Federal Democratic Republic of Ethiopia
Ministry of Health

National Pharmacy Service, Pharmaceuticals Supply Chain and Medical Equipment Management Monitoring and Evaluation Framework

May 2019
Addis Ababa

Acknowledgments

The Federal Ministry of Health would like to express its gratitude and appreciation to all participants and their respective health institutions who were involved in this document preparation for their relentless efforts and commitment. The shared technical knowledge and experiences have produced a comprehensive framework for realization of simple, coordinated and effective results-based national M&E system for data management, dissemination and utilization of strategic information for pharmaceutical supply chain management, pharmacy service and medical device.

The support and commitment of the members of the technical team at the Ministry of Health and partner organizations are also very well acknowledged. Their active participation and engagement in the development process have been the driving force to the completion of this document successfully.

Sincere appreciation is extended to the following members of the technical team whose support was central to the development, coordination, and finalization of the entire M&E framework document

Name	Organization
Anteneh Tsige	GHSC-PSM
Dagim Damtew	FMOH
Elias Germew	GHSC-PSM
Fikreselase Alemu	GHSC-PSM
Meseret Zerihun	JSI/Aids Free
Mohammedaman Jemal	FMOH
Tsedeke Matiwos	FMOH
Seid Ali	CHAI
Shegaw Mulu	FMOH
Solomon Abdellah	FMOH
Sufyan Abdulber	FMOH
Yidnekachew Degefaw	FMOH

Finally, FMOH would like to express its gratitude to United Nation Population Fund (UNFPA), Clinton's Health Access Initiative (CHAI), JSI/AIDSFree, On behalf of the Federal Ministry for Economic Cooperation and Development (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the United States Agency for International Development (USAID) Global Health Supply Chain Program - Procurement and Supply Management (GHSC-PSM) project in Ethiopia for the dedicated and full support for successful completion and printing of the M&E framework document.

Acronyms

DIS	Drug Information Service
DTC	Drug and Therapeutic Committee
DTP	Drug Therapy Problem
EPSA	Ethiopian Pharmaceuticals Supply Agency
FMOH	Federal Ministry of Health
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HFs	Health Facilities
IPLS	Integrated Pharmaceuticals Logistics System
PMED	Pharmaceuticals and Medical Equipment Directorate
PSCM	Pharmaceutical Supply Chain Management
RHB	Regional Health Bureau
ScHO	Sub city Health Office
UDS	Unit Dose Dispensing
WoHO	Woreda Health Office
ZHD	Zonal Health Department

Table of Contents

Acknowledgments i
Acronyms ii
Foreword v
Executive Summary vi
Chapter one: Introduction 1
1.1. Background 1
1.2 Monitoring and Evaluation Situation Analysis 3
1.3 Rationale for Developing the M&E framework 4
Chapter Two: Overview of the Monitoring & Evaluation Framework 5
2.1. Objectives of M&E Framework 5
2.2. Guiding Principles 5
2.3. Development Processes of the M&E framework 5
2.4. Summary of the Monitoring and Evaluation Framework 6
2.5 Categorization of Indicators 6
2.6. Intended Users of the Document 7
Chapter Three: The National Pharmaceutical SCM, Pharmacy Service and Medical Device Monitoring and Evaluation Indicators 9
3.1. Pharmacy Service Indicators 9
PS1. Drug and therapeutics committee (DTC) Functionality 9
PS2. Availability of health facility specific medicine list 10
PS3. Availability of standard treatment guidelines 10
PS4. Percentage of medicines prescribed from the facility's medicines list 10
PS5. Average number of medicines per encounter 11
PS6. Percentage of encounters with an antibiotic prescribed 11
PS7. Average dispensing counselling time 12
PS8. Percentage of medicines adequately labelled 12
PS9. Patients' knowledge on correct dosage 13
PS10. Percentage of clients with 100% prescribed drugs filled 13
PS11. Clinical pharmacy service functionality 14
PS12. Hospital with functional unit dose dispensing system (UDS) 14
PS13. Percentage of hospitals with functional DIS 15
PS14. Percentage of hospitals with functional compounding services 15
PS15. APTS functionality 16
PS16. Client satisfaction with dispensing services 16
3.2. Supply Chain Indicators 17
SC1. Forecast accuracy 17
SC2. Supplier fill rate 17
SC3. Average lead time 18
SC4. Stock out duration 18
SC5. Wastage rate 19
SC6. Percentage of facilities that maintain acceptable storage conditions 19
SC7. Inventory accuracy rate 20
SC8. RRF reporting rate 20
SC9. Essential drugs availability 21
SC10. Disposal of unfit-for-use medicines 21

3.3. Medical Equipment Indicators 22
MD1. Availability of functional medical equipment 22
MD2. Percentage of health facilities with updated medical equipment inventory 22
MD3. Percentage of health facilities with functional medical equipment management committee (MEMC) 23
MD4. Percentage of health facilities with scheduled preventive maintenance practice 23
MD5. Percentage of medical equipment installation 24
MD6. Biomedical professional positions filled at health facilities 24
MD7. Availability of medical equipment as per the national standard 24
3.4. Pharmacy Services and Pharmaceutical Supply Chain Management Cross Cutting Indicators 25
SC-PS1. Pharmacy review meetings conducted 25
SC-PS2. Supportive supervision of health facility pharmacies 25
SC-PS3. Percentage of pharmacy workforce positions filled at health facilities 26
Chapter Four: Data Collection, Analyses and Utilization 27
4.1 Flow of reports 27
4.2 Reporting schedule 28
4.3 Collection and analysis of data 28
4.3.1 Collection and analysis of data at facility level 28
4.3.2 Collection and analysis of data at administrative levels 29
4.4 Utilization of data 29
4.4.1. Utilization of data at health facility level 29
4.4.2. Utilization of reports by WoHOs/RHBs/FMOH 29
4.5 Data quality assurance 30
4.6. Roles and responsibilities 30
Annex 31
Annex 1. Registration formats for pharmacy service indicators 31
Annex 2. Registration formats for supply chain indicators 39
Annex 3. Registration and reporting formats for medical equipment indicators 43
Annex 4: Registration formats for supply chain and pharmacy service crosscutting indicators 47
Annex 5: Reporting format 48
Annex 5.1: Reporting format for Health Center 48
Annex 5.2: Reporting format for Hospital 49
Annex 5.3: Reporting format for Woreda 51
Annex 5.4: Reporting format for Zone 54
Annex 5.4: Reporting format for Region 57
Annex 6: List of workshop participants 59

Foreword

The Federal Ministry of Health (FMOH) has been coordinating sector wide reforms that aim to improve equity and quality of health services. As part of these efforts, the ministry is also exerting concerted efforts to improve accessibility and quality of pharmaceutical products and services. It is widely known that, the sector is growing in line the overall growth and transformation plan of the country and the sector is being guided by the health sector transformation plan (HSTP).

Pharmaceutical supply chain management and pharmacy service activities are an integral part and a cross cutting activity of the health care system. Managing pharmaceutical supply chain, pharmacy service and medical device is a key for fulfilling basic customer satisfaction with regards to obtaining the right product with right quantity and right condition, at the required time. Therefore, the purpose of this M&E plan is to strengthen the pharmaceuticals supply chain management, pharmacy service and medical device management of the country to ensure uninterrupted supply of pharmaceuticals for the ultimate customers. Also the M&E framework will help FMOH to build the capacity of professionals working at different levels of the system so as to properly manage pharmaceuticals SCM, pharmacy service and medical devices. The M&E framework is developed by the national ME TWG established by plan, ME Directorate.

As the development of this framework is a significant achievement, it would be meaningful only if the M&E framework of all stakeholders engaged in pharmaceutical SCM, pharmacy service and medical device is built on this common framework. Realization of this framework requires effective leadership by the government and commitment, dedication, and concerted action of all stakeholders.

Regasa Bayisa (B.Phram, MSC)
Director, Pharmaceutical and Medical Equipment Directorate
Federal Ministry of Health

Executive Summary

Ethiopia Health Sector Transformational Plan (HSTP 2016-2020) lay emphasis on the need to have strong health commodity supply chain management and pharmacy services to fulfill customer satisfaction with regards to obtaining the right pharmaceutical with right quantity and right condition, at the required time, for the right client. It demonstrates the performance of the pharmacy service and logistics system, highlights successes, and informs the design of appropriate interventions for areas that need improvement.

Therefore, it's essential to have implementable monitoring and evaluation (M&E) framework that help continually improve pharmaceutical supply management (PSM), pharmacy service (PS) and medical equipment management (MEM) performance.

In Ethiopia, however; the M&E system for PSM, PS and MEM lacked standardization and was implemented in a fragmented manner. Recognizing this, the FMOH, through Pharmaceuticals and Medical Equipment Directorate (PMED) in collaboration with partners developed this national M&E framework.

The aim of M&E framework is to assist the FMOH, EPSA, RHBs, ZHDs, and Woreda health offices, health facilities, donor agencies and development partners in evaluating performance and identifying the factors which contribute to its service delivery outcomes.

The main purposes of the M&E framework are:
(i) To provide guidance for gathering of timely, accurate and complete information for monitoring and evaluating PSM, PS and ME.
(ii) To standardize data collection and reporting tools and procedures
(iii) To promote information sharing among stakeholders
(iv) To promote informed decision making
(v) To promote continuous improvement in the pharmaceutical sector through timely identification and addressing of implementation challenges

This M&E framework comprises a range of indicators at various levels to measure, monitor and evaluate both implementation and impact of pharmaceutical related intervention. There are a total of 36 indicators grouped into four areas namely: PS, PSM, MEM, and Supply chain and pharmacy service crosscutting.

Some indicators will be collected and used by each level without reporting to the next level while selected indicators will be reported to the next level. The data elements for the four KPIs that can be captured by the routine HMIS system will follow the HMIS reporting system.

Chapter one: Introduction

1.1. Background

Health Service in Ethiopia

Ethiopia is located in Sub Saharan Africa. The country has a decentralized administrative system that consists of nine Regional States and two City Administrations. At the national level, the Federal Ministry of Health (FMOH) is responsible for health policy making, strategic planning, coordination and harmonization of all health actors and stakeholders. It coordinates and harmonizes action plans of all actors in the health sector including national and international organizations; provides technical support and guidance to Agencies under it, Regional and city administration Health Bureaus, as well as monitor the execution of the action plans and evaluate performances periodically.

Health system service provision is organized in a three-tier system. These include Primary Healthcare Units (PHCU) composed of primary hospitals, health centers and health posts that serve 60,000 – 100,000 people. The second tier consist general hospitals that serve 1-1.5 million people. The third tier consist specialized hospitals that render tertiary level healthcare for 3.5 - 5 million people.

Currently, the sector is guided by a 20-year strategic plan document, envisioning Ethiopia's path towards universal health coverage through strengthening primary health care. A 5-years strategic plan, Health Sector Transformation Plan, 2015-2020 (HSTP), that is derived from the envisioning document and which is also part of the second Growth and Transformation Plan (GTP II) of the government, is developed detailing the sector's priority until 2020. The HSTP aims to transform the health sector so as to further improve equity, coverage and utilization of essential health services, improve quality of healthcare, and enhance the implementation capacity of the health sector at all levels of the system.

In the HSTP, addressing triple burden of diseases namely communicable diseases, non-communicable diseases and accidents/injuries is given much focus. The HSTP has identified three key features: quality and equity; universal health coverage and transformation. It also sets out four pillars of excellence which are believed to help the sector to achieve its mission and vision. These are:

1. Excellence in health service delivery
2. Excellence in quality improvement and assurance
3. Excellence in leadership and governance
4. Excellence in health system capacity

The strategic initiatives that are prioritized in the HSTP include improving supply chain and logistics management, pharmacy service, use of technology and innovation, development and management of human resource for health.

Major performance measures for improving medicines and medical equipment management stated in the HSTP include:

- Increase availability of essential drugs for primary, secondary and tertiary healthcare to 100%,
- Reduce wastage rate to less than 2%,
- Increase proportion of essential drugs procured from local manufactur-

ers from 25% to 60%
- Reduce procurement lead-time from 240 days to 120 days.
- 80% of facilities equipped with medical equipment as per the essential medical equipment list

The government intends to achieve these targets through pharmaceutical supply chain management, pharmacy service and medical equipment management strategic initiatives which include scale-up of auditable pharmaceutical transaction and services, scale-up community pharmacies, enhancing efficiency in selection, quantification and procurement of essential medicines, developing an essential medical equipment list, strengthening and scaling-up of the training of biomedical engineers and technicians, and establishing a medical equipment maintenance center etc.

The Ethiopian Government has endorsed the Ethiopian Hospital Service Transformation Guideline (EHSTG) and Ethiopian Health Centres Reform Implementation Guidelines (EHCRIG) which have chapters on operational standards for pharmacy services and medical equipment management. These guidelines have indicated performance standards and guidance to ensure efficient and quality service delivery in hospitals and health centres. Although all those strategic documents and guidelines have given considerable focus to the pharmacy service, supply chain and medical equipment management, there are many challenges in their implementation.

Pharmaceutical supply chain management, medical equipments and pharmacy service activities are integral parts of the healthcare system. They are key for fulfilling basic customer satisfaction with regards to obtaining the right pharmaceutical with right quantity and right condition, at the required time, for the right client.

Cognizant of the pivotal role of pharmaceuticals, the Government of Ethiopia established Pharmaceutical Fund and Supply Agency (PFSA), currently renamed as Ethiopian Pharmaceuticals Supply Agency (EPSA), which is responsible to ensure uninterrupted supply of quality assured pharmaceuticals to the public at affordable price through strengthening Integrated Pharmaceutical Logistics System (IPLS), efficient procurement, improved warehousing and inventory management, and efficient distribution of pharmaceuticals to health facilities. Routine monitoring reports show that IPLS is improving information recording and reporting, storage and distribution systems, as well as the availability of essential commodities at service delivery points (SDPs). The recent national survey conducted on IPLS to measure system performance at public health facilities (hospitals, health centers and health posts) indicated that the system has significantly improved the availability of essential pharmaceuticals at health facilities.

To further improve the availability and rational utilization of medicines and medical equipment, a directorate, Pharmaceuticals and Medical Equipment Directorate (PMED), was established within FMOH. This directorate is composed of three case-teams: Pharmaceuticals Supply management case-team, Pharmacy service case-team, and medical equipment case-team. The directorate was first established as Pharmaceuticals Logistics Management Unit (PLMU) in 2012 to oversee and facilitate the smooth implementation of supply chain management of pharmaceuticals. The unit was established based on the findings of the mid-term review of the Health Sector Development Plan IV (HSDP IV). The mid-term review found out that supply chain management and pharmacy service activities had become uncoordinated and weak primarily due to unavailability of strong departments which is responsible to coordinate and oversee SCM activities at FMOH and lower levels.

In Ethiopia, Medical equipment (ME) almost exclusively acquired through donation or through purchase. According to anecdotal data from EPSA, the past few years' procurement of ME has significantly increased due to increase in construction of primary hospitals, HCs and health posts. On average, EPSA has procured 2.9, 2.7 and 2.8 billion birr worth of MEs in 2006 EC, 2007 EC and 2008 EC respectively. In addition to EPSA, some partners also procured MEs to the Ministry.

Some reports showed that inferior quality medical equipment are procured and distributed to health facilities. As a result, they are damaged without providing the required services and eventually risk service disruptions or have a prolonged downtime. In addition, multiple brands are being supplied which caused significant burden to avail the required different types of consumables and to address training requirements. Although standards are set to define which medical equipment to be availed at the different levels of the health system, the current availability of medical equipment at different levels is haphazard and not guided strategically.
As there is no standardized monitoring and evaluation (M&E) system, it is difficult to identify and analyze problems and provide directions in the management of medicines and medical equipment.

1.2 Monitoring and Evaluation Situation Analysis

The review of the existing national and regional health supply chain and pharmacy service M&E system indicated that all RHBs and City Administration Health Bureaus (CAHBs) introduced Health Supply Chain Management and pharmacy service M&E system since 2014 with the objective of improving health supply chain and pharmacy services. EPSA has also drafted M&E framework in 2017 to assess and improve SCM functions which are managed by the agency.

Major findings of the review are summarized below:

- Most of the RHBs and CAHBs have M&E system with defined Key performance Indicators (KPIs).
- Key indicators that are routinely monitored by RHBs and CAHBs include order fill rate, line fill rate for program and budget items, proportion of availability of essential tracer drugs, and proportion of stock wasted due to expiry and damage.
- Health supply chain M&E trainings were provided for RHBs/CAHBs, ZHDs, WoHOs, and selected hospitals.
- Supportive supervision has been conducted at selected health facilities.
- RHBs and CAHBs have been collecting, analyzing and providing feedback in the implementation of the health supply chain management M&E reports of WoHOs and health facilities.

The major weaknesses/gaps identified were:

- FMOH did not develop national M&E framework that measure performances at all levels of the health system and can serve as reference for lower level M & E systems design.
- There is lack of harmonization and alignment between the regional PSCM M&E KPIs and M&E plans implemented by the RHBs and CAHBs and little or no involvement of regional M&E and planning units
- All regions have different M&E plans, different number of KPIs, reporting systems and reporting tools. As the involvement of the FMOH was minimal, there was no way to standardize the framework.
- Skill gaps were observed in collecting quality data, analysis and reporting

- Lack of well-developed data recording and management guides/manuals
- Poor data documentation, utilization and feedback system
- Lack of electronic system for data collection and reporting

1.3 Rationale for Developing the M&E framework

Routine monitoring and evaluation (M&E) of the pharmaceutical supply chain, pharmacy service and medical equipment management enhances efficiency and effectiveness. Having an M&E system helps to ensure that the right product is delivered in the right quantity, right condition, and at the right time. It demonstrates the performance of the SCM, medical equipments, and related services; highlights successes, and informs areas that need improvement.

However, in Ethiopia, the M&E system for pharmaceutical supply chain, pharmacy service and medical equipment lacked standardization and was implemented in a fragmented manner.

Recognizing this, the FMOH, through Pharmaceuticals and Medical Equipment Directorate (PMED) and in collaboration with developmental partners, developed this national M&E framework.

The M&E Framework will provide stakeholders with a tool for well-coordinated, harmonized and functional M&E systems that enhances evidence-based decision making in pharmaceutical SCM, Pharmacy service and Medical equipment.

In order to develop appropriate M&E system, it is necessary to define the benefits that the designed M&E system will bring into the healthcare system. Some of the benefits that this M&E framework will bring into the Ethiopian health system include, but not limited to:

- Standardization: Common definitions of indicators, data collection instruments, and data management procedures form the foundation for effective M&E system. Without these, performance cannot be systematically measured and improved across different geographical locations or over time.
- Coordination: One national M&E framework, shared by all actors and stakeholders, is critical for effective M&E system. This principle helps to avoid duplication of efforts among stakeholders and ensures to generate complete data that show the full picture of programs.
- Integration: Collecting and reporting of pharmaceutical SCM, pharmacy service and medical equipment related data in an integrated way brings efficiency into the system. Each intervention should align with the standard indicators and reporting format that will guide tracking the progresses made.
- Decentralization: Analysis and storage of data takes place at the level where it's collected and used for evidence-based decision making.
- Simplification: Collecting, analyzing, and interpreting only the information that is immediately relevant to performance improvement and makes best use of scarce resources.
- Transparency and Accountability: M&E framework of pharmaceutical SCM, pharmacy service and medical equipment has to be open and participatory for stakeholders at all levels. Those in charge of data collection, analysis, timely reporting, and policy decisions must take ownership of and accountable for their actions and be able to professionally defend their reports and/or decisions. All stakeholders and participants have to agree on and abide by this key principle.

Chapter Two: Overview of the Monitoring & Evaluation Framework

2.1. Objectives of M&E Framework

General Objectives

- To provide a comprehensive framework for realization of simple, coordinated and effective results-based national M&E system for data management, dissemination and utilization of strategic information for pharmaceutical supply chain management, pharmacy service and medical equipment.
- To enhance multi-sector partnerships, networking, collaboration and accountability with all stakeholders through strengthening existing platforms for M&E of pharmaceutical supply chain management, pharmacy service and medical equipment at all levels.

Specific objectives

- To provide guidance for gathering of timely, accurate and complete information for monitoring and evaluating pharmaceutical supply chain management, pharmacy service and medical equipment.
- To standardize data collection and reporting tools and procedures across all levels.
- To promote information sharing among stakeholders.
- To promote informed decision making.
- To promote continuous improvement in the pharmaceutical sector.

2.2. Guiding Principles

In order to develop appropriate M&E framework, it is necessary to set guiding principles, which the system and the measurement items (metrics) and processes can be screened. Such principles include the following:

- Consistent with pharmaceutical supply chain management, pharmacy service and medical equipment strategic objectives in HSTP.
- Consistent with both national and international standards
- Feasibility (in terms of cost, time, data collection and capturing burden)
- Relevance of the indicator
- Basic principles of Health Information System (Simplification, Integration, Standardization and Institutionalization)

2.3. Development Processes of the M&E framework

To develop the M&E framework, a technical team, comprising of different expertise from ministry of health and development partners and led by pharmaceuticals and medical equipment directorate has been established. The technical expertise included pharmacists, supply chain management specialists, biomedical engineers and M&E experts.

After many consultations at technical team level, two consultative workshops were conducted to develop the draft M&E framework. Furthermore, the draft M&E framework was presented and shared on the annual PMED review meeting in 2018, to get inputs from potential stakeholders. After repeated meetings of the technical team to incorporate comments, a second version of the M&E framework was drafted, which became ready for larger audience comments and for a validation workshop.

Finally, the validation workshop was conducted from February 13 – 15, 2019 in Bishoftu. A total of 37 participants from Regional Health Bureaus, selected Zone health department and Hospitals, Pharmaceutical Supply Agency (EPSA), Policy Plan Monitoring and Evaluation Directorate (PPMED), Pharmaceuticals and Medical Equipment Directorate (PMED), Public Relation (PR), UNFPA, GHSC-PSM, CHAI and JSI/AIDSFree representatives attended the workshop (list of participants annexed). At the end comments from the validation workshop participant were reviewed and incorporated to the final document by the technical team.

2.4. Summary of the Monitoring and Evaluation Framework

The M&E framework provides a foundation for performance monitoring and evaluation of the pharmaceutical supply chain, pharmacy service and medical equipment management of the country. The framework helps to monitor how program activities contributes to the achievement of effectiveness and efficiency of pharmaceutical supply chain management system, availability and quality of pharmacy services and improved medical equipment availability, utilization and management practices. It is outlined in Figure 1, showing how inputs are translated into outputs, outcomes and impact. System inputs, processes and outputs reflect systems capacity, whereas outcomes and impact reflect systems performance.

Multiple data sources will be used in the implementation of the M&E framework. Data sources will include routine administrative sources (such as HMIS), surveys and supportive supervision findings. Various input, output, and outcome indicators are included in the M&E framework. Input indicators will help ensure that resources are properly mobilized, equitably distributed and efficiently utilized. Output indicators will be used to measure utilization and coverage. Outcome and impact indicators have the advantage of being "integrative" (i.e. many different factors are "integrated" into the outcome/impact), reflecting the result of interventions within and outside the sector. A total of 36 indicators are selected to monitor and evaluate the sector. In addition, regions can have specific indicators related to their operational and program monitoring and evaluation.

The PYRAMID shape information flow will be systematically strengthened by identifying more indicators to be utilized at lower level such as districts and health facilities. Data analysis will be conducted starting from facility level to national level to be used for evidence-based decision making. M&E findings will be disseminated to stakeholders using different channels. Quarterly and annual reports will be produced and shared to stake holders. The data will be used in performance review meetings to review strengths and challenges and to agree on future interventions. FMOH will conduct inspections to verify activities are undertaken at grass roots level. In addition, the involvement of all stakeholders is highly required in the implementation of M&E process up to use of information.

2.5 Categorization of Indicators

For the ease of implementation and use, this M&E framework document systematically categorize the list of indicators in to four categories: pharmacy service indictors, supply chain indicators, medical equipment indicators and supply chain and pharmacy service crosscutting indicators.

Indicator Reference Sheet (IRS) that defines each performance indicator in each category, when and how performance data are collected, analysed and reported is developed for each indicator and can be found in chapter three.

For some of the indicators like DTC functionality, all hospitals and health centers should evaluate their performance using annexed weight based criteria. Hospitals and health centers should report their summarized performance result to the next level (WoHO, ZHD and RHB) using the indicators indicated in Chapter 3.

2.6. Intended Users of the Document

The intended users of this M&E framework are Ministry of Health, Food and Drug Authority (FDA), Ethiopian Health Insurance Agency (EHIA), Pharmaceuticals Supply Agency (EPSA), Regional Health Bureaus (RHBs), Zonal Health Departments (ZHDs), Sub city Health Office (ScHO), Woreda health offices (WoHO), health facilities, donors, UN agencies, and development partners that work in the pharmaceutical sector. The framework can also be useful to M&E professionals, universities, professional associations, research institutes, civil society organizations, and experts in the field of policy analysis and advocacy.

Figure1: Monitoring and Evaluation Framework for Pharmaceutical Supply Chain, Pharmacy Service and Medical equipment Management

Program: Pharmacy Services, Supply Chain Management and Medical Equipments Management					
	Program Objectives • Improve effectiveness and efficiency of pharmaceutical supply chain management system • Improve availability and quality of pharmacy services • Improve Medical Equipment availability, utilization and management				
Indicator Domains	Inputs →	Process →	Outputs →	Outcome →	Impact
	Pharmacy Workforce Leadership and management Coordination Strategies, guidelines Finance Information Logistics Technology	- Quantification, Procurement and distribution of drugs - Establishing DTC - Developing facility specific drug list - Perform activities to implement APTS - Implement clinical Pharmacy - Perform phar. compounding - Capacity Building activities - Conduct HTA - Establish Medical Equipment management committee (MEMC) - Perform scheduled preventive maintenance - Implement IPLS - Develop electronic systems for reporting and use of data - Conduct supervision, mentorship	- Improved Essential Drug availability - Reduced stock out of drugs - Availability of national and facility specific drug list - Reduced drug wastage - Improved storage of medicines - Improved disposal of unfit for use drugs - Availability of Quality pharmaceutical products and effective services - Availability of DTC, MEMC - APTS implemented - Capacitated workforce on pharmacy services & supply management - Improved availability of MEs - Improved procurement, distribution, installation, maintenance & disposal of MEs	- Improve patient satisfaction in pharmacy services - Improved Rational use of drugs - Improved knowledge on rationale use of drugs - Reduced Drug therapy problems - Improved equitable access to quality health services - Effective and safe utilization of medical equipment - Improved diagnostics capacity of HFs	- Improved Health Status - Reduced drug resistance - Improved efficiency and effectiveness in pharmacy services and management
Data Collection and Reporting	Routine Pharmacy reporting formats. Admin Reports, regular facility surveys HMIS, EHCRIG and EHTG Reports, Supportive supervision reports Submission and aggregation of reports with the existing hierarchy of health administration			Facility Surveys, Population surveys	
Analysis and interpretation	Data Quality assurance at all levels; Assessment of progress of performance versus plan, use performance indicators to discuss during regular performance monitoring meetings				
Dissemination and use	Dissemination of data through different platforms such as regular reporting, quarterly and annual review meetings, publication of bulletins				

Chapter Three: The National Pharmaceutical SCM, Pharmacy Service and Medical Equipment Monitoring and Evaluation Indicators

An indicator is a variable that measures one aspect of a program/project and is related to the program's goal and objectives. Indicators provide M&E information crucial for decision -making at every stage of program implementation. FMOH, in collaboration with its stakeholders, has selected a set of core indicators to inform management of pharmaceutical SCM, pharmacy service and Medical device program. The breakdown of these core indicators consists of routine indicators and non-routine indicators.

3.1. Pharmacy Service Indicators

PS1. Drug And Therapeutics Committee (Dtc) Functionality

Indicator	Drug and therapeutic Committee (DTC) functionality					
Definition	Percentage of health facilities that have functional DTC					
Formula	*Number of health facilities that have functional DTC* / *Total number of hospitals that established DTC* *X 100*					
Interpretation	This indicator measures the functionality of health facility DTC. Functional health facility DTC develops and implements interventions promoting the rational and cost-effective use of medicines. DTC functionality serves as a proxy indicator of the ability of a health facility to avail pharmaceuticals and ensure their rational use. The criteria for functionality of DTC are Assigned DTC members by official letter, Has approved TOR, Meets regularly at least every months with documented minute, Has developed action plan, Has updated health facility specific medicine and medical devices list, Has medicine use policy and procedures (at least two policies, Conduct supply and medicine use problem studies, Take actions based on the supply and medicine use study findings, Report its performance activities to the management. If the facility meets 75% of the requirements the facility has functional DTC. Health facilities measure their DTC functionality using weight-based criteria (Annex 1.1).					
Disaggregation	By health center and hospital					
Sources	Documents from DTC secretary (DTC minute, official assignment letters, approved TOR, action plan, facility specific medicine list, policy & procedures, DTC performance reports, medicine use study/evaluation reports)					
Method of data collection	Survey/Supportive supervision with structured checklist, Routine report					
Frequency of collection/ Reporting	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

PS2. Availability Of Health Facility Specific Medicine List

Indicator	Availability of Health facility specific medicine list						
Definition	Percentage of health facilities that have specific health facility medicine list updated every year.						
Formula	*Number of health facilities with facility specific medicine list* / *Total number of health facilities* *X100*						
Interpretation	This indicator measures the extent to which comprehensive facility specific list of medicines, reagents and supplies, medical device is available at health facilities. The list should be prepared by the DTC and updated at least every year. The list is prepared based on relevance to treat prevalent diseases of the catchment area, and should be categorized by VEN.						
Disaggregation	By health center and hospital						
Sources	A copy of facility specific medicine list						
Method of data collection	Survey, supportive supervision						
Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
			Annually	Annually	Annually	Annually	Annually

PS3. Availability Of Standard Treatment Guidelines

Indicator	Availability of Standard Treatment Guidelines (STG)						
Definition	The percentage of health facilities that have recent edition of STG.						
Formula	*Number of health facilities with recent STG* / *Total number of health facilities* *X100*						
Interpretation	This indicator measures the availability and utilization of copies of nationally developed STG. The availability of STG in a health facility can be used as proxy indicator for rational medicine use. The STG assessed should be those that are developed for the level of health facility. At least one copy of the recent STG should be available at adult, pediatric OPDs and at OPD pharmacy.						
Disaggregation	By health center and level of hospitals						
Sources	Copy of STG						
Method of data collection	Survey, supportive supervision						
Frequency of collection/Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Annually	Annually

PS4. Percentage Of Medicines Prescribed From The Facility's Medicines List

Indicator	Percentage of medicines prescribed from the facility's medicines list						
Definition	Percentage of medicines prescribed from those listed on the medicines list of the health facility (developed by the DTC).						
Formula	*Total number of medicines prescribed from HF medicine list* / *Total number of medicine prescribed* *X100*						
Interpretation	This indicator measures the level of prescribers' adherence to the health facility specific medicines list. High level of adherence to the medicine list indicates better rational prescribing practices. For health facilities the assessment tool and method is indicated on Annex 1.2.						
Disaggregation	None						
Sources	Dispensing register, Prescription paper						
Method of data collection	Survey						
Frequency of collection/Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Quarterly	Quarterly				

PS5. Average Number Of Medicines Per Encounter

Indicator	Average number of medicines per encounter						
Definition	The average number of medicines prescribed per encounter/prescription at OPD						
Formula	*Total number of medicines prescribed* / *Total number of encounters*						
Interpretation	This indicator measures the degree of polypharmacy. Polypharmacy is prescribing many medicines for a single encounter. In this analysis, the known combination drugs are counted as one. This analysis should be done only in outpatient pharmacy. If a patient comes with two prescriptions in one encounter, the two prescriptions will be considered as one. The expected level of average number of medicines per encounter is less than two. If the number of medicines per encounter is more than two, it indicates probability of polypharmacy and is subjected to further drug use evaluation. For health facilities the assessment tool and method is indicated on Annex 1.2.						
Disaggregation	By health center and hospital						
Sources	Dispensing registration book, prescription paper, routine report						
Method of data collection	Survey, supportive supervision with structured checklist						
Frequency of collection/Reporting	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Annually	Annually

PS6. Percentage Of Encounters With An Antibiotic Prescribed

Indicator	Percentage of encounters with an antibiotic prescribed						
Definition	The percentage of encounters with one or more antibiotics prescribed at OPD						
Formula	*Total number of encounters with one or more antibiotic* / *Total number of encounters* *X100*						
Interpretation	This indicator measures the overall level of antibiotics use. Imprudent use of antibiotics leads to antimicrobial resistance. For health facilities the assessment tool and method is indicated on Annex 1.2. The target is 20-30 %.						
Disaggregation	Health center, Hospital						
Sources	Prescription papers, prescription registration book						
Method of data collection	Survey						
Frequency of collection/Reporting	HP	HC	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

PS7. Average Dispensing Counselling Time

Indicator	Average dispensing counselling time						
Definition	Average time (in seconds) spent for counseling on the proper use of dispensed medicines by dispenser; calculated for a sample of series of counseling encounters.						
Formula	*Total time for counseling on medicines dispensed for series of encounters* / *Number of encounters observed*						
Interpretation	This indicator measures the average time dispensers spend on counseling patients about their medicines. It is calculated by observing and recording the time (in seconds) the dispenser takes to counsel a series of encounter. For health facilities the assessment tool and method is indicated on Annex 1.3.						
Disaggregation	Health center, hospital						
Sources	Observation of counseling encounters						
Method of data collection	Survey						
Frequency of collection /Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Annually	Annually	Annually	Annually	Annually	Annually

PS8. Percentage Of Medicines Adequately Labelled

Indicator	Percentage of medicines adequately labeled						
Definition	Percentage of medicine packages that are labeled with adequate information to enable the rational use of medicines by patients.						
Formula	*Number of medicines with adequate label* / *Total number of medicines dispensed* *X100*						
Interpretation	This indicator measures the degree to which dispensers record essential information on dispensed medicine packages. It is very important that medicines are labelled with the necessary information that enables their rational use by patients. A medicine is adequately labelled, at least when it is labelled with patient name, name of the medicine, dose, frequency, duration of use/quantity dispensed, and route of administration. Medicine information written directly on blisters and strips by the manufacturer or dispenser cannot be considered as labeling information. For health facilities the assessment tool and method is indicated on Annex 1.4.						
Disaggregation	Health center, Hospital						
Sources	Observation of dispensed medicine by exit interview						
Method of data collection	Survey						
Frequency of collection/Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Annually	Annually

PS9. Patients' Knowledge On Correct Dosage

Indicator	Patients knowledge on correct dosage						
Definition	Percentage of patients who understood the correct dosage of their dispensed medicines.						
Formula	*Number of patients with adequate knowledge on correct dosage* / *Total number of patients interviewed* *X100*						
Interpretation	This indicator measures the effectiveness of the information given to patients c the dosage of medicines dispensed to them. Correct dosage includes dos frequency, route, and duration. For health facilities the assessment tool a method is indicated on Annex 1.4.						
Disaggregation	Health center, Hospital						
Sources	Client, label of medicine dispensed						
Method of data collection	Survey						
Frequency of collection/Reporting	HP	HC	Hospital	WoHO	ZHD/	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarter

PS10. Percentage Of Clients With 100% Prescribed Drugs Filled

Indicator	Percentage of clients with 100% prescribed drugs filled					
Definition	Percentage of clients who get all the prescribed medicines (100%) from dispensary among all the clients who received prescriptions in a given time period.					
Formula	*Number of clients who received all prescribed drugs* / *Total number of clients who received prescriptions*					*X 100*
Interpretation	This indicator measures proportion of clients who get all the prescribed drugs. It is one of the indicators that tell about continuous availability of medicines. Getting prescribed drugs within the facility pharmacy improves patient satisfaction and overall trust and confidence in the health sector. Percentages of clients who get all the prescribed drugs (100%) from dispensary is expected to be 100 percent. The registration book is indicated in annex 1.5.					
Disaggregation	Health center, Hospital					
Sources	Dispensing registration book, Prescription paper					
Method of data collection	Routine through DHIS2					
Frequency of Reporting	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

PS11. Clinical Pharmacy Service Functionality

Indicator	Clinical pharmacy service functionality					
Definition	Percentage of hospitals with functional clinical pharmacy service (CPS)					
Formula	*Number of hospitals with functional CPS* / *Total number of hospitals*					X 100
Interpretation	This indicator measures the extent of the provision of pharmaceutical care in inpatient wards by pharmacists to maximize therapeutic benefits and minimize risk of medicines. A functional clinical pharmacy service requires the provision of pharmaceutical care from admission to discharge, at all times, and in all inpatient wards. A hospital is considered as functional when it fulfills 75% of the criteria indicated in Annex 1.6.					
Disaggregation	None					
Sources	Clinical pharmacy records and report					
Method of data collection	Survey, routine report					
Frequency of collection/ Reporting	HC	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Semi-annually		Semi-annually	Semi-annually	Annually

PS12. Hospital With Functional Unit Dose Dispensing System (UDS)

Indicator	Percentage of hospitals with functional unit dose system (UDS).					
Definition	Percentage of hospitals with functional unit dose dispensing system (UDS) in their inpatient ward pharmacies in the reporting period.					
Formula	*Number of hospitals with functional UDS* / *Total number of hospitals* X100					
Interpretation	This indicator shows the presence and functionality of UDS in the inpatient ward pharmacy of the hospital. The presence of functional UDS is expressed in terms of availability of dedicated ward pharmacy(s), dedicated pharmacist, medicines are dispensed in a single dose package, in a ready to administer form and only for 24 hours with a pharmacy specific documentation. A health facility UDS is considered functional when a minimum of 75% score is achieved using a checklist. Health facilities measure their UDS functionality using criteria indicated in Annex 1.7.					
Disaggregation	None					
Sources	Direct observation					
Method of data collection	Survey					
Frequency of Reporting	HC	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Annually	Annually	Annually	Annually	Annually

PS13. Percentage Of Hospitals With Functional Drug Information Service

Indicator	Percentage of hospitals with functional Drug information service (DIS)					
Definition	Percentage of hospitals with functional drug information services in the reporting period.					
Formula	*Number of hospitals with functional DIS* / *Total number of hospitals that established DIS* X100					
Interpretation	This indicator measures the provision of DIS to health professionals, patients and the public. A hospital DIS is considered functional when 75% of the following criteria are fulfilled: availability of dedicated room, dedicated pharmacy professional, adequate reference materials and equipment, standard operating procedures, completed query response forms, medicine education program and report, sample alerts/newsletters prepared, action plan and performance reports. Health facilities measure their DIS functionality using criteria indicated in Annex 1.9.					
Disaggregation	None					
Sources	Observation Completed DIS recording and reporting form					
Method of data collection	Routine aggregation of health facility DIS record and report, survey					
Frequency of collection/ Reporting	HC	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Semi-annually	Semi-annually	Semi-annually	Annually	Annually

PS14. Percentage Of Hospitals With Functional Compounding Services

Indicator	Percentage of hospitals with functional compounding services.					
Definition	Percentage of hospitals fulfilling the criteria for functional compounding services					
Formula	*Number of Hospitals with functional compounding services* / *Total number of Hospitals* *X 100*					
Interpretation	This indicator measures the presence of compounding capability of a hospital pharmacy to prepare non-sterile preparations. The preparations may include dermatological preparations (ointments, creams) and bulk preparations (e.g. hand rubs, hydrogen peroxide, gentian violet,). A hospital compounding service is considered functional when 75% of the following criteria are fulfilled: separate room/area dedicated for compounding, dedicated pharmacist, equipment, chemicals, SOP, completed compounding registration form. Health facilities measure their compounding functionality using criteria indicated in Annex 1.8.					
Disaggregation	None					
Sources	Observation, Compounding registration form					
Method of data collection	Survey and supportive supervision through Observation					
Frequency of Reporting	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
		Annually	Annually	Annually	Annually	Annually

PS15. APTS Functionality

Indicator	APTS functionality					
Definition	Percentage of health facilities with functional APTS					
Formula	The number of health facilities with functional APTS / *Total Number of Health facilities implementing APTS* *X 100*					
Interpretation	This indicator measures the number of health facilities that fulfilled the requirements and implemented APTS. APTS is considered functional when 75% of the following criteria are fulfilled: Designed workflow, started APTs in all dispensaries and stores, produce daily summary and monthly report, bin ownership, conduct audit, fulfill pharmacy workforce, availability of skilled personnel, APTS vouchers, sales tickets and registers, conduct physical inventory as per the standard, ABC/VEN and stock status analyses. Health facilities measure their APTS functionality using criteria indicated in Annex 1.10.					
Disaggregation	By level of health facility					
Sources	Observation, APTS records and report					
Methods of data collection	Routine report, survey					
Frequency of collection/ Reporting	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

PS16. Client Satisfaction With Dispensing Services

Indicator	The percentage of clients satisfied with dispensing services						
Definition	The proportion of patients satisfied with dispensing services among all interviewed patients from all dispensing outlets.						
Formula	*Number of clients satisfied with dispensing services* / *Total number of clients interviewed* *X 100*						
Interpretation	This indicator measures the overall outcome of all reform activities to improve pharmacy services in general and dispensing activities in particular. It indicates the degree to which dispensing service meets clients' expectations. It can be measured in terms of availability of medicines, information provision, premises and personnel. A minimum of 80% client satisfaction with dispensing service is considered acceptable. (Annex 1.11)						
Disaggregation	By health center, hospital						
Sources	Client						
Methods of data collection	Survey						
Frequency of collection/Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Annually	Annually

3.2. Supply Chain Indicators

SC1. Forecast Accuracy

Indicator	Forecast accuracy						
Definition	Forecast accuracy is the percentage difference between forecasts previously made for specified period of time and the actual consumption or issues data for that period.						
Formula	$1 - \left\lvert \frac{\text{forecasted consumption} - \text{actual consumption}}{\text{actual consumption}} \right\rvert * 100$						
Interpretation	This indicator measures the degree of accuracy of a forecast or quantification exercises in facilities that perform forecasting of their own medicine requirement. Higher calculated value indicates there is a correspondence between the forecasted quantities and the actual consumption and this tells the forecasting accuracy is high. Hundred percent accuracy is difficult to achieve in any facility but values greater than or equal to 75% are considered high. The health facility should calculate this indicator for tracer items for which a forecast is made by the health facility not more than 10 products. Health facilities should use the formats indicated in Annex 2.1.						
Disaggregation	By program, by tracer product						
Sources	Facility forecast data/document, facility consumption data from bin card/DAGU, actual dispensary records (dispensing registration book)						
Frequency of Reporting/ Collection	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
		Annually	Annually				Annually

SC2. Supplier Fill Rate

Indicator	Supplier fill rate						
Definition	The percentage of all items ordered by health facility from a distribution source (EPSA, or other private supplier) over a period that are filled correctly at least 80% in terms of quantities requested of those items						
Formula	Number of line items delivered at least 80% Total no. of line items requested						*X 100*
Interpretation	This indicator measures supplier's ability to fill orders completely in terms of items and quantity during a definite period of time. This indicator measures the percentage of items ordered that are received to determine whether an order is filled in the correct quantities with the correct products at least 80%. For health facilities, it may be necessary to identify which items are causing the most problems and find another mechanism for obtaining those items. Health facilities can measure supplier fill rate using the format indicated in Annex 2.2.						
Disaggregation	By supplier (EPSA, others) and by Programs						
Sources	RRF report, Receiving voucher of HF, approved procurement						
Method of data collection	DHIS2						
Frequency of Reporting/ collection	HP	HC	Hospital	WoHO	ZHD/ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

SC3. Average Lead Time

Indicator	**Average Lead Time**						
Definition	The average amount of time between facilities place order to supplier and when the products are delivered to a facility.						
Formula	Summation of the number of days it takes by supplier to deliver products once orders are submitted to the supplier Number of orders submitted to the supplier						
Interpretation	This indicator measures the average amount of time it takes by supplier to deliver products once the facilities placed order to supplier. Facilities submit order up to the 10th day of the month following the end of the reporting period. EPSA will use the data from RRF to resupply health facilities within 20 days. Therefore, this indicator helps to measure on time delivery. A lead time average exceeding 20 days is considered as delay. Health facilities can measure the average lead time by using the format indicated in Annex 2.3.						
Disaggregation	By supplier (EPSA, others), program/RDF						
Sources	RRF report, approved procurement request and Model 19						
Method of data collection	Document review & routine report						
Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
		Bi-annually	Bi-annually	Bi-annually	Bi-annually	Bi-annually	

SC4. Stock Out Duration

Indicator	Stock out duration for tracer items						
Definition	The number of days in which the tracer drug was not available in a specified period of time						
Formula	Sum of stock out days of specific tracer drug in specific review period						
Interpretation	The availability of tracer items is a measure of service availability. Tracer items should always be available at the health facility. If there is any stock out of tracer items, the facility should act to identify and address the cause. This indicator provides a proxy measure of the ability of a program to meet clients' needs with a full range of items. Health facilities can measure stock out duration of tracer items by using the tracer drug availability and stock out duration tally sheet and registration format indicated in Annex 2.4.						
Disaggregation	By specific tracer product, By level of health facility						
Sources	Bin card, DAGU and tracer drug availability tally sheet						
Method of data collection	Survey and SS (Review of documents and observation)						
Frequency of Reporting/ collection	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Quarterly	Quarterly	Annually	Annually

SC5. Wastage Rate

Indicator	Wastage rate of health products						
Definition	The percentage of the stock of products, in value, that are unusable because of expiration or damage during a period to the total value of the products received during the same period plus the quantity of the products found during the beginning of the period.						
Formula	Unusable stock of products during a period in monetary value / Beginning stock + received stock during the same period in monetary value *X 100*						
Interpretation	This indicator can be calculated for any facility that manages pharmaceutical of interest. It can be measured over any period but it is preferable to be calculated for unusable stock with in a quarter. It is usually calculated after a physical inventory is taken. Unusable stock that has been accumulated for long period and were not disposed previously (expired and damaged items that were transferred from previous quarter) should not be included during calculation of this indicator. In addition, Items that were unusable during the quarter reviewed but were disposed with in the quarter should be taken in to consideration during calculation. This indicator is one of the performance indicators to have efficiency gain and one of the HSTP indicators. The target in HSTP is to reduce wastage of pharmaceuticals to less than 2%. This indicator is calculated for medicines, reagents, chemicals and supplies by using the registration format indicated in Annex 2.5.						
Disaggregation	By program, RDF						
Sources	Bin cards, Model 19, inventory sheet, disposal reports, electronic records						
Method of data collection	DHIS2						
Frequency of Reporting/ collection	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

SC6. Percentage Of Facilities That Maintain Acceptable Storage Conditions

Indicator	Percentage of facilities that maintain acceptable storage conditions						
Definition	This indicator measures the percentage of facilities that meet acceptable storage conditions.						
Formula	Number of facilities that meet acceptable storage condition / Total number of facilities *X 100*						
Interpretation	This indicator measures the conditions of pharmaceutical store against a list of storage conditions required to protect the integrity of products. Evaluators can apply the indicator at pharmaceutical stores identify facilities that need improvement. The good storage guideline standards are a set of standards that a well-functioning pharmacy store should maintain and have in place. There is a total of 13 standards (Annex 2.6). Storage facilities are expected to meet at least 80% of the requirements according to standard checklist.						
Disaggregation	Hospital and Health Center						
Sources	Checklist for standard storage condition						
Method of data collection	Survey, supportive supervision						
Frequency of Reporting/Collection	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
		Annually	Annually	Annually	Annually	Annually	Annually

SC7. Inventory Accuracy Rate

Indicator	Inventory accuracy rate						
Definition	This indicator measures the accuracy of stock balances recorded in stock keeping records (bin card, electronic) versus physical count over a range of items as a percentage of stock balances reviewed for accuracy.						
Formula	Number of items where stock record balance equals physical stock count / Total number of items counted *X100*						
Interpretation	This indicator measures the accuracy of logistics data as the percentage of discrepancy between physical count and stock record. The calculation is performed for randomly selected 10 tracer products. High accuracy rate (80% and above) indicates good inventory practice. For administration levels, this indicator measures the percentage of health facilities that had 80% and above inventory accuracy rate when bin cards were compared to a physical inventory count out of the total number of facilities under review during a defined period. Health facilities can measure their inventory accuracy rate by using the format indicated in Annex 2.7.						
Disaggregation	By Health Center and Hospital						
Sources	Bin cards, Electronic records, physical count						
Method of data collection	Survey, supportive supervision						
Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Annually	Annually

SC8. Rrf Reporting Rate

Indicator	RRF reporting rate						
Definition	The proportion of Report and Requisition Forms (RRFs) submitted on time						
Formula	Total number of RRF submitted on time / Total number of expected RRF *X100*						
Interpretation	This indicator provides an overall measure of whether timely reports and requests are sent to EPSA. All health facilities are expected to send RRF report every two months until the 10th day of the following month. Health facilities can measure their RRF reporting rate by using the format indicated in Annex 2.8.						
Disaggregation	By Hospital and Health Center						
Source	RRF, Electronic report, RRF submission monitoring log book, RRF tracking dashboard						
Method of data collection	Document review for WoHO and ZHD, EPSA RRF tracking dashboard for FMOH						
Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

SC9. Essential Drugs Availability

Indicator	Essential drugs availability						
Definition	The percentage of tracer drugs available throughout the month averaged over all tracer drugs under the review in the month						
Formula	Number of tracer drugs available / Number of tracer drugs under review *X 100*						
Interpretation	Essential drugs should always be available. Essential drug availability is the proportion of tracer drugs under review which are available throughout the month. The type of essential drug that needs to be available differs by type of health facility. This indicator measures product availability (or absence) over a period and serves as a proxy indicator of the ability of a program to meet clients' needs with a full range of products and services. If a product is not available (stocked out) for one day in the month, then it's considered as not available for the whole month. Health facilities can measure stock out duration of tracer items by using the tracer drug availability and stock out duration tally sheet and registration format indicated in Annex 2.4.						
Disaggregation	By each product, program products						
Sources	Bin card, Electronic records and tracer drug availability sheet						
Method of data collection	DHIS 2						
Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

SC10. Disposal Of Unfit-For-Use Medicines

Indicator	**Disposal of unfit-for-use medicines**					
Definition	Percentage of health facilities that have disposed unfit-for-use medicines at least once in the past 12 months.					
Formula	Number of health facilities that have disposed of their unfit-for-use medicines / Total number of health facilities having unfit-for-use medicines *X 100*					
Interpretation	This indicator measures the performance with which health facilities dispose unfit-for-use pharmaceuticals as per the national disposal directive. Unfit-for-use pharmaceuticals include expired or damaged, pharmaceuticals with quality problems. Health facilities should be able to dispose of these products in a timely fashion to avoid their inadvertent use by patients due to dispensing errors and enables efficient utilization of storage space. The indicator assumes that pharmaceuticals are disposed of at least once in 12 months. Health facilities can measure their disposal of unfit-for-use medicines by using the format indicated in Annex 2.9.					
Disaggregation	Health center and hospital					
Sources	Disposal certificate, bin card, Electronic record, physical count					
Method of data collection	Survey, supportive supervision, document review,					
Frequency of Reporting	HC	Hospital	WoHO	ZHD	RHB	FMOH
	Annually	Annually	Annually	Annually	Annually	Annually

3.3. Medical Equipment Indicators

ME1. Availability Of Functional Medical Equipment

Indicator	Availability of Functional Medical Equipment					
Definition	Percentage of functional medical equipment from the health facility's updated medical equipment inventory list.					
Formula	Number of functional medical equipment in the health facility / Total number of medical equipment in the health facility from updated medical equipment inventory list *X 100*					
Interpretation	This indicator measures percentage of functional medical equipment in the health facility during the review/data collection. Functional medical equipment are instruments which are giving the expected services. To monitor and evaluate this indicator, the health facility should establish computer based or manual medical equipment inventory system and also should update the inventory whenever additions or omissions of medical equipment occur to the health facility. Health facilities should use the Medical Equipment Inventory Form (Annex 3.1) to register medical equipment that is available in the health facility. Health facilities can measure this indicator by using the format indicated in Annex 3.1.					
Disaggregation	By type of health facility					
Sources	Updated medical equipment Inventory					
Method of data collection	Document review and observation					
Frequency of Reporting	HC	Hospital	WoHO	ZHD	RHB	FMOH
	Annually	Annually	Annually	Annually	Annually	Annually

ME2. Percentage Of Health Facilities With Updated Medical Equipment Inventory

Indicator	Availability of updated Medical Equipment inventory list					
Definition	Percentage of health facilities that have updated their medical equipment inventory annually.					
Formula	Number of health facilities with updated medical equipment inventory / Total number of health facilities *X 100*					
Interpretation	This indicator measures the proportion of health facilities that have updated medical equipment inventory list annually. Medical equipment inventory is a list of technology on hand including details of the type and quantity of equipment and the current operating status. This indicator enables the health facility and administrative bodies to take action on procurement, distribution, installation, maintenance and disposal of medical equipment. Health facilities should use the Medical Equipment Inventory Form (Annexed) to register medical equipment that are available in the health facility. Health facilities can measure this indicator by using the format indicated in Annex 3.2.					
Disaggregation	By type of health facility					
Sources	Inventory record					
Method of data collection	Document review, survey					
Frequency of Reporting	HC	Hospital	WoHO	ZHD	RHB	FMOH
	Annually	Annually	Annually	Annually	Annually	Annually

ME3. Percentage Of Health Facilities With Functional Medical Equipment Management Committee (MEMC)

Indicator	Health facilities with functional MEMC					
Definition	Percentage of health facilities that have functional Medical Equipment Management committee					
Formula	Numbers of health facility with functional MEMC / Total numbers of health facility					X100
Interpretation	This indicator measures functional MEMC at each health facility that advices the management of medical equipment in the facility. Medical Equipment Management committee (MEMC) is a committee that is established at health facilities to play an advisory role on management of medical equipment in the facility. MEMC is considered functional, if it meets 80% of the below criteria: having defined TOR, assigned members officially, annual action plan, regular meeting with minutes, develop medical equipment list, and conducts regular inventory (Annex 3.3).					
Disaggregation	By health facilities					
Sources	MEMC documents					
Method of data collection	Document review, Survey					
Frequency of Reporting	HC	Hospital	WoHO	ZHD	RHB	FMOH
	Quarterly	Quarterly	Quarterly	Quarterly	Annually	Annually

ME4. Percentage Of Health Facilities With Scheduled Preventive Maintenance Practice

Indicator	Health facilities with scheduled preventive maintenance practice					
Definition	The proportion of medical equipment that has undergone scheduled preventive maintenance as per the manufacturer's recommendation.					
Formula	Number of scheduled preventive maintenance performed / Total numbers of expected preventive maintenance					*X 100*
Interpretation	This indicator measures scheduled preventive maintenance performed to maintain the functionality of medical equipment. Preventive maintenance refers to regular, routine maintenance to help keep equipment up and running, preventing any unplanned downtime and expensive costs from unanticipated equipment failure. It requires careful planning and scheduling of maintenance on equipment before actual problem happens. Preventive maintenance schedule includes regular inspection, testing, safety and calibration for each medical equipment as per the manufacturer's service manual. If the manufacturer's manual is not available, inspection, testing and preventive maintenance should be conducted at a minimum every six months. A facility is considered as having a scheduled preventive maintenance practice, if it meets 80% of the criteria: care and cleaning schedule, safety procedures in place, functional and performance, calibration testing, preventive maintenance checks for at least 80% of medical equipment. Health facilities measure their preventive maintenance practice using criteria indicated under Annex 3.4.					
Disaggregation	By health facilities					
Sources	Medical equipment history file, log sheet, scheduled preventive plan and report					
Method of data collection	Review of documents, Survey					
Frequency of Reporting	HP	HC	Hospital	ZHD	RHB	FMOH
			Annually	Annually	Annually	Annually

ME5. Percentage Of Medical Equipment Installation

Indicator	Medical equipment Installed within six months					
Definition	Percentage of Medical equipment delivered to the health facility within the past six months and installed					
Formula	Number of installed medical equipment within the past six months / Total number of medical equipment delivered to the health facility in the past six months that needs installation *X 100*					
Interpretation	This indicator indicates that all delivered medical equipment are installed and commissioned in accordance with the manufacturer's specifications and undergoes acceptance testing within the contract agreement. The supplier should provide staff in-service training on the correct and safe use of equipment and basic troubleshooting and preventive maintenance. See annex 3.5 for reporting formats.					
Disaggregation	By time taken for installation (≤ 3 months, > 3 months, by health facility					
Sources	Medical equipment history file, distribution list, Inventory data, survey					
Frequency of Reporting	HC	Hospital	WoHO	ZHD	RHB	FMOH
	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

ME6. Biomedical Professional Positions Filled At Health Facilities

Indicator	Biomedical professional positions filled at health facilities					
Definition	The percentage of Biomedical workforce positions filled at health facilities					
Formula	Number of Biomedical professionals at health facilities / Number of Biomedical workforce positions *X 100%*					
Interpretation	This indicator measures the number of Biomedical staffs deployed as per the approved workforce position for the health facilities. The measurement of this indicator shows the gap on the number of Biomedical professionals against the approved structure and help to fulfill through recruitment or other means. The percentage of biomedical professionals' positions filled can be measured using the format indicated in annex 3.6.					
Disaggregation	By level of Health Facility					
Sources	HR records					
Method of data collection	Review of documents, Survey					
Frequency of Reporting	HC	Hospital	WoHO	ZHD	RHB	FMOH
	Annually	Annually	Annually	Annually	Annually	Annually

ME7. Availability Of Medical Equipment As Per The National Standard

Indicator	Availability of medical equipment as per the national standard					
Definition	This indicator measures the percentage of health facilities that have medical equipment as per the national standard.					
Formula	Number of health facilities that have medical equipment as per the national standard / Total number of health facilities *X 100*					
Interpretation	All health facilities are required to be equipped as per the national standards. Those health facilities that are equipped as per the national standard are expected to deliver quality health services and satisfy the needs of the health professionals and the population. This indicator measures medical equipment availability (or absence) over a period and serves as a proxy indicator of the ability of a program to meet clients' needs with a full range of products and services. Health facilities that have 80% of the medical equipment according to the national standard for the level are considered as acceptable. Evaluators may assess reasons for unavailability to help program managers address the underlying causes.					
Disaggregation	By level of health facility (except tertiary hospital)					
Sources	BIN card, Inventory record, List of standard medical equipment (EFDA)					
Method of data collection	Review of documents					
Frequency of Reporting	HC	Hospital	WoHO	ZHD	RHB	FMOH
	Annually	Annually	Annually	Annually	Annually	Annually

3.4. Pharmacy Services and Pharmaceutical Supply Chain Management Cross Cutting Indicators

SC-PS1. Pharmacy Review Meetings Conducted

Indicator	Number of review meetings conducted						
Definition	The number of pharmaceutical supply chain and pharmacy service related review meetings conducted within a year per administrative level						
Formula	Number of review meetings						
Interpretation	This indicator measures the presence of coordination, leadership, and commitment. Pharmaceutical good governance is critical to realize sustainable commodity security and quality of pharmacy services. Resilient pharmaceutical systems require the involvement of stakeholders that are involved in all aspects of the system strengthening efforts. It is to be noted that these review meetings should also participate development partners to align plans and monitor progress in a timely fashion. Hence, review meetings at respective administrative bodies can play an important technical and political role by coordinating the different actors working in the pharmaceutical sectors. Review meeting are expected to be conducted at least annually. This indicator can be measured using the format indicated in annex 4.1.						
Disaggregation	By RHB						
Sources	Reports of review meetings						
Frequency of Reporting/ collection	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
						Annually	Annually

SC-PS2. Supportive Supervision Of Health Facility Pharmacies

Indicator	Supportive Supervision of Health Facility Pharmacies						
Definition	The percentage of health facility pharmacies that received supportive supervision on their pharmacy activity by immediate administrative units using standard checklist within the specified time-period.						
Formula	Number of health facility pharmacies supervised / Total number of health facilities under immediate administrative level *X100*						
Interpretation	This indicator measures the percentage of health facilities that received technical and administrative support on their pharmaceutical supply chain and pharmacy service activities. The supervision should be conducted using standard checklist which is approved by RHB/FMOH. The feedback and action points obtained from the supportive supervision should be documented at both the supervised health facility and the supervisor's office. Higher rate of supportive supervision will help facilities to improve supply chain efficiency and pharmacy services and will help to solve gaps at health facility levels. This indicator can be measured using the format indicated in annex 4.2.						
Disaggregation	By ZHD & RHB						
Sources	Completed checklist, copy of written feedback provided						
Method of data collection	Survey and supportive supervision (Document review)						
Frequency of Reporting/ collection	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
				Quarterly	Quarterly	Bi-annually	Annually

SC-PS3. Percentage Of Pharmacy Workforce Positions Filled At Health Facilities

Indicator	Percentage of pharmacy workforce positions filled						
Definition	The percentage of pharmacy workforce positions filled by at health facilities						
Formula	Number of pharmacy workforce at health facilities / Number of pharmacy workforce positions *X100%*						
Interpretation	This indicator measures the number of pharmacy staff deployed at health facilities as per the structure/determined by workload analysis. The measurement of this indicator shows the pharmacy staff gap and help to fulfill the pharmacy department through recruitment. The percentage of pharmacy workforce positions filled can be measured using the format indicated in annex 4.3.						
Disaggregation	By type of health facility, type of professionals (pharmacy professional and other pharmacy workforce)						
Sources	HR records						
Method of data collection	Document review and routine report						
Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Annually	Annually	Annually	Annually	Annually	Annually

Chapter Four: Data Collection, Analyses and Utilization

The M&E Framework consists of a total of 36 indicators. Some indicators will be collected and used by each level without reporting to the next level while selected indicators will be reported to the next level. Some indicators will be tracked by higher administrative levels using different data collection methods such as surveys and supportive supervisions. The data elements for the four KPIs that can be captured by the routine HMIS system that will follow the HMIS reporting system. There will not be parallel reporting system for these indicators.

4.1 Flow of reports

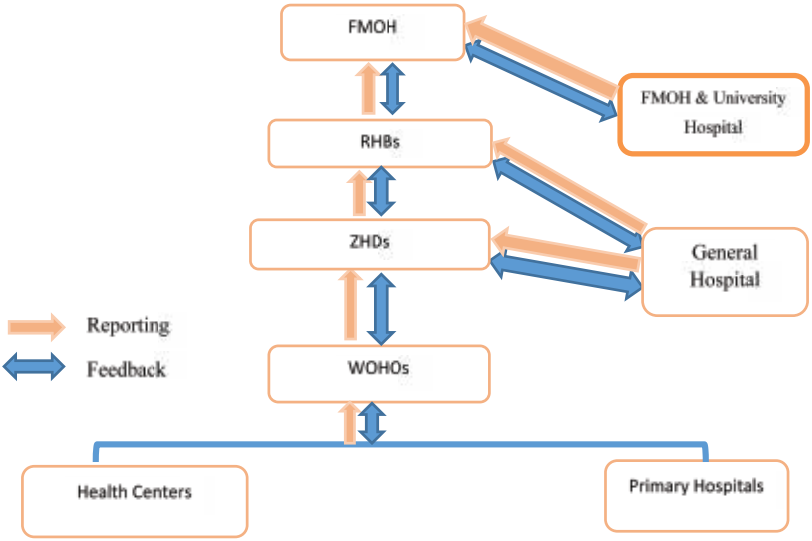
Data elements that are selected for reporting from one level to the next will follow the existing hierarchy of report flow in the health system. Report flow from the lowest to the highest levels of the health system and the flow of feedback in the reverse direction is depicted in figure 2 below. Accordingly,

- Health centers report to woreda health offices
- Woreda health offices aggregate and report to Zonal Health Departments
- Zonal Health Departments aggregate and send to Regional Health Bureaus
- Regional Health Bureaus aggregate and report to the FMOH

In addition to the above-mentioned reporting hierarchy, some regions may have a different administrative organization for whom their unique administrative hierarchy will be used for reporting flow. Example: Some regions that have no zonal administrative structure, Woreda Health Offices will directly report to the RHBs.

Data will be collected, analyzed, reviewed and reported via an electronic reporting tool that will be developed for this purpose.

Figure 2: Pharmaceutical Supply Chain, Pharmacy Service and Medical Equipment M&E Indicators Reporting Flows



4.2 Reporting schedule

Reportable data elements will be reported to the next administrative level using a standardized reporting format for a specified reporting period. A reporting timeline, which is in line with the HMIS reporting schedule, is set for each level, Accordingly, a monthly report of a health facility is compiled from the 21st of the previous month up to the 20th of the reporting month and submitted to the next level the latest by the 26th of the reporting month. Example: For Tikimt 2011 EC monthly report, the data should be collected from Meskerem 21 up to Tikimt 20, 2011. The reporting channel and period of public health facilities and administrative health units will follow the following schedule, as depicted in the table below.

Table 1: Reporting hierarchy, frequency and schedule of public health facilities and administrative health units

Unit	Reports to	Timeline	Latest date report should be submitted*	Type of reporting form
Health Centre	WoHO	Quarterly 2	6t day of the last month of the quarter	Reporting form for health centres
Hospital Z	HD/RHB	Quarterly	26t day of the last month of the quarter	Reporting form for hospitals
WoHO Z	HD	Quarterly	2n day of the 1st month of the next quarter	Reporting form for Woreda Health Offices
ZHD	RHB	Quarterly	7t day of the 1st month of the next quarter	Reporting form for Zonal Health Departments
RHB F	MOH	Quarterly	15t day of the 1st month of the next quarter	Reporting form for RHBs

Quarterly reports consist of data for three months according to the Ethiopian fiscal year. It should follow the following periods:

- Quarter 1: Sene 21-Meskerem 20
- Quarter 2: Meskerem 21- Tahsas 20
- Quarter 3: Tahsas 21- Megabit 20
- Quarter 4: Megabit 21- Sene 20

Also annual reports contain data for a one-year period from Sene 21 of the previous fiscal year to Sene 20 of the current fiscal year.

Example:

For the 1st quarter of the Ethiopian Calendar, health facilities should submit their quarterly reports of the first quarter the latest by Meskerem 26; WoHO will aggregate the reports and submit to ZHD until Tikimt 2; ZHD will submit their report to RHBs until Tikimt 7; and RHBs should submit their quarter report to the FMOH by the 15th of Tikimt.

4.3 Collection and analysis of data

4.3.1 Collection and analysis of data at facility level

Health facilities will use the standard forms to collect routine and survey data. They will review and assure the quality of data before analysis and use. During analysis, the indicator reference sheet should be used as a reference for the description and interpretation of the indicator. Health facilities should use the data to assess their performance and take actions accordingly.

The pharmacy department of the health facility is the data owner for PSCM and PS data and is responsible to generate the report and submit to the health facility head. Moreover, the Biomedical Engineering department head generates data related to medical equipment, compiles and submits the report to the pharmacy head. The health facility head will submit to the next administrative level as per the reporting schedule. The pharmacy head of the facility or his delegate should be a member of the facility's performance monitoring team (PMT) and should present performance reports to the PMT.

If the facility is using non-electronic reporting system, the report will be prepared in two copies from which the 1st copy will be summited to Woreda/Zone; and the second copy to be archived at the health facility. Ideally, the focal person should submit the report using electronic platforms such as emails. If this is not possible, the pharmacy department focal person should submit the hard copy of the data elements to the next level.

4.3.2 Collection and analysis of data at administrative levels

All administration levels should assign a focal person to receive and compile reports. The focal person is responsible to follow the timeliness and completeness of reports. The administrative levels will use the aggregation formats to aggregate reports submitted from the lower units. In order to simplify aggregation and analysis, an electronic data base (Excel based or other) will be developed and used. The electronic system will help simplify aggregation of reports and to generate and display the results in the form of tables, graphs in a dashboard. Every quarter, the results will be analyzed, and feedbacks will be given to lower levels. The results will also be shared to the next higher administrative level as per the agreed timeline.

4.4 Utilization of data

4.4.1. Utilization of data at health facility level

The pharmacy department is responsible not just for reporting of data, but primarily to use the data for performance and service improvement through evidence-based decision making.

Useful questions to consider when reviewing the data include:

- How does this result compare to the last reporting period? How and why has the change in performance happened?
- How does the data compare to the target for the reporting period? Has the target been reached? If the target has not been reached, why not?
- Is there a need for further improvement on the indicators?
- Is further support required from health facility management, administrative levels or other partners to support the facility to make improvements?

The pharmacy department, together with PMT should analyze the performance and develop action plan to improve performance. The PMT will oversee performance monitoring and improvement across the health facility.

4.4.2. Utilization of reports by WoHOs/RHBs/FMOH

The RHBs, ZHDs and WoHOs should aggregate and analyze reports received from all health facilities and provide feedback. When reviewing reports, the RHB/ZHD/WoHO should consider the same questions as outlined above. In addition, performance of health facilities should be compared:

- Which facilities are showing the best performance overall? Which are showing poor performance?

- Which facilities are improving? Which facilities show slow or no improvement?
- What are the strengths in the region/Zone/Woreda? What are the weaknesses?

The RHB should give feedback to each ZHDs/hospitals on the reports, asking for clarification or further information whenever required. The RHB should also use the reports to identify areas for action. The reports can be used as an input for subsequent supportive supervision visits.

4.5 Data quality assurance

All health facilities and administrative health units should provide a due attention to the quality of data generated and used at each level of the health system. In order to ensure the quality of data, each unit should avail adequate inputs and make sure that data quality assurance processes are in place. They will review the following elements to ensure data quality:

- Availability of standardize data collection, aggregation, and reporting tools
- Written standard operating procedures (SOPs) are in place for data collection
- Data quality assessments will review whether these procedures are in place, implemented consistently, and reviewed periodically for effectiveness and efficiency)
- Initial training and ongoing refresher training provided for all relevant staff
- Implement SOPs that have a system to check for and remove duplicate data
- Safeguards are in place to prevent unauthorized access to and changing of data
- Original source documents are maintained and readily available.
- Carry out system assessment to identify underlying causes for poor data quality

The national Health Data Quality Guideline of the HMIS provides guidance to comprehensively measure the level of data quality, to assess the underline data management system, and to build an internal data quality assurance mechanism for health facilities and administrative levels. To conduct data quality checks at health facilities, LQAS (Lot Quality Assurance Sampling) methodology can be used. (Refer to the national Health Data Quality Guide and training manual to understand the details of LQAS methodology).

Use of information for decision making will have a positive reinforcing effect to improve data quality. FMOH and RHBs will technically support cross referencing and linking of logistic system performance to program or service delivery performance. FMOH/ RHBs will make technical data reviews to improve the data quality and provide interpretation on the use of the reports. The data review might also suggest adjustment of performance for decision making such as supply planning, redistribution of commodities, and allocation of resource.

4.6. Roles and responsibilities

Each health institution at all levels of the health system has specific roles and responsibilities in implementing and monitoring the implementation of the M&E plan for pharmaceutical supply chain, pharmacy services, and medical device. Table x below outlines the major roles and responsibilities of each health institution/stakeholder. FMOH, together with the RHBs, will review the M&E plan/framework every two to three years to determine if adjustment is needed on the indicators, and data collection tools.

Table 2: Roles and Responsibilities

Institution	Role and Responsibilities
FMOH/RHBs/EPSA	Design the M&E system
	Periodically review and update the M&E plan
	Develop standardized reporting forms and electronic database
	Follow the implementation of the M&E plan
	Collect performance data from lower levels
	Analyze data and use for performance improvement
	Provide feedback to health facilities or administrative levels
	Assign focal persons for data management
	Conduct supportive supervision visits
	Conduct research and evaluations
	Provide capacity building to staff at all levels of the health system
	Conduct data quality assessments
	Organize and conduct national performance review meetings
ZHDs/WoHOs	Follow the implementation of the M&E plan
	Collect performance data from lower levels
	Analyze data and use for informed decision making
	Provide feedback to health facilities
	Assign focal persons for data management
	Conduct supportive supervision visits
	Provide trainings and other capacity building activities
	Conduct data quality assessments
	Present the data in review meetings and other platforms
Health Facilities (Hospitals/Health Centers)	Assign focal person for data management
	Maintain the primary data source(s) for KPI information
	Compile data regularly, perform data quality checks
	Compute indicators and conduct self-assessment
	Receive feedback and take actions
	Provide data for monthly progress review meetings
	Submit quarterly reports to the next level

Annex

Annex 1. Registration formats for pharmacy service indicators

Annex 1.1: DTC functionality criteria

DTC functionality criteria			
S.N	**Criteria**	**Weight**	**Score**
1	Assigned DTC members by official letter	10	
2	Has approved TOR	10	
3	Meets regularly at least every months with documented minute	10	
4	Has developed action plan	10	
5	Has updated health facility specific medicine and medical devices list	15	
6	Has medicine use policy and procedures (at least two policies)	10	
7	Conduct supply and medicine use problem studies	10	
8	Take actions based on the supply and medicine use study findings	15	
9	Report its performance activities to the management	10	
DTC functionality (%) Sum of total score			
Functionality of DTC if >75%, **Yes**, If < 75%, **No**			

Annex 1.2: Data collection form for indicators obtained from prescriptions/ prescription registration book

1. Data Collection Form for Indicators Obtained from Prescriptions

Health Facility: _____
Investigator: _____
Reporting period: from _____ to _____

SN	# Drugs	# Generics	Injection (0/1)	Antibiotics (0/1)	# on FSML*	Diagnosis
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
--						
--						
--						
100						
Total	X			XXX	YYY	X
Average	X		X	X	X	X	X
Percentage	X		*% of total drugs*	*% of cases*	*% of total cases*	*% of total drugs*	X

**FSML: Facility Specific Medicines List*
For this M&E framework, Antibiotics (XXX) and # on FSML(YYY) are reported to the next administrative level.*

Take a sample of 100 prescriptions using systematic random sampling from the prescription register/prescription paper during the fiscal year

Annex 1.3: Counseling time registering form

Patient #	Counseling time in seconds		
	T1	T2	T2-T1
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
31.			
32.			
33.			

Method
Observe a series of at least 100 patients and record the time spent for each encounter. Time is recorded when a patient receives the medicine during which instruction on the use of medicine is provided.

Annex 1.4: Data collection form for patient knowledge and labeling interview

Data Collection Form														
Health Facility: _____ **Investigator:** _____ **Reporting period: from** _____ **to** _____														
Case #	**Dispensing Counseling Time (seconds)**	**Adequacy of Labeling**							**Patient Knowledge on Dosage**					
		Patient Name	Drug Name	Dose	Frequency	Duration	Route	Adequate (1), If not adequate (0)	Dose	Frequency	Route (እንደታዘዘ ነው ወይ)	Duration (ለሚመለከተው ብቻ)	Adequate (1), If not adequate (0)	
1.														
2.														
3.														
4.														
5.														
6.														
7.														
8.														
9.														
10.														
11.														
--														
--														
--														
100														
Total														
Average														

Labelling and knowledge data is obtained by observing a sample of at least 100 clients during exit interview. To analyze knowledge, the label of medicine dispensed to patients can be checked.

NB. When regional/national assessments are conducted, take 30 encounters from each of 20 health facilities.

Annex 1.5: Health facility dispensing registration book

Region _____ Woreda _____ Name of Health Facility _____

SN		Patient Name	Age	Sex	Diagnosis (NCoD)	Medicines Prescribed	Therapeutic Category	Level of Importance by VEN			Dispensed (Y/N)	Overall* (1,0)	Remark
								Vital (√)	Essential (√)	Non Essential(√)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	**(13)**	(14)
		Count total patient								**Count Total 1**			
Overall*: Enter '1' only if all the prescribed medicines are dispensed and enter '0' if one or more medicines not dispensed.													FMOH V1 2009

Annex 1.6: Functionality of clinical pharmacy

Criteria to measure clinical pharmacy functionality			
S.N	**Criteria**	**Weight**	**Score**
1	Dedicated pharmacist	9	
2	Continuous care (24/7)	8	
3	Service provided in all wards	5	
4	Assess medication history at admission	8	
5	Participate in multidisciplinary round	8	
6	Participate in multidisciplinary morning session	8	
7	Conduct pharmacy only rounds	8	
8	Identify drug therapy need / problem	15	
9	Perform medication reconciliation	15	
10	Provide discharge planning and counseling	7	
11	All clinical pharmacy service activities documented and reported	9	
Total Score			
Functionality of Clinical pharmacy, if ≥75%, Yes. If <75%, No			

Annex 1.7: Criteria to measure UDS functionality

SN.	Criteria	Availability	
		Yes (1)	No (0)
1	Separate room/area dedicated for compounding,		
2	Dedicated pharmacist		
3	Compounding equipment		
4	Chemicals		
5	Standard Operating Procedure (SOPs)		
6	Compounding registration form		
	Total Yes/6		
	Compounding functionality (%)		
	Functionality of compounding (≥75%) (If yes 1, If no 0)		

Annex 1.8: Criteria to measure compounding functionality

SN.	Criteria	Availability	
		Yes (1)	No (0)
1	Separate room/area dedicated for compounding,		
2	Dedicated pharmacist		
3	Compounding equipment		
4	Chemicals		
5	Standard Operating Procedure (SOPs)		
6	Compounding registration form		
	Total Yes/6		
	Compounding functionality (%)		
	Functionality of compounding (≥75%) (If yes 1, If no 0)		

Annex 1.9: DIS functionality

Criteria to measure DIS functionality			
S.N	**Criteria**	**Weight**	**Score**
1	Dedicated room	8	
2	Dedicated pharmacy professional	8	
3	Reference materials	8	
4	DIS equipment (furniture, computer, printer)	8	
5	Standard operating procedure	8	
6	Sample query responses	15	
7	Medicine education program and report	15	
8	Sample alerts/newsletters prepared	15	
9	Annual action plan	7	
10	Performance reports	8	
Total Score			
Functionality of DIS, if ≥75%, Yes. If <75%, No			

Annex 1.10: Functionality of APTS

Criteria to measure APTS functionality			
S.N	**Criteria**	Weight	Score
1.	Designed workflow	15	
2.	Implement APTs in all dispensaries and stores	15	
3.	Produce daily summary and monthly report	15	
4.	Bin ownership	5	
5.	Conduct audit as per the standard	5	
6.	Workforce deployment and development as per the workload analysis	10	
7.	Availability of adequate APTS registers and vouchers	5	
8.	Conduct physical inventory as per the standard	10	
9.	Perform ABC/VEN analysis and reconciliation	10	
10.	Perform stock status analyses	10	
Total Score			
Functionality of APTS, if ≥75%, Yes. If <75%, No			

Annex 1.11: Client satisfaction with dispensing services

SN	**Client satisfaction criteria**	Client Response	
		Yes (1)	No (0)
1	The OPD pharmacy is easily accessible		
2	The pharmacy is clean		
3	The pharmacy room is adequate for the service		
4	The pharmacy ensures reasonable privacy		
5	The waiting area is convenient		
6	The dispensers were welcoming to patients		
7	The dispensers were ready to listen to my problems		
8	Waiting time was appropriate		
9	All my prescribed medicine were given me		
10	The medicines are affordable to me		
11	I trust the competence of the dispensers		
12	I received adequate information about how I should use my medicines		
13	I am generally satisfied by the service I received		
	Total Yes/13		
	Patient satisfied with dispensing service (%)		
	Satisfaction (>80%) (If yes 1, If no 0)		

Annex 2. Registration formats for supply chain indicators

Annex 2.1 Forecast accuracy

	Forecast accuracy for tracer products				
		Quantity			
S.N.	**Tracer products**	**Forecasted quantity (P1)**	**Consumed (Issued) Quantity (P2)**	**Forecast error (P3) |(P1-P2)/P2|**	**Forecast Accuracy (1-P3x100)**
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Summary Forecast accuracy					

Annex 2.2. Supplier fill rate

EPSA					
S.no	**Pharmaceutical Category**	**Total number of line items requested to EPSA in the quarter (P2)**	**Total Number of line Items supplied in the quarter**	**Total Number of Items which are correctly supplied in greater than 80% of the quantity requested (P1)**	**Supplier Fill Rate $\frac{P1}{P2}$*100**
1	Program from RRF				
	RDF Pharmaceuticals				
	Total				
EPSA Refill Rate for RDF and program drugs = $\frac{P1}{P2}$* 100					

Private					
S.no	**Pharmaceutical Category**	**Total number of line items requested to private supplier in the quarter (P2)**	**Total Number of line Items supplied**	**Total Number of Items which are correctly supplied in greater than 80% of the quantity requested (P1)**	**Supplier Fill Rate $\frac{P1}{P2}$*100**
1	RDF Pharmaceuticals				
2	RDF Pharmaceuticals				
3	RDF Pharmaceuticals				
Private Supplier Refill Rate for RDF drugs = $\frac{P1}{P2}$* 100					

Annex 2.3 Average lead time

#	Reporting Period	Date the report & request was summited to EPSA	Date the products are delivered by EPSA to HF	Number of days it took by EPSA to deliver products
1	Reporting Period 1			
2	Reporting Period 2			
3	Reporting Period 3			
4	Reporting Period 4			
5	Reporting Period 5			
6	Reporting Period 6			
7				
	Total Number of Days			
	Number of reporting periods considered for the calculation			
Average Lead Time =				

Annex 2.4 Tracer drug availability and stock out duration tally sheet and registration format

Federal Democratic Republic of Ethiopian Ministry of Health

Tracer Drug Availability Tally Sheet and Stock Out Duration Registrtion Form

Woreda---------- Facility Name---------- Month---------- Year----------

S/No	Tracer drug list	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Overall* (1.0)	No. of stock out days in the month
1	Amoxicillin dispersable tablet																																
2	Oral Rehydration Salts																																
3	Zinc dispersible tablet																																
4	Gentamycin Sulphate injection																																
5	Co-trimoxazole																																
6	Magnesium Sulphate injection																																
7	Oxytocin injection																																
8	Enalapril tablets																																
9	Medroxyprogesterone Injection																																
10	Glibenclamide tablet																																
11	Adrenaline injection																																
12	Pentavalent vaccine																																
13	Glucose 40%																																
14	Dextrose in normal saline																																
15	Ferrous sulphate + folic acid																																
16	Ciprofloxacin tablet																																
17	Ceftriaxone injection																																
18	Hydralazine injection																																
19	TDF/3TC/EFV adult																																
20	RHZE/RH																																
21	Tetanus Anti toxin (TAT)																																
22	Tetracycline eye ointment																																
23	Arthmeter +Lumfanthrine (Coartem) tablet (any packing)																																
24	Artesuante injection																																
25	Implanon NXT																																
																																Sum of stock out days	

Note: Tick on each day, if the drug is available on the working day or leave it as blank if the drug is not available. Enter 1 in "overall" column if the drug is available on working days and zero if it is out of stock for one or more working days in that reporting period. If the facility doesn't give service on holidays and weekends, enter "NA" in the specific dates and exclude the dates from the list of stock out dates. For the number of stock out days in a monthly: count the number of stock out days (Number of zeros) in the month and write on the last column. Then, sum the stock out days for all tracer drugs.

Annex 2.5 Wastage rate

#	RDF Category	Unusable stock of products during a period in monetary value in the period (P1)	Value of Beginning stock at the beginning of the Period (P2)	Value of total items received during the Quarter (P3)	Wastage Rate $\frac{P1}{P2+P3} * 100$
1	RDF Pharmaceuticals				
2	Program Pharmaceuticals				
	Summation				
				Wastage Rate	

Annex 2.6 Percentage of facilities that maintain acceptable storage conditions check list to evaluate good storage condition

Assess the storage conditions of main storage area only. Place a check (tick) mark in the appropriate column based on visual inspection of the storage area. To qualify for a "Yes" response, all products must meet the criteria for each item.

Good storage condition criteria			
S.N.	**Criteria**	**Met**	
		Yes (1)	**No (0)**
1	Products are arranged on shelves with arrows pointing up, and with identification labels, expiry dates, and manufacturing dates clearly visible.		
2	Drugs are stored and organized to FEFO procedures and are accessible for counting and general stock management.		
3	Outer cartons are in good condition (not crushed, perforated, stained, or otherwise visibly damaged).		
4	Damaged and expired products are separated from usable products in the storeroom, and procedures exist for removing them from inventory.		
5	Drugs are stored in a dry, well-lit, well-ventilated storeroom. *(Visually inspect roof, walls, and floor of storeroom.)*		
6	Cartons and products are protected from direct sunlight.		
7	There is no evidence of rodents or insects in the storage area. *(Visually inspect the storage area for evidence of rodents [droppings] or insects that can damage or contaminate the products.)*		
8	Storage area is secured with a lock and key but is accessible during normal working hours; access is limited to authorized personnel.		
9	Products are stored at the appropriate temperature according to product temperature specifications (8°–30°C) and including cold chain storage (2°–8°C), as required for certain products.		
10	Roof is maintained in good condition to avoid sunlight and water penetration.		
11	Storeroom is clean, with all trash removed, no evidence of food and drinks, products stored on sturdy shelves/bins, and boxes organized neatly.		
12	Current storage space is sufficient for existing products and planned program expansion.		
13	Drugs are stored separately from insecticides, flammable products, and chemicals.		
	Total number of Yes		
	Storage condition score (%)=$\frac{\text{Total Yes}}{13} * 100$		
	If storage condition score is $\geq$ 80%, say acceptable		

Annex 2.7 Inventory accuracy rate

S.No.	List of Tracer Drugs	Bin Card/Electronic Record Balance	Physical Count	Bin Card Balance equals with physical count (if yes put 1, if no put 0)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Number of items where bin card (Manual or Electronic) balance equals physical stock count _**Sum=Total number of "1" Checks**				
Inventory accuracy rate =Total yes *100 10				

Annex 2.8 RRF reporting rate

Date entry: (enter 1 if the facility reported using the RRF, 0 if the facility does not use RRF report in the reporting period. Please fill for each period).

RRF reporting rate			
S.N.	**Reporting Period**	**Date RRF sent to EPSA**	**Send RRF report on time (if sent until the 10th day of the month, put 1. if not, put 0)**
1	Reporting Period 1		
2	Reporting Period 2		
3	Reporting Period 3		
4	Reporting Period 4		
5	Reporting Period 5		
6	Reporting Period 6		
	RRF reporting rate (total number of RRF sent on time/expected number of RRF)		

Annex 2.9. Disposal of unfit-for-use medicines

S.no.	Activity	Write 1 if yes; write 0 if no
1	Did the health facility dispose unfit-for-use medicines at least in the past 12 months (EFY)?	

Annex 3. Registration and reporting formats for medical equipment indicators

Annex 3.1 Availability of functional medical equipment

Medical Equipment Inventory Form
Name of health facility ……..…
Date of conducting survey……

Number	Location/ Department	Name of Equipment	Inventory No.	Model	Serial No.	Manufacturer	Country of Origin	Year of manufacturing	Supplier/ Local agent	Operational condition					Why do down	When do down	How often is it Used	Trained Operator (yes/No)	Trained Technician/Engineer (yes/No)	Spare parts availability (Yes/No)	Do you have user Manuals? (Yes/No)	Do you have service Manuals (Yes/No)
										functional	Non-Functional but reparable	Non-Functional and not reparable										

Annex 3.2. Percentage of health facilities with updated medical equipment inventory

S.N	Criteria	Updated Inv. List	
		Yes	No
1	Does the facility has updated Medical equipment Inventory?		

Annex 3.3. Criteria to functionality of medical equipment committee

S.No	Criteria	Functional	
		Yes	No
1	Assigned medical equipment committee members by official letter		
2	Has approved TOR		
3	Meets regularly at least every two months with documented minute		
4	Has annual action plan and monitor performance		
5	Has updated model medical equipment list		
6	Conduct annual medical equipment inventory		
7	Has medical equipment policy and procedures		
8	Maintain equipment history profile for all model medical equipment		
9	Follow disposal of non-functional medical equipment		
10	Follow the reporting and implementation of medical equipment indicator findings		
11	Review and follow medical equipment procurement and installation request		
	Total number of "yes"		
	Total Criteria	11	
	Percentage functionality of MEMC = Total number of "yes" / Total criteria		
	Functionality of MDC (>80%) If functional write "1" If not functional write "0"		
	Note: A health facility is considered as having functional MEMC if 80% of the above requirements are met.		

Annex 3.4. Criteria for the scheduled preventive maintenance practice

No	Medical equipment	Criteria									
		Care and cleaning schedule (C & C)		Safety procedures in place (Safety P.)		Functional and performance (F & P)		Calibration testing (Calib.)		Preventive maintenance checks (PMC)	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	ME4.1=Total no. of Yes										
	ME4.2=Expected PPM										
	Percent PPM performed = ME4.1/ ME4.2										
	Overall average PPM performed	% C&C + % Safety P+ % F & P+% Calib.+ %PMC / 5 = _____									

NB: it is "yes" if it meets 80% of the preventive maintenance criteria for 80% of medical equipment.

Annex 3.5. ME5. Percentage of medical equipment installation

S.N	Criteria	Number
ME5.1	Number of installed medical equipment within the past three months	
ME5.2	Total number of medical equipment delivered to the health facility in the past six months that needs installation	
	Percentage of medical equipment installed in the past three months that needs installation (ME5.1/ ME5.2*100)	
ME5.3	Number of installed medical equipment within the past 4-6 months	
ME5.4	Total number of medical equipment delivered to the health facility in the past six months that needs installation	
	Percentage of medical equipment installed in the past six months that needs installation (MD5.3/ MD5.4*100)	

Note: ME5.2 and ME5.4 (total medical equipment delivered within the past six months) are the same number

Annex 3.6. ME6. Biomedical professionals' positions filled at health facilities

S.NO	Description	Number
ME6.1	Number of Biomedical professionals at health facilities	
ME6.2	Number of Biomedical professional positions	
	Positions of biomedical professionals filled (ME6.1/ME6.2*100)	

Annex 3.7. ME7. Availability of medical equipment as per the national standard

S.N	Criteria	standard?	
		Yes	No
1	Does the health facility have medical equipment as per the national standard?		
	NB: it is "yes" if it meets 80% of the national standard.		

Annex 4: Supply chain and pharmacy service crosscutting indicators

Annex 4.1. Pharmacy review meetings conducted

S.NO	Description	Number
P1	Number of review meetings	

Annex 4.2. Supportive supervision of health facility pharmacies

S.NO	Description	Number
P1	Number of health facility pharmacies supervised	
P2	Total number of health facilities under immediate administrative level	
	Percentage of health facility pharmacies ($\frac{P1}{P2}$ *100)	

Annex 4.3. Percentage of pharmacy workforce positions filled at health facilities Annex

S.NO	Description	Number
P1	Number of pharmacy workforce at health facilities	
P2	Number of pharmacy workforce positions	
	Adequacy of (P1*100/P2)	

Annex 5: Reporting Formats
Annex 5.1: Health Center

Name of Health Center:- **Zone:-** **Woreda:-** **No of HP:-** **No of DUs:-**				
Reporting Period:- From:_____ To:_____				
S.No	**Activities**	**Unit**	**Result**	**Remark**
	PS1. Drug and Therapeutics Committee (DTC) Functionality	yes/no		
	PS2. Availability of Health Facility Specific Medicine List	yes/no		
	PS3. Availability of Standard Treatment Guidelines	yes/no		
	PS4. Percentage of medicines prescribed from the facility's medicines list	Percent		
	PS5. Average Number of medicines per encounter	Number		
	PS6. Percentage of encounters with an antibiotic prescribed	Numerator Count		
		Denominator Count		
	PS7. Average dispensing counselling time	Second		
	PS8. Percentage of medicines adequately labeled	Numerator Count		
		Denominator Count		
	PS9. Percentage of Patients knowledge on correct dosage	Numerator Count		
		Denominator Count		
	PS10. Percentage of clients with 100% prescribed drugs filled			Collected through DHIS 2
	PS13. Health facilitiy with functional DIS	yes/no		
	PS15. APTS functionality	yes/no		
	PS16. Client satisfaction with dispensing services	Numerator Count		
		Denominator Count		
	SC1. Forecast accuracy	Percentage		
	SC2. SC2. Supplier fill rate			Collected through DHIS 2
	SC3. Average lead time	Number of days		
	SC4. Stock out duration	Number of days		
	SC5. Wastage rate			Collected through DHIS 2
	SC6. Percentage of facilities that maintain acceptable storage conditions	yes/no		
	SC7. Inventory accuracy rate	yes/no		
	SC8. RRF reporting rate	Numerator Count		
		Denominator Count		

	SC9. Essential drugs availability			Collected through DHIS 2
	SC10. Disposal of unfit-for-use medicines	Yes/No		
	ME1. Availability of functional medical equipment	yes/no		
	ME2. Percentage of health facilities with updated medical equipment inventory	yes/no		
	ME3. Percentage of health facilities with functional medical equipment management committee (MEMC)	yes/no		
	ME4. Percentage of health facilities with scheduled preventive maintenance practice			Hospital
	ME5. Percentage of medical equipment installation	Numerator Count		
		Denominator count		
	ME6. Biomedical professional positions filled at health facilities	Numerator Count		
		Denominator Count		
	ME7. Availability of medical equipment as per the national standard	yes/no		
	SC-PS3. Percentage of pharmacy workforce positions filled at health facilities	Numerator count Denominator Count		
Report Completed by name----------Signature ----------Date----------				
Report Approved by name----------Signature ----------Date----------				

Annex 5.2: Hospital

Name of Hospital:- **Zone:-** **Woreda:-** **No of DUs:-**				
Reporting Period:- From:_____ To:_____				
S. No	**Activities**	**Unit**	**Result**	**Remark**
	PS1. Drug and Therapeutics Committee (DTC) Functionality	yes/no		
	PS2. Availability of Health Facility Specific Medicine List	yes/no		
	PS3. Availability of Standard Treatment Guidelines	yes/no		
	PS4. Percentage of medicines prescribed from the facility's medicines list	Percent		
	PS5. Average Number of medicines per encounter	Number		
	PS6. Percentage of encounters with an antibiotic prescribed	Numerator Count		
		Denominator Count		
	PS7. Average dispensing counselling time	Second		
	PS8. Percentage of medicines adequately labeled	Numerator Count		
		Denominator Count		

	PS9. Patients knowledge on correct dosage	Numerator Count		
		Denominator Count		
	PS10. Percentage of clients with 100% prescribed drugs filled			Collected through DHIS 2
	PS11.Clinical pharmacy service functionality	yes/no		
	PS12.Functional unit dose dispensing system (UDS)	yes/no		
	PS13. Functional DIS	yes/no		
	PS14. Functional Compounding Services	yes/no		
	PS15. APTS functionality	yes/no		
	PS16. Client satisfaction with dispensing services	Numerator Count		
		Denominator Count		
	SC1. Forecast accuracy	yes/no		
	SC2. SC2. Supplier fill rate			Collected through DHIS 2
	SC3. Average lead time	Number of days		
	SC4. Stock out duration	Number of days		
	SC5. Wastage rate			Collected through DHIS 2
	SC6. Percentage of facilities that maintain acceptable storage conditions	yes/no		
	SC7. Inventory accuracy rate	yes/no		
	SC8. RRF reporting rate	Numerator Count		
		Denominator Count		
	SC9. Essential drugs availability			Collected through DHIS 2
	SC10. Disposal of unfit-for-use medicines	Yes/No		
	MD1. Availability of functional medical equipment	yes/no		
	MD2. Percentage of health facilities with updated medical equipment inventory	yes/no		
	MD3. Percentage of health facilities with functional medical equipment management committee (MEMC)	yes/no		
	MD4. Percentage of health facilities with scheduled preventive maintenance practice	yes/no		
	MD5. Percentage of medical equipment installation	Numerator Count		

	MD6. Biomedical professional positions filled at health facilities	Numerator Count		
		Denominator Count		
	MD7. Availability of medical equipment as per the national standard	yes/no		
	SC-PS3. Percentage of pharmacy workforce positions filled at health facilities	Numerator count Denominator Count		
Report Completed by name----------Signature ----------Date----------				
Report Approved by name----------Signature ----------Date----------				

Annex 5.3: Woreda

Name of Woreda:- **Zone:-** **# of Health centers :-** **No of HP:-**

Reporting Period:- From:_____ To:_____

S. No	Activities	Unit	Result	Remark
	PS1. Percentage of health facilities that have functional DTC	Numerator Count		
		Denominator Count		
	PS2. Percentage of health facilities that have specific health facility medicine list	Numerator Count		
		Denominator Count		
	PS3. Percentage of health facilities that have recent edition of STG	Numerator Count		
		Denominator Count		
	PS4. Percentage of medicines prescribed from the facility's medicines list	Numerator Count		
		Denominator Count		
	PS5. Average Number of medicines per encounter	Number		
	PS6. Percentage of encounters with an antibiotic prescribed	Numerator Count		
		Denominator Count		
	PS7. Average dispensing counselling time	Second		
	PS8. Percentage of medicines adequately labeled	Numerator Count		
		Denominator Count		
	PS9. Patients knowledge on correct dosage	Numerator Count		
		Denominator Count		

	PS10. Percentage of clients with 100% prescribed drugs filled			Collected through DHIS 2
	PS11.Percentage of hospitals with functional clinical pharmacy service	Numerator Count		For hospitals only
		Denominator Count		
	PS12.Percentage of hospitals with functional unit dose system	Numerator Count		For hospitals only
		Denominator Count		
	PS13.Percentage of health facilities with functional Drug information service	Numerator Count		
		Denominator Count		
	PS14. Percentage of hospitals with functional compounding services	Numerator Count		For hospitals only
		Denominator Count		
	PS15. Percentage of health facilities with functional APTS	Numerator Count		
		Denominator Count		
	PS16.The percentage of clients satisfied with dispensing services	Numerator Count		
		Denominator Count		
	SC1. Forecast accuracy	Numerator Count		
		Denominator Count		
	SC2. SC2. Supplier fill rate			Collected through DHIS 2
	SC3. Average lead time	Numerator Count		
		Denominator Count		
	SC4. Stock out duration	Numerator Count		
		Denominator Count		
	SC5. Wastage rate			Collected through DHIS 2
	SC6. Percentage of facilities that maintain acceptable storage conditions	Numerator Count		
		Denominator Count		
	SC7. Inventory accuracy rate	Numerator Count		

		Denominator Count		
	SC8. RRF reporting rate	Numerator Count		
		Denominator Count		
	SC9. Essential drugs availability			Collected through DHIS 2
	SC10. Disposal of unfit-for-use medicines	Numerator Count		
		Denominator Count		
	MD1. Availability of functional medical equipment	Numerator Count		
		Denominator Count		
	MD2. Percentage of health facilities with updated medical equipment inventory	numerator Count		
		Denominator Count		
	MD3. Percentage of health facilities with functional medical equipment management committee (MEMC)	Numerator Count		
		Denominator Count		
	MD4. Percentage of health facilities with scheduled preventive maintenance practice	Numerator Count		
		Denominator Count		
	MD5. Percentage of medical equipment installation	Numerator Count		
		Denominator Count		
	MD6. Biomedical professional positions filled at health facilities	Numerator Count		
		Denominator Count		
	MD7. Availability of medical equipment as per the national standard	Numerator Count		
		Denominator Count		
	SC-PS2. Supportive supervision of health facility pharmacies	Numerator Count		
		Denominator Count		
	SC-PS3. Percentage of pharmacy workforce positions filled at health facilities	Numerator Count		
		Denominator Count		

Report Completed by name----------Signature ----------Date----------

Report Approved by name----------Signature ----------Date----------

Annex 5.4: Zone

Name of Zone:-	**Region:-**			**No of Woredas:-**
Reporting Period:- From:_____ To:_____				
S.No	**Activities**	**Unit**	**Result**	**Remark**
	PS1. Percentage of health facilities that have functional DTC	Numerator Count		
		Denominator Count		
	PS2. Percentage of health facilities that have specific health facility medicine list	Numerator Count		
		Denominator Count		
	PS3. Percentage of health facilities that have recent edition of STG	Numerator Count		
		Denominator Count		
	PS4. Percentage of medicines prescribed from the facility's medicines list	Numerator Count		
		Denominator Count		
	PS5. Average Number of medicines per encounter	Number		
	PS6. Percentage of encounters with an antibiotic prescribed	Numerator Count		
		Denominator Count		
	PS7. Average dispensing counselling time	Second		
	PS8. Percentage of medicines adequately labeled	Numerator Count		
		Denominator Count		
	PS9. Patients knowledge on correct dosage	Numerator Count		
		Denominator Count		
	PS10. Percentage of clients with 100% prescribed drugs filled			Collected through DHIS 2
	PS11.Percentage of hospitals with functional clinical pharmacy service	Numerator Count		For hospitals only
		Denominator Count		
	PS12.Percentage of hospitals with functional unit dose system	Numerator Count		For hospitals only
		Denominator Count		
	PS13.Percentage of health facilities with functional Drug information service	Numerator Count		
		Denominator Count		
	PS14. Percentage of hospitals with functional compounding services	Numerator Count		For hospitals only
		Denominator Count		
	PS15. Percentage of health facilities with functional APTS	Numerator Count		
		Denominator Count		

		Denominator Count		
	PS16.The percentage of clients satisfied with dispensing services	Numerator Count		
		Denominator Count		
	SC1. Forecast accuracy	Numerator Count		
		Denominator Count		
	SC2. SC2. Supplier fill rate			Collected through DHIS 2
	SC3. Average lead time	Numerator Count		
		Denominator Count		
	SC4. Stock out duration	Numerator Count		
		Denominator Count		
	SC5. Wastage rate			Collected through DHIS 2
	SC6. Percentage of facilities that maintain acceptable storage conditions	Numerator Count		
		Denominator Count		
	SC7. Inventory accuracy rate	Numerator Count		
		Denominator Count		
	SC8. RRF reporting rate	Numerator Count		
		Denominator Count		
	SC9. Essential drugs availability			Collected through DHIS 2
	SC10. Disposal of unfit-for-use medicines	Numerator Count		
		Denominator Count		
	MD1. Availability of functional medical equipment	Numerator Count		
		Denominator Count		
	MD2. Percentage of health facilities with updated medical equipment inventory	numerator Count		
		Denominator Count		
	MD3. Percentage of health facilities with functional medical equipment management committee (MEMC)	Numerator Count		
		Denominator Count		
	MD4. Percentage of health facilities with scheduled preventive maintenance practice	Numerator Count		
		Denominator Count		
	MD5. Percentage of medical equipment installation	Numerator Count		
		Denominator Count		

		Denominator Count		
	MD7. Availability of medical equipment as per the national standard	Numerator Count		
		Denominator Count		
	SC-PS2. Supportive supervision of health facility pharmacies	Numerator Count		
		Denominator Count		
	SC-PS3. Percentage of pharmacy workforce positions filled at health facilities	Numerator Count		
		Denominator Count		
Report Completed by name----------Signature ----------Date----------				
Report Approved by name----------Signature ----------Date----------				

Annex 5.5: Region

Name of Region:-	**No of Hospitals:-**		**No of Health Centers:-**	
Reporting Period:- From:_____ To:_____				
S.No	**Activities**	**Unit**	**Result**	**Remark**
	PS1. Drug and Therapeutics Committee (DTC) Functionality	Percent		
	PS2. Availability of Health Facility Specific Medicine List	Percent		
	PS3. Percentage of health facilities that have recent edition of STG	Percent		
	PS4. Percentage of medicines prescribed from the facility's medicines list	Percent		
	PS5. Average Number of medicines per encounter	Number		
	PS6. Percentage of encounters with an antibiotic prescribed	Percent		
	PS7. Average dispensing counselling time	Second		
	PS8. Percentage of medicines adequately labeled	Percent		
	PS9. Patients knowledge on correct dosage	Percent		
	PS10. Percentage of clients with 100% prescribed drugs filled			Collected through DHIS 2
	PS11.Percentage of hospitals with functional clinical pharmacy service	Percent		For hospitals only
	PS12.Percentage of hospitals with functional unit dose system	Percent		For hospitals only
	PS13.Percentage of health facilities with functional Drug information service	Percent		
	PS14. Percentage of hospitals with functional compounding services	Percent		For hospitals only
	PS15. Percentage of health facilities with functional APTS	Percent		
	PS16.The percentage of clients satisfied with dispensing services	Percent		

	SC1. Forecast accuracy	Percent		
	SC2. SC2. Supplier fill rate			Collected through DHIS 2
	SC3. Average lead time	Number		
	SC4. Stock out duration	Number		
	SC5. Wastage rate			Collected through DHIS 2
	SC6. Percentage of facilities that maintain acceptable storage conditions	Percent		
	SC7. Inventory accuracy rate	Percent		
	SC8. RRF reporting rate	Percent		
	SC9. Essential drugs availability			Collected through DHIS 2
	SC10. Disposal of unfit-for-use medicines	Percent		
	MD1. Availability of functional medical equipment	Percent		
	MD2. Percentage of health facilities with updated medical equipment inventory	Percent		
	MD3. Percentage of health facilities with functional medical equipment management committee (MEMC)	Percent		
	MD4. Percentage of health facilities with scheduled preventive maintenance practice	Percent		
	MD5. Percentage of medical equipment installation	Percent		
	MD6. Biomedical professional positions filled at health facilities	Percent		
	MD7. Availability of medical equipment as per the national standard	Percent		
	SC-PS1. Pharmacy review meetings conducted	Yes/No		
	SC-PS2. Supportive supervision of health facility pharmacies	Percent		
	SC-PS3. Percentage of pharmacy workforce positions filled at health facilities	Percent		

Report Completed by name----------Signature ----------Date----------

Report Approved by name----------Signature ----------Date----------

Annex 6: List of workshop participants

S.No.	Full Name	Organization
1.	Andualem Ababu	FMOH/PMED
2.	Anteneh Tsige	GHSC-PSM
3.	Asnake Mebrat	Gambella RHB
4.	Azeb Fisseha	JSI/AIDSFree
5.	Beshir Abdi	Somalia RHB
6.	Bethlem Hailu	FMOH/PMED
7.	Buzuayehu W/Hitsan	Black Lion Specialized Hospital
8.	Dagim Damtew	FMOH/DPCD
9.	Deresse Abera	Oromia RHB
10	Edmealem Ejigu	GHSC-PSM
11.	Elias Germew	GHSC-PSM
12.	Fasika Berhanu	Dire Dawa Administration HB
13.	Fikreslassie Alemu	GHSC-PSM
14.	G/Egziabeher W/Giorgis	Tigray RHB
15	Hassen Seid	EPSA-main office
16	Kaleb Terefe	SNNPR HB
17	Lemlem Degifu	FMOH/PMED
18	Lucha Geneti	Oromia RHB
19	Marye Yehuala	Amhara RHB
20	Melkamu Kumsa	Melka Oda General Hospital
21	Meseret Zerihun	JSI/AIDSFree
22	Mesret Adugna	FMOH/PMED
23	Miraf Tesfaye	FMOH/MCH
24	Mohammed-Aman Jemal	FMOH/PMED
25	Mustafa Mohammed	Benishangul-Gumz RHB
26	Seid Ali	CHAI
27	Seid Mohammed	Afar RHB
28	Seife Demisse	Addis Ababa City Administration HB
29	Selam Kifle	FMOH/PRD
30	Selamawit Meressa	JSI/AIDSFree
31	Shegaw Mulu	FMOH/PPD
32.	Solomon Abdella	FMOH/PMED
33	Solomon Nigussie	Adama EPSA Branch
34	Sufyan Abdulber	FMOH/PMED
35	Tadele Gedif	Dangila Hospital
36	Wondowesen Shewarege	FMOH/PMED
37	Yidenkachew Degifa	FMOH/PMED

Monitoring and Evaluation Framework for Pharmaceutical Supply Chain, Pharmacy Service and Medical Equipment Management

Program: Pharmacy Services, Supply Chain Management and Medical Equipments					
	Program Objectives • Improve effectiveness and efficiency of pharmaceutical supply chain management system • Improve availability and quality of pharmacy services • Improve medical equipment availability, utilization and management				
Indicator Domains	Inputs →	Process →	Outputs →	Outcome →	Impact
	Pharmacy Workforce Leadership and management Coordination Strategies, guidelines Finance Information Logistics Technology	- Quantification, Procurement and distribution of drugs - Establishing DTC - Developing facility specific drug list - Perform activities to implement APTS - Implement clinical Pharmacy - Perform phar. compounding - Capacity Building activities - Conduct HTA - Establish Medical Equipment management committee (MEMC) - Perform scheduled preventive maintenance - Implement IPLS - Develop electronic systems for reporting and use of data - Conduct supervision, mentorship	- Improved Essential Drug availability - Reduced stock out of drugs - Availability of national and facility specific drug list - Reduced drug wastage - Improved storage of medicines - Improved disposal of unfit for use drugs - Availability of Quality pharmaceutical products and effective services - Availability of DTC, MEMC - APTS implemented - Capacitated workforce on pharmacy services & supply management - Improved availability of MDs - Improved procurement, distribution, installation, maintenance & disposal of MDs	- Improve patient satisfaction in pharmacy services - Improved Rational use of drugs - Improved knowledge on rationale use of drugs - Reduced Drug therapy problems - Improved equitable access to quality health services - Effective and safe utilization of medical equipments - Improved diagnostics capacity of HFs	- Improved Health Status - Reduced drug resistance - Improved efficiency and effectiveness in pharmacy services and management
Data Collection and Reporting	Routine Pharmacy reporting formats. Admin Reports, regular facility surveys HMIS, EHCRIG and EHTG Reports, Supportive supervision reports Submission and aggregation of reports with the existing hierarchy of health administration			Facility Surveys, Population surveys	
Analysis and interpretation	Data Quality assurance at all levels; Assessment of progress of performance versus plan, use performance indicators to discuss during regular performance monitoring meetings				
Dissemination and use	Dissemination of data through different platforms such as regular reporting, quarterly and annual review meetings, publication of bulletins				