of public expenditure in these four areas in 2017.

1.2.2 Specific objectives

Specifically, the study for the health component aims to:

i) Assess tracking in the management of public expenditure (level and sources of loss of resources intended for final beneficiaries: councils, health facilities, etc.);

ii) Identify malfunctions in the system of acquisition, conservation and distribution of vaccines (DTP, measles and pentavalent BCG) in Cameroon;

iii) Identify malfunctions in the supply system (acquisition, conservation and supply) of drugs (ACTs for children under 5 years, IPT for pregnant women, ARVs for pregnant women and children under 5 years) in Cameroon.

1.3 METHODOLOGICAL APPROACH OF THE STUDY

The methodological approach presented in this document consisted in the use of the database of the health facilities of the Ministry of Public Health for the development of the elements for the implementation of the survey and analysis of the related results.

1.3.1 Scope of the study and observation units

Geographically, the data collection phase of the study covered the entire national territory. The information collected covered the 2017 financial year. Observation units comprised all the hierarchical levels of Public Health:

- The central level (CENAME, EPI, NMCP), the peripheral level (Regional Public Health Delegation, Regional Technical Group-EPI (RTG-EPI), Regional Public Health Funds);
- The operational level (District Health Services, including public health care and service providers); cross-cutting structures such as the financial control of public health expenditure (divisional or regional financial control services).

The information from these different observation units was triangulated to assess financial losses.

1.3.2 Data sources and statistical units

1.3.2.1 Statistical population

The statistical population of the health sector comprises the administrative services through which financial resources and/or vaccines and drugs are channelled, as well as health facilities as structures for the provision of health services and care.

1.3.2.2 Statistical units

With regard to the health pyramid and the expenditure system, data were collected from:

(i) Administrative services (central, regional/peripheral, divisional, operational, including councils) through which financial resources and/or vaccines and drugs are channelled;

(ii) A sample of health districts through which vaccines and drugs are channelled;

(iii) A sample of health care and service delivery structures in the cluster (sample councils).

1.3.3 Sampling

The sampling design used is a cluster survey. The cluster is the council.

1.3.3.1 Sampling frame

The sampling frame consists of all health facilities (HFs) in the public sector. These are the HFs under the control of the Health Districts, the anchor point of the Health Sector Strategy. Category 1 to 3 hospitals (general, central and regional hospitals) and private health facilities are excluded from the sample, including church health facilities.

1.3.3.2 Sampling design

The sampling design applied is a cluster random design. The cluster in this case is the council as a geographical unit. For each survey region, the clusters (councils) are drawn at the first level and at the second level, in each of them, all the District Health Services (DHS) concerned by the scope of the study are identified. From the list of DHSs, all facilities within their area of competence are listed for survey. In addition, all units located at the regional and divisional levels are surveyed (Regional Financial Control Service, Divisional Financial Control Service, Regional Vaccine Repositories, Regional Delegations of Public Health, Regional Health Promotion Funds).

This sampling design was guided by budgetary constraints. It reduces the travel and accommodation costs of collection staff, and the costs of the monitoring and supervision of the survey. It can also lead to gains in terms of better coverage or higher response rates.

Size and distribution of the sample

Calculation of the sample size was guided by the constraint relating to the study budget and the accuracy of the estimators.

At the central level (Yaounde)

All central services (DGB/MINFI, DGEPIP/MINEPAT, MINSANTE (DFRP, EPI, NMCP, CENAME, NACC), points of departure of financial resources, vaccines and drugs to the structures providing health services and care were all surveyed;

At the level of regions: The following structures were surveyed:

- **Regional Delegations of MINSANTE** (payment of subsidies to health facilities under PBF);
- **Regional control services** (financial resources);
- **Divisional control services** (financial resources);
- **Regional vaccine repositories** (distribution of vaccines);
- **Regional Health Promotion Funds** (distribution of drugs).

A sample of 50 councils was selected at the national level according to certain considerations, especially the weight of the health facilities that benefited from the investment budget in 2017. These councils were distributed among the ten regions in proportion to the total number of councils in each region. All the sample health facilities (DH, SMC, IHC) were reviewed in these councils.

This key made it possible to retain the sample of:

- **Health districts**: District Health Services (distribution of drugs, vaccines);
- **Divisions:** Divisional Control Service (financial resources);
- **Councils:** Revenue collector or finance controller (equipment and construction of health facilities as part of decentralisation).

In all the councils, 479 health facilities were counted. Table 1 below shows the sample size of statistical units by region.

Table 1: Sample size of health component statistical units surveyed

Regions	*Devolved health service*				*Financial control services and similar*		*Health facilities*	*Council*
	RDPH	**RTG-EPI**	**RFHP**	**DHS**	**Regional Financial Control Service**	**Divisional Financial Control Service**	**DH, SMC, IHC**	**Councils**
Adamawa	01	01	01	04	01	03	25	04
Centre	01	01	01	09	01	06	66	08
East	01	01	01	04	01	02	39	04
Far North	01	01	01	09	01	04	56	08
Littoral	01	01	01	04	01	02	21	04
North	01	01	01	08	01	03	81	05
North-West	01	01	01	03	01	01	40	05
West	01	01	01	10	01	05	83	06
South	01	01	01	05	01	01	35	03
South-West	01	01	01	05	01	03	33	03
Cameroon	**10**	**10**	**10**	**61**	**10**	**30**	**479**	**50**

Source: our calculations

1.3.4 Observation methods

Direct and indirect observation methods are used in the field. In this sense, collection staff visit a sample structure to: (i) conduct interviews on the expenditure system and other aspects of the management of drugs and vaccines, and (ii) observe other information to be collected directly in the archives.

1.3.5 Collection method

The collection method consisted in the exploration of the various archives as well as the direct interview between the collection agent and the person designated by the sample structure for this purpose. Collection was computerised (Computed Assisted Personal Interviewing or CAPI). However, a set of paper questionnaires was printed to deal with all eventualities.

1.3.6 Data processing and estimation

As data were collected electronically, they were progressively processed and validated by computer experts as they came from the field before being tabulated. A quality control programme enabled to detect, for each collection agent, the main errors. The supervisors and/or controllers were responsible for communicating them to the collection agents for possible controls. Several software programmes were used including CSPro for collection, SPSS for table production, analysis and clearance, Excel for graph production and World for report write-up.

1.4 LIMITATIONS AND DIFFICULTIES ENCOUNTERED

i. Limitations

- Some structures initially selected during the sampling did not exist in the field, and they could not be replaced by other health facilities at the same level since the methodology provided for the coverage of all existing health facilities in a council.

ii. Difficulties encountered

- Length of time devoted to data collection in the field was relatively short. The data collection staff had to make several visits to the structures, depending on the unavailability of the managers and/or the information not required.
- Absence of management tools (mainly inventory sheets) did not enable the calculation of certain indicators in some Health Facilities;
- Gathering information on funding has been the most difficult problem. In general, there were no archives for tracing financial movements, so most authorising officers did not always give information on financial losses;
- Unavailability of all the members of the health teams in the facilities did not help to provide the best information to collection agents;
- Qualitative analysis, based on open-ended questions, identified some bottlenecks in budget implementation. However, in the absence of data on financial losses, no correlation could be established between the losses and the bottlenecks.

CHAPTER 2: ORGANISATION AND FUNCTIONING OF THE CAMEROONIAN HEALTH SYSTEM

2.1 HEALTH SECTOR DEVELOPMENT CONTEXT

Strategic planning in the health sector began in the 2000s with the development of the first Health Sector Strategy (2001-2015 HSS). This Health Sector Strategy, which was an operationalisation of the Poverty Reduction Strategy Paper (PRSP), was a first-generation reform focused on a few health programmes. It was updated in 2009, making it possible to align it with the GESP and incorporate the MDGs in it as strategic objectives. The objective of this strategy was to *make the health districts viable* in order to achieve the MDGs. This update was to lead to a paradigm shift. The aim was to move from the logic of vertical programmes to that of the viability of health districts. But this logic has not been operationalised. As a result, the objectives set were only partially achieved.

To take account of programmatic requirements and changing epidemiological patterns, now marked by an increase in communicable diseases and an upward trend in chronic non-communicable diseases, a new health sector strategy was developed for the 2016-2027 period. Its overall objective is to Contribute to the development of a healthy, productive human capital capable of delivering strong, inclusive and sustainable growth. This new strategy is in line with the Growth and Employment Strategy Paper (GESP) and the Sustainable Development Goals (SDGs).

2.1.1 Demographic context of Cameroon

In 2017, Cameroon's population was estimated at 23,248,044 inhabitants. The population growth rate remained stable at 2.4% between 2014 and 2017. At this pace, the population is expected to reach 25 million by 2020. This population is unevenly distributed over the national territory: the cities of Douala and Yaounde alone are home to nearly 24.8% of the total population. The most populated regions are the Centre (19.6%), Far North (18%), Littoral (15.2%) and North (11.0%)[i].

Fertility in Cameroon is obviously declining, but it is still high. It was estimated in 2005 by BUCREP at 164 live births per 1,000 women aged 15-49 years. This high fertility results in high population growth, which leads to a high dependency ratio (around 95%) and strong pressure on infrastructure and basic social services such as education, health, access to energy and potable water, food security and land security[ii].In 2010, 52% of the total population lived in urban areas, 43.6% were under 15 years and only 5.5% were 60 years or more.[iii.]

2.1.2 Rural Sector Development Strategy

Law No. 96/03 of January 4, 1996 on the framework law in the field of health, provides in Article 2 that: "The objective of the national health policy is to improve the health condition of the population by increasing access to integrated and quality care for the entire population and with the full participation of communities in the management and financing of health activities. " (2016-2027 HSS, p. 105).

On the basis of this framework law and Cameroon's long-term development vision for 2035, the health sector has formulated its vision as follows: "Cameroon, a country where universal access to quality health services is ensured for all social classes by 2035, with the full participation of

communities". This vision is supported by values of equity, national solidarity, shared responsibility and social justice. To achieve this, the implementation of the selected strategic option is a prerequisite (2016-2027 HSS, p. 107).

The strategic choice made by all stakeholders in the health sector is to ensure equitable and universal access to quality basic and priority specialised health services and care, with the full participation of the community and involvement of other related sectors.

This strategic option will result in the implementation of the following packages of interventions:

a. Basic essential health care and services: The major interventions in this option will be oriented towards primary health care (health promotion, disease prevention, curative management of common diseases in the community). The aim here is to offer packages of essential and complementary services and care (MAP and CAP) to combat the main communicable and non-communicable diseases or to cope with public health events.

b. Priority specialised health services and care: This will include increasing the provision of service for the management of priority chronic diseases and public health events requiring specialised care or action.

The strategic choice retained should enable national and international health objectives (SDGs, GESP) to be achieved and progress towards universal health coverage. This option should enable the populations, especially the most vulnerable, to have geographical, financial and cultural access to essential health care and services and quality priority specialised care (2016-2027 HSS, p . 109-110).

2.2 ORGANISATION OF CAMEROONIAN HEALTH SECTOR

In Cameroon, the health sector is structured in three levels (central, intermediate and peripheral) and comprises three sub-sectors: (i) a public sub-sector; (ii) a private sub-sector (non-profit and lucrative) and (iii) a traditional sub-sector. Each level of the pyramid has administrative, health and dialogue structures (see Table 1 below).

Table 1: The various levels of the health pyramid and their functions

Level	Administrative structures	Responsibilities	Health structures	Dialogue structures
Central	- Minister's Cabinet - Secretariat of State - Secretariat General - Departments and similar structures	- Development of concepts, policy and strategies - Coordination - Regulation - Supervision	General Hospitals, University Teaching Hospital, Central and similar Hospitals (CENAME, CPC, CHRACERH, LANACOME, CIRCB, ONSP)	National Council of Health, Hygiene and Social Affairs
Intermediate	- 10 regional delegations	- Technical support to Health Districts - General coordination - Regulation - Supervision	Regional hospitals and similar	Regional Funds for Health Promotion
Peripheral	- 189 Health Districts	- Provision of health care and services - Coordination - Regulation - Supervision	District hospitals and similar Clinics SMC SMCs, Health care practices	COSADI COGEDI COSA COGE

Source: *MINSANTE, 2016-2027 HSS*

The Sectoral 2016-2027 Health Strategy is structured around five strategic axes. Three are vertical, namely: (i) health promotion; (ii) disease prevention and (iii) case management, and two horizontal or cross-cutting: (iv) strengthening of the health system and (v) governance and strategic leadership.

2.2.1 Major players in the health sector in Cameroon

The Ministry of Public Health is responsible for the development and implementation of the Government's public health policy[iv], in accordance with Decree No. 2013/093 of April 3, 2013. In addition to MINSANTE, the other state actors involved in this sector are partner administrations and regional and local authorities. According to the 2016-2027 HSS, partner administrations include:

- Ministries and health care providers (MINDEF, DGSN, MINEDUB, MINESEC, MINESUP, MINJUSTICE, MINAS, and MINTSS);
- Partner ministries working for health promotion especially on the determinants of health (MINEDUB, MINESEC, MINESUP, MINPROFF, MINAS, MINTSS, MINCOM, MINADER, MINEPIA, MINEPDED, MINHDU, MINTP, MINEFOP, MINSEP, MINJEC and MINAC).

In addition to the aforementioned actors, professional representations (professional orders, trade unions and associations); public and private health human resources training institutions and health research facilities; parastatal and private enterprises that integrate health concerns into their activities through their social responsibility; civil society organisations at large, dialogue structures, NGOs and Community-based organisations (CBOs). Apart from national actors, the sector also has many Technical and Financial Partners (TFPs). (2016-2027 HSS, p. 34).

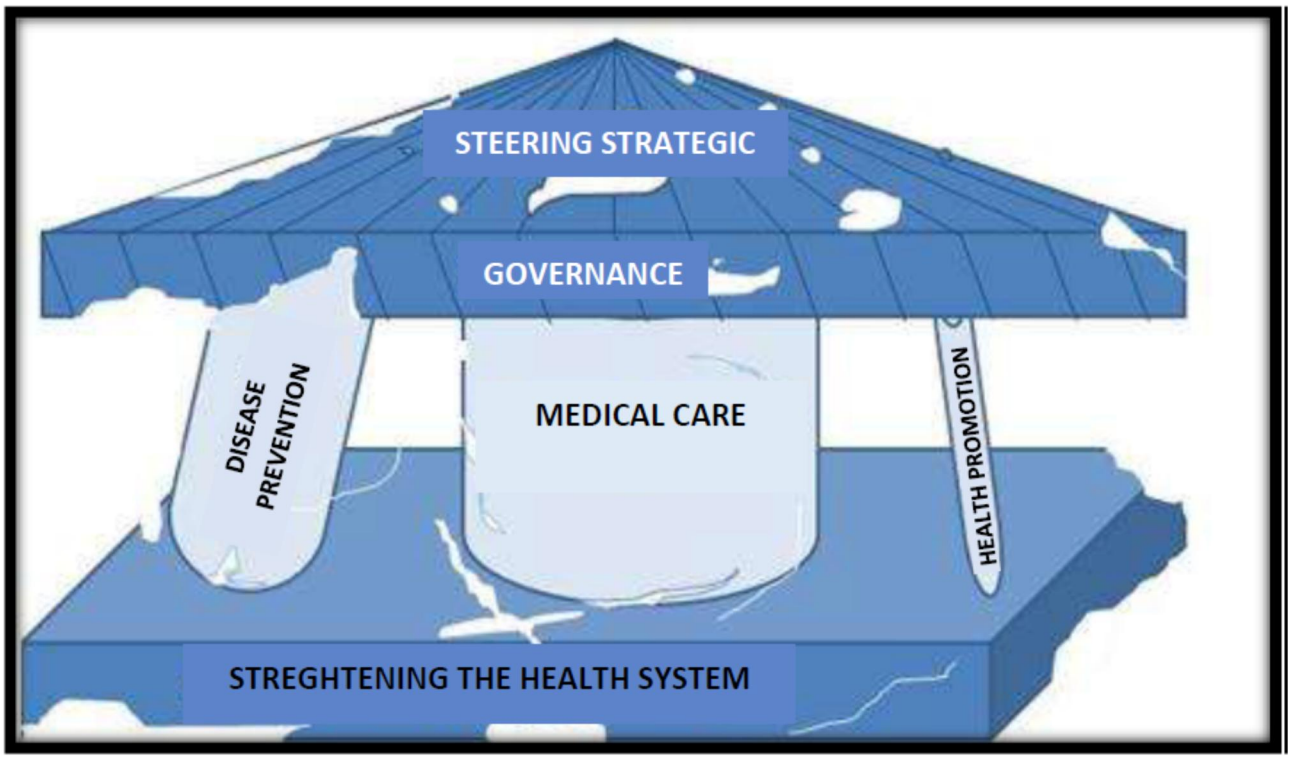
2.2.2 Situation of the pillars of the health system and epidemiological profile in 2017

2.2.2.1 Situation of the pillars of the health system in 2017

According to the health system diagnosis established in the 2016-2027 SSS, the major problem of the health sector is its "low capacity to meet the social and health needs of populations and to contribute to the development of healthy and productive human capital".

Faced with the weakness of its six pillars (leadership and governance[1]; human resources; provision of services and care; infrastructure; drugs and health technologies; funding and health information system), the current health system does not enable adequate prevention of events that negatively affect health. It fails to effectively promote the health of populations and properly manage cases. In practice, the health system's low capacity to effectively respond to the well-being needs of the population translates into unsatisfactory health indicators, including high mortality, increased health expenditure and a decrease in the work force. This overall diagnosis is summarised in schematic form in the image below.

Graph 1: Global Health Diagnosis



***Source**: MINSANTE, Document Etat des lieux et diagnostic du secteur santé (2015), cited by 2016-2027 HSS, p.93*

[1] *The many major challenges related to strategic management and governance of the health sector, as well as the development of a national strategy on the theme of governance, have motivated the choice of the establishment of this pillar of the health system as a cross-cutting component for improved analysis.*

2.2.2.2 Epidemiological profile in 2017

The epidemiological profile of the country is marked by a predominance of communicable diseases. The most important are: HIV/AIDS, malaria and tuberculosis. These three diseases account for 23.66% of the overall burden of morbidity. There has also been an increase in mortality due to Non-Communicable Diseases (NCDs), including cardiovascular diseases, cancers, mental illness and injuries due to road accidents. Added to this list are work-related accidents (among 12.2% of workers) and occupational diseases (7.5% of workers)[v].

Among children under 5 years, lower respiratory tract infections, malaria, diarrhoeal diseases and nutritional deficiencies are the main causes of morbi-mortality. Maternal mortality remains high at 782 deaths per 100,000 live births[vi]. (2016-2020 NHDP, p.7).

2.3 PROVISION OF HEALTH SERVICES IN 2017

The health sector is divided into three sub-sectors: public, private and that of traditional medicine. The public sub-sector includes health structures under supervisory authority, other partner administrations such as Defence, National Security, Penitentiary Administration, Labour and Social Security (through the National and Social Insurance Fund), Basic Education, Secondary Education, Higher Education, etc. The private sub-sector includes private for-profit and not-for-profit health facilities (religious denominations, associations and various non-governmental organisations). With regard to traditional medicine, the State has embarked on a process of supervision and enhancement of this sub-sector whose legal framework is being adopted.

According to MINSANTE 2016 statistics on the supply of health facilities by region, physical capital for the provision of services and health care in 2016 included 2,675 public health facilities (district health services) district hospitals, sub-divisional medical centres and public integrated health centres).

Table 2: Overall assessment of the capacity of health care and service provision in Cameroon in 2016 by region16

Region	Public	Private denominational	Private secular	Total
Adamawa	124	38	39	201
Centre	474	187	941	1,602
East	177	58	74	309
Far North	356	19	65	440
Littoral	244	184	729	1,157
North	254	18	55	327
North	234	90	45	369
West	415	83	318	816
South	206	35	73	314
SOUTH-WEST	191	35	92	318
Grand total	**2,675**	**747**	**2,431**	**5,853**

Source: Health Information Unit, MINSANTE, 2016

Globally, a total of 18,390 health staff with various qualifications were identified in 2017 in the various health facilities. Despite the annual recruitment of health staff by the State, the ratio of medical staff to the population is still far from the international standard. The uneven spatial distribution of staff shows that the Centre, Far North, Littoral, West and South-West regions alone

account for 68.3% of the country's skilled staff. The Littoral and Centre regions alone account for almost 54% of working physicians.

Table 3: Human resources summary data by region in 2017

Regions	Qualifications									
	Physicians	Hospital administration	Pharmacists	Nurses	Dental surgeons	Midwife/birth attendant	Health engineering	Medical-health technique	Biomedical techniques	Others
Central services	99	70	32	76	1	60	27	27	9	538
Adamawa	88	12	22	487	10	23	12	87	8	2,019
Centre	619	26	78	2,039	39	60	27	545	9	235
East	99	8	21	449	10	31	8	109	3	102
Far North	93	6	21	774	14	54	14	103	1	82
Littoral	535	21	79	1,585	34	50	16	330	9	414
North	71	8	19	707	6	28	7	70	1	156
North-West	116	8	20	652	11	28	12	143	5	157
West	180	8	30	1,030	15	32	13	158	2	120
South	113	12	25	438	16	23	7	104	3	39
South-West	143	9	32	744	10	32	15	166	10	180
Total	**2,156**	**188**	**379**	**8,981**	**166**	**421**	**158**	**1842**	**60**	**4,042**

Source: MINSANTE-DRH, 2018

2.4 ORGANISATION OF THE VACCINATION PROGRAMME

The Expanded Programme on Immunisation was established since 1976 with the aim of preventing vaccine-preventable diseases. Interventions offered by this programme are mainly surveillance, development communication and immunisation activities. *(MINSANTE 2015, Document Etat des lieux et diagnostic du secteur santé).*

To date, twelve (12) diseases are targeted by the Routine Expanded Programme on Immunisation (EPI): tuberculosis, polio, diphtheria, tetanus, pertussis, Viral Hepatitis B, *Hemophilus type B* infection, pneumococcal infection, Rotavirus diarrhoea, yellow fever, measles and rubella[vii]. Difficulties encountered in the implementation of this programme are of several kinds:

- ✓ Coverage of rolling stock needs is inadequate;
- ✓ Coverage of health facilities in cold chain equipment is 75% (national standard being 80%)[viii] ;
- ✓ Low level of implementation of advanced/mobile strategies in several health districts;
- ✓ Low quality and use of routine data for decision-making;
- ✓ High dependence on external financing. Cameroon will no longer be eligible for external financing (GAVI Alliance) when its GDP will exceed $1,580 per capita, which is likely to happen in 2020 according to the projections made on this macroeconomic aggregate.

These difficulties in implementing the programme are summarised in the following areas:

- **Equipment**: Coverage of rolling stock needs is 36% for motorcycles at the level of health areas, 54% for vehicles at the level of health districts and 40% for off-board vehicles.[2] Coverage of health facilities in cold chain equipment is 75% (national standard being 80%)[3] ;
- **Terms and conditions for service provision**: There is low appropriation of the child-centred approach; advanced/mobile strategies are still lowly implemented in some health districts.
- **Funding**: the programme continues to be funded primarily by development partners. *(MINSANTE 2015, Document Etat des lieux et diagnostic du secteur santé).*

[2] PTA–EPI, 2014
[3] MINSANTE-EPI. (2013). Rapport d'Évaluation de la Gestion Efficace des Vaccins.

CHAPTER 3: NORMATIVE FRAMEWORK FOR BUDGET MANAGEMENT IN CAMEROON

Laws No. 2007/006 of December 26, 2007 on the State's financial system and No. 2018/012 of July 11, 2018 on the financial system of the State and Other Public Entities reflect the authorities' ambition to modernise the management of public finances and achieve the nation's development objectives. The purpose of the necessary revision of the financial system of 2007 is to adapt Cameroon's financial legislation to the normative framework of CEMAC carried by the directives of December 19, 2011. By integrating these directives into its legal corpus, Cameroon is in line with international and community standards in the area of public finance. This ambition is mainly based on the rebalancing of budgetary powers, the institutionalisation of performance management of public action, accountability and transparency in order to include citizens in budgetary processes.

It should be recalled that budgetary management in Cameroon is governed hierarchically by the Constitution of January 18, 1996, Law No. 2007/006 of December 26, 2007 on the State's financial system, reinforced by Law No. 2018/012 of July 11, 2018 on the financial system of the State and Other Public Entities, the Finance Bill of the relevant year and Decree 2011/2414/PM of August 17, 2011 on the establishment, organisation and functioning of the inter-ministerial committee for the examination of programmes, decrees of the Prime Minister to amend appropriations, orders to amend appropriations, annual circulars of the President of the Republic on the preparation of the budget and of the Minister of Finance on the implementation of the budget.

In the light of the above, it can legitimately be said that the survey on the tracking of public expenditure in the areas of health, education, nutrition and water-hygiene-sanitation with the support of Technical and Financial Partners, particularly UNICEF, remains in line with the public finance reform undertaken in Cameroon. This approach enables a step-by-step monitoring of resource flows at all levels in order to be able to quantify the share of budgetary resources that actually reaches the final beneficiaries. First and foremost, it is important to describe the process of budget preparation before examining how the budget is implemented.

3.1 BUDGET PREPARATION

This phase revolves around three main axes, namely planning, programming and budgeting.

It all starts with strategic planning, which is a thought-provoking exercise that allows the State to set long-term objectives and coordinate its actions to achieve the expected results. It covers a period of 5 to 10 years.

Planning cannot be successful without programming. Financial programming enables the State to calculate expected medium-term revenue and to allocate it to the programmes and activities that contribute to the achievement of the objectives set out in the strategies. This 3-year phase is to be reviewed annually (Medium-Term Expenditure Framework).

Budgeting for a given year makes it possible to determine government expenditure and revenue on the basis of the Medium-Term Expenditure Framework. It is similar to financial programming, but is detailed for the following year. This phase is carried out every year (Finance Bill).

3.1.1 State budget preparation process

Budget preparation in Cameroon comprises several equally important stages. These phases are detailed in the budget preparation schedule below:

No.	BUDGET MILESTONES	DEADLINES
1	The Presidency of the Republic releases the **Circular for the preparation of the budget**	June 30
2	MINEPAT and MINFI organise the **Enlarged Programming Conference**, which is the forum for validating the Medium-Term Expenditure Frameworks developed by the sectoral ministries	July 7
3	MINFI and MINEPAT organise **Pre-Budget Conferences**, which enable sectoral ministries to present their financing needs and programmes	July 27
4	The **Interdepartmental Program Review Committee** reviews and validates programs proposed by ministries without going into financial details	August 17
5	**Special Conferences** are held in the perspective of budget conferences to discuss issues of particular importance: the budgeting of major projects, budgeting of rehabilitation funds as part of plan contracts	August 31
6	MINFI and MINEPAT organise **Budget conferences** with sectoral ministries and institutions to ensure that expenditure ceilings are respected and that changes proposed by the Interdepartmental Program Review Committee have been taken into account	September 21
7	Preparation of the draft Finance Bill and transmission to the Prime Minister's Office	October 1
8	The Prime Minister's Office sends the draft law to the President of the Republic with the final arbitration	October 8
9	The Presidency of the Republic tables the Finance Bill with its appendices in parliament (discussed and voted in both chambers, the National Assembly and the Senate)	October 15
10	The parliament examines and votes on the Finance Bill	November
11	The President of the Republic promulgates the Finance Bill	December

3.1.2 Budget preparation mechanism in the health sector

With regard to budget preparation, the only reference is the Presidential Circular on the preparation of the State budget, which gives the main guidelines.

In 2016, for the preparation of the 2017 budget, the innovation was the reactivation of the PPBS chain (Planning-Programming-Budgeting-Monitoring/Evaluation) and the activation of management controls which leads to the effective implementation of operational technical structures.

3.2 BUDGET IMPLEMENTATION

After the promulgation of the Finance Bill by the President of the Republic, the State budget becomes enforceable. First of all, the Minister of Finance signs the instruction circular relating to the execution of

Finance Bills and monitoring and control of the budget of the State and Other Public Entities. The budget is subsequently launched both at the central level and in the regions. This exercise aims to explain the context in which the budget will be implemented, the issues and innovations for the new budget year. After budget is launched, the operations of conveying expenditure authorisations (commonly referred to as "Cartons") in the regions as well as other media (project journals, purchase order booklets, commitment order booklets, etc.) take place throughout the national territory. It is on this occasion that the role of the actors is also recalled.

3.3 DIFFERENT ACTORS INVOLVED IN BUDGET IMPLEMENTATION

In addition to the Minister of Finance, who is responsible for making credits available to the Chief Authorising Officers and for budgetary regulation, the Law on the Financial System of the State and other public entities identifies the operational actors involved in the implementation of the State budget. These are authorising officers, financial controllers and public accountants (Article 64 Paragraph 1).

- **The Authorising Officer**

It is any person entitled on behalf of the State to prescribe the execution of revenue and expenditure entered in the State budget.

In terms of expenditure, there are three categories of authorising officers: Chief Authorising Officers, Secondary Authorising Officers and Delegated Authorising Officers. The Chief Authorising Officers of the State budget are the heads of ministerial departments or similar and High Constitutional Authorities. Secondary Authorising Officers are heads of devolved State services who receive expenditure authorisations from the Chief Authorising officers. Finally, Delegated Authorising Officers are officials appointed by Chief or Secondary Authorising Officers for expressly defined matters.

In terms of expenditure, there are two categories of authorising officers: Chief Authorising Officers and Delegated Authorising Officers. The Chief Authorising Officer is the Minister of Finance. Heads of ministerial departments or similar as well as heads of tax administrations are Delegated Authorising Officers for revenue generated by their administrations. Heads of ministerial departments may appoint, under their own responsibility, revenue managers.

- **Financial Controllers**

The financial controller is an actor in the budgetary process. Financial controllers are appointed to the Chief Authorising Officers, as well as to the Secondary Authorising Officers at the head of the devolved services. The financial controller is responsible for prior checks, by affixing a prior approval of budgetary transactions, on proposals for expenditure acts forwarded to him by the Minister or his delegated authorising officers in accordance with procedures defined by the Minister of Finance. The financial controller gives an opinion on the sincerity and sustainability of the expenditure commitment plans.

- **Public accountants**

Public accountants are public officials with exclusive responsibility for the collection, keeping and handling of funds and securities, keeping of the accounts of the State and other public entities. Payment of State expenditure is the exclusive responsibility of the public accountant or an officer designated by them, acting under their control and under their direct responsibility. All public revenue

must be collected by a public accountant who is required to carry out all necessary due diligence to recover revenue documents issued in accordance with the law.

The actors having been presented, it is worth presenting the expenditure system.

The public expenditure system

The procedure for the implementation of public expenditure comprises four stages, three of which are the responsibility of the authorising officer (commitment, validation and scheduling) and one of the accounting officer (payment).

Stage 1: Commitment of expenditure

Commitment is the initial phase of the procedure for the execution of public expenditure, it is the decision taken by the authority which is entitled, for this purpose, to withdraw part of the appropriations allocated to the budget heading for the allocation of expenditure by performing an act which will result in a debt to be borne by the State. The commitment phase consists of two operations: the legal commitment and the accounting commitment.

Stage 2: Validation of expenditure

Validation is the recognition of the service provided: it is the responsibility of the credit manager in the case of an order below the public procurement thresholds or of the person responsible for public procurement in collaboration with the credit manager in the case of a public procurement contract (reception of the service, signature of the minutes, or delivery note, etc.).

This involves the manager certifying the service provided by validating invoices and the financial controller verifying the quality of the authorising officer, the conformity of the order upon commitment and the validity of the certification of the service provided.

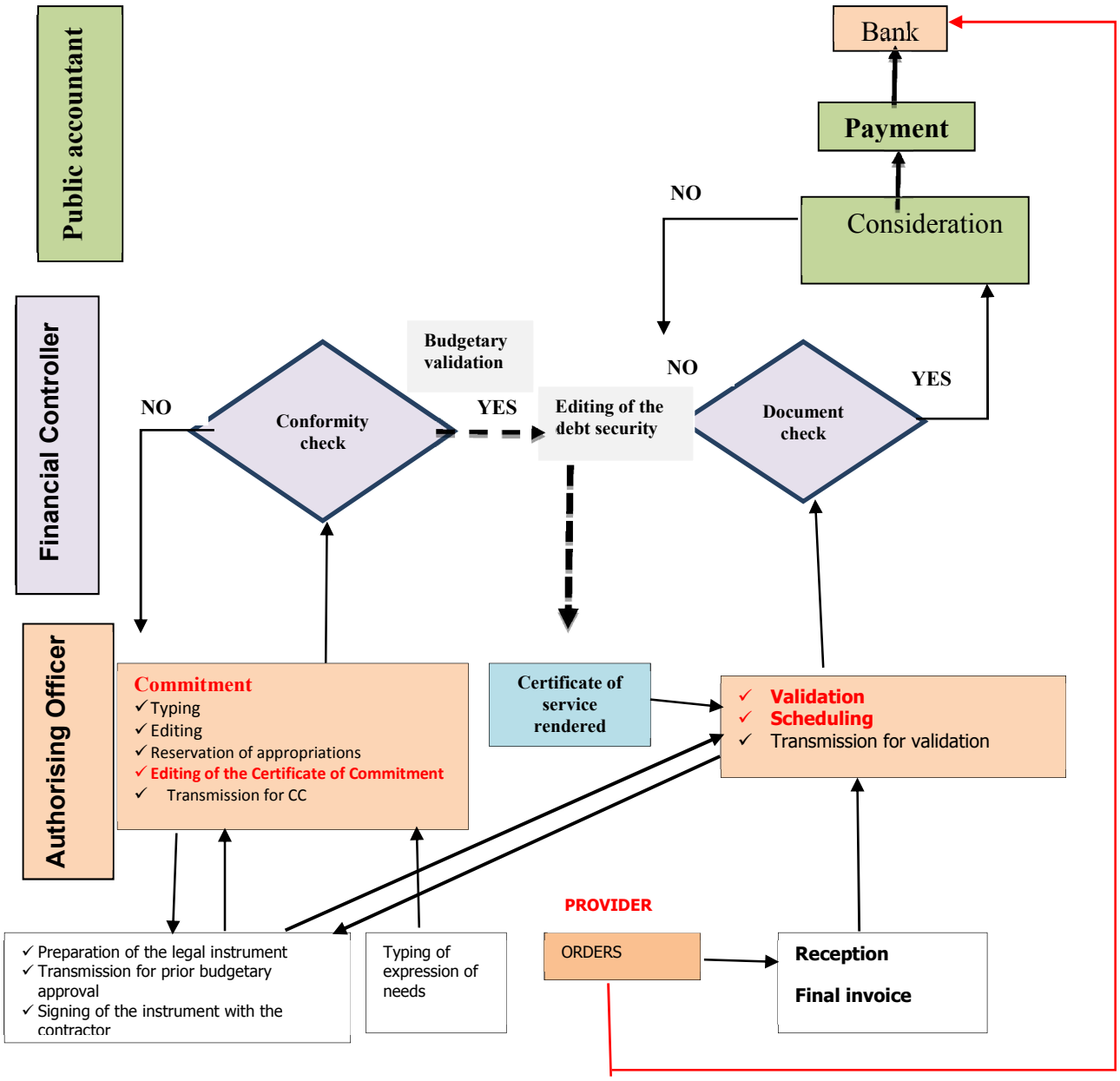
Stage 3: Scheduling of expenditure

It is the act by which the order is given, in accordance with the result of the validation, to the public accountant to pay the State debt. In practice, it is done by printing and signing the transmission slip for transmission of the orders authorised (scheduling of the payment order) to the public accountant.

Stage 4: Payment of expenditure

This is the final phase of the procedure. It results in the payment of the debt by the public accountant. At this level, the service responsible for settling the expenditure checks whether there is any opposition to payment: this may be the case, for example, for notices to third party holders, revenue orders, securities issued by the courts, and takes them into account. At the end of its controls, it issues the settlement title, which may be a cash voucher for payments at the Public Treasury counter, a credit notice for payments by bank or postal transfer or a slip for other payment methods (payment by cheque on the Treasury).

Figure 1: Global public expenditure system



CHAPTER 4: MANAGEMENT OF FINANCIAL RESOURCES AND DRUG AND VACCINE INVENTORIES IN 2017

In general, the tracking of public expenditure follows the flow of public funds and material resources from the government and other donors through the administrative hierarchy to health facilities.

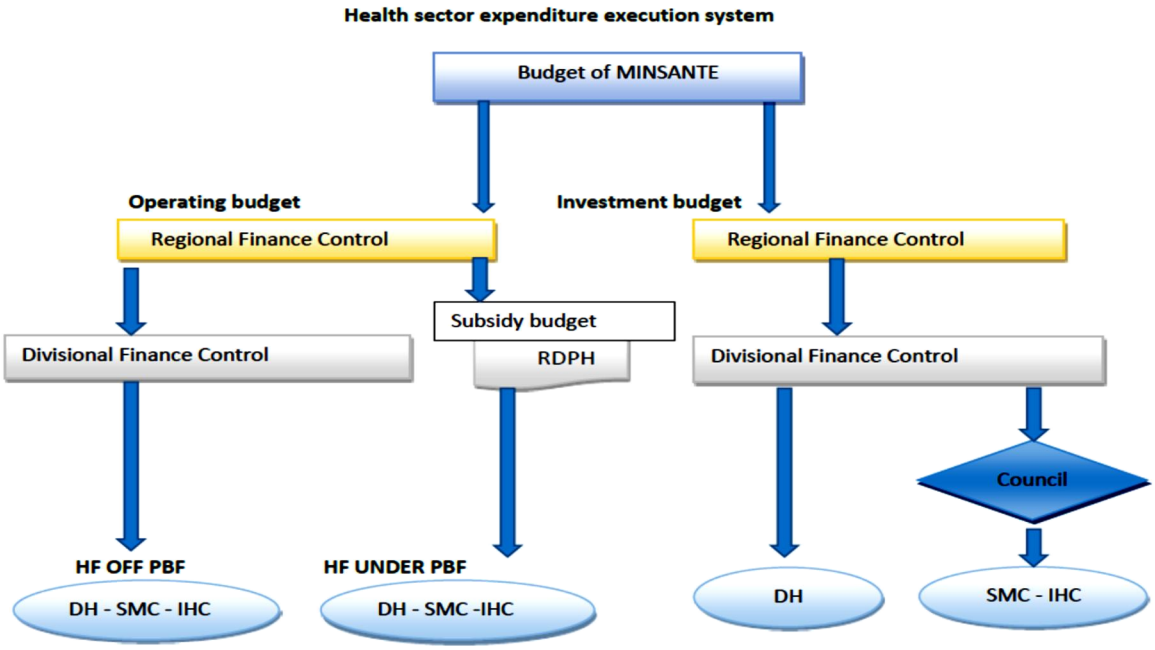
In the PETS 3 study, only lines relating to acquisition of goods and provision of services, equipment and construction of IHCs and SMCs, and management of drugs (ACTs (children), ORS/ZINC, IPT, paediatric ARVs, adult ARVs (pregnant women), amoxicillin (capsules/tablets) and amoxicillin (syrup)) and vaccines (Penta, BCG, OPV, IPV and RM) were targeted for monitoring.

This chapter focuses on the management of financial resources, drug and vaccine inventories, staff assigned to public health facilities and analysis of strengths and weaknesses in the management of financial resources, drug and vaccine inventories in 2017.

4.1 MANAGEMENT OF FINANCIAL RESOURCES

4.1.1 Conceptual model for monitoring the tracking of public expenditure

To properly analyse the tracking of budgetary resources intended for these structures, it is necessary to have complete and reliable information both on the expenditure system and on the allocations provided for in the Finance Bill and those actually received by the various links in the chain. The following concept map forms the basis for the sections on the budget system in the questionnaires for intermediate and peripheral services, including health facilities, as well as Regional and Local Authorities. It presents upstream the budget preparation and downstream the use made of it. Precise indicators, recorded at the level of each stage, make it possible to better identify the relevant information.



4.1.2 Budget allocation

The share of MINSANTE budget in relation to the State budget remained around 5% over the 2013-2016 period. However, in 2017, it represented only 4.76%, i.e. a decrease of about 15% compared to the previous year.

Table 4: Evolution of MINSANTE budget allocation in billion CFA francs from 2013 to 2017

Budget	*2013*	*2014*	*2015*	*2016*	*2017*
State budget (billion CFA francs)	3236	3,312	3,746	4,235	4,373
State budget allocated to MINSANTE (billion CFA francs)	162.44	165.87	207.6	236.15	208.19
Share of MINISANTE budget in relation to the national budget (%)	5.02	5.01	5.54	5.58	4.76

Source: Excerpt from the Finance Bills of Cameroon from 2013 to 2017

In the State budget allocation to the Ministry of Public Health in 2017, 38.16% of its operating budget was spent on the acquisition of goods and provision of services. Regarding the investment budget, 2.5% was used for acquisition of medical equipment and construction of health centres.

Table 5: Budget allocations for the acquisition of goods and provision of services, medical equipment and construction of health centres in 2017 (in billion CFA francs)

Regions	Operating budget		Investment appropriations			
	Acquisition of goods and provision of services	Share (%)	Acquisition of medical equipment	Share (%)	Construction of health centres	Share (%)
Central administration	83.554	61.84	0	0.0	2.05	35.08
Adamawa	0.916	0.68	0.141	12.53	0.52	8.90
Centre	17.903	13.25	0.88	7.82	0.65	11.12
East	3.545	2.62	0.255	22.67	0.334	0.57
Far North	0.606	0.45	0.960	8.53	0.25	4.28
Littoral	7.966	5.90	0.770	6.84	0.5075	8.68
North	7.304	5.41	0.720	6.40	0.387	6.64
North-West	0.538	0.40	0.640	5.69	0.4	6.84
West	5.249	3.89	0.710	6.31	0.95	17.03
South	6.550	4.85	0.111	9.87	0	0.0
South-West	0.973	0.72	0.150	13.33	0.05	0.86
Total	**135.109**	**100**	**1.125**	**100**	**5.843**	**100**

Source: Excerpt from the database of the 2017 Project Journal

4.1.3 Traceability in the management of public resources in 2017

4.1.3.1 Availability of budget information at the health facility level

It is assessed through prior information and its main channels.

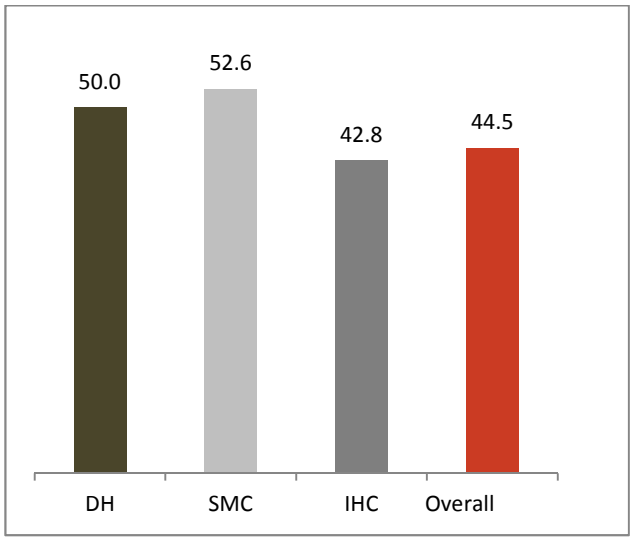
- **Prior information**

Globally, (Graph 2), less than half (45%) of HF managers were informed of their 2017 budget before the arrival of resources, despite the availability of this information in official documents. This situation may be explained by the presumption of officials that the amount of Expenditure Authorisations is invariable from one year to another. Yet, it is important for the authorising officer concerned to be informed before the arrival of the expenditure authorisations in order to anticipate some procedures for budget implementation.

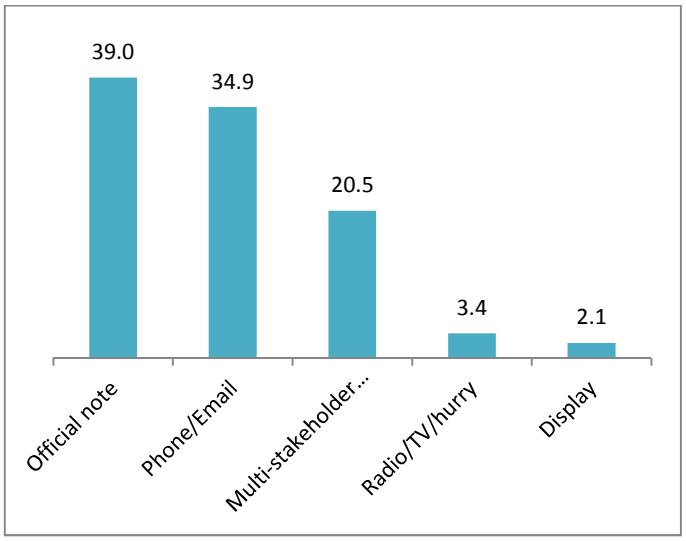
- **Main information channels**

The channel most used (39%) to access information on budget allocation by health facility managers is the official note (project journal, list of accreditation quotas) and the multi-stakeholder consultation framework. Other means of informal access to information were telephone, email and the media.

Graph 2: Percentage of health facility managers informed of the operating budget of their structure before the arrival of resources (%)



Graph 3: Distribution of health structures according to the main channels for reception of information on budget allocation in 2017 (%)



Source: PETS 3 Cameroon, 2019

4.1.3.2 Management of budgetary resources

The management of budgetary resources is monitored through the availability of budgetary information, withdrawal of expenditure authorisations and processing of the bundle of expenditure (commitment, validation and scheduling) and payment.

- **Availability of accounting documents on the use of financial resources**

The unavailability (Table 6) of records on the management of financial resources in the expenditure system was noted. Although this situation does not concern all the structures visited, it was noted that more than 25% of the health facility managers stated that they had no accounting document on the management of the operating budget allocated to their structure in 2017.On the other hand, it was observed in the expenditure system that as one moves from the top to the bottom, managers have less and less information on their operating and investment budgets of previous years.

Table 6: Proportion of officials with information available on the management of the 2017 health operating and investment budgets (%)

Type of structure	Type of information	Availability based on observation		Availability based on statement	
		Operation	Investment	Operation	Investment
Intermediate services (CRF, CDF)	Up-to-date/partial accounting documents	87.2	86.4	91.8	96.4
	No documents	12.8	13.6	8.2	3.6
Health facilities (DH, SMC, IHC)	Up-to-date/partial accounting documents	46.7	8.3	79.3	0.0
	No documents	54.3	91.7	20.7	100.0
Councils	Up-to-date/partial accounting documents	n.a.	95.5	n.a.	95.5
	No documents	n.a.	4.5	n.a.	4.5

Source: PETS 3 Cameroon, 2019 n.a. = not applicable

This unavailability of accounting documents is mainly the result of two facts observed in the field:

- Managers newly assigned to a health facility usually have no record of their predecessor's financial management;
- Management of resources is carried out in an opaque manner, the manager being the only one to hold and have access to the accounting documents.

- **Withdrawal of expenditure authorisations**

The expenditure authorisation (EA), the medium on which the amount of the budget appropriation for a peripheral structure is entered, was in most cases (60%) in 2017, withdrawn by the managers of the health facilities.

However, some may be assisted in this task by an Administrative Authority, a local elected representative or a service provider. The managers of the HFs under PBF contract have reported that they no longer receive expenditure authorisations (EAs) because of the way they operate.

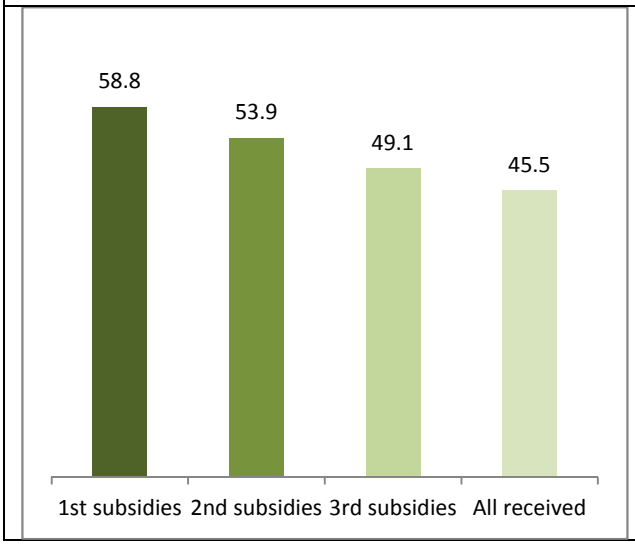
Table 7: Distribution of health facilities according to the capacity of the people who withdrew operating and investment expenditure authorisations in 2017 (%)

Capacity of people	Operation								Investment
	First semester				Second semester				
	DH	SMC	IHC	Total	DH	SMC	IHC	Total	DH
Manager	70.0	55.6	66.3	65.3	58.3	52.6	60.5	59.5	0.0
Administrative authority	10.0	8.3	6.4	6.8	8.3	10.5	5.5	6.3	0.0
Local elected representative	0.0	11.1	0.7	1.9	0.0	7.9	1.1	1.8	0.0
Providers / predecessor	20.0	8.3	11.6	11.8	16.7	7.9	14.0	13.5	8.3
not concerned / no expenditure authorizations / no records	20.0	16.7	15.0	15.5	16.7	15.8	18.8	18.3	0.0

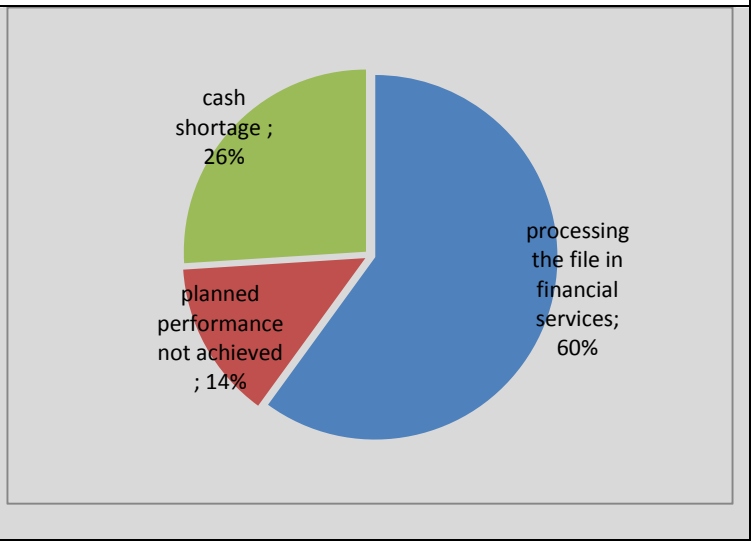
Source: PETS3 Cameroon, 2019

For health facilities that have signed Performance-Based Financing (PBF) contracts, only 54.9% received their full subsidies in 2017. The main reasons for this situation are: delays in processing the file in financial services (59.4%), cash shortage (26%) and planned performance not achieved (14%).

Graph 4: Distribution (%) of health facilities under PBF that received their full subsidies in 2017



Graph 5: Distribution (%) of health facilities under PBF according to the reasons for the partial reception of subsidies expected in 2017



Source: PETS 3 Cameroon, 2019

- **Commitment, validation and scheduling of expenditure authorisations**

Operating expenditure authorisations are withdrawn, committed, validated and scheduled twice during the year. From January, expenditure authorisations ("cartons") are issued and transmitted to financial controllers for the first half of the year and from the first week of July for the second half of the year.

Regardless of the semester (Table 8), about seven in ten (73.1%) health facilities of all categories withdrew their operating expenditure authorisations for the acquisition of goods and provision of services. Of these health facilities, 33% did not make any commitments. This situation may be explained by the fact that the manager was absent from their position during the period, has not been accredited by their top management, shows a lack of interest because of the small amount allocated or because of the lack of a deed of appointment to the position.

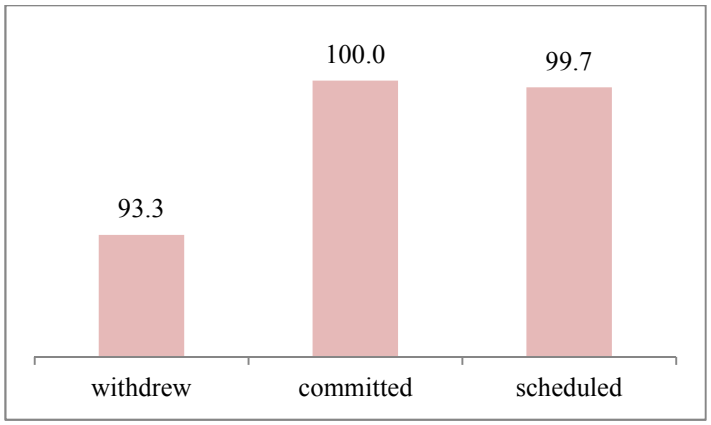
Table 8: Distribution (%) of health facilities that withdrew, committed and scheduled their Expenditure Authorisation for acquisition of goods and provision of services in 2017

		DH	SMC	IHC	Total
First semester	**Withdrawn**	89.7	65.9	72.4	73.1
	Committed	82.8	56.5	67.4	67.5
	Scheduled	75.4	58.0	67.6	67.3
Second semester	**Withdrawn**	89.7	65.9	71.0	72.0
	Committed	82.8	56.5	63.6	64.5
	Scheduled	68.0	54.8	64.5	63.7

Source: PETS3 Cameroon, 2019

For the investment budget transferred to the councils for equipment and construction of SMCs and IHCs, EAs were withdrawn, committed, validated and scheduled for all projects. As for the District Hospitals, 93.3% of the managers withdrew their EAs for the equipment of their structure, almost all of them were committed (100%), validated and scheduled (99.7%).

Graph 6: Proportion (%) of hospital managers who withdrew, committed and scheduled their expenditure authorisations for equipment in 2017



Source: PETS3 Cameroon, 2019

- **Delays in withdrawal, commitment, validation and scheduling of expenditure authorisations**

There are bottlenecks that hamper the implementation of expenditure, such as delays in the transmission of EAs by the Financial Controller, late accreditation of the manager by the administrative authority, red tape or the low amount of EAs, resulting in slow execution.

In general, the main cause of delay in the expenditure execution process is the cumbersome transmission of EAs by the Financial Controller.

Regardless of the semester, over 50% of HF managers have reported that Financial Controllers are still primarily responsible for delays in the withdrawal of expenditure authorisations. In addition to the responsibility of the financial controllers for the delays observed, the responsibility of some HF managers is also involved.

Table 9: Distribution (%) of health facilities according to the causes of delays in the withdrawal, commitment, validation and scheduling of expenditure authorisations dedicated to the line "acquisition of goods and provision of services"

	Causes of delays	Withdrawal	Commitment	Scheduling
First semester	Delays in the transmission of expenditure authorisations by the financial controller	61.3	67.4	69.2
	Late accreditation by the administrative authority	26.7	32.6	30.8
	Low amount of EAs	12.0	0.0	0.0
Second semester	Delays in the transmission of expenditure authorisations by the financial controller	52.1	64.1	69.6
	Late accreditation by the administrative authority	33.8	35.9	30.4
	Low amount of EAs	14.1	0.0	0.0

Source: PETS3 Cameroon, 2019

4.1.3.3 Budget implementation

The level of budget implementation is assessed on the basis of the rate of physical and financial implementation.

In the health facilities in the sample, the financial implementation rate of the operating budget (Table 10) was 90%. Based on the categories of the health facilities, the rate in IHCs was more than 90% while it was respectively 88.1% and 87.8% in the DHs and SMCs. Health facilities under PBF are not concerned (see box).

Table 10: Financial implementation rate (%) of operating budget in health facilities in 2017

		DH	SMC	IHC	Total
Commitment basis	First semester	88.6	89.6	92.3	91.6
	Second semester	88.6	89.0	93.4	92.4
Overall implementation rate based on commitment		**88.1**	**87.8**	**92.2**	**91.3**
Scheduling basis	First semester	89.0	86.8	91.0	90.4
	Second semester	88.4	89.3	90.7	90.3
Overall implementation rate based on scheduling		**88.4**	**86.5**	**91.0**	**90.3**

Source: PETS3 Cameroon, 2019

For the investment budget for projects for the equipment and construction of the health facilities managed by the sampled Regional and Local Authorities, the overall implementation rate based on commitment in 2017 was 92%. Specifically, the implementation rate based on commitment for the equipment of health facilities was 79.8% while the implementation rate for construction projects reached 99.8% during the same year.

Payment of subsidies for health facilities under PBF

Performance Based Financing (PBF) is an innovative approach to health system strengthening. It consists in remunerating some services on the basis of the level of performance of a number of previously defined indicators. The ultimate goal is to improve the quality of care in health facilities.

The PETS3 study focused on health facilities under PBF. It was observed that the State and the World Bank (WB) are the two sources of financing for the health facilities under PBF. Some of the health facilities in the sample under PBF benefited from it. With regard to the deadlines for transferring subsidies, some stated that they received their subsidies in 2018. This was due to slowness in the processing of files after evaluation of their performance. However, because of the management mode of these health facilities, their integration into the expenditure system could not lead to relevant results with the methodological approach adopted in the PETS3 study.

4.1.3.4 Budget implementation deadlines

Budgetary resources for the operation of health facilities, made available every six months, are channelled through financial controllers. Their timely availability should enable district hospital directors and managers of SMCs and IHCs to acquire what is necessary for the operation of their structures.

In the case of operating appropriations for the acquisition of goods and provision of services, it was observed that the time taken to withdraw and execute the expenditure was shorter for the first half of the year. A little more than one in ten (10.3%) said they withdrew their EAs of the first half of the year in the second half of January 2017. On the other hand, 13% of managers experienced delays in the withdrawal of their EAs. This had a negative effect on the subsequent execution of the EAs, which could lead to these not being committed.

Of the 79% of health facility managers who executed their EAs in the same semester, 91.0% executed it in the first two weeks. For the second half of 2017, nearly 86.4% of health facility managers withdrew their EAs after more than fifty-eight (58) days, due to hassles in the public expenditure system. Once the withdrawal was made, 90% of them executed the expenditure within a few days.

Table 11: Distribution (%) of hospital, Sub-Divisional Medical Centre and Integrated Health Centre managers, based on EAs withdrawal and operating resource execution deadlines for acquisition of goods and provision of service in 2017

		DH	SMC	IHC	Total
Duration between the beginning of the 1st semester 2017 and withdrawal of the expenditure authorisation	15 days or less	18.8	13.3	9.2	10.3
	16 - 58 days	68.8	80.0	77.1	76.6
	58 days or more	12.5	6.7	13.7	13.0
Duration between the withdrawal of the authorisation of expenditure and start of implementation of the budget of the 1st semester of 2017	15 days or less	92.9	100.0	89.9	91.0
	16 - 58 days	0.0	0.0	7.6	6.2
	58 days or more	7.1	0.0	2.5	2.8
Duration between the beginning of the 2nd semester 2017 and withdrawal of the expenditure authorisation	15 days or less	0.0	0.0	6.2	5.1
	16 - 58 days	6.3	0.0	9.7	8.5
	58 days or more	93.8	100.0	84.1	86.4
Duration between the withdrawal of the authorisation of expenditure and start of implementation of the budget of the second semester of 2017	15 days or less	83.3	92.3	89.1	88.9
	16 - 58 days	16.7	7.7	7.3	8.1
	58 days or more	0.0	0.0	3.6	3.0

Source: PETS3 Cameroon, 2019

4.1.3.5 Losses registered by managers

Losses reported by the managers of the health facilities are bribes paid either to obtain the expenditure authorisation in respect of the operating budget, or to process the file in the financial control services, etc.

A proportion of 80% of managers reported paying bribes when executing their EAs for the acquisition of goods and provision of services (taking possession of their EAs, committing and/or receiving payment). It is worth mentioning note that it was not easy in the field to collect information from the managers interviewed, illegal amounts they unduly paid to be served, although they denounced this practice which has repercussions on the quality of the final provision.

Table 12: Proportion (%) of managers who incurred losses as a result of the various causes during the execution of the expenditure

Causes	Acquisition of goods and provision of services	
	First semester	Second semester
Late availability of resources	16.9	15.8
Late processing of the file in the financial service	15.9	14.7
Absence of providers	10.0	10.5
Late contracting	9.0	9.4
Other (lump sum/percentage required)	19.0	17.0

Source: PETS3 Cameroon, 2019

In addition, all the managers of the Regional and Local Authorities stated that they had not lost any financial resources from the investment budget earmarked for the equipment and construction of health facilities.

4.1.3.6 Assessment of the effectiveness and functionality of equipment and infrastructure

In 2017, in the State budget allocation granted to the Ministry of Public Health, 64.92% of its investment budget was devoted to the construction of health centres and the rest to the equipment of health facilities. These resources made it possible to effectively build seven health centres and equip twenty-five health facilities (DHs, SMCs and IHCs) with medical equipment in the sampled councils. All these projects were implemented by the District Hospital managers and the mayors. In addition, all the health facilities (IHCs and SMCs) surveyed were effectively equipped in 2017.

4.1.3.7 Transparency and Governance

The aim of transparency and governance is to capture, through the statements of authorising officers, their clarity in the keeping of accounting documents and their good faith in presenting them when necessary. In the health facilities, in addition to the manager, staff in charge of store accounting operations are chosen by the manager to ensure the effectiveness of the delivery and are responsible for keeping the accounting documents.

Of all the health facility managers interviewed at the national level, 63.6% stated that they had supporting documents for operating expenditure for the year 2017. Some managers stated that the financial documents had been taken away by their predecessors or were missing. The same situation was observed by the HD managers for investment appropriations. At the regional level, disparities are less perceptible and are around the average for all regions except the East (11.8%) and South (45%).

Although most of the health facilities had accounting documents tracing their operating expenditure, it was observed that nearly seven in ten managers (67.9%) stated that they had submitted to the accounting officer the documents justifying the operating expenditure for the acquisition of goods and provision of services.

With regard to the availability of a document tracing the execution of expenditure, it was globally observed that less than 40% of managers of structures did not have such a document, as a result of their negligence or weakness in archiving such documents.

With regard to the submission of supporting documents to the accounting officer, a little more than 30% of managers of the health facilities stated that they had not done so.

Moreover, the accounting documents held by some authorising officers were not up to date.

Table 13: Distribution (%) of health facilities that had a document that traces budget expenditure and submitted the supporting documents to the accountant in 2017 (in %)

	Had a document that traces budget expenditure		Submitted supporting documents to the accounting officer	
	First semester	Second semester	First semester	Second semester
Category of health facilities				
DH	76.3	76.3	76.3	79.9
SMC	59.7	57.0	62.4	62.4
IHC	61.8	63.2	67.4	67.3
Regions				
Adamawa	59.3	59.3	73.6	78.3
Centre	78.7	78.9	81.0	81.2
East	11.8	11.8	11.8	11.8
Far North	63.8	63.8	72.7	72.7
Littoral	77.3	77.3	77.3	77.3
North	64.2	63.8	79.2	72.3
North-West	90.6	90.3	93.8	93.5
West	71.9	83.2	66.1	77.4
South	45.0	45.0	45.0	45.0
South-West	55.0	49.7	55.0	55.0
Total	**62.8**	**63.6**	**67.6**	**67.9**

Source: PETS 3 Cameroon, 2019

4.2 MANAGEMENT OF DRUG AND VACCINE INVENTORIES IN 2017

Cameroon has a National Essential Drug Supply System (SYNAME) under the umbrella of CENAME for the public, private denominational sector and for-profit private sector wholesalers. It is therefore through the SYNAME that the supply and distribution of pharmaceutical products is carried out throughout the national territory. In the public sector, CENAME centralises all purchases of pharmaceutical products and distributes them through the RFHP and the internal pharmacies of the health facilities (CHs, RHs, DHs, SMCs and IHCs). In its capacity as a public purchasing centre, CENAME ensures the regular supply of quality drugs at lower costs in intermediate supply structures (RFHP) and in the pharmacies of 1st and 2nd category health facilities.

For vaccines, the EPI ensures the purchase and distribution of vaccines at the level of the RTGs, which are responsible for distributing them to the Health Districts, which in turn make them available to the health facilities.

Tracking here includes the system established to ensure the supply, storage, distribution and use of drugs and vaccines needed in health facilities. These drugs and vaccines mainly concern products for the treatment of malaria (ACT for children, ORS/ZINC, IPT), antibiotics (Amoxicillin (capsules/tablets) and Amoxicillin (syrup)), the monitoring system for HIV patients (ARVs for children and ARVs for pregnant women) and five antigens (Penta, BCG, OPV, IPV and RM) for children under five years.

Graph 9: Proportion (%) of health facilities electrified in 2017

Table 14: Distribution (%) of health facilities using other sources of electric power in 2017

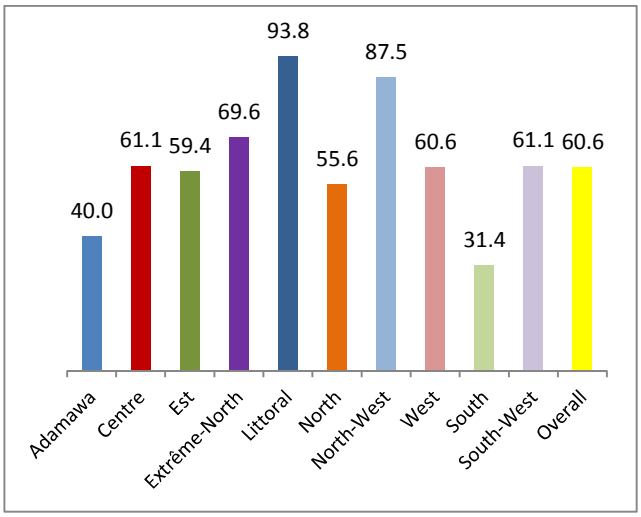
4.2.1 Basic services in the health sector

Access to water and electricity in quality and quantity contributes to improving the quality of health care and services in HFs.

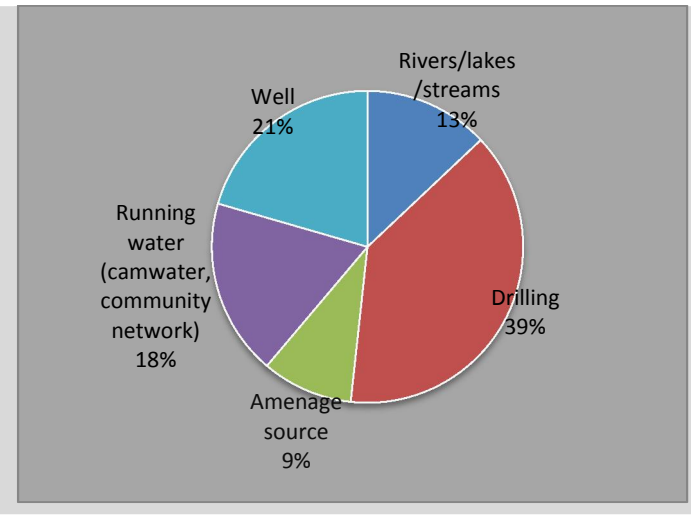
4.2.1.1 Water supply

Globally, a little more than 60% of health facilities in Cameroon have a potable water supply source in 2017. The situation is still of great concern in the regions of Adamawa (40.0%) and South (31.4%), where less than half of the health facilities have an improved water source. Boreholes (39.0%) remain the main source of water supply used in health facilities.

Graph 7: Proportion (%) of health facilities with an improved drinking water source by region in 2017



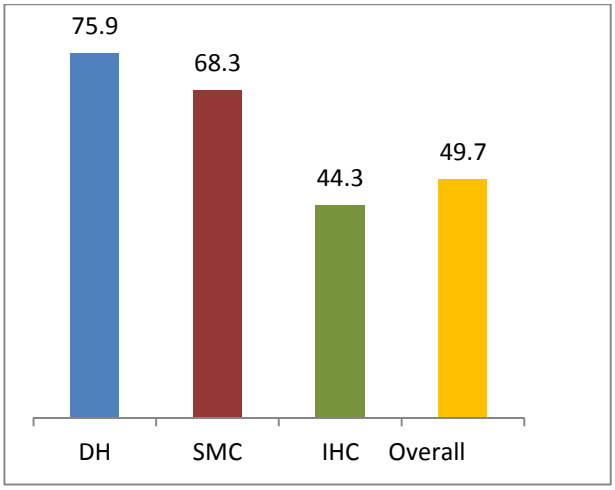
Graph 8: Distribution (%) of health facilities by main sources of drinking water supply in 2017



Source: PETS 3 Cameroon, 2019

4.2.1.2 Connection to an electric power source

With regard to connection to the electricity network, 49.7% of health facilities were connected to the national electricity network in 2017. By category of HF, three in four DHs (75.9%) are connected to the ENEO network. This situation concerns 68.3% of SMCs and 44.3% of IHCs. In addition, 45.8% of health facilities used other alternative sources of electric power such as generators, solar plates and others (flash light). However, in cases of connection to the ENEO network, all health facility managers deplore the regular power cuts.



Electric power sources	*DH*	*SMC*	*IHC*
Generator	23.9	23.9	52.1
Solar plate	3.9	9.8	86.3
Gas	8.3	8.3	83.3
Others (flash light, candle)	7.1	14.3	78.6
Total	**14.2**	**16.9**	**68.9**

Source: PETS 3 Cameroon, 2019

Repeated power cuts in health facilities have a detrimental effect on the quality of services and the storage of drugs and vaccines. In 2017, the duration of power cuts in health facilities ranged from 11.5 days to 41.9 days.

Regarding the average frequency of power cuts in health facilities, 77.4% of facility managers reported experiencing more than two power cuts per month. In terms of the number of cuts per week, half (51.4%) of managers reported experiencing more than two cuts per week in the HFs within their area of competence. With regard to the number of cuts per day, 29.9% of managers experienced in 2017 more than two cuts per day within their HFs. This situation continues to be of great concern to health facility managers, as it has a detrimental effect on the storage of drugs and vaccines and the lifespan of medical equipment.

Table 15: Average cut-off frequency in health facilities (%)

Frequency		*DH*	*SMC*	*IHC*	*Total*
Day	None	33.3	22.7	33.0	31.4
	Once	27.8	22.7	26.8	26.3
	Twice	0.0	27.3	11.3	12.4
	More than twice	38.9	27.3	28.9	29.9
	Total	100.0	100.0	100.0	100.0
Week	None	10.0	0.0	11.1	9.0
	Once	20.0	28.0	16.2	18.8
	Twice	10.0	12.0	25.3	20.8
	More than twice	60.0	60.0	47.5	51.4
	Total	100.0	100.0	100.0	100.0
Month	None	5.0	0.0	7.4	5.8
	Once	10.0	0.0	7.4	6.6
	Twice	5.0	4.5	12.6	10.2
	More than twice	80.0	95.5	72.6	77.4
	Total	100.0	100.0	100.0	100.0

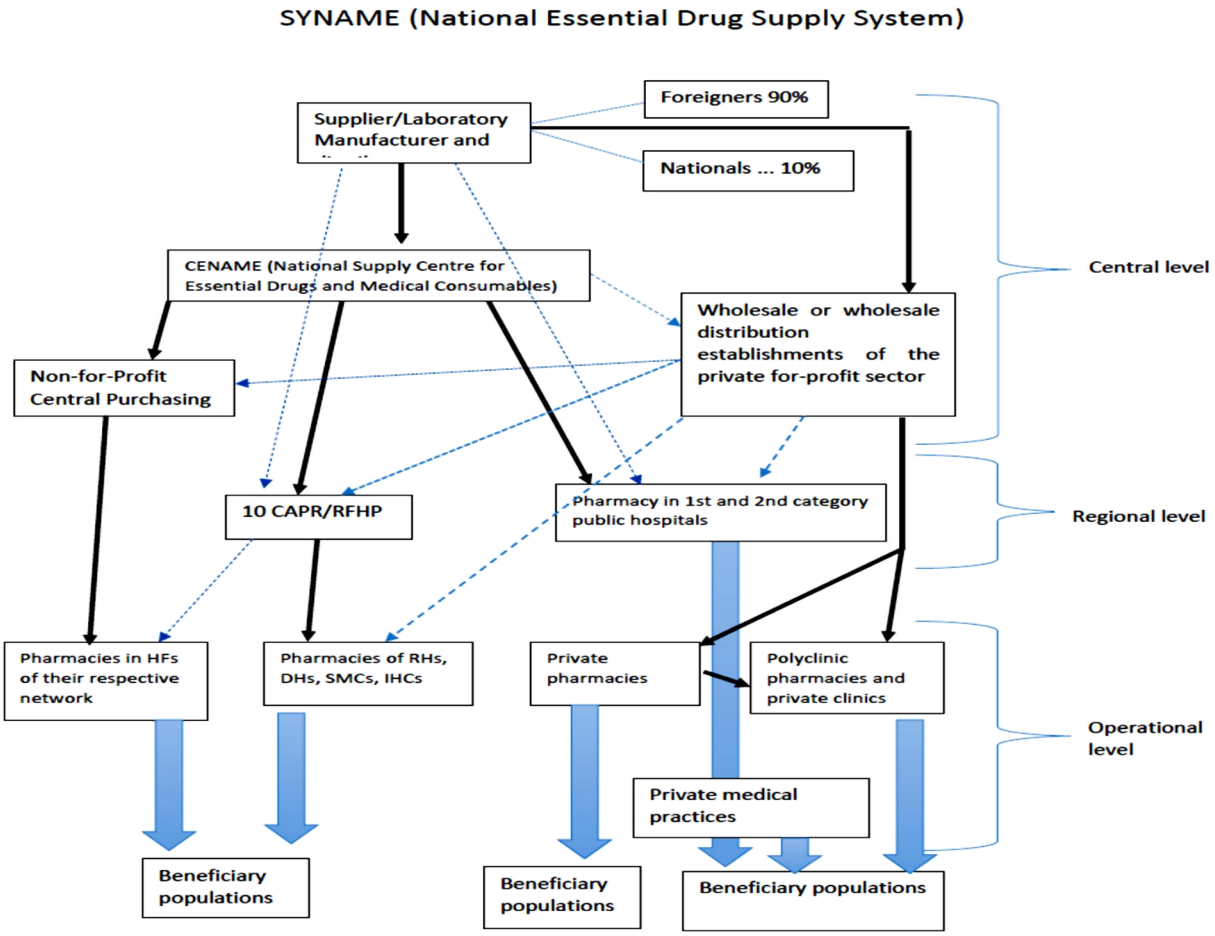
Source: PETS 3 Cameroon, 2019

4.2.2 Drug inventory management

4.2.2.1 Drug supply chain

CENAME sells drugs to the RFHP, which in turn sells them to the health facilities (DHs, SMCs and IHCs). HFs make them available to the final beneficiary, i.e. the patient.

This drug distribution system is based on four fundamental pillars: selection or ordering, supply, distribution and use of drugs. It is supported by a strong management set of qualified human resources, sufficient finances, a good information system and procedures. It is described according to the Drug Management Cycle presented below:



Caption:

Priority supply flows

Alternative flow for back-up supply when required

Flows of pharmaceutical products delivered to beneficiary populations

HF: HF/RH: Regional Hospital/DH: District Hospital/SMC: Sub-divisional Medical Centre/IHC: Integrated Health Centre

4.2.2.2 Prior information at the health facility level

In 2017, most of the health facilities that requested essential drugs were informed by official note of the availability of drugs. Only six in ten (60%) Regional Funds for Health Promotion said they were informed of the availability of drugs by official note, while the others were informed through display and telephone.

Most of the health facilities sampled, for their part, reported having received information on the availability of drugs by official note and by telephone.

Table 16: Percentage of health facility managers informed beforehand of the availability of drugs by category and region in 2017(%)

Structures		Official note	Multi-stakeholder consultation framework	Radio/TV/Press	Display	Phone/ SMS Email
Intermediate service Category of health facility	RFHP	60.0	0.0	0.0	0.2	0.2
	DH	10.7	10.0	40.0	0.0	4.3
	SMC	16.5	15.0	20.0	0.0	7.2
	IHC	72.8	75.0	40.0	100.0	88.4
	Total	100.0	100.0	100.0	100.0	100.0
Regions	Adamawa	6.8	5.0	0.0	0.0	7.2
	Centre	12.6	10.0	20.0	14.3	8.7
	East	8.7	20.0	20.0	0.0	5.8
	Far North	18.4	20.0	20.0	42.9	7.2
	Littoral	5.8	7.5	0.0	0.0	4.3
	North	9.7	15.0	0.0	0.0	44.9
	North-West	15.5	2.5	0.0	14.3	4.3
	West	12.6	10.0	20.0	0.0	5.8
	South	2.9	10.0	0.0	0.0	5.8
	South-West	6.8	0.0	20.0	28.6	5.8

Source: PETS 3 Cameroon, 2019

4.2.2.3 Drug supply sources

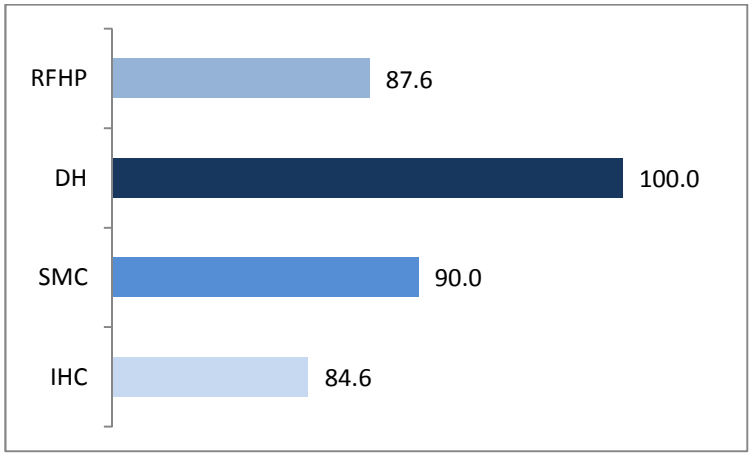
The RFHP and health facilities (DHs, IHCs, SMCs) are supposed to have their supplies primarily from CENAME or the RFHP to which they belong, respectively. However, these health facilities can also have their supplies from higher level hospitals or, when there is a stock-out at the RFHP, from other approved suppliers.

It was observed that in 2017, more than 85% of health facilities acquired their drugs from the Regional Fund for Health Promotion (RFHP).

Specifically, all district hospitals as well as SMCs (90%) and IHCs (84.6%) were supplied at the level of the Regional Funds for Health Promotion. The other health facilities had their supplies either from higher level hospitals or from approved private suppliers.

With regard to the Regional Funds for Health Promotion, only 1 in 8 did not have supplies from CENAME in 2017, as in most cases there was a high stock of drugs in store. Two Regional Funds for Health Promotion provided no information on their source of drug supply in 2017.

Graph 10: Proportion (%) of health facilities that obtained supplies from recommended facilities (CENAME, RFHP) in 2017



Source: PETS3 Cameroon, 2019

4.2.2.4 Storage conditions and management of drugs inventories

This section covers good distribution practices (storage conditions), packaging of drugs received/transferred and inventory management tools. In normative terms, they are as follows:

- Storage areas and conditions are considered compliant if the structure has: (i) well-defined storage areas for reception, storage, preservation and delivery of products, as well as for expired/tainted products, and (ii) storage criteria (existence of an operational pharmacy, existence of an operational refrigerator, absence of direct exposure of products to sunlight, availability of storage equipment and existence of adequate storage facilities) are met.
- Packaging of medicinal products is considered compliant if it best guarantees the use and conservation of the medicinal product, as well as its safe use.
- Inventory management tools (manual or computerised) comply with the standard if they are maintained and updated on a regular basis.

Globally, health facility managers reported compliance with good distribution practices and drug management/storage standards at both central and intermediate levels in 2017.

At the operational level, over 83% of health facility managers, all categories combined, stated that drug management/storage standards are respected, thus ensuring the quality of drugs and good inventory management.

Table 17: Proportion of health facilities with criteria for storage and packaging of drugs met in 2017 (%)

Storage and packaging criteria	Peripheral level			
	DH	SMC	IHC	Total
Operational pharmacy /pro-pharmacy/storage space/refrigerator	100.0	94.4	85.6	87.9
Packaging of drugs received/transferred	96.2	97.2	81.4	84.6
Drug inventory management tools (software, registry...)	92.3	91.7	81.4	83.6

Source: PETS 3 Cameroon, 2019

Drug inventory management was based on the acquisition, registration, transfer and use of products. In order for it to be effective, a number of minimum conditions must be met, namely: (i) existence of inventory sheets (manual or computerised) that comply with the standards and are up to date; (ii) removal of products according to the first expired - first out method; (iii) definition of alert inventories and renewal of inventories must be carried out when the alert threshold is reached.

At the level of peripheral health facilities, storage conditions seem to be better and drug inventory management efficient. Irrespective of the type of drugs, 74.1% of health facilities were supplied by the Regional Funds for Health Promotion in 2017. It was observed that the drug supply chain is respected by health facilities.

Table 18: Distribution (%) of health facilities that acquired drugs in 2017

Types of drugs	RFHP	DH	SMC	IHC	Total
ACT (for children)	83.3	72.4	82.9	75.8	76.3
ORS/ZINC	66.7	69.0	62.9	72.1	70.7
IPT	83.3	55.2	68.6	83.3	78.9
ARV (for children)	83.3	75.9	45.7	52.9	54.3
ARV (for pregnant women)	50.0	69.0	57.1	62.1	62.2
Amoxicillin (capsules/tablets)	83.3	89.7	91.4	88.8	89.1
Amoxicillin (syrup)	83.3	89.7	85.7	87.9	87.8

Source: PETS3 Cameroon, 2019

Availability of the seven drugs is relatively good in all the structures studied at the central, intermediate, and peripheral levels. This justifies that at the level of the health facilities, the average rate of use of the seven drugs is above 50%. This rate is considered to be relatively good. Whatever the category of the health facility, the various antimalarial tracer products had a use rate above 70%; the same is true for antibiotics (over 81%).

Table 19: Utilisation rate (%) of drugs purchased by category of health facilities in 2017

Types of drugs in boxes	DH	SMC	IHC	Total
ACT (for children)	66.1	75.4	75.0	74.3
ORS/ZINC	75.5	85.6	77.3	77.9

IPT	65.1	67.5	71.7	70.9
ARV (for children)	73.4	56.3	51.9	54.8
ARV (for pregnant women)	78.3	66.0	66.7	67.7
Amoxicillin (capsules/tablets)	86.0	90.2	80.3	81.9
Amoxicillin (syrup)	84.5	88.7	82.2	83.1

Source: PETS3 Cameroon, 2019

4.2.2.5 Stock-outs

Stock-outs are one of the consequences of the poor quantification of needs. The development of a supply plan by the health structures makes it possible to express the annual needs in terms of quantity and value of drugs as well as the supply schedule and to guarantee the availability of products while limiting their loss.

In 2017, many health facilities were supplied with drugs and at least 20% of them experienced stock-outs for each type of drug monitored.

Duration of drug stock-outs is long enough in general and more particularly in peripheral structures (HFs). In 2017, it ranged from 19 days for the shortest to 80 days for the longest.

For the seven essential drugs monitored, ACTs for children (58.2 days) and ORS/ZINC (80.3 days) were the two products with the longest stock-out periods. This may be explained by the high demand for malaria treatment products for children and the remoteness of intermediate supply centres for IHCs and SMCs. However, apart from products and inputs for the treatment of malaria, drug stock-outs seem to be more frequent in district hospitals than in IHCs and SMCs.

Table 20: Distribution (%) (%) of health facilities that experienced drug stock-outs in 2017

Types of drugs	Intermediate service		Category of health facilities		
	RFHP	DH	SMC	IHC	Total
ACT (for children)	40.0	70.0	63.2	49.1	**53.**
ORS/ZINC	20.0	55.0	42.1	58.6	**56.**
IPT	20.0	25.0	10.5	22.4	**21.**
ARV (for children)	60.0	20.0	21.1	23.3	**22.**
ARV pregnant women	40.0	10.0	36.8	21.6	**21.**
Amoxicillin (capsules/tablets)	60.0	10.0	31.6	34.5	**31.**
Amoxicillin (syrup)	0.0	15.0	47.4	38.8	**36.**

Table 21: Average number of days of drug stock-outs in 2017 in health facilities

Types of drugs	Intermediate service		Category of health facilities		
	RFHP	DH	SMC	IHC	Total
ACT (for children)	265.5	101.6	53.2	51.9	58.2
ORS/ZINC	0.0	87.9	120.8	73.2	80.3
IPT	30	37.8	11.4	18.0	19.9
ARV (for children)	184.5	13.1	53.1	40.6	38.1
ARV pregnant women	66	13.1	58.8	31.9	32.2
Amoxicillin (capsules/tablets)	216.6	13.1	17.9	23.3	21.4
Amoxicillin (syrup)	0.0	12.0	19.7	22.4	20.8

Source: PETS3 Cameroon, 2019

Despite the fact that some health facilities reported stock-outs, others had drugs that remained in stock in 2017. A little more than three health facilities out of four (75.2%) preferred to leave their

drugs in stock in 2017, and some of the drugs that remained in stock were destroyed (between 3% and 10% of health facilities), sent to another health facility (between 1% and 6% of health facilities) and returned to the RFHP.

Table 22: Distribution of health facilities that had drugs left in stock according to the action taken on these drugs in 2017 (%)

Types of drugs	Returned to the RFHP	Transferred to another health facility	Left in stock	Destroyed (tainted)	Total
ACT (for children)	13.4	1.3	75.2	10.1	100.0
ORS/ZINC	10.5	2.4	78.2	8.9	100.0
IPT	7.1	1.3	84.6	7.1	100.0
ARV (for children)	11.7	4.7	75.0	8.6	100.0
ARV pregnant women	9.3	6.2	76.0	8.5	100.0
Amoxicillin (capsules/tablets)	6.4	0.0	88.6	5.0	100.0
Amoxicillin (syrup)	6.5	0.7	89.1	3.6	100.0

Source: PETS3 Cameroon, 2019

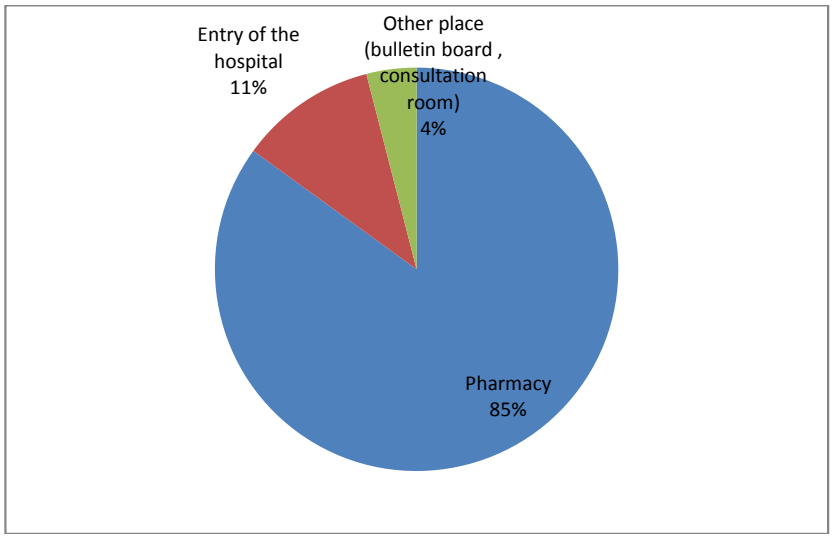
4.2.2.6 Transparency

As part of drug management, the results of the PETS2 had recommended the display of drug prices by health facilities. Transparency is addressed here through the display of prices and the availability of a document tracing the management of drugs in health facilities.

In general, six in seven health facilities reported displaying drug prices at the pharmacy.

Non-display of drug prices is still prevalent in some regions. This is the case in the South region, where 64.7% of health facilities reported that they did not display drug prices, a proportion well above the national average.

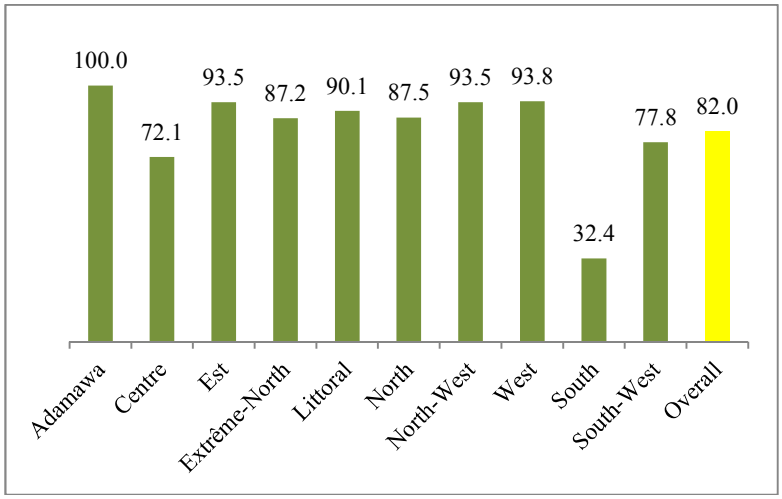
Graph 11: Distribution (%) of health facilities according to the main places where drug prices were displayed in 2017



Source: PETS3 Cameroon, 2019

Drug inventory management varies from region to region. On average, 82.0% of health facilities reported having documents that trace the management of drug stocks in 2017. However, the South region is particular inasmuch as only 32.4% of the health facilities have complied with this managerial requirement, which consists in having inventory registration sheets and making regular updates.

Graph 12: Proportion (%) of health facilities with documents retracing the management of drug inventories in 2017 by region



Source: PETS3 Cameroon, 2019

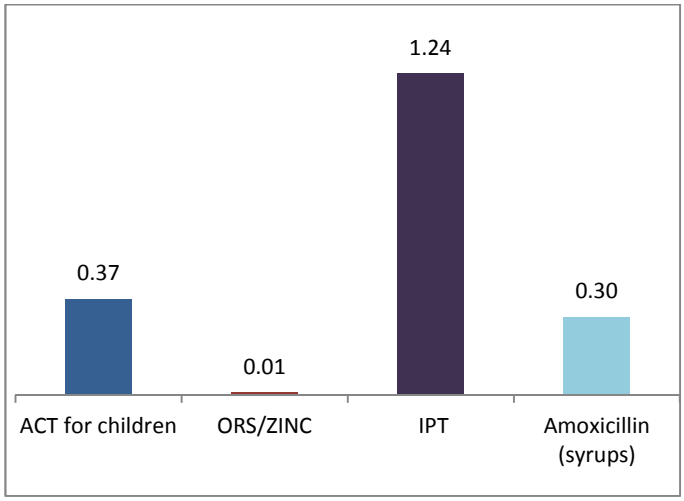
4.2.2.7 Losses in drug inventory management

Losses in drug inventory management were observed at all levels of the supply chain in 2017.

- **At the intermediate level (RFHP)**

Poor storage of drugs was the main cause of the losses reported by the Regional Funds for Health Promotion. Of the seven drugs monitored, four (ACT for children, ORS/ZINC, IPT and Amoxicillin (syrups)) were reported lost due to storage failure. Regular power cuts and narrowness of the storage space were cited by the managers interviewed as the main causes of these losses.

Graph 13: Losses (%) of drugs due to storage reported by the Regional Fund for Health Promotion



Source: PETS3 Cameroon, 2019

- **At the peripheral level (health facilities)**

In general, nearly 27% and 12% of health facilities reported losses of drugs in 2017 due to storage and delivery difficulties: (i) at the time of conveyance, the means of transport of drugs at the peripheral level are not always suitable for fragile drugs such as ampoules and glass vials; (ii) during storage, regular power cuts, insufficient storage space and the absence of a pharmacy result in the loss of drugs.

Table 23: Proportion (%) of health facilities that experienced drug losses according to storage and packaging criteria in 2017

	DH	*SMC*	*IHC*	*Total*
Storage				
ACT (children)	57.1	25.0	21.6	26.9
ORS/ZINC	14.3	12.5	16.2	15.4
IPT	14.3	0.0	10.8	9.6
ARV (for children)	28.6	25.0	8.1	13.5
ARV (for pregnant women)	28.6	25.0	5.4	11.5
Amoxicillin (capsules/tablets)	14.3	12.5	2.7	5.8
Amoxicillin (syrup)	0.0	12.5	2.7	3.8
Mode of conveyance				
ACT (for children)	0.0	12.5	13.5	11.5
ORS/ZINC	0.0	12.5	5.4	5.8
IPT	0.0	12.5	10.8	9.6
ARV (for children)	14.3	0.0	13.5	11.5
ARV (for pregnant women)	0.0	0.0	0.0	0.0
Amoxicillin (capsules/tablets)	0.0	25.0	5.4	7.7
Amoxicillin (syrup)	0.0	25.0	0.0	3.8

Source: PETS 3 Cameroon, 2019

In 2017, nearly 10% of boxes of acquired drugs (ACT for children, ORS/ZINC, IPT, ARV for children, ARV for pregnant women, amoxicillin (capsules/tablets) and amoxicillin (syrups)) were reported lost by the health facilities sampled.

With regard to the type of drug, antimalarial products are those for which the health facilities recorded more losses due to poor storage, poor assessment of needs and delivery. This phenomenon is also due to the acquisition of products with close expiry dates.

To avoid these losses, it is important to develop a supply plan, take into account the real needs of health facilities and develop procedures and mechanisms for transportation of drugs to the health facility, as well as provide health facilities with alternative sources of electricity.

Table 24: Percentage of drugs lost according to storage and packaging criteria in 2017

Types of drugs	DH	SMC	IHC	TOTAL
Storage				
ACT (for children)	14.1	0.5	4.5	19.0
ORS/ZINC	1.0	0.3	37.5	38.8
IPT	0.3	0.0	14.2	14.5
ARV (for children)	5.8	0.4	0.3	6.5
ARV (for pregnant women)	2.6	1.0	0.6	4.3
Amoxicillin (capsules/tablets)	13.1	0.2	3.3	16.6
Amoxicillin (syrup)	0.0	0.2	0.1	0.3
Mode of conveyance				
ACT (for children)	0.0	18.6	2.4	21.0
ORS/ZINC	0.0	18.8	8.6	27.4
IPT	0.0	0.0	9.7	9.7
ARV (for children)	12.1	0.0	3.9	16.0
ARV (for pregnant women)	0.0	0.0	2.4	2.4
Amoxicillin (capsules/tablets)	0.0	0.4	19.0	19.4
Amoxicillin (syrup)	0.0	3.7	0.4	4.1

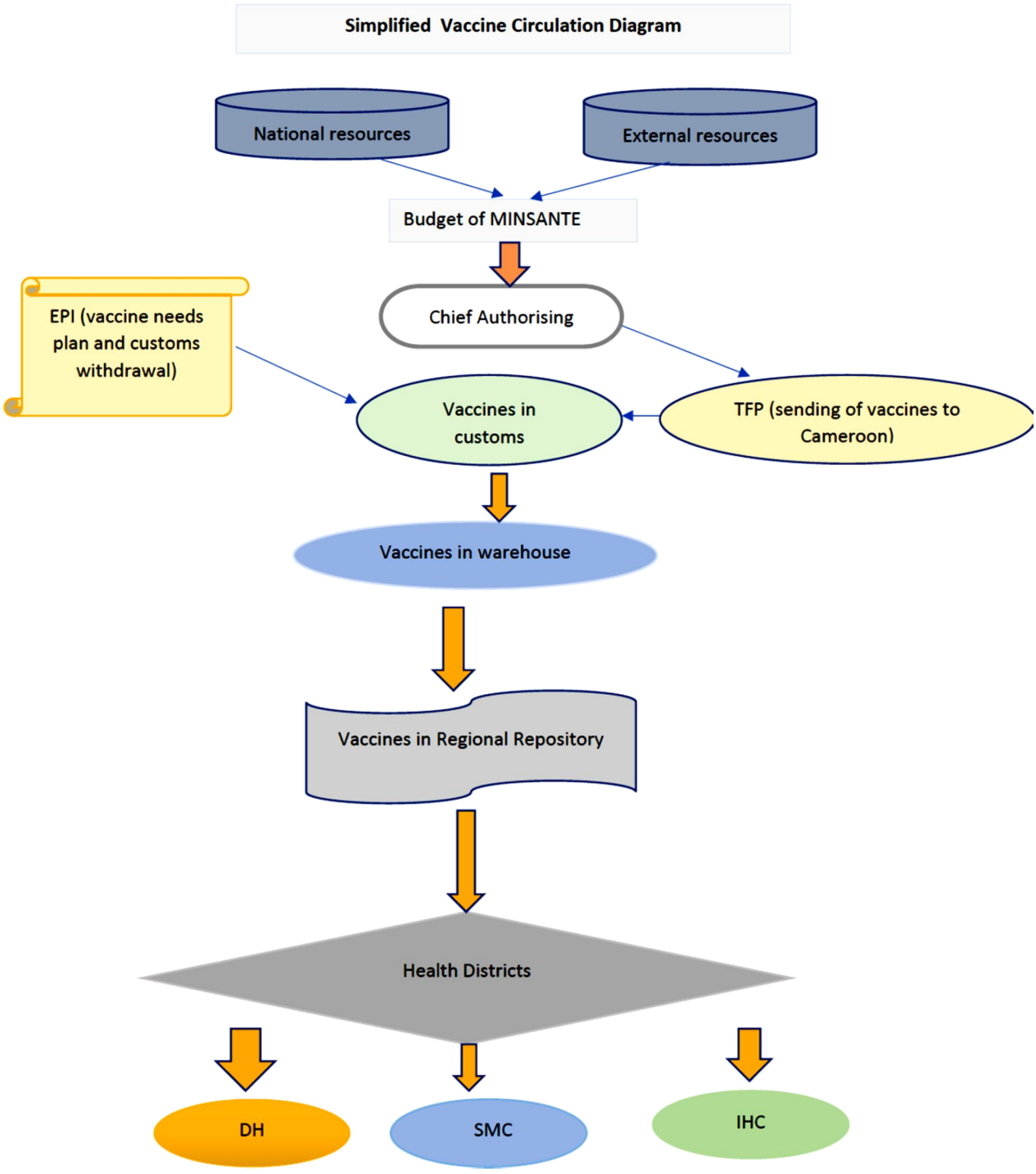
Source: PETS 3 Cameroon, 2019

4.2.3 Management of vaccines

Vaccination is the most effective means of prevention against several infectious diseases (poliomyelitis, measles, yellow fever, meningitis, tetanus, etc.). The Ministry of Public Health, with the support of UNICEF, makes antigens for children and pregnant women available to health structures in order to prevent serious cases of physical, mental or neurological disabilities. In 2017, approximately 708,947 children in Cameroon were vaccinated by the sampled health facilities.

4.2.3.1 Vaccine distribution system

The Expanded Program on Immunisation (EPI) is the only programme that centralises the supply of vaccines from its office in Yaounde and distributes them through its regional repositories and relay stations, which in turn convey them to IHCs and SMCs for organisation of vaccination sessions. The EPI supply chain is identical regardless of the source of funding for purchase of vaccines (STATE, UNICEF, WHO, GAVI, etc.). In 2017, the EPI received 1,248,405 vials of antigens and transferred 2,188,228 vials of antigen to Regional Vaccine Repositories.



4.2.3.2 Prior information

In 2017, 80.3% of health facilities were informed of the availability of vaccines at the level of the district health services within their area of competence. Most of those in charge of these health service structures were informed by an official note (38.5%) and by telephone (34.8%).

Table 25: Percentage of health structures informed of the availability of vaccines according to the main channels of reception of information in 2017

Transmission channels	Intermediate health services		Categories of health facilities		
	RVR	DHS	DH	SMC	IHC
Official note	42.9	46.8	40.9	30.3	**39.8**
Phone/Email	42.9	38.3	40.9	36.4	**34.5**
Multi-stakeholder consultation framework	0.0	8.5	4.5	24.2	**16.8**
Display	0.0	2.1	9.1	3.0	**5.8**
Radio/TV/press	14.2	4.3	4.5	6.1	**3.1**
Total	**100**	**100**	**100**	**100**	**100**

Source: PETS 3 Cameroon, 2019

4.2.3.3 Vaccine storage conditions

Vaccine storage conditions are based on a number of criteria including the existence of an operational refrigerator, packaging of vaccines received/transferred and existence of vaccine management tools.

In 2017, over 70% of intermediate health services (RTG-EPI) reported that they had met predefined standards for vaccine storage and packaging.

At the peripheral level, more than 80% of health facilities of all categories reported having adequate storage and packaging conditions, which made it possible to guarantee the quality of the vaccines.

Table 26: Proportion (%) of health facilities that are electrified and do not meet the criteria for vaccine storage and packaging in 2017

Storage and packaging criteria	Intermediate health service	Categories of health facilities			
	DHS	DH	SMC	IHC	Total
Operational refrigerator	36.8	6.1	12.7	25.4	21.0
Packaging of vaccines received/transferred	21.1	11.6	8.7	14.4	13.1
Vaccine inventory management tools (software, registry...)	**42.1**	11.6	13.1	6.9	8.5

Source: PETS 3 Cameroon, 2019

4.2.3.4 Supply and use of vaccines

Optimal vaccine management consists in maximising coverage through high utilisation and minimal wastage. In 2017, most health facilities at both the intermediate and peripheral levels were supplied with antigens. The EPI transferred 2,180,028 vials of antigens to the Regional Vaccine Repositories. They sent 2,422,694 vials of antigens to the district health services.

Assessment of the management of vaccine flows was observed through the uses made at the level of the health facilities. In 2017, the use rate of medicines by the immunisation services of health facilities reached 70% globally.

Table 27: Utilisation rate (%) of vaccines by health facility in 2017

Antigens	DH	SMC	IHC	Total
Penta	86.8	95.9	87.7	88.6
BCG	77.4	91.1	87.1	86.8
OPV	71.4	92.4	88.1	87.2
IPV	87.7	95.1	87.8	88.7
RM	90.2	96.0	86.6	88.0

Source: PETS3 Cameroon, 2019

A total of 193,963 vials of vaccines were used by the sampled health facilities for 1,197,276 children in 2017. The discrepancy observed is due to some vials that are opened and not fully used. Given that health policy wants every child to be vaccinated.

Table 28: Total number of children vaccinated in health facilities in 2017

Antigens	DH	SMC	IHC	Total
Penta	28454	62095	205600	296149
BCG	14331	37615	149704	201650
OPV	39419	72225	220778	332422
IPV	12941	46686	130597	190224
RM	14097	33249	129485	176831

Source: PETS3 Cameroon, 2019

In general, various actions are taken on vaccines that are not used in the health facilities, including transfer/return to another RVR/DHS/HF, stockpiling or destruction (tainted).

At the intermediate level, nine DHSs out of ten reported leaving vaccines in stock. Among them, only one of the sample had to destroy its tainted vaccines.

For the vaccines that were left in stock at the level of the health facilities, 69.4% reported that they had kept them in stock. In contrast, one-quarter of these facilities returned their additional stocks to an RVR or DHS or resupplied another HF upon request.

Table 29: Proportion (%) of health facilities that had vaccines left in stock according to sources of use in 2017

Actions taken	DH	SMC	IHC	Total
Returned/transferred to another RVR/DHS/HF	25.0	27.3	24.8	25.0
Left in stock	58.3	69.2	70.6	69.4
Destroyed (tainted)	25.0	9.1	13.3	14.1
Others	0.0	0.0	2.9	2.4

Source: PETS3 Cameroon, 2019

4.2.3.5 Stock-out management

Stock-out is considered as the absence of antigens in health facilities.

In general, the stock-out of antigens varied from one structure to another, and from one antigen to another. 59.6% of DHSs surveyed reported they had vaccine stock-outs in 2017.

At the peripheral level, over 50% of health facilities (HFs) reported stock-outs for BCG and RM antigens. In contrast, about one in three HFs (30%) reported stock-outs for Penta, OPV, and IPV antigens.

Lack of storage space, lack of conservation equipment, and late delivery of vaccines with close expiry dates are factors that have favoured these stock-outs in the HFs in 2017.

Table 30: Proportion (%) of health facilities that experienced vaccine stock-outs in 2017

Antigens		**Penta**	**BCG**	**OPV (for polio)**	**IPV**	**RM**
Intermediate health service	DHS	35.5	71.0	45.2	48.4	54.8
	DH	28.6	92.9	7.1	28.6	35.7
Categories of health facilities	SMC	20.0	90.0	25.0	30.0	60.0
	IHC	27.2	76.0	39.2	41.6	49.6
Regions	Adamawa	25.0	50.0	37.5	37.5	50.0
	Centre	15.0	70.0	25.0	25.0	40.0
	East	15.4	100.0	46.2	7.7	30.8
	Far North	50.0	90.0	53.3	63.3	53.3
	Littoral	22.2	55.6	11.1	22.2	44.4
	North	32.6	83.7	37.2	41.9	65.1
	North-West	11.1	77.8	11.1	11.1	55.6
	West	11.1	72.2	11.1	50.0	38.9
	South	0.0	87.5	62.5	50.0	37.5
	South-West	100.0	0.0	0.0	0.0	0.0
	Total	**26.4**	**79.2**	**34.6**	**39.0**	**49.7**

Source: PETS3 Cameroon, 2019

Stock-out duration at the central level (EPI) ranged from 19 to 92 days and reached three months for the RM antigen. This long stock-out may be due to late delivery of the vaccine by suppliers.

At the peripheral level (HF) and regardless of the antigen, the stock-out period was between 27 and 79 days. Poor storage conditions and inventory management also explain these stock-outs.

Table 31: Average number of days of vaccine stock-outs in health structures in 2017

	Central service	***Intermediate health services***		***Categories of health facilities***			
Antigens	**EPI**	**RVR**	**DHS**	**DH**	**SMC**	**IHC**	**Total**
Penta	0	19.5	8.2	30.8	25.0	27.1	27.2
BCG	46	18.5	22.3	92.9	90.0	76.4	79.6
OPV (for polio)	19	32	17.8	21.4	35.0	38.1	36.2

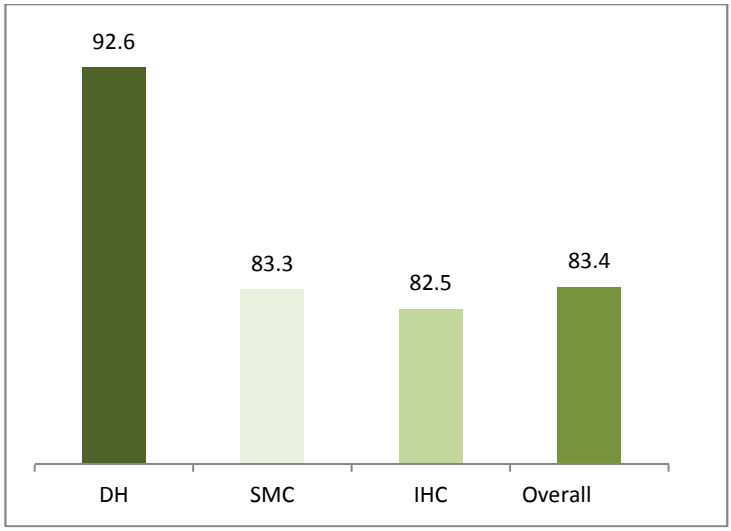
IPV	35	56.2	20.3	28.6	30.0	44.9	41.4
RM	92	15.5	14.7	50.0	60.0	50.8	52.0

Source: PETS3 Cameroon, 2019

4.2.3.6 Transparency

Transparency is achieved through the existence of a document that traces the management of vaccines within the health structures. At all levels of the health system, 83.4% of health facilities managers reported having documents that describe the management of vaccines.

Graph 14: Proportion (%) of health facilities with documents retracing the management of vaccine inventories in 2017 by region



Source: PETS3 Cameroon, 2019

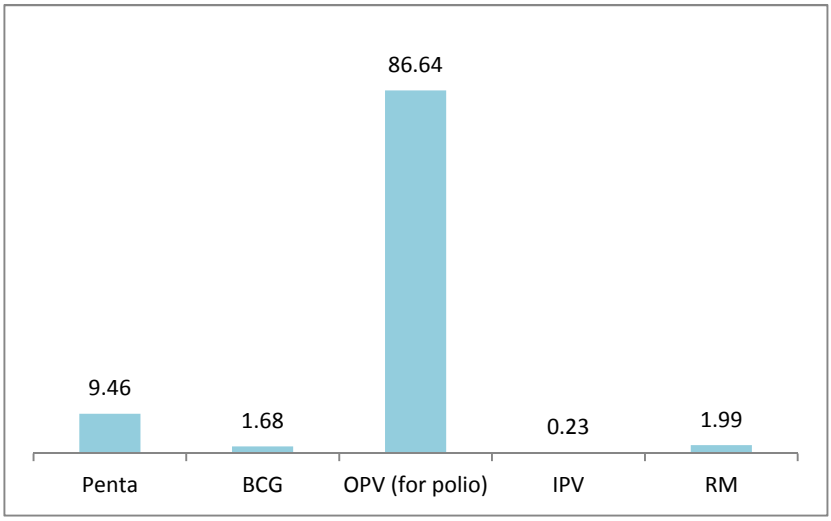
4.2.3.7 Losses in vaccine management

Vaccine losses are generally observed when certain conditions are not met, in particular the respect of storage temperatures between +2 and +8°C, respect of expiry dates (first expired first out principle), storage conditions and adequate transport conditions. In this study, vaccine losses occurred in both open and closed vials.

- **At the central level (EPI)**

Losses recorded at the central level were due to tainted antigens. In 2017, the EPI identified a total of 682,147 unused antigen vials. Of these lost antigens, OPV (86.64%) is the one with the highest losses.

Graph 15: Percentage of antigens reported lost by the EPI



Source: PETS3 Cameroon, 2019

- **At the intermediate level**

At the level of the RTG-EPI, the vaccine losses recorded were due to poor storage and expiry. Among the antigens received in 2017 by the Regional Vaccine Repositories, 11.09% of RM (Rubella-Measles) antigen were lost. The main reasons cited are either the reception of vaccine stocks with very close expiry dates, or the lack of demand for supplies in the region and failure by the repository to issue an alert in time for these vaccines to be redeployed by the central warehouse.

Regarding recorded antigen losses, they are relatively low for Penta (1.39%) and BCG (2.21%). As for conservation, we note that about 3 vaccines out of 1,000 are tainted.

Table 32: Loss of vaccines at Regional Vaccine Repositories (%)

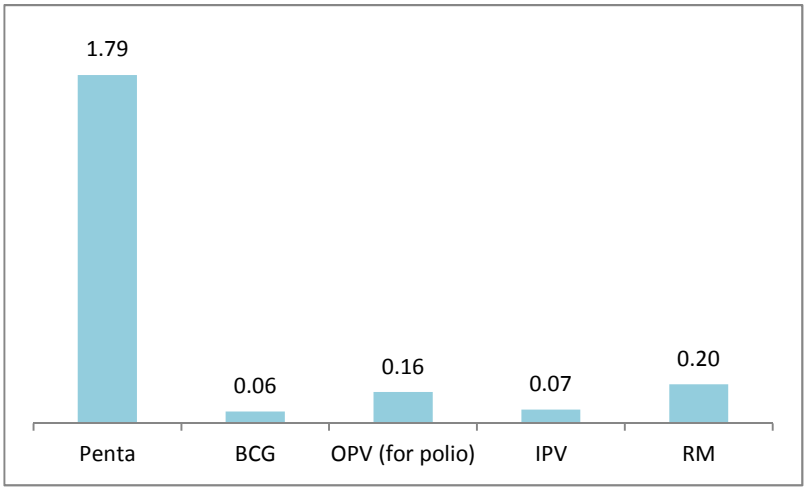
Method of storage and packaging	***Penta***	***BCG***	***OPV***	***IPV***	***RM***	***Total***
Storage	0.45	2.05	0.00	0.00	0.16	0.30
Expiry	0.81	0.14	0.00	0.00	10.83	1.13
Total	1.39	2.21	0.00	0.00	11.09	1.47

Source: PETS3 Cameroon, 2019

- **At the peripheral level**

At the level of District Health Services, the vaccine losses reported in 2017 were low and were due to lack of storage; because, the District Health Services are not responsible for storing vaccines. Once the antigens have been received, the antigens are distributed and the health facilities within their area of competence come to supply themselves, hence the low rate of loss per antigen.

Graph 16: Vaccine losses (%) due to storage at the level of District Health Services



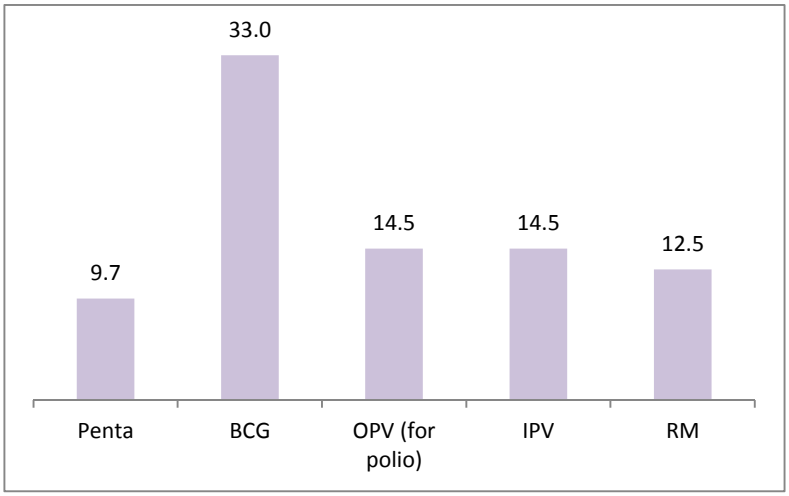
Source: PETS 3 Cameroon, 2019

In 2017, the vaccine losses recorded by health facilities was between 9% and 33%. This loss may be explained by the fact that health facilities received a stock of antigens with close expiry dates. Other factors also contributed to these losses, in particular the failure of health facilities to comply with standards, given the weakness of the cold chain. These include: vaccines exposed to heat; regular power cuts; lack of gas to power gas refrigerators; use of unlicensed refrigerators; freezing of certain antigens (e.g. BCG with a loss rate of 33%, or about 14 million CFA francs); difficulties of access marked by long distances at the time of vaccine administration and unqualified staff to administer vaccines are all causes of vaccine losses.

In addition, these losses are significantly high due to the entering of erroneous data on the numerator (e.g. more children vaccinated than were actually vaccinated) or denominator (e.g. fewer doses of vaccine used than were actually used), or other data quality issues.

Given that the loss of antigens at the national level is close to 12%, it is important to take into account the distribution schedule, the existing conservation facilities in each health facility, and even the size of the resident population in each Health District.

Graph 17: Vaccine loss rate (%) due to use in 2017



Source: PETS 3 Cameroon, 2019

4.3 MANAGEMENT OF STAFF ASSIGNED TO PUBLIC HEALTH FACILITIES

Sufficient and well-trained human resources contribute to optimal management of the financial and material resources (drugs and vaccines) of health structures.

4.3.1 Staff assigned to public health facilities

The study focused on the assessment of the number and quality of staff assigned to health facilities. Added to this is the percentage of staff who were absent from their duty stations in 2017.

Globally, all types of staff were assigned to the surveyed health facilities in 2017. The managers of these structures mentioned having received more Pharmacists (60.6%), Nursing Assistants (56.9%) and Paramedical staff (31.7%) during the year mentioned.

Table 33: Proportion (%) of health staff assigned to health facilities in 2017

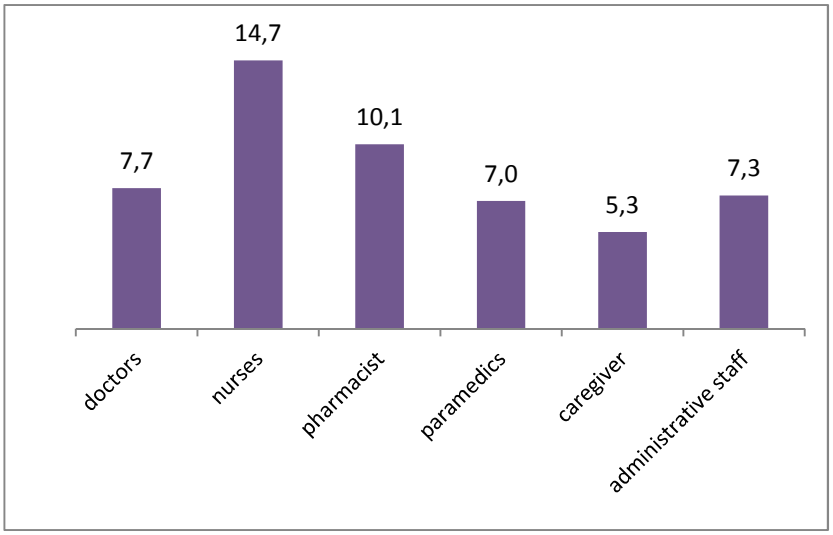
	DH	*SMC*	*IHC*	*Total*
Physician	93.1	78.0	1.1	17.6
Nurses/midwives/birth attendants	55.2	26.8	11.0	16.4
Pharmacists	82.8	85.4	54.8	60.6
Paramedical staff (laboratory technicians, physiotherapists)	86.2	68.3	20.8	31.7
Nursing assistants	89.7	73.2	51.2	56.9
Administrative staff	79.3	63.4	16.6	27.2

Source: PETS3 Cameroon, 2019

The number of officials responsible for financial and material management in health facilities is considered insufficient in most regions. The results showed that in 2017, out of a population of 100,000 inhabitants, one physician, three nurses, one paramedical staff and one administrative staff were found in terms of medical support within the health facilities.

It is important to note that the lack of motivation and poor treatment of these staff are at the root of this reduction in staff numbers. The study showed that, out of 100 staff paid from the State budget, an average of 8 were not regularly at their duty stations in 2017.

Graph 18: Rate of absenteeism (%) from their duty station in 2017



Source: PETS3 Cameroon, 2019

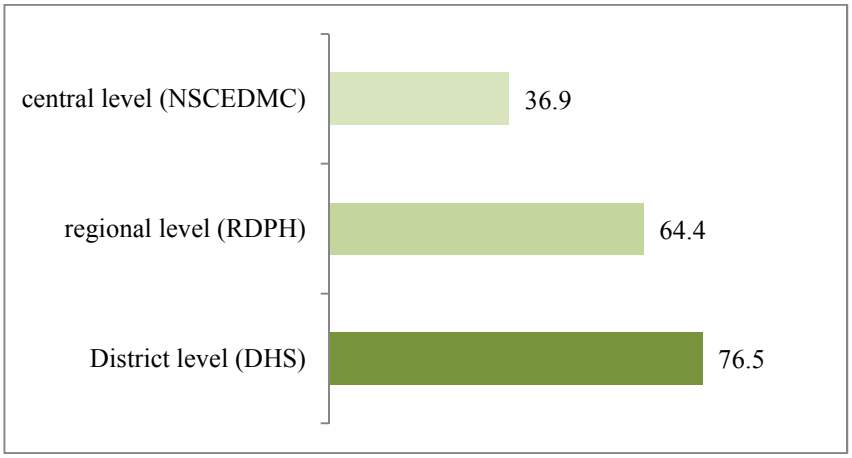
4.3.2 Supervision and inspection

Supervisory visits to health facilities can take place at three levels. A total of 2,745 visits (including 287 visits at the central level (MINSANTE), 784 at from the regional level (RDPH) and 1674 visits at the district level (DHS)) were made to health facilities in 2017.

These supervisory visits to the health facilities are made by the Head of the District Health Services (DHSs). 76.5% of health facilities surveyed reported that they received at least one visit during 2017. The points towards which the DHSs direct these supervisions are as follows: verification of storage conditions, physical inventory and audit of the stock sheets and finances of the HFs.

Regardless of the categories of health facilities, the frequency of supervision is quarterly and sometimes monthly. Nevertheless, 23.5% of health facilities reported that they did not receive any visits in 2017, which shows that the frequency of visits hardly reaches the three visits recommended by the Ministry of Public Health throughout the year.

Graph 19: Proportion (%) of health facilities that received supervisory visits in 2017 according to three main levels of supervision



Source: PETS3 Cameroon, 2019

4.3.3 Main difficulties in budget implementation and management of drug and vaccine inventories in 2017

With regard to the problems mentioned by the managers of the health structures interviewed on the tracking of public expenditure and management of material resources, the following problems were mentioned in substance:

4.3.3.1 Difficulties relating to the expenditure system

The managers of health service delivery structures mentioned various shortcomings that have hindered the implementation of their expenditure authorisations, in particular:

- Late arrival of EAs and “cartons”;
- Insufficient financial allocation;
- Lack of training of authorising officers in financial management;
- Bad governance practices (bribes), failure to take account of real needs in EAs;
- Illegal levies;
- Slowness/red tape in the processing of the budget file and budget implementation;
- Refusal, absence or poor archiving of management information.

4.3.3.2 Difficulties encountered in the drug and vaccine supply chain

- Inadequate drug and vaccine warehouses;
- Difficult access to certain areas, which limits the safe delivery of drugs and vaccines;
- Prolonged stock-outs of some essential drugs and vaccines;
- Lack of mastery of the inventory management process (estimation of needs, pace of orders, procurement and supply channels);
- Lack of financial resources to procure drugs;
- Low purchasing power of the population/patients;
- Insufficient qualified staff in inventory management;

- Insufficiency/lack of adapted and approved cold chain equipment (refrigerator, cooler);
- Untimely power cuts.

4.3.4 Measures to address difficulties and suggestions in the management of financial and material resources in the health sector in 2017

4.3.4.1 Measures taken for the management of financial resources

- Recourse to elite and community support;
- Pre-financing of certain activities;
- Awareness raising among patients for the payment of medical expenses;
- Involvement of personal resources;
- Informal meeting of financial managers to speed up the processing of financial files.

4.3.4.2 Measures to alleviate the difficulties encountered in the management of drugs and vaccines

- Use of other health centres to obtain drugs and vaccines;
- Purchase of drugs and vaccines at preferential prices through other partners;
- Recruitment of temporary staff for the management of the pharmacy and efficient monitoring of inventories;
- Storage of medicines and vaccines in nearby structures;
- Acquisition of cold chain equipment required in the HFs, taking into account the difficulties related to the availability of public electrical power;
- Acquisition of an energy source (preferably solar energy or a generator);
- Supply in nearby centres;
- Use of accumulators;
- Use of products depending on the expiry date;
- Supply in small quantities to avoid expiry problems;
- Return of unused inventories immediately after vaccination;
- Taking vaccines on time and using them on time;
- Storage of vaccines in the cold chain of another nearby health facility;
- Use of other centres or referral of children/pregnant women to other health facilities;
- Training of staff on vaccine inventory management.

4.3.5 Suggestions for the management of financial and material resources in the health sector in 2017

4.3.5.1 Suggestions for the management of financial resources

- ✓ Meeting the deadlines for transmission of expenditure authorisations (EAs) at all levels;

- ✓ Building the capacities of managers at all levels on the maintenance of accounting documents and archiving of management information;
- ✓ Ensuring that the technical handover is effective before the administrative handover whenever a manager is transferred or retires and recalling the requirement to compiling archives and management documentation in order to ensure the continuity of public services in financial and accounting management;
- ✓ Introducing the imprest procedure in the execution of the expenditure at the local level in order to avoid losses;
- ✓ Computerising systematically budget implementation procedures at the operational level.

4.3.5.2 Suggestions for the management of drugs and vaccines

In addition, to ensure good management of drugs and vaccines, it is imperative that:

- ✓ Health facilities be equipped with storage infrastructures that comply with standards and equipment be adapted to local realities;
- ✓ HFs be provided with alternative sources of electricity;
- ✓ The archiving system be improved and inventory sheets be systematically updated;
- ✓ Qualified staff be recruited for good management of drugs and vaccines;
- ✓ The capacity of health staff be strengthened on the inventory management process at all levels.

4.4 ANALYSIS OF STRENGTHS AND WEAKNESSES IN THE MANAGEMENT OF FINANCIAL AND MATERIAL RESOURCES IN THE HEALTH SECTOR IN 2017

4.4.1 Main strengths

- Existence of other reliable sources of energy (solar plates and generators) for the storage of vaccines and drugs in the District Health Services and health facilities;
- Most of the officers in charge of vaccine management at all levels know the temperatures at which vaccines are stored;
- Cold (vaccines) and room temperature (consumables) storage capacities are sufficient in some of the health facilities surveyed, from the central level to the regions, districts and health facilities;
- Existence of a contingency plan to safeguard vaccines in the event of failure of storage equipment, at the level of all regions, districts and health facilities;
- Most authorising officers have documents justifying their expenditure;
- Mechanism for the management of public financial resources is gradually being mastered by managers.

4.4.2 Main weaknesses

- Persistence of corruption in the execution of financial resources;
- Long delay in the transfer of financial resources;
- Small amount of money allocated to health facilities does not allow for the acquisition of quality goods or equipment;
- Lack and insufficient qualified health staff in health facilities;
- Low use of drug and vaccine management tools at all levels;
- Vaccine and drug stock-outs observed in most health districts and several health facilities as a result of transportation problems between the regional and council levels;
- No generators and voltage regulators installed in most health facilities located in remote areas of the country;
- Lack of equipment;
- Untimely power cuts;
- No systematic reviews of records of drug and vaccine inventory movements by some health facilities;
- Difficulty of monitoring the loss of drugs and vaccines by some health facilities.

CONCLUSION AND RECOMMENDATIONS

One of the major concerns of this study is to identify the main bottlenecks in the public health expenditure system, assess the management of drug and vaccine inventories and propose relevant solutions for their improvement, taking into account the socio-economic stakes and the major challenges posed by the impact of the development policies and programmes (2016-2027 HSS) in force for the improvement of the health system for the benefit of the populations.

An analysis of the stylised facts shows a marked improvement in the management of public health expenditure in 2017, in line with the Government's commitment to reduce red tape in the expenditure system. However, the involvement of the managers of the devolved services in budget preparation, as well as the managers of the health facilities, has not been equal to the desired qualitative leap in the good management of health expenditure, taking into account the constraints/difficulties related to the lack of mastery/knowledge about the management of public expenditure (lack of mastery of the manual of budgetary and accounting procedures).

This study has shown that in Cameroon, the rate of completion in 2017 of projects of equipment and construction of the beneficiary health facilities by councils has been fully reached. Thus, despite the low proportion of health resources allocated to equipment, all the health facilities (IHCs and SMCs) surveyed stated that they had received their various equipment from the council. This is also true for the construction of seven health facilities.

The study also showed that, since the quality of drugs and vaccines is partly guaranteed, it appears that more than four in five health facilities of all categories have adequate storage and packaging conditions. Even though these conditions are met, long stock-out periods were recorded in 2017, indicating a poor quantification of annual needs.

The same applies to the evaluation of losses of drugs and vaccines, which are also poorly estimated due to the lack of regular updates of the inventory coordination and monitoring mechanism.

As part of the improvement of the system for the management of financial resources and of drugs and vaccines, the following recommendations are made:

To all stakeholders:

- ✓ Strengthen the fight against corruption at all levels of the health system.

To the Ministry of Finance:

- ✓ Increase the budget of the Ministry of Public Health so as to get closer to that recommended by the ABUJA declaration (15% of the State budget);
- ✓ Reduce the number of players in the expenditure system at the peripheral and operational levels;
- ✓ Establish an effective mechanism for the transfer and control of expenditure;
- ✓ Make the implementation of the budget voted in year n-1 effective as of January 1 of year n;
- ✓ Strengthen the capacities of credit managers at all levels;
- ✓ Adapt budget headings to the real needs expressed;
- ✓ Meet the deadlines for transmission of expenditure authorisations (EAs) at all levels;

To the Ministry of Public Health:

- ✓ Improve the mechanism of support for economically and socially vulnerable patients;
- ✓ Strengthen the capacity of health staff on the inventory management process at all levels.
- ✓ Improve the archiving system for financial documents;
- ✓ Improve the archiving system and systematically update inventory sheets;
- ✓ Establish a financial incentive mechanism to retain health staff at their duty stations;
- ✓ Improve drug and vaccine storage;
- ✓ Provide HFs with alternative sources of electricity;
- ✓ Make effective the display of drug prices at all levels;
- ✓ Redeploy health staff according to real needs.

To the councils (Regional and Local Authorities)

- ✓ Involve authorising officers in local procurement boards.

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APPENDICES

Appendix 1: Summary table of the main indicators

Themes	Indicators	Level of disaggregation	Modality	Value
1. Management of financial resources				
Prior information to authorising officers	Distribution of health structures according to the main channels of reception of information on budget allocation in 2017 (%)	Official notification		39.0
		Phone/Email		34.9
		Multi-stakeholder consultation framework		20.5
		Radio/TV/press		3.4
		Display		2.1
	Percentage of health facility managers informed of the operating budget of their structure before the arrival of resources (%)	DH		50.0
		SMC		52.6
		IHC		42.8
Withdrawal, commitment and scheduling of expenditure authorisations	Distribution of health facilities according to the quality of the people who withdrew operating and investment expenditure authorisations in 2017 (%)	First semester (operation)	Manager	65.3
			Administrative authority	6.8
			Local elected representative/elite	1.9
			Providers/predecessor	11.8
			Not concerned/no expenditure authorisation/no record	15.5
		Second semester (operation)	Manager	59.5
			Administrative authority	6.3
			Local elected representative/elite	1.8
			Providers/predecessor	13.5
			Not concerned/no expenditure authorisation/no record	18.3
		Investment	Manager	0.0
			Administrative authority	0.0
			Local elected representative/elite	0.0
			Providers/predecessor	8.3
			Not concerned/no expenditure authorisation/no record	0.0
	Proportion of health facilities that withdrew, committed and scheduled their Expenditure Authorisation for acquisition of goods and provision	First semester	Withdrawn	73.1
			Committed	67.5
			Scheduled	67.3
		Second semester	Withdrawn	72.0

Themes	Indicators	Level of disaggregation	Modality	Value
	of services in 2017 (%)		Committed	64.5
			Scheduled	63.7
	Proportion of hospital managers who withdrew, committed and scheduled expenditure authorisations for equipment in 2017 (%)			99.7
Delays in withdrawal, commitment and scheduling of expenditure authorisations	Distribution of health facilities according to the causes of delays in the scheduling of expenditure authorisations dedicated to the line "acquisition of goods and provision of services" (%)	First semester	Delays in the transmission of expenditure authorisations by the financial controller	69.2
			Late accreditation by the administrative authority	30.8
		Second semester	Delays in the transmission of expenditure authorisations by the financial controller	69.6
			Late accreditation by the administrative authority	30.4
Budget implementation	Implementation rate of operating budget by health facilities in 2017 (%)	First semester	Commitment basis	91.6
			Scheduling basis	92.4
		Second semester	Commitment basis	90.4
			Scheduling basis	90.3
Budget implementation deadlines	Distribution (%) of hospital, SMC and IHC managers, based on operating resources execution deadlines for acquisition of goods and provision of services in 2017	Duration between the withdrawal of the authorisation of expenditure and start of implementation of the budget of the 1st semester of 2017	15 days or less	91.0
			16 - 58 days	6.2
			58 days or more	2.8
		Duration between the withdrawal of the authorisation of expenditure and start of implementation of the budget of the second semester of 2017	15 days or less	88.9
			16 - 58 days	8.1
			58 days or more	3.0
Losses registered	Proportion of managers who experienced financial losses due to late availability of resources (%) in 2017	First semester	Late availability of resources	16.9
			Late processing of the file in the financial service	15.9
			Absence of providers	10.0
			Late contracting	9.0
			Other (lump sum/percentage required)	19.0
		Second semester	Late availability of resources	15.8
			Late processing of the file in the financial service	14.7
			Absence of providers	10.5
			Late contracting	9.4
			Other (lump sum/percentage required)	17.0

Themes	Indicators	Level of disaggregation	Modality	Value
Transparency and Governance	Proportion of health facilities that had a document retracing budget expenditure (%)	First semester		62.8
		Second semester		63.6
2. Material resources management (drugs and vaccines)				
Basic services	Proportion of health facilities with basic services (%)	Electric current		49.7
		Improved source of drinking water		60.6
	Duration of power cuts in health facilities (in days)			Between 11.5 and 41.9
Storage conditions and management of drugs and vaccines	Proportion of health facilities with storage and packaging criteria met in 2017 (%)	Drugs		83
		Vaccines		80
	Proportion of health facilities that acquired (%) drugs			74.1
Uses of drugs and vaccines	Use rate (%)	Drugs		72.9
		Vaccines		87.8
Stock-outs	Proportion of health facilities that experienced stock-outs of (%)	Drugs		20
		Vaccines		45.7
	Duration of vaccine stock-outs in 2017 (in days)			Between 27 and 79 days
Losses	Proportion of health facilities that registered drug losses (%) due to:	Storage		27
		Conveyance		12
	Drug loss rate (%)			10
	Vaccine loss rate due to use			Between 9 and 33
Transparency	Proportion of health facilities with documents retracing the management of vaccine inventories in 2017 (%)			83.4
Absenteeism	Absenteeism rate (%)			8

Source: PETS 3 Cameroon, 2019

Appendix 2: Additional Tables

Table 34: Distribution of health structures according to main channels of reception of operating and investment budget and subsidy information in 2017 (%)

Channels of reception	Subsidies	Operation (acquisition of goods and provision of services)			
	RDPH	DH	SMC	IHC	Total
Official note	50.0	45.5	40.0	37.8	**38.7**
Multi-stakeholder consultation framework	0.0	9.1	20.0	23.5	**22.0**
Radio/TV/press	50.0	0.0	10.0	2.5	**3.3**
Phone/Email	0.0	45.5	30.0	33.6	**34.0**
Display	**0.0**	**0.0**	**0.0**	**2.5**	**2.0**

Source: PETS 3 Cameroon, 2019

Table 35: Proportion of health facilities that did not display drug prices in 2017 by region

	DH	SMC	IHC	Total
Adamawa	...	0.0	16.7	15.0
Centre	0.0	42.9	40.0	37.0
East	0.0	0.0	0.0	0.0
Far North	25.0	0.0	12.5	12.2
Littoral	0.0	25.0	33.3	25.0
North	0.0	0.0	7.5	6.9
North-West	0.0	0.0	0.0	0.0
West	0.0	0.0	8.7	6.5
South	100.0	33.3	66.7	64.7
South-West	0.0	0.0	14.3	11.1
Total	**7.7**	**12.5**	**19.4**	**17.7**

Source: PETS3 Cameroon, 2019

Table 36: Distribution (%) of health facilities according to the average frequency of power cuts in health facilities

		DH	SMC	IHC	Total
Day	None	28.6	29.6	32.7	31.6
	Once	23.8	22.2	25.2	24.5
	Twice	0.0	25.9	10.3	11.6
	More than twice	47.6	22.2	31.8	32.3
Week	None	14.3	3.7	12.1	11.0
	Once	14.3	25.9	17.8	18.7
	Twice	9.5	14.8	21.5	18.7
	More than twice	61.9	55.6	48.6	51.6
Month	None	9.5	3.7	14.0	11.6
	Once	9.5	7.4	5.6	6.5
	Twice	4.8	3.7	12.1	9.7
	More than twice	76.2	85.2	68.2	72.3

Source: PETS 3 Cameroon, 2019

Table 37: Proportion (%) of health structures that experienced essential drug stock-outs in 2017 by region

Regions	DH	SMC	IHC	Total
Adamawa	…	100.0	44.4	50.0
Centre	100.0	71.4	40.0	50.0
East	66.7	33.3	52.0	50.0
Far North	50.0	40.0	37.5	38.8
Littoral	100.0	25.0	44.4	50.0
North	75.0	100.0	58.2	59.7
North-West	50.0	33.3	22.2	28.0
West	100.0	50.0	47.8	51.6
South	0.0	33.3	26.7	26.5
South-West	100.0	33.3	21.4	27.8
Total	**73.1**	**47.5**	**42.7**	**45.5**

Source: PETS3 Cameroon, 2019

Table 38: Proportion (%) of staff actually on duty in 2017 by region

Regions	Physicians	Nurses/midwives/birth attendants	Pharmacists	Paramedical staff (laboratory technicians, physiotherapists)	Nursing assistants	Administrative staff
Adamawa	11.8	7.8	27.5	15.7	31.4	9.8
Centre	10.9	3.8	32.7	19.2	23.1	17.3
East	13.3	3.5	34.5	14.2	28.3	8.8
Far North	3.4	6.8	20.3	6.8	48.0	14.2
Littoral	11.6	2.2	35.0	15.2	24.9	11.2
North	7.2	2.2	25.4	9.4	48.1	13.3
North-West	7.2	2.2	45.7	17.0	22.0	6.1
West	15.2	6.5	38.0	15.2	16.3	9.8
South	3.0	1.3	10.3	4.3	8.6	2.1
South-West	16.8	5.6	106.4	18.4	28.8	8.0
Total	**9.2**	**3.4**	**36.4**	**14.3**	**25.8**	**10.4**

Source: PETS3 Cameroon, 2019

Table 39: Proportion (%) of health facilities with basic services in 2017

	Electricity	*Improved source of water*
Category of health facility		
DH	75.9	82.1
SMC	68.3	72.5
IHC	44.3	56.6
Total	**49.7**	**60.6**
Regions		
Adamawa	10.0	40.0
Centre	63.6	61.1
East	43.8	59.4
Far North	20.4	69.6
Littoral	81.3	93.8
North	36.1	55.6
North-West	84.4	87.5
West	84.8	60.6
South	40.0	31.4
South-West	68.4	61.1

Source: PETS 3 Cameroon, 2019

Appendix 3: List of stakeholders

1. Technical Group

Chairman: OUM ELOMA Janvier, Director General of Planning and Regional Development

Co-Chairman: TEDOU Joseph, Director General of the National Institute of Statistics

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2. Operational Unit

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