## Logistics Management Division

# Three Year's Report

(FY 2071/72 – 2073/74)

Government of Nepal

**Ministry of Health**

**Department of Health Services**

## Logistics Management Division

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This document summarizes the program, progress and achievements of
Logistics Management Division under
Department of Health Services for the periods 2071/72, 2072/73 and 2073/74

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# Preface

It gives me an immense pleasure to know that the Logistics Management Division has published a compressive Three Year Logistics Report for 2071/72 – 2073/74. Regular progress reviewing is important not only for being satisfied in achieving the set targets to accomplish overall goal but also identifying the gaps and actions to be taken for future improvement.

Government of Nepal, Ministry of Health and Population would like to ensure that all the Nepalese people especially of women, children, adolescents, senior citizens, vulnerable groups, under privileged, indigenous and marginalized population residing both in rural and urban areas of the country will have greater access to quality health care through ever improving and expanding services. The Ministry is committed to materialize "Health for All" by formulating pro-people plan and policies and strengthening implementation, monitoring and evaluation through collaboration of public and private sectors and external development partners.

I am sure that Three Year Logistics Report of the Logistics Management Division will be helpful for planners, researchers, managers, decision-makers and health service providers in analyzing the health situation and gauge the development made in health logistics.

To conclude, I would like to extend my sincere thanks to Dr. Ramesh Kumar Kharel, Director of Logistics Management Division and his team for bringing this report.

Dr. Guna Raj Lohani
Director General

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# Foreword

It is matter of great pleasure for me to have Three Year Logistics report for the FY 2071/72 – 2073/74 of the Logistics Management Division. This kind of report not only presents the past performance but also support for robust and evidence based planning exercise. I believe that the information provided in this report will be of immense help to planners, researchers, managers, service providers and relevant students.

This report is being very comprehensive covering all the major activities of Logistics Management Division/Department of the Health Services.

An efficient management of logistics is crucial for effective and efficient delivery of health services as well as ensuring rights of citizens of having quality of health care services. Logistics Management Division (LMD) has been established under the Department of Health Services in 2050/51 (1993), with a network of central and five regional medical stores as well as district level stores.

The main objective of Logistics Management Division is to plan and carry out the logistics activities for the uninterrupted supply of essential medicines, vaccines, contraceptives, equipments, HMIS/LMIS recording & reporting tools and allied commodities (including repair and maintenance of medical equipments) for the efficient delivery of healthcare services from government health institutions in the country.

The facts presented in the report are based on the information managed by Logistics Management Information System (LMIS) along with other stakeholders involved in health logistics. The report provides comprehensive information about logistics activities including program, policies, strategies, and achievements in last three FY.

Finally, I would like to extend my appreciation and thanks to Baburam Lamichhane, Under Secretary and Gyan Bahadur BC, Planning and LMIS Section Chief for their meticulous and hard work in bringing out this Report.

Dr. Ramesh Kumar Kharel
Director

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# Acknowledgements

Along with Logistics Management Division, I express pleasure to offer this Three Year Logistics Report of Logistics Management Division for 2071/72–2073/74. The report contains relevant information about health logistics activities of LMD including brief background, policies, strategies, coverage, achievements and pertaining issues.

The information provided in this report will be of immense help to planners, managers, service providers, decision - makers, researchers and as well as the teachers, students of relevant faculties. It seems remarkable that the service coverage in many thematic areas is improving despite effects of political and social transition.

I express my sincere heartfelt gratitude to respected Director General of Department of Health Services Dr. Guna Raj Lohani for providing preface to the report. Sincere thanks to Dr. Ramesh Kumar Kharel, Director of Logistics Management for his guidance in preparing this report.

My colleagues in the Logistics Management Division are highly appreciated for their hard work and untiring job to bring out this Report in time. I feel indebted to all those who worked without which this report publication was not possible.

I take this opportunity to offer my sincere appreciation to Bikalpa Upadhyay and Prem Adhikari of Seet Enterprises Pvt.Ltd and also thank goes to Chandramani Dhungana and Rajeev Yadav of UNFPA Nepal and ADRA Nepal for taking assignment and shaping the report to this form.

To conclude, I hope that this report will be of great help in strengthening the health services in Nepal. I also hope that this report will provide valid information to all those who work for health logistics in Nepal.

Gyan Bahadur BC
Planning and LMIS Chief

# Acronyms

| | |
|---|---|
| LMD | Logistics Management Division |
| LSIP | Logistics System Improvement Plan |
| LMIS | Logistics Management Information System |
| HMIS | Health Management Information System |
| DoHS | Department of Health Services |
| MYP | Multi Year Procurement |
| CBS | Central Bidding System |
| LWG | Logistics Working Group |
| OIMS | Online Inventory Management System |
| SOP | Standard Operating Procedure |
| EVM | Effective Vaccine Management |
| INGO | International Non-Governmental Organization |
| NGO | Non-Governmental Organization |
| UNICEF | United Nations' International Children's Emergency Fund |
| DHO | District Health Office |
| DPHO | District Public Health Office |
| RDQA | Routine Data Quality Assessment |
| RMS | Regional Medical Stores |
| CAAP | Consolidated Annual Procurement Plan |
| RH | Reproductive Health |
| ICB | International Competitive Bidding |
| NCB | National Competitive Bidding |
| LICB | Limited International Competitive Bidding |
| GoN | Government of Nepal |
| NHTC | National Health Training Center |

| | |
|---|---|
| PHCRD | Primary Health Care Revitalization Division |
| UK | United Kingdom |
| NHSSP | Nepal Health Sector Support Program |
| PPMO | Public Procurement Monitoring Office |
| FY | Fiscal Year |
| SCM | Supply Chain Management |
| VDC | Village Development Committee |
| VHW | Village Health Workers |
| AHW | Auxiliary Health Workers |
| FCHV | Female Community Health Volunteer |
| FP | Family Planning |
| MNCH | Maternal, Neonatal and Child Health |
| EDP | External Donor Partner |
| EPI | Extended Program on Immunization |
| NFHP | Nepal Family Health Program |
| USAID | United States Agency for International Development |
| IUCD | Intra Uterine Contraceptive Device |
| UNFPA | United Nations Fund for Population Activities |
| UNICEF | United Nations' International Children's Emergency Fund |
| ROC | Rights of the Child |
| GAVI | Global Alliance for Vaccine Immunization |
| DFID | Development Fund for International Development |
| GHSC-PSM | Global Health Supply Chain Program-Procurement and Supply Management |

# Table of Contents

# Summary Report

No commodities No Program is starting slogan with avaibility of medicines, health commodities round the year is the major part to achieve logistics goals and objectives in Health Delivery System. To meet this motto there was establishment of Logistics Management Division in FY 2051/52 (1994/95) under the Department of Health Services. LMD's role is important among the divisions. Major role is forecast, quantify, procure, store, distribute/transport of program commodities, eg essential medicines, vaccines, FP/RH Commodities, biomedical equipments and including procurement and distribution of transportation vehicles, ambulances, refrigerator van and proper disposal and auctioning of de-junking of commodities, equipments, furniture etc as well as maintenance of biomedical equipments and transport vehicles. Construction of Centre, Regional and District warehousing. Supply chain management is based on information called LMIS. LMIS is vital function and quarterly reporting system which is compiled and analyses by LMIS Centre in LMD after outcome of commodities consumption data.

This summary report shows that glimpse of 3 years (2071/72 to 2073/74) program activities regarding procurement and supply chain management progress trends achievements and issues and challenges.

# 1. Background

Efficient procurement, appropriate storage and timely distribution of essential commodities are critical functions for health and family planning programs. Summarized as "logistics management", these functions must be operational and well integrated to ensure that equipment and supplies are available for use at health facilities, ready as needed for delivery of services. Logistics management depends, above all, on the ability to track commodities as they pass through storage and distribution systems to reach service delivery points.

Despite its relatively small area, Nepal has always presented extreme logistics challenges. Prior to 1993, Nepal has vertical programs; however they were being integrated as prescribed by the new National Health Policy (1991). However, in 1993, the Ministry of Health began to take decisive steps to strengthen and rationalize logistics management. The Logistics Management Division (LMD) was established to take responsibility for selection, procurement, distribution and monitoring of commodities used by health facilities throughout Nepal. LMD, with technical assistance from JSI and other partners, prepared a Logistics System Improvement Plan (LSIP) in order to "institutionalize a sustainable, effective and efficient health logistics system. In order to systematize the management of logistics, the Logistics Management Information System (LMIS) unit was established in LMD in 1994. LMIS Unit collects and analyses quarterly (three monthly) LMIS reports from all of the health facilities across the country; prepares report and disseminates it to:

- Forecast annual requirements of commodities for public health program including family planning, maternal, neonatal and child health, HIV and AIDS commodities, vaccines, and Essential Drugs;
- Help to ensure demand and supply of drugs, vaccines, contraceptives, essential medical supplies at all levels;
- Quarterly monitor the national pipeline and stock level of key health commodities.

## Goal

Quality health commodities available at health facilities and community level round the year.

## Overall Objective

To plan and carry out the logistics activities for the uninterrupted supply of essential medicines, vaccines, contraceptives, equipment, HMIS/LMIS forms and allied commodities (including repair and maintenance of bio-medical equipment) for the efficient delivery of healthcare services from the health institutions of government of Nepal in the country.

Procurement and supply chain system ensures that essential products, necessary for program success and must be consistently available to customer. Public health program is linked directly to an effective and efficient supply chain Management. Modern supply chain management focuses more on people than goods. It is the people who make supply chain work and the customers who are served by the supply chain. Therefore, the goal of the Health Logistics System is to make available quality health commodities at health facilities and community level round the year.

## Strategic Procurement

Strategic procurement is a systematic and fact-based approach for optimizing LMD's improving the overall value proposition. Within LMD there is procurement section; procurement professionals have a clear understanding strategic goals and objectives of LMD. Within other Division and Centers under Department of Health Services (DoHS), LMD is in constant communication and coordination starting from consensus forecasting, quantification, and preparation of annual procurement plan. Every quarter, the status of procurement, supply schedule are reviwed in a pipeline meetings. LMD often time holds meeting with vendors to improve procurement. Thus, the strategic procurement of LMD directed toward:

- Value for money
- Better service delivery
- Improve the quality of goods and services
- Increased profits
- Good governance
- Economic development

## Objectives

- To promote economy and efficiency in Logistic Management
- To ensure system is a fair, transparent and non-discriminatory manner to obtain Value for money
- To ensure timely procurement and supply of essential medicines, vaccines, contraceptives, equipment, HMIS/LMIS forms and allied commodities uninterrupted (including repair and maintenance of bio-medical equipment) in equitable manner.

## Strategies

- Logistics planning for procurement, storage and distribution of essential health care commodities.
- Introduce effective and efficient procurement mechanisms like Multi-Year Procurement (MYP), Central Bidding System (CBS) and E-Bidding.
- Use of LMIS information in the decision making at all levels.
- Strengthen physical facilities at the central, regional, sub-regional and district level for the storage and distribution of health commodities.
- Promote web-based LMIS and Equipment/Expendable Items Inventory System in districts and regions.
- Repair and maintenance of bio-medical equipment, instruments, cold-store and transportation vehicles.
- Capacity building and enhancement of human resources on logistics management at all levels.
- Implement effective Pull System for year round availability of Essential Drugs and other health commodities at all levels (Central, Regional, District and Health Facilities).

# 2. Organizational Structure

Government has a policy of providing essential drugs, commodities, and equipment uninterruptedly. This policy is intended for conduction of preventive and curative activities. Along with this, product selection, procurement, distribution, storing, vaccine services are key policies in logistics management addressed in the ninth five-year plan (1997-2002). For this government has established a number of health institutions and facilities in the country. Such institutions are established in the center, regions, districts, and communities for better and timely delivery of health and referral services to the people.

All these public health institutions and facilities require an uninterrupted supply of essential drugs, medicines, vaccines, contraceptives, and non-medicinal commodities like HMIS/LMIS forms. To facilitate health logistics activities in the country Logistics Management Division (LMD), its network centers in center, regions, and districts has been established under Department of Health Services (DoHS) in 1993. LMD was established under DoHS, Ministry of Health (MoH) in order to integrate all MoH activities under one single entity. LMD's function is to ensure a regular supply of medicines, equipment, and vaccines for the effective operation of health services in consultation with all health agencies and institutions.

LMD with other partner governmental and non-governmental organizations is continuously working to facilitate and better management of health logistics activities in the country. All logistics function previously carried out by projects and organizations have to be performed under the supervision and monitoring of LMD.

Logistics management involves technical, managerial, and administrative expertise and good information system at all level. Medical and allied equipment is the integral part of health care services. Similarly, transportation, distribution are integral part of logistics management.

## 2.1 LMD Organogram

A key prerequisite for achieving significant improvements in health sector procurement is to have sustained high level integrity leadership to create the accountability that will motivate various agencies to achieve the results for which they are responsible. The Ministry of Health and Population (MoHP), working closely with the Ministry of Finance, is well placed to create that inter/intra-ministerial accountability to coordinate the health sector procurement plan and programmes. An effective agency for the implementation of such plan and programmes are direly needed i.e. restructuring of the LMD to make it more responsive and accountable in health sector procurement and logistics management. The following are rationales:

1. Organizational constraints
2. Procurement planning, monitoring and reporting
3. Information for strategic procurement
4. Distribution of drugs and commodities

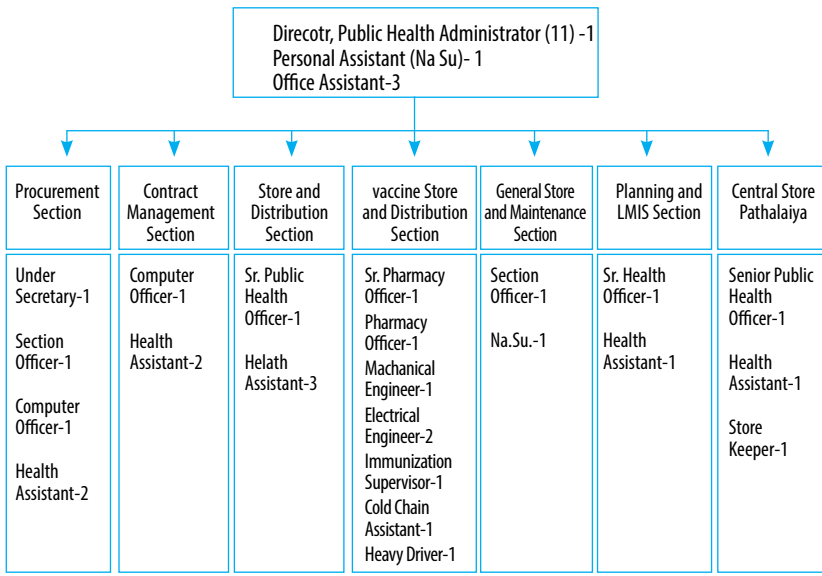
The goal of the LMD restructuring is 'to improve efficiency and effectiveness in the health sector procurement, distribution and management of drugs, equipment and services to ensure value for money'. The outcomes of the LMD restructuring are to:

1. Strengthen health sector procurement institutionally.
2. Improve supply-chain management to put in place an effective partnership mechanism.
3. Institutionalize the internal control system to reduce fiduciary risks in procurement

Accordingly, the new revised organogram for LMD the following organizational structure is developed in 2016/17 to strengthen procurement and supply chain management.

## 2.3 Revised LMD Organogram (2016/17)

In 2016/17, the organogram of LMD is again revised. The sanctioned position of the revised organogram is given below.



## 2.4 Programme Components of Logistics Management Division

The program components of LMDare basically consolidation of procurement plan of all divisions and centers under Department of Health Services, procurement of health/vaccines and allied commodities vaccines including equipment and supply chain management of health commodities across all distribution tiers. The program components and key functions of LMD are summarized in ***table 1.***

***Table 1: Program Component and Key Functions of LMD***

| S.N. | Programme Components | Scope/Key functions |
|---|---|---|
| 1 | Consolidation of procurement plan | • Integration of Annual forecasting and quantification<br>• Coordination with other Divisions on items and quantity for procurement<br>• Development of consolidated procurement plan<br>• Approval of the procurement plan |
| 2 | Procurement of health related goods and technologies | • Use and endorsement of specifications<br>• Notice Publication<br>• Bid Preparation<br>• Tendering<br>• Bid evaluation<br>• Contracting<br>• Pre and post shipment inspection |
| 3 | Supply chain management | • Pipeline monitoring<br>• Transportation and distribution<br>• Warehouse management<br>• Inventory management<br>• Capacity building<br>• Monitoring and evaluation<br>• Reverse logistics |

## 2.5 Activities of LMD

- Plan for the efficient management on forecasting/quantification, procurement, storage, distribution and transportation of health commodities to all health facilities for the delivery of healthcare services based on LMIS.
- Develop tender documents as per public procurement rules and regulations and procure essential medicines, vaccines, contraceptives, equipment, different forms including HMIS/LMIS and allied commodities.
- Store, re-pack and distribute medicines, vaccines, contraceptives equipment and allied commodities.
- Formation of 9 members Logistics Working Group (LWG) at Central level to solve logistics issues
- Manage to print and distribute HMIS/LMIS forms, stock books and different forms required for all health institutions.
- Support on implementation and functioning of Web Based LMIS. Web based LMIS will be modified and robust into Online Inventory Management System at Centre, Region and Districts level.
- Conduct capacity building in Online Inventory Management System (OIMS) to all New/Old Store Keepers, Computer Assistants for full functioning of OIMS throughout country with live operation.
- Conduct capacity building on Public Procurement Act and Regulations with coordination of Public Procurement Monitoring Office to Regional and Districts Managers and Store Keepers in remaining of 2 Regions.
- Capacity building of health workers in central, regional, district and below district level and office assistants of regional, district and below district level on Standard Operating Procedures (SOP) in Effective Vaccine Management (EVM).
- Disposal, De-junking and auctioning of unsusable equipments, materials and other health commodities.
- Coordination with partner INGOs and NGOs like UNICEF, Lifeline Nepal for strengthening cold chain capacity through support in disaster resilient cold chain equipment as well as repair and maintenance of refrigerators and freezers.
- Manage to maintain the bio-medical equipment, machineries and transport vehicles.

- Implement and monitor Pull System for contraceptives, vaccines and essential drugs in the districts.
- Coordinate with all development partners supporting health logistics management.
- Supervise and monitor the logistics activities of all Regional Medical Stores (RMS) and district levels (DPHO/DHO).
- Conduct routine data quality assessment (RDQA) for LMIS data.
- Implement Telemedicine program in the hill and mountain districts.

# 3. Major Logistics Activities to Strengthen Health Care Services

## 3.1 Procurement

Procurement is the acquisition of goods or services at the best possible total cost of ownership, in the right quantity and quality, at the right time, in the right place for the direct benefit or use of the governments, institutions, or individuals generally through contract. But it is not limited to contract only.

### 3.1.1 Procurement Practices

The procurement process has been standardized and fully integrated in the LMD/DoHS procedures. LMD follows the standard procedures established for tenders. The tendering process is transparent and comprehensive, the participation in the tendering by the bidders has improved and the quality of tender submission by the suppliers has reached a high standard.

LMD's procurement activities begin with the development of a consolidated annual procurement plan (CAPP) in coordination with programme divisions and centres under DoHS. When the budgets have been approved for each of the divisions and centres, and the CAPP has been approved by the WB, the procurement process of each individual procurement activity can start based on the information stated in the CAPP.

The Second Nepal Health Sector Program (2010-2015) is a donor pool-funded programme under which the RH programme is implemented. Since the World Bank is the trustee of the pooled fund, the procurement policies and procedures of the Bank are followed for procuring Reproductive Health (RH) medicines. In the last few years, International Competitive Bidding (ICB) procedures have been adopted for all centralized procurements.

LMD continued and added more commodities in the multi-year procurement. Condom, Injectables, ORS, Iron Tablets, Essential Drugs are now being procured through multi-year mechanism. Multi-year mechanism saves every year bidding and evaluation time for tender. LMD also completed the LICB (limited international competitive bidding) process in coordination with World Bank in the procurement of Implants, resulting in procuring Implants directly from the manufacturer in much lower cost.

The DoHS' Divisions and Centres are responsible for: identifying their needs, ensuring that the

funds are set aside in the budget for this (based on a realistic price estimates) and for providing LMD with generic technical specifications. To facilitate the last, LMD has developed a technical specification bank, which only requires the Divisions and Centres to mention the identification number of which technical specifications, they can refer to.

Under the Government of Nepal (GoN) public procurement regulations, districts are involved in local procurement of health commodities (Essential Drugs) necessary for the district. LMD provided District Level Public Procurement Training to district level to impart knowledge and skill to the participants in order to make procurement process timely, simple, easy, uniform and more transparent over time. National Health Training Center (NHTC) and LMD decided to monitor district procurement based on following five indicators:

- Setting up of procurement committee (evaluation committee) in the district
- District Procurement Plan
- Forecasting and quantification (also have district followed quantification provided by the center)
- Cost estimation of the health commodities
- Timely procurement

A district-wise breakdown list of essential drugs and quantities to be procured at the district level, based on consensus forecast was developed by Primary Health Care Revitalization Division (PHCRD) and LMD. The list and budget was sent to all districts by the PHCRD. Similarly, on the development of e-bidding software, the terms of reference/guidelines was finalized and sent to prospective e-bidders for their review and feedback.

Training on public procurement for the Region and District level personnel was carried outwith the financial support of UK AID/NHSSP and technical support of GoN/Public Procurement Monitoring Office (PPMO). Completion of the training in FY 2071/72 in 3 Region (Eastern, Central and Far Western), rest of 2 Region (Western and Mid-Western) was covered in FY 2072/73.

## 3.2 Supply Chain Management (Drugs, Vaccines, Equipments)

Supply chain management (SCM) is the oversight of materials, information, and finances as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer. Supply chain management involves coordinating and integrating these flows both within and among companies. It is said that the ultimate goal of any effective supply chain management system is to reduce inventory (with the assumption that products are available when needed).

In many countries the public sector distribution system or the supply chain frequently hybridized onto the existing administrative structure. Though it looks convenient administratively, however, distribution system should be based on functional, technical, and financial considerations. Streamlining the supply chain can often yield substantial result and cost savings.

To determine the minimum levels required the supply chain managers must consider the total pipeline lengths; desired frequency and delivery speed; cost of transport, storage, handling; and operational constraints.

### 3.2.1 Existing Supply Chain System in Nepal – Medicines and Other Allied Commodities

Central Medical Warehouses:2

Regional Medical Warehouses:

District Medical Warehouses/Stores:75

Health Facility Level Medical Warehouses/Stores: 6000+

Distribution is a backbone of effective logistics management system for the uninterrupted delivery of quality health services from all the health institutions in the country. Logistics

Management Division (LMD) has been established under Department Services in FY 2050/2051 with 2 central stores, 5 regional stores and 75 district stores. Logistics Management Division plans and implements the logistics activities for the year round availability of essential medicines, vaccines, contraceptives, equipments, HMIS/LMIS forms and other commodities for efficient delivery of health care services from all health institutions in the country.

Geographical difficulties and rugged terrain makes logistics management challenging especially in distribution of health and allied commodities. Despite of many barriers, LMD has been able to establish well functioning distribution system and is gradually adopting the modern systems and technologies.

### 3.2.2 Immunization Supply Chain Strengthening

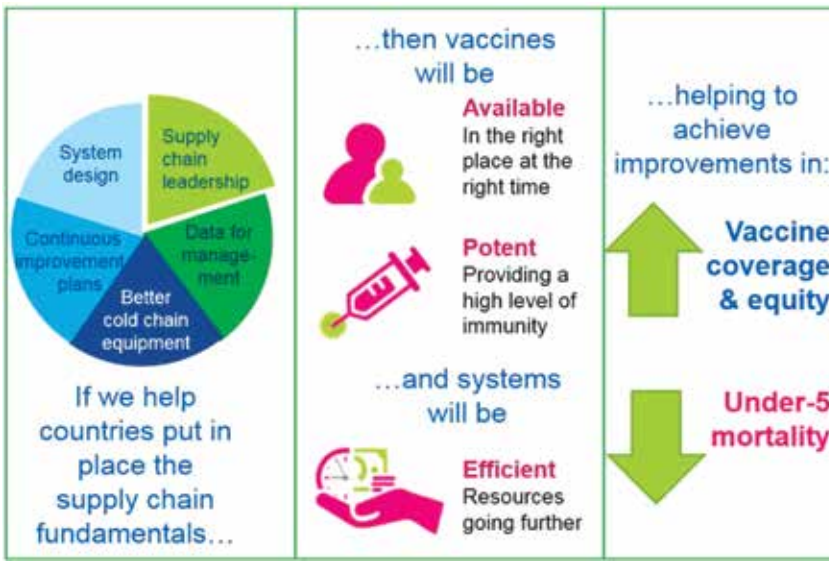



*Figure 1: Immunization Supply Chain Strengthening*

### 3.2.3 Vaccine supply flowchart

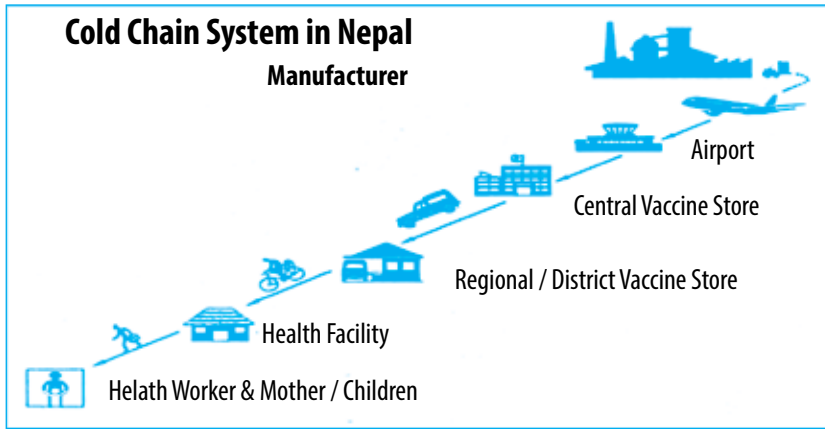



*Figure 2: Vaccine Supply Flow Chart*

**Vaccine transportation, storage and distribution**


*Figure 3: Vaccine Transportation by Refrigerator Van*

*Figure 4: Vaccine Storage and Distribution*

The transportation of vaccines at appropriate temperatures is crucial for maintaining the vaccine potency during the transportation. Usually, vaccines are transported through government vehicles because of its sensitivity. LMD has started to use the refrigerator van for vaccine transportation to ensure the quality of the vaccine.

### 3.2.4 Routine Immunization Service

Immunization services are provided mainly through fixed and outreach clinics. There are about 3-5 outreach clinics per Village Development Committee (VDC) based on the local micro plan. Some areas in mountain districts mobilize mobile teams to reach children in hard-to-reach areas. The vaccinators are mainly Village Health Workers (VHW) and Maternal & Child Health Worker (MCHW). The vaccination program is supported by Female Community Health Volunteers (FCHVs).

## 3.2.5 Consensus Forecasting Workshop

Commodity security is essential for the effective delivery of quality health services. Commodity security exists when people are able to choose, obtain and use products whenever they need them.

Forecasting is estimating the quantity of each product that will be dispensed to customers during a future period of time usually two or more years[1]. Forecasting is a logistics management function that estimates the quantity of each product that will be dispensed to customers (consumed) during a future period, usually two or more years. To operate efficient supply chain that will guarantee the customer a dependable supply of quality contraceptives, drugs, and other essential products, health and family planning organizations need reasonably accurate forecasts of future consumption.

Consensus forecast and quantification, which began with family planning commodity security in 1998 under the leadership of Logistics Management Division/Department of Health Services, today includes quantification of Essential drugs, Family Planning/Maternal, Neonatal and Child Health (FP/MNCH) commodities, vaccines, syringes and HIV and AIDS related commodities.

Consensus forecasting is crucial in identifying long-term needs and funding requirements of health commodities. It is an excellent platform to discuss the funding requirement and shortfall between the MoHP and External Donor Partners (EDPs), and to timely resolve the shortfall. This is also an opportunity of interaction among different stakeholders (Public, EDPs, NGOs, and Social Marketing) to improve the supply chain management and achieve health commodity security in the country. For Program Divisions under Department of Health Services, it serves as a basis to plan the budgets for concerned health commodities in the annual work plan. For Logistics Management Division, this serves a basis for making a procurement plan and delivery schedules of the health commodities. As the decision is based on consensus, the process has improved the procurement system in the public sector and Government's commitment for delivery of health commodities to the people to strengthen the essential health care services. The entire process can be an example to other line ministries in Nepal.

Different types of data and information are required during each step of quantification. Data from the health management information system (HMIS) and logistics management information system (LMIS) were provided to the participants. In addition, demographic

1 *Program That Delivers*

health surveys, census data and policy documents were also referred frequently. Basically, the forecast and quantification were based on the following criteria and assumptions:

- **Consumption data**: This data provides the actual amount of commodities consumed within a specified period of time especially in mature stable programs that have had an uninterrupted supply of commodities. Referring to the past three year's trend, the LMIS data provided a strong basis for forecast of contraceptives, MNCH commodities, essential drugs and vaccines.
- **Demographic data**: This was one of the criteria where portion of total population affected by specific disease or specific needs were estimated. The participants were also required to estimate the change in population growth over time in order to forecast health commodities.
- **Morbidity data**: Demographic data together with morbidity data gives the best estimate for commodity forecast. The team that forecasted the Child Health related commodities took into consideration both the incidence and prevalence rates, while the team that forecasted the HIV and AIDS commodities focused on incidence rates.
- **Program considerations**: Programs like Family Planning, which has special program considerations for e.g. unmet need, CPR, infertility, spousal separation and method mix took these factors into account before forecasting the commodity quantity. Scale up programs quantified their need according to program coverage.

  Every year, the working group forecasts for coming three year period with periodic review. The group consists of representation from various divisions under DoHS/MOH, districts, social marketing organizations and EDPs. The main purpose of the workshop is outlined below:

- To estimate the commodity needs and assess stock status of in-country supply pipeline so as to identify and correct supply imbalance.
- To provide data on specific commodity requirements and plan for government budget allocations.
- To support the estimation of commodity procurement cost.
- To inform donors about funding requirements and advocate for commodity procurement.
- To ensure government's commitment for Citizens Right in providing health care service.

### 3.2.6 Consensus Forecasting 2014/15

The workshop developed a consensus on forecasting of Essential drugs, RH/FP commodities, MNCH commodities, vaccines, syringes and HIV& AIDS commodities. The forecast was based on scientific data, which included demographic data, consumption pattern, morbidity issues and some special programmatic considerations.

The workshop was highly successful in addressing issues on forecast of health commodities with some important recommendations from the participants. The workshop also incorporated other factors effecting forecasting i.e. non-prescribed drugs, replacing drugs, fast moving drugs and duplication. The success of consensus forecast is a milestone in logistics management, but there is always room for continuous improvement.

### 3.2.7 Consensus Forecasting 2015/16

LMD organized a Quantification workshop in March 26, 2015 in which a total 403 items quantified and out of which, 188 items quantified to procure for upcoming fiscal year 2072/073 (2015/2016) by public sector that was decided.

Similarly, National Level Consolidated Annual Procurement Plan (CAPP) organized by DoHS in collaboration with all concerned division and centre in August 13-14, 2015 with technical assistance and financial support from USAID/Nepal Health For Life Logistics/Lifeline Nepal. LMD's Procurement Unit took a lead role prepared CAPP in which all requirements are grouped into Goods, Consulting Services, Drug Package-1 and Drug Package-2.

### 3.2.8 Consensus Forecasting 2016/17

LMD organized a Quantification and Forecasting workshop on March 16, 2016. It estimated the quantities and costs of the products required for fiscal year 2073/074 (2016/2017) by public sector, and determining when the product should be delivered to ensure an uninterrupted supply at service delivery points.

National Level Consolidated Annual Procurement Plan (CAPP) organized by DOHS in collaboration with all concerned division and centre in June 23-24, 2016 and LMD's Procurement Unit took a lead role to prepare CAPP.

### 3.2.9 Quarterly National Pipeline Review Meetings

To be successful, public health programs must always have enough medicines and supplies to meet the needs of their clients. At the same time, programs must avoid surpluses that waste products and money. Pipeline is a best-in-class desktop software tool–it helps program managers' plan optimal procurement and delivery schedules for health commodities, and it monitors their orders throughout the supply chain. Policymakers, product suppliers, and donors can generate reports, estimate future product needs, and use the software as a key tool in program planning. This effective tool has been used in more than 40 countries around the world, with products in reproductive health, essential medicines, anti-retroviral testing and treatment, malaria testing and treatment, lab supplies, and tuberculosis treatment.

**For each medicine or health product in a program, Pipeline helps track**

- The rate at which commodities are used
- What has been ordered but not yet received
- Total quantity available at all storage facilities and health care facilities
- Total amount of losses (due to expiry and damage) or transfers
- Time required for the product to arrive after it is ordered.

**With these data, Pipeline can be used to**

- Identify when to order new products and what actions are needed to do so
- Identify shortfalls, surpluses, stockouts, and other pipeline problems
- Forecast future needs.

Logistics Management Division (LMD) started pipeline monitoring of FP commodities since 1997/98. It now covers FP, MNCH, EPI Vaccines, Syringes, selected Essential Drugs and HIV/AIDS commodities as well. National pipeline reports are now used to monitor the availability of the stock at service delivery points (SDPs) and to monitor the procurement status of key health commodities.

In each quarter, a national pipeline meeting takes place at the LMD to review, monitor, and evaluate the procurement, shipment, distribution, transportation and stock status of family planning and other health commodities. LMD conducts Quarterly Pipeline Review meetings. The meeting is participated by Program Divisions of DoHS, External Donor Partners and stakeholders like Social Marketing agency. In the meetings shipment schedules, shipment status (planned, ordered and received), actual consumption and months-of-stock-on-hand of health commodities were discussed.

### 3.2.10 Strengthen Storage Capacity

Ideal storage conditions for essential drugs and commodities are required to deliver quality health services to service delivery sites in order to ensure optimal health service utilization by consumers. In the course of implementing the Logistics System Improvement Plan (LSIP) of Ministry of Health and Population (MOH) jointly developed by MOH, a massive clean-up and de-junking activities were carried out across the country during the period of 1994-97. This effort resulted in freeing storage space and generating revenue for the government (from de-junking and auctioning), which revealed that numerous districts seriously lacked ideal storage space for handling health and other allied commodities including vaccines.

The MOH and LMD commissioned an assessment in 1999 to identify the current storage conditions and space needed at district level. The assessment was carried out with support from JSI Research & Training Institute and USAID. The study revealed that 58 of 75 districts had immediate storage needs (none of the districts had ideal cold storage facilities) and all 75 would require new stores. Space was inadequate and security was poor. 49 out of 75 districts had storerooms scattered in two or more rooms with none specifically designed for storage and many were in rented buildings. Most of the storerooms were filled with unusable commodities and junk. Every year huge quantities of drugs and other health commodities went missing, damaged or had to be destroyed.

Government offices are facing space constraints for storing essential commodities due to the space occupied by unusable commodities often causing difficulties in stock management. So, it is eminent to do auctioning and write-off such commodities in a periodic manner so as to free the space and stock management of other usable commodities. Logistics Management Division has taken lead role in revising the Procedure Guideline for Auctioning, Disposal and Write-off 2010. The guideline is based on Financial Procedure Act 2055, Financial Procedure Regulations 2063, Public Procurement Act 2063 and Public Procurement Regulations in 2064. This guideline also takes an account of the auctioning, disposal and write-off guideline prepared in 2052 by Department of Health Services.

This guideline is materialized with joint effort of Comptroller General's Office, MoHP, the Auditor General's Office, MoHP, the LMD and NFHP. It has been approved by the Ministry of Finance and Financial Comptroller General's Office. The guideline is expected to allow the public sector offices to carry out auctioning, disposal and write off with minimal external support. Moreover, because of its generic application, it could be useful to other sectors of the government as well.

### 3.2.11 Steps to Follow for Auctioning and Disposal Process (ACTIVITIES)

- Completion of physical inventory of all the goods in both the hospitals including preparation of Auditor General's Forms (AGF) #57 and 49 to find out the quantity, conditions of non- expendable goods whether usable, unusable or repairable as per the prevailing Financial Administration Rules and Regulations of the Government of Nepal.
- Separation of unusable and un-repairable commodities in all wards and stores of the hospitals.
- Collection of the unusable commodities from all stores to separate rooms for the purpose of auctioning and disposal.
- Preparation of list of the unusable commodities to fill in AGF # 50.
- Facilitation of physical inspection of the unusable non-expendable commodities as prescribed in the prevailing Financial Administration Rules and Regulations in Nepal.
- Coordination to organize Evaluation Committee meetings for fixing minimum prices of the unusable commodities with representations of all the members the evaluation committees as prescribed in the regulations.
- Coordination of the auctioning committees and preparation of all documents and conduction of auctioning with necessary technical support.
- Supervision of the receiving auctioning proceeds and deposition of the so collected amount in the designated revenue accounts of the Government of Nepal (GON).
- Facilitation of handover of the auctioned off commodities and vehicles after formal decisions made in presence of the Evaluation Committee members deputed by GON District Administration Office (DAO), District Treasury Office (DTO) including representatives from Store.
- Completion of updating stock books including preparation of new books after handover of the disposed off of unusable non-expandable commodities and
- Reorganization and physically cleaning of all stores and vacant space.

## Progress

As per Logistics System Improvement Plan (LSIP) in 1994, nationwde massive auctioning/ disposal activities carried out across the nation. This was continued 2003. Since 2003, sporadic

clean up and auctioning activites were carried out by LMd with support from different supporting agencies. The summary of clean up activities till 2011 is given in the table 2 below.

**Table 2: Auctioning and Disposal till 2011**

| Year | Institutions | Space Vacated (in sq. ft.) | Revenue Generated (in NRs.) |
|---|---|---|---|
| Till 2003 | 2104 HFs | 123,000 | 17,120,000.00 |
| After 2003 | MoHP | 800 | 47,500.00 |
| | Kanti Children's Hospital | 10,000 | 617,500.00 |
| | Narayani Sub-Regional Hospital, Birgung | 3,150 | 111,118.00 |
| | Narayani Zonal Hospital, Chitwan | 500 | 42,949.00 |
| | LMD/DoHS | 1,200 | 191,459.45 |
| | Bheri Zonal Hospital | 960 | 208,000.00 |
| | Pyuthan District Store | 288 | 160,000.00 |
| | RMS Dhangadi | 800 | 32,000.00 |
| | Saragrmatha Zonal Hospital | 1,050 | 29,000.00 |
| | Mechi Zonal Hospital | 580 | 226,000.00 |
| June 2011 | DoHS/LMD | 450 | 91,985 |
| August 2011 | DoHS/LMD | 7,060 | 1,190,000 |
| November 2011 | DPHO Kanchanpur | 3,100 | 91,300 |
| **Total** | | **152,938** | **20,158,811.45** |

Till 2011, more than 150,000 squarefeet of store space is vacated in health institutions across the nation and that yield more than 20 million to the national treasury.

UNICEF/Lifeline has been supporting in the auctioning process of non-repairable cold chain equipment especially refrigerators and other useless commodities which has been occupying large space in the DHOs and district cold room. Not only has the auctioning process cleared area for proper maintenance of DHOs and cold rooms, but it has also help in generating revenue.

Lifeline Nepal under UNICEF/ Lifeline Nepal PCA program has been providing technical support for auctioning since 2015. Till date the auction activities has been completed in 66 out of 75 districts. The process of auctioning has been initiated in other remaining districts by Auctioning officers. Evaluation meeting for auctioning has been completed in Parsa and Manang District Health Office.

The summary of auctioning and disposal activities is given in the box below:

| Accounting Summery (December 2015-December 2017) | |
|---|---|
| Districts/Institution | 83 |
| Auctioned Refrigerator/Freezer | 502 |
| Total Others Items | 9,480 |
| Total Revenue Collected | Rs. 4,090,604 |

During the period December 2015 to December 2017, auctioning and disposal ctivities were carried out in health institutions (Regional Medical Stores, District Stores and few HFs). A total of 502 cold cahin equipments and 9,480 other unusable commodities were auctioned. This generated Rs. 4 million to the national treasurey.

### 3.2.12 Effective Vaccine Management

Effective Vaccine Management is one of the core working areas of LMD. Effectiveness of vaccine management widely depends on the effective and proper storage of vaccine as well as cold chain and supply chain management. To ensure proper cold chain, LMD has mobilized Mechanical Engineers and Refrigerator Technician for immediate repair of damaged refrigerators and freezer to ensure effective vaccine management. LMD had repaired and maintenance of refrigerators and freezers whenever required.

UNICEF/Nepal and Lifeline Nepal is supporting Child Health Division (CHD) and Logistics Management Division (LMD) in *Effective Vaccine Management Improvement Plan Implementation and Strengthening of Child Health Program***.** The findings of EVM Assessment 2014 had revealed the alarming status of the 9 EVM criteria at primary level, sub national level, district level and service point and demanded immediate attention for its improvement. It is an undoubtable fact that only after the improvement in the nine standards set for effective vaccine management at different level of vaccine store and service delivery point, protection of children against vaccine preventable diseases becomes possible.

## Program Areas

**22 Eathquake affected district:**

Kathmandu, Laliput, Bhaktapur, Kavre, Sindhupalchowk, Dolakha, Okhaldhunga, Ramechhap, Sindhuli, Dhading, Gorkha, Rasuwa, Nuwakot, Makawanpur, Chitwa, Tanahun, Kaski, Lamjung, Parbat, Nawalparasi, Syanja, Palpa

**8 Poor Performing District:**

Banke, Kailali, siraha, Morang, Bardiya, Sarlahi, Dhanusa, Bara

**15 Unicef District:**

Accham, baitadi, bajhang, Bajura, Dhanusa, Dolpa, Doti, Humla, Jumla, Kalikot, Mahattari, Mugu, parsa, Rautahat, Saptari

The summary of major activities under Effective Vaccine Management is given below:

- UNICEF Supported Sure-chill Transportation, Installation and Maintenance
- Auction of non-repairable cold chain equipments
- Repair of Cold Chain Equipments
- Trainings: EVM SOP Training at all level and for office assistants, Online IMS Training
- Coordination through joint field monitoring, meetings and workshops

### 3.2.13 Formation of Logistics Working Group (LWG)

An authentic Group was formation with 9 membership chaired by Director of LMD with representation of Divisions, Centers and External Development Partners at centre level. The LWG addressed major issues regarding procurement and supply chain management of health related commodities.

### 3.2.14 Routine Data Quality Assessment (RDQA)

The Ministry of health, Department of health services, Logistics Management Division is committed to building a comprehensive performance and information management system, that supports achievement of its objective in carrying out logistics activities for the uninterrupted supply of essential medicines, vaccines, contraceptives, equipment, and allied commodities for the efficient delivery of healthcare services by government health institutions.

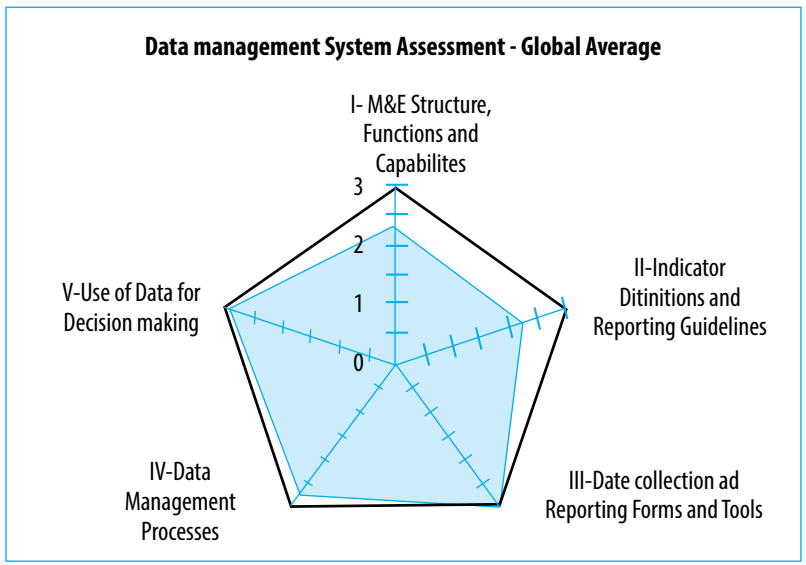
An effective Logistics Management Information System (LMIS) collects essential data about stock

status and consumption and ensures accountability and cost effectiveness for all products in the supply chain. In the course of implementation of Logistics System Improvement activities, a LMIS for Ministry of Health and Population (MOHP) was designed in 1994 and tested in four districts of the Eastern Region. In 1997, the system was expanded nationwide. In Nepal, efforts to improve the public health logistics management information system (LMIS) have given policymakers and supply chain managers' better tools to ensure that health supplies reach the population.

The Logistics Management Information System (LMIS) was thus, created to harmonize the LMD's Key functions of forecasting, procurement, storage, and distribution. The data generated from LMIS is very crucial in ensuring consistency and better decision-making process for allocation of resources to all health facilities and for ensuring every citizen's access to quality health care service.

Many databases are not error-free, and some contain a surprisingly large number of errors. LMIS too is not error free. Realizing the need, LMD in 2016/17 for the first time conducted RDQA of LMIS facilitate with objectives to:

1) verify the quality of the data,
2) assess the system that produces that data, and
3) develop action plans to improve both.



A total 12 stores were selected from districts and health facilities for RDQA with key FP/MNCH commodities condom, DMPA, Pills, ORS, Vitamin A, Co-trimP and Iron. The overall results are produced based on the global summary dashboard, which demonstrates that supply chain management faces challenges in three categories, which resulted some lack in M&E Structure, functions and capabilities, use of data for decision making and data management processes that threaten in accuracy in the forms submitted by the facilities. Stock availabilities at 88% shows inefficient in filling requisition on time and effort should make to increasing complete reporting from 81% to 100%.

The spider chart displays qualitative data generated from the assessment of the data management and reporting system and can be used to prioritize areas for improvement. Over all use of data for decision making and data collection and availability of reporting forms and tools at the central level is completely followed. However, there is a need of improvement in M&E structure, and indicator definitions and reporting guidelines needs to be improved.

Based on the finding of the assessment, the following recommendations are made for the further improvement of the data quality to ensure evidence based logistics decision making so as to make available health commodities at the consumer end.

1. There is a need of regular monitoring and supervision from center, region and districts for the overall system improvement.
2. Center needs to re-establish feedback system on inconsistent reports received from the service delivery sites to correct such inconsistencies in time.
3. About 25% of staffs assessed are untrained in supply chain management, center should organize regular logistics training for newly hired and transferred personnel.

# 4. Capacity Building in Logistics Management - New Interventions

## 4.1 Facility Based LMIS

In an effort to decentralize logistics decision making at the peripheral level health facilities and transfer of technology below district level, LMD with support from H4L Logistics piloted web-based LMIS in peripheral level Health Facilities (HFs) of Jumla, Arghakhanchi and Bardiya. This is an effort to help districts with real time information on stock status of key health commodities and other essential drugs at peripheral level HFs and can make evidence based logistics decision by making commodities available uninterruptedly and ultimately contributing to increase health services utilization by the hard-to reach population.

## 4.2 Real Time IMS

The Web-Based LMIS was introduced in 2008 replaced the quarterly paper based reporting system to monthly, however it did not provide the real time information needed to make an effective supply chain decision making. Realizing the need of real-time information on heath commodities, LMD took an initiative to make real time inventory management system up to the district level with customization of already in use IMS software. The system was adapted from the USAID supported IMS system with support from UNICEF/Lifeline Nepal. This is being online system, gives real-time information of stock status of health commodities of central, regional and district stores. This allows making supply chain decision making. Plan is to implement this new system from next FY.

## 4.3 e-LMIS

Electronic logistics management information system (eLMIS) is the cellular data-based eLMIS enables accurate and near real-time monitoring of commodity demand and flow. Access to these data, combined with GHSC-PSM assistance to improve forecasting and quantification methodologies and practices, positions the LMD for more accurate supply planning and procurement. The eLMIS is being piloting in selected health institutions of Western and Mid Western Region and plan is to implement across the nation in the future.

## 4.4 Pull System Manual Revision

LMD and National Health Training Center (NHTC) revised pull system training manuals with the inclusion of data quality chapter to improve recording and reporting. The manuals were yet to revise since 2009.

## 4.5 Basic Health Logistics Training Manual Revision

The Basic Health Logistics Training Manual was first developed in 2056 (2000-2001 AD) to enhance the capacity of personnel involved in supply chain management of health commodities. Five years late in 2005-06 the manual was revised after the implementation of pull system. Since then the manuals were not revised and many changes in logistics management have had occurred. Realizing this LMD took lead to revise the manual incorporating many new components. Forecasting, data quality and pipeline monitoring were added in 2017. The country is already in federal structure, local bodies need to have capacity of supply chain management of health commodities. The new revised manual is expected to assist them for the capacity enhancement in supply chain management, procurement, recording/reporting and use of data for evidence based decision making. Health Coordinators of local bodies of Kavrepalanchwok district were given ToT on new manual wit support from Lifeline Nepal and Terres De Homes in 2017. During the ToT 15 health coordinators participated and later concucted training in their respective local body.

## 4.6 LMIS Forms and Formates Revision

LMIS revision sub-committee was formed under LWG and organized three meetings to revise the LMIS forms that have not been revised since 20 years. The sub-committee revised the LMIS forms accordingly adding new drugs and removing redundant ones with eight digit unique codes for each items.

**Table 3: Number of Items in Revised LMIS by Level**

| Type of Forms | Original Number of drugs and supplies | Revision and added new drugs | New code Assigned |
|---|---|---|---|
| District Store | 208 | 232 | 95 |
| District Hospital | 208 | 232 | 95 |

| Type of Forms | Original Number of drugs and supplies | Revision and added new drugs | New code Assigned |
|---|---|---|---|
| PHC | 208 | 193 | - |
| HP | 169 | 132 | - |
| NGO | 6 | 5 | - |

## 4.7 Logistics Regional Review Meeting

Logistics Management Division (LMD) carries out Regional Logistics Review Meeting in all regions of the country to address the problems and issues faced by the districts in supply chain management of health commodities to serve the end users. The current logistics challenges and issues are discussed with district health officers in the meetings. Likewise, this is an opportunity to share district's experience last mile in supply chain and issues/challenges in supply chain management and how they dealt. Similarly, in this forum LMD can share the progress status, logistics indicators and coming year's activities as well.

The objectives of the Logistics regional Review Workshop is to:

- Share district's experience in supply chain management of health commodities to the peripheral level HFs
- Experience sharing in issues and challenges in logistics management
- Progress, achievements/accomplishments and upcoming year's program from the center

During the regional logistics workshop districts present on the prescribed format provided by Logistics Management Division (LMD) which covers the following areas:

1. Progress status (Anusuchi 2)
2. Health Facility wise estimated transportation
3. Total commodities distributed in FY
4. Estimated required quantity of commodities
5. LMIS reporting status
6. Situation of bio-medical instruments and equipments
7. Status of repair and maintenance of biomedical equipments

8. Estimated transportation cost from district to peripheral level HFs
9. Transportation facility and their conditions
10. Issues and challenges

The workshop has recommended the following actions to alleviate the above mentioned problems and constraints.

- LMD will forward the problem to concern ministries and planning commission for the additional required transportation budget in district.
- Strengthen supply system with coordination to center, RMSs and districts.
- LMD will coordinate with Management Division on making storage spaces and suggested to districts to send estimate to MD.
- Budget has been allocated to districts for hiring temporary staff from next year. (UNFPA support)
- Coordinate with NHTC to organize basic logistic training for newly transferred staff.
- LMD along with supporting partners will provide necessary support for auctioning and disposal.

# 5. Major Progress -Trends

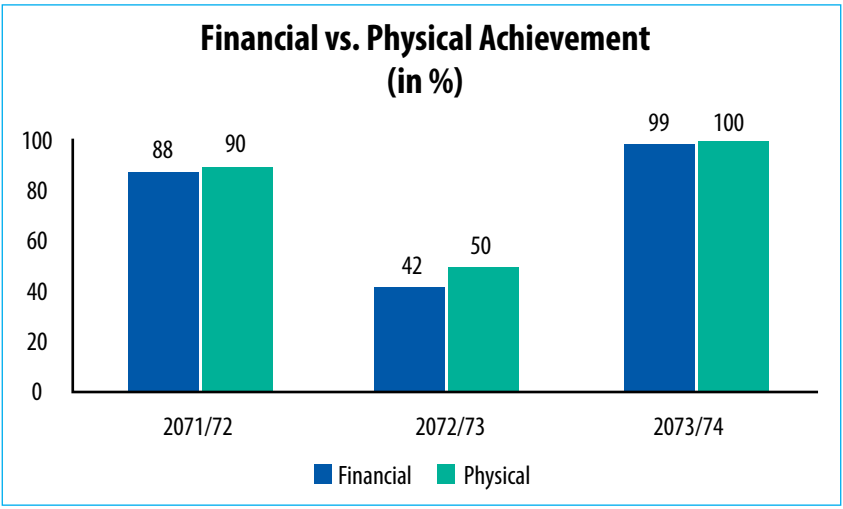
The following section gives the trend of central level and district level budget allocation versus expenses and financial versus physical achievements for the FY 2071/72, 2072/73, and 2073/74. The information is collected from TABUCS.

## 5.1 Central Level

**Table 4: Budget Allocation versus Expenses at the Centrral Level**

| Description | 2071/72 | 2072/73 | 2073/74 |
|---|---|---|---|
| Allocated | 706,590 | 459,760 | 541,537 |
| Expenses | 622,855 | 195,985 | 538,900 |

Table 4 above gives the budget allocation and expenses at the central level for FY 2071/72, 2072/73, and 2073/74. The allocated budget drastically decreased by 35% in FY 2072/73 from previous year.




Comparing the central level financial vs. physical achievement for FY 2071/72, 2072/73, and 2073/74, both financial and physical achievement was 42 and 50 % respectively. Many underlying factors including the devastating earthquake on Baisakh 2072 have had led to this low achievement.

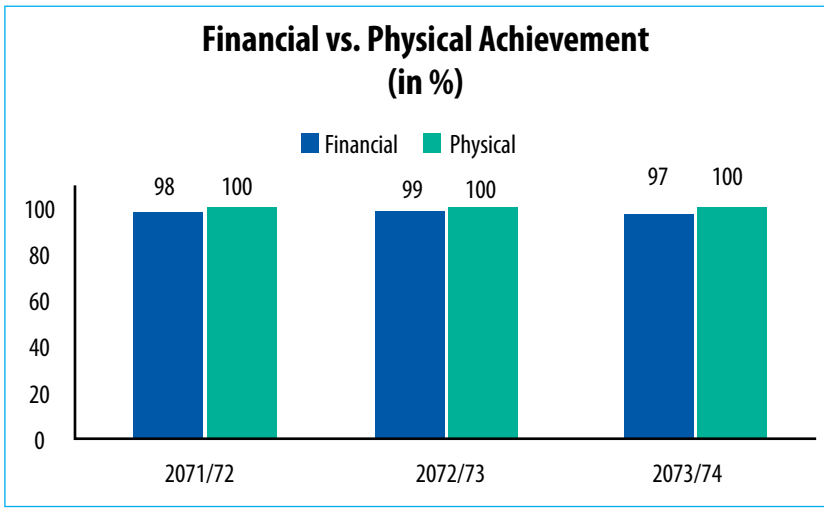
## 5.2 District Level

**Table 5: Budget Allocation versus Expenses at the District Level**

| Description | 2071/72 | 2072/73 | 2073/74 |
|---|---|---|---|
| Allocated | 69,770 | 56,949 | 69,275 |
| Expenses | 68,898 | 56,933 | 67,980 |

Table above gives the budget allocation and expenses at the district level for FY 2071/72, 2072/73, and 2073/74. The allocated budget decreased by 18.4% FY 2072/73 from previous year.

Comparing the district level financial vs. physical achievement for FY 2071/72, 2072/73, and 2073/74, both financial and physical achievements are around 100%.

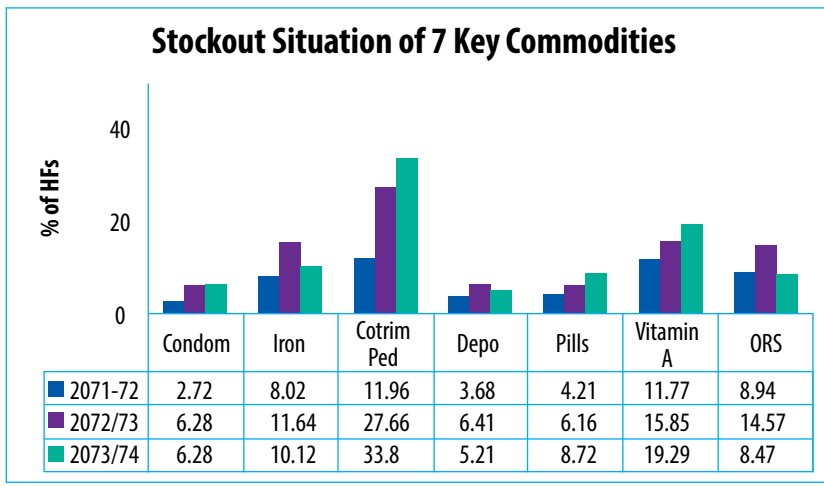


# 6. Trends of Logistics Indicators

## 6.1 Availability of Key Commodities

Logistics Management Division aims to make year round availability of health commodities in all health facilities. National stock out of health commodities has been steadily decreasing in last four fiscal years. The average availability of contraceptives and key MCH commodities has increased in HFs in comparison with previous fiscal years.

Though the demand and consumption of essential drugs has increased drastically after implementation of free health policy up to hospital level, the stock out of the selected drugs has been reduced. The availability of health commodities is increased in health facilities is because of scale-up of Pull System, monitoring of LMIS and inventory management, health institution level logistics orientation, and other capacity building activities at various levels. There is a need to decrease the stock-outs % of essential drugs in the health facilities, for this there is need to strengthen the supply chain system from district to health facilities and effective implementation of 'Pull System'.

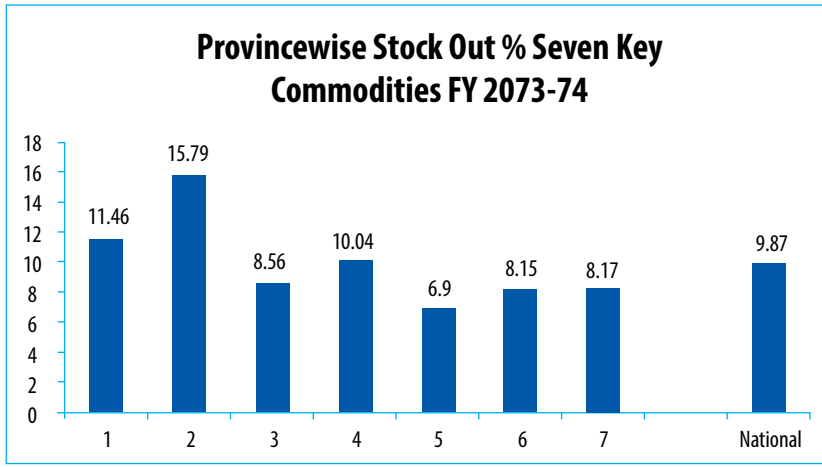



| | Condom | Iron | Cotrim Ped | Depo | Pills | Vitamin A | ORS |
|---|---|---|---|---|---|---|---|
| 2071-72 | 2.72 | 8.02 | 11.96 | 3.68 | 4.21 | 11.77 | 8.94 |
| 2072/73 | 6.28 | 11.64 | 27.66 | 6.41 | 6.16 | 15.85 | 14.57 |
| 2073/74 | 6.28 | 10.12 | 33.8 | 5.21 | 8.72 | 19.29 | 8.47 |

The following chart gives the stockout percentage of 7 key commodities Condom, Oral Pills, Injectable, ORS, Vitamin A, Iron Tablet and Cotrim Ped modities at the health facilities across the nation for FY 2071/72, 2072/73 and 2073/74.

Analyzing the stockout trend, stockout of 7 key commodiites at HFs has increased from 2071/72

to 2073/74. Stockout percentages of HFs for all key commodiites except ORS are in increasing trend. Almost one-third of HFs are stocked out of Cotrimoxazole Parditric Tablet, and one-fifths are stocked out of Vitamin A Capsules in FY 2073/74.

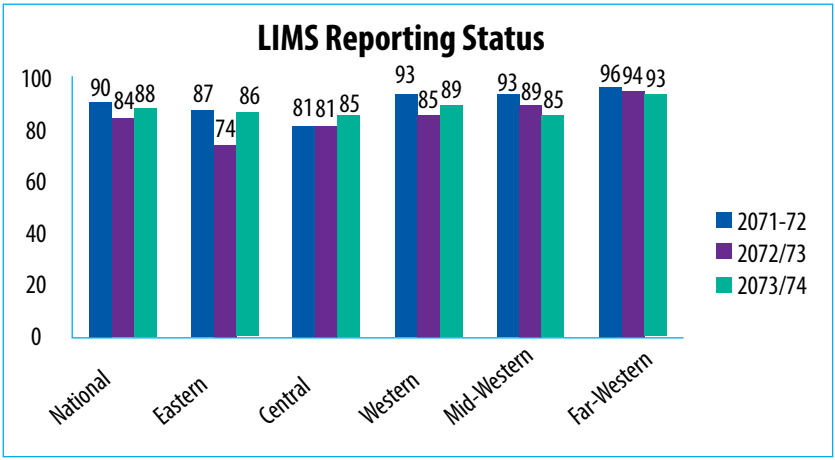



The chart below gives the combined stockout percentage of seven key commodiites in HFs in FY 2073/74 disaggregated provincewise. The combined stockout pevcentages of HFs for seven commodiites is 9.87. Amongst seven provinces, province 2 has the highest combined stockout percentage of 15.79 for seven key commodities. Likewise, Provinces 1 and 4 has comnined stock out percentage more than national average.

## 6.2 Reporting Status

### 6.2.1 LMIS Reporting Status

The LMIS has helped to generate accurate and reliable feedback reports, thereby contributing to improved logistics functions like budgeting, quantifying, forecasting, procurement, storage, transportation and distribution of MCH commodities and essential drugs to be procured by the center. With closely monitoring LMIS information, it has played a key role in reducing stock-out rates and increasing year-round availability of key health commodities.

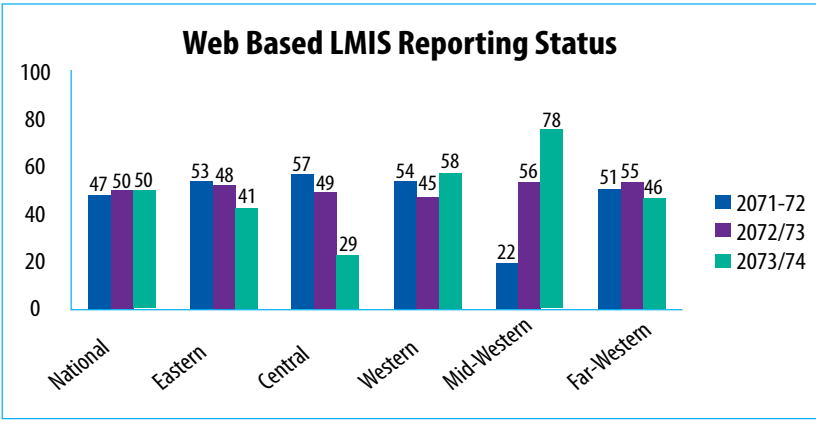



LMIS is now established as a credible information system in the MoH and is being used in Health Sector Reform document defining procurement indicators and reporting on stock situations. LMIS, at the central level, is used extensively for key logistics decision making such as forecasting, quantification, procurement and distribution of health commodities. Moreover, LMIS is being used at all levels for evidence based logistics decision making.

Over the years, LMIS reporting trend was around 90% or above.

However, the national reporting percentage decreased to 84 % in 2072/73. The devastating earthquakes of Baisakh 12, 2072 and Baisakh 29, 2072, many HFs in Central Region were destroyed and could not send reports. Analyzing the region wise reporting percentage, there has been sharp decline in Central Region in Fy 2072/73 with 74% reporting. Camparing three year trends of LMIS reporting percentage; there consistently has been decline in Mid-Western from 93% in FY 2071/72 to 85% in FY 2073/74. The reporting percentage from Easten Region, Central Region and Mid-Western Region in FY 2073/74 are 86%, 86% and 85% respectively which is below national average of 88% in same FY 2073/74.

## 6.2.2 Web Based LMIS Reporting Status




Logistics Management Division took a decision to implement Web based LMIS and Inventory Management System up to the district level to tap the possibilities of transforming logistics information from quarterly to monthly with the advancement of Internet technology in Nepal,. This has helped to establish a better logistics network system between Central stores, RMSs and District stores with real time information on months of stock on hand of key FP, MCH, Essential Drugs, EPI and allied health commodities.

Evidence based logistics decision making has had helped ensuring year round availability of key health commodities and essentials drugs to the consumer end.

LMD took decisive step in 2008 in implementing monthly web LMIS and Inventory Management System from Central warehouse, Regional Medical store and District Medical stores. Efforts being made on to setup reliable internet connectivity by supplying ADSL and networking accessories to DPHO/DHO and on going computer trainings to the district storekeepers for the implementing and most of them have very positive response in this innovative approach of LMD towards using online logistics information system.

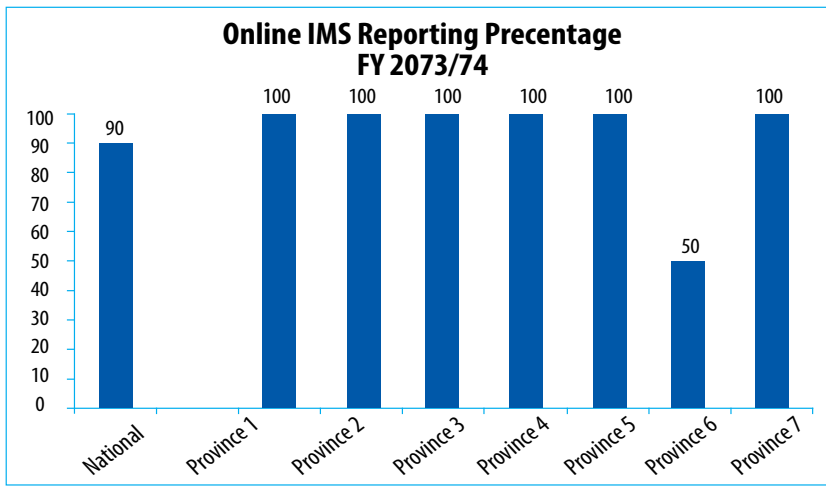
Web-based LMIS up to the district level is in operation since 2008. The reporting percentage of districts remained in an around 50% for the last three years.

Recognizing the important role technology and internet can play for timely management and monitoring of the stock availability of vaccines, expiry date, batch number etc., UNICEF/ Lifeline Nepal supported in designing and developing online inventory management system

under the leadership of LMD. This software has included online format of all the forms used for stock management of vaccine and other commodities to ensure the personnel responsible stock management can perform their task with efficiency and accuracy. The online IMS has been upgraded to online Inventory Management System in 2016 to achieve the following objectives:

- To provide real time data for evidence based decision making
- To make supply chain effective by getting the real time information
- To minimize wastage rate by tracking expiry date and VVM stage

### 6.2.3 Online IMS




The online reporting percentage nationwide in FY 2073/74 is 90%. All provinces except province 6 have hundred percent reporting in FY 2073/74. Province 6 has reporting percent of only 50% which is par below the national average. The reporting percentage

# 7. Planning, Monitoring and Evaluation (PME)

**Planning:** LMD had adopted 2 types of Planning System 1. Annual Work plan and Budgeting system 2. Five years Plan.

**Monitoring:** as per annual plan and activities, its goals and objectives, target vs achievement etc

**Evaluation:** Based on plan and activities and progress report on target vs achievements as monthly, bimonthly, trimesterly, biannual and annual.

## 7.1 Major achievements carried out during 2071/72 - 2073/74

- Emergency supply chain management of essential equipments, emergency medicines, essential medicines in earthquake effected area.
- Preparation of annual logistics plan, quarterly implement plan and evaluation
- Forecast, quantify, pipeline monitor of essential medicines and program commodities
- Procurement and distribution of Hospital equipments including CT scan, X-ray, USG, Ventilator, beds
- Procurement and distribution of pick-up for transportation of drugs, health commodities purposes in Region and Districts.
- Procurement and distribution of computers, printers, solar, batteries, internet devices for online LMIS operations in Centre, Region and Districts.
- Procurement and distribution of essential medicines, program commodities for free health program in Region and Districts
- Packing, re-packing , transportation, storage, distribution and re-distribution of essential medicines, program commodities and biomedical/general equipments
- Quality assurance of essential medicines, program commodities and biomedical/general equipments
- Review, update, printing and distribution of HMIS, LMIS forms and formats
- Contract of computer assistant for online LMIS operations in Centre, Regions and Districts
- Capacity building on Online LMIS, Basic Logistics for computer assistants, store keepers and health personnel

- Supportive supervision and monitoring on online LMIS, store/inventory management, LMIS in Centre , Regional, Districts and Health Facility Level warehouses
- Routine Data Quality Assissment (RDQA) of Logistics Management Information System(LMIS) Report
- Safely dispose , resale, de-junck ingand auctioning of expired medicine, wastage commodities/materials

## 7.2. Issues and Action Taken

| Issues | Action Taken | Responsibility |
|---|---|---|
| Low stock of essential Drugs | Procurement and supply of drugs will be in time | DoHS/LMD |
| Vehicle for Supervision Monitoring and Transportation | LMD proceed the procurement of vehicles and ambulance | MoH /DoHS/LMD |
| Inadequate equipment for service delivery sites | LMD will be procure and supply of equipment on the basis of demand/ needs | DoHS/LMD |
| Re distribution of drugs | LMD proceed coordinate in between region and Districts for re distribution of drugs | DoHS/LMD |
| Inadequate of HMIS/LMIS tools and late supply | Tools will be supply in time and adequately | DoHS/MD/LMD |
| Clearance of not repair/ not used equipments/ materialsfrom district and health facility. | LMD will act auctioning and disposal according to guideline with the coordination of external development partners. | DoHS/LMD/EDPs |

# 8. Nepal Health Sector Strategy 2015-2020

Under the auspices of National Health Policy 2014, Nepal Health Sector Strategy 2015-2020 (NHSS) is the primary instrument to guide the health sector for the next five years. It adopts the vision and mission set forth by the National Health Policy and carries the ethos of Constitutional provision to guarantee access to basic health services as a fundamental right of every citizen. It articulates nation's commitment towards achieving Universal Health Coverage (UHC) and provides the basis for garnering required resources and investments.

## Vision

All Nepali citizens have productive and quality lives with highest level of physical, mental, social and emotional health.

## Mission

Ensure citizens' fundamental rights to stay healthy by utilizing available resources optimally and through strategic cooperation between service providers, service users and other stakeholders.

## Goal

Improved health status of all people through accountable and equitable health service delivery system

## Outcome

**Outcome 1: Rebuilt and strengthened health systems: HRH, Infrastructure, Procurement and Supply chain management:**

An efficient and effective system is crucial to improve and ensure quality health services at the point of service delivery. A number of health systems functions are important to make the health care delivery responsive to the people's need. Human resources, Infrastructure, Procurement and Supply chain are highlighted as essential, interconnected and complex health systems components that need to function in tandem for smooth service delivery. These systems are altogether geared towards ensuring optimal deployment and quality of health personnel, setting up minimum infrastructure and the timely procurement, uninterrupted

supply of drugs and logistics. Considering these, focus will be on strengthening production, deployment and retention of human resources, standardizing procedures for site selection, developing and upgrading physical infrastructure, maintenance, timely procurement and efficient supply chain. The importance of these health system functions has been heightened in the aftermath of devastating earthquake on 25th April, 2015. In affected districts, resilient and responsive health systems will need to be built that delivers quality health services. New infrastructure will be erected in strategic locations with commensurate skilled human resources, basic equipment and supplies to deliver routine and additional health services that seek to maximize utilization of public health services.

## Procurement and Supply chain Management:

The output envisions reforming procurement and logistics systems responsible for forecasting, tendering, contracting, and supply chain processes. Establishment of a procurement centre staffed with procurement experts will be initiated, including further capacity enhancement in supply chain management and implementation of innovative approaches to improve supply chain management.

## Output 1c.1: Improved procurement system

**Key Interventions**

1. Build capacities in procurement and quality assurance at central and decentralised levels
2. Implement Consolidated Annual Procurement Plan.
3. Widen the scope of Multi-year contracts in health products and services.
4. Pilot central bidding and local ordering approach and scale-up as appropriate
5. Lay foundations for the establishment of procurement centre Output

## Output 1c.2: Improved supply chain management

**Key Interventions**

1. Develop capacity in operational planning and logistics management systems in order to develop a cost effective and timely distribution system.
2. Expand warehouse capacities, including upgrading of storage facilities at regional and

district levels.

3. Explore innovative approaches (e.g. PPP) and technologies to improve supply chain management between the district store and health facilities for supply management at the district level.
4. Improve management to prevent expiry of drugs and handling of expired drugs and non-functional equipment
5. Improve supply chain of Ayurvedic drugs/medicines

For the next five years, NHSS propels Nepal's health sector towards UHC through four key strategic directions:

- Equitable Access to Health Services
- Quality Health Services
- Health Systems Reform
- Multi-sectoral Approach

# 9. Donor Partners and Contribution

## United Stated Agency for International Development (USAID)

USAID is joining hands for more than half a century to improve the lives of Nepali people. Since1994 USAID is supporting MoHP's initiative in health logistics through implementation of improved logistics system and LMIS to strengthen the use of quality data in evidence based logistics decision making.

USAID with its successive bilateral contracts is supporting MoHP's initiatives in strengthening the logistics management system. Currently, Chemonics through Global Health - Procurement Supply Chain Management (GH-PSCM) the support ontinuous to institutionalize the successes gained over the years in health logistics.

- Competency-based training to government health workers on IUCD, implant, nonscalpel vasectomy and minilap including CoFP, counselling training
- Mobile outreach camps including postpartum family planning through static, satellite, and outreach clinics and health facilities
- Post-training follow up, coaching and mentoring
- Social behaviour change communication through mass media, social media, community engagement and inter-personal communication
- Data quality assurance including HMIS and LMIS

## United Nations Fund for Population Activities (UNFPA)[2]

UNFPA, the United Nations Population Fund, is the lead UN agency for delivering a world where every pregnancy is wanted, every birth is safe, and every young person's potential is fulfilled. UNFPA expands the possibilities for women and young people to lead healthy and productive lives.

UNFPA support to Nepal began in 1971 and has evolved in response to the changing national contexts. The current 8th Country Programme is part of the UN Development Assistance Framework (UNDAF), which is the strategic programme framework that describes the UN System's collective response to national development priorities. The current programming cycle is from 2018 to

2 http://nepal.unfpa.org/en/node/15058

2022. The UNDP work is grounded in international human rights and gender equality principles. UNFPA partners with the Government of Nepal, youth and women's organizations and development partners to advance its mission. Under the 8th Country Programme and in line with its mandate, UNFPA Nepal is working on the following areas:

- Sexual and reproductive health and rights
- Gender equality
- Population dynamics

### United Nations' International Childrens Emergency Fund (UNICEF)[3]

Guided by the Convention on the Rights of the Child (CRC), UNICEF advocates and works for the protection of children's rights, help the young meet their basic needs and to expand their opportunities to reach their full potential. Partnerships with governments, UN organizations, other development partners and civil society, are at the heart of the organization's mandate as is building the capacity of communities and local government to plan and manage programs.

UNICEF has a history of more than four decades of work in Nepal and has contributed towards many of the development strides the country has taken, from the provision of basic services and immunization in the 60s and 70s; early childhood rights, education and protection in the 80s; empowering communities, more so women, to be more self-sufficient in the 90s; and an emphasis on protection during the conflict period in the 2000s. What began as a programme to boost child survival and infrastructure for drinking water and sanitation, has widened to include women's empowerment and self-sustainability; and social & child protection, and governance and emergency preparedness; and the direct participation of children and adolescents in the planning processes of government and civil society. The focus of UNICEF's programme in Nepal has continuously changed over the years to meet the changing needs of Nepali children, adolescents and women.

UNICEF mainly focuses in the 15 lowest performing districts of Nepal but our impact is nationwide especially with our advocacy work with the Government of Nepal in developing legislations, plans, budgets, coordination and monitoring mechanisms that enable the survival, development, protection and participation of children, adolescents and women.

The current five-year programme (2013-2017) focuses on addressing the three main sets of

3 http://unicef.org.np/about-us/unicef-in-nepal

inequity factors (policy, system and societal) so that all children, adolescents and women have access to basic and other services necessary to fulfil their rights to survival, development, protection and participation.

## World Health Organization (WHO)[4]

The World Health Organization (WHO) is a specialized agency of the United Nations System. WHO Country Office in Nepal is headed by the WHO Representative. The objective of WHO is the attainment by all people of the highest possible level of health in the sense that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity", as enshrined in the WHO Constitution as one of the basic principles. WHO provides technical support to address the country's priority health issues within the purview of WHO core functions which relate to engaging and partnerships, shaping the research agenda, setting norms and standards, articulating policy options, catalyzing change and assessing health needs. WHO provides support mostly in policy planning and program development; human resources development; prevention and control of major communicable diseases, polio eradication, leprosy elimination; health promotion; healthy environment; and health technology and pharmaceuticals.

## Global Allinace for Vaccine Immunization (GAVI)[5]

Created in 2000, Gavi is an international organisation - a global Vaccine Alliance, bringing together public and private sectors with the shared goal of creating equal access to new and underused vaccines for children living in the world's poorest countries.

Nepal is committed in providing immunization to all eligible children. Immunization is the government's priority number one health program (P1). The GoN has been increasing the share of the budget allocation for EPI reflecting its committment to the programme. The government procures all traditional vaccines (BCG, OPV, measles, TT and JE) from its own resources and co-finances penta vaccine with GAVI. For last 10 years Nepal has introduced HepB, Hib and JE (high risk districts) vaccine into routine immunization. Around 90% of vaccination is provided through EPI outreach clinics.

4 http://www.searo.who.int/nepal/about/WHOinNepal/en/

5 https://www.gavi.org/about/

## Development Fund for International Development (DFID)[6]

Health system strengthening, including health policy and planning, health governance and decentralization, healthcare financing, procurement and infrastructure, public financial management, improving access to medicines, including safe motherhood and family planning, gender, equity and social inclusion, monitoring, evaluation, surveillance and research. Special focus on health transition and recovery in earthquake-affected districts to re-establish health services and provide focused support on mental health, rehabilitation and physiotherapy in affected districts.

## Nepal Health Sector Support Program (NHSSP)[7]

The Nepal Health Sector Support Programme 3 (NHSSP 3) is funded by UK Aid from the UK government, and is being implemented from April 2017 to December 2020. It is designed to support the goals of the National Health Sector Strategy (NHSS) and is focused on enhancing the capacity of the Ministry of Health (MoH) to build a resilient health system to provide quality health services for all. The capacity enhancement of organisations, systems and people will be achieved through nuanced and responsive approaches that build on a deep understanding of the MoH in Nepal.

The programme is managed by four core partners: Options, HERD International, Miyamoto and Oxford Policy Management with an approach that ensures each partner contributes to the planning and delivery of the programme with a shared focus on achieving results for the UK government and Government of Nepal (GoN) over the next four years. The programme has two components. The first component is General Technical Assistance to increase the capacity of the Ministry of Health to improve health policy-making and planning, procurement and financial management, health services, and the use of evidence for planning and management. The second component aims to increase the Ministry of Health's capacity to retrofit health infrastructure to withstand future earthquakes. The programme consists of five work streams:

- Health Policy and Planning (HPP)
- Procurement and Public Financial Management (PPFM)
- Service Delivery (SD)

6 DOHS Annual Report 2072/73

7 http://www.nhssp.org.np/about.html

- Evidence and Accountability (E&A)
- Health Infrastructure (HI)

## Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM)

USAID's Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is working in Nepal to reinforce the country's National Health Policy and the National Health Sector Strategy 2015–2020, which seeks to reduce health commodity stockouts and strengthen health systems, infrastructure, human resource management, procurement and supply chain management, and health information management. The main objective of GHSC-PSM is to support Nepali government institutions to easily access and use data for decisions to improve the health of all Nepali citizens. With Nepal's Logistics Management Division (LMD), the project focuses on enhancing supply chain performance and professionalism with better forecasting and quantification accuracy.

## Key activities in Nepal include:

- Support LMD capacity to develop and implement long-term strategies for achieving sustainable supply chain improvements
- Draft a forecasting guidebook based on international best practices
- Building on local-level procurement guidelines, provide additional training and support to improve both sourcing of quality-assured maternal and child health and family planning commodities at the district level, and commodity storage capacity and quality
- Support workforce development of medical warehouse and store staff
- Develop a tool to measure supply chain performance, and monitor and report performance changes

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# Annexures

# Annex 1

**Table 6: Outputs for Procurement and Supply Chian Management**

| Output | Key Interventions |
|---|---|
| Output 1c.1: Improved procurement system | 1. Build capacities in procurement and quality assurance at central and decentralized levels<br>2. Implement Consolidated Annual Procurement Plan<br>3. Widen the scope of Multi-year contracts in health products and services<br>4. Pilot central bidding and local oedering approach and scale-up as appropriate<br>5. Lay foundations for the establishment of procurement center |
| Output 1c.2: Improved supply chain management | 6. Develop capacity in operational planning and logistics management systems in oeder to develop a cost effective and timely distribution system<br>7. Expand warehouse capacities, including of storage facilities at all levels<br>8. Explore innovative approaches (e.g. PPP) and technologies to improve supply chain management between the district store and HFs<br>9. Improve management to prevent expiry of drugs and handling of expired drugs and non-functional equipment<br>10. Improve supplu chain of medicines |

## 1.1 NHSS Outputs and Key Interventions

| OP1a1: Health infrastructure developed as per plan and standards | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Construct ware houses atthe central and provincial, as per the master plan | Store and Distribution | Event | x | x | x | x | x |

| OP1a3: Improved management of health infrastructure | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| | Develop preventive maintenance and corrective maintenance plan for existing equipment | VSD/S&D/Gen.S&D | Event | x | x | x | x | x |
| 1 | Manage/maintain inventory of existing equipment, conduct rapid inventory for newly distributed equipment and provision for inventory of equipment to be distributed | VSD/S&D | Event | x | x | x | x | x |
| 2 | Develop storage guidelines (vaccines, medicines, and equipment) for all level | VSD/S&D | Event | x | x | x | x | x |
| 3 | Strengthen physical facilities at the district medical storelevel for the storage and distribution of health commodities | S&D | Event | - | x | x | x | x |
| 4 | Pre-qualify and standardize medical equipment by level of health facility | S&D | Event | - | x | x | x | x |
| 5 | Manage replacement plan of cold chain and medical equipment | VSD / S&D | Event | - | x | x | x | x |
| | | | | | | | | |

| OP1b1: Improved availability of human resource at all levels with focus on rural retention and enrolment | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Fulfill human resource need for procurement and supply chain management | Planning/ Procurement | Event | x | x | x | x | x |
| 2 | Recruit pharmacists at district level and PHC level | Planning & LMIS/ Procurement/VSD | Event | x | x | x | x | x |

| OP1b2: Improved medical and public education and competencies | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Build capacity at provincial and district level to strengthen procurement and supply chain management | Procurement/S&D | Event | x | x | x | x | x |
| 2 | Train health personnel on online IMS and IMS mobile application | Planning&LMIS | Event | x | x | x | x | x |

| OP1c1: Improved procurement system | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Prepare consolidated procurement plan | Procurement | Event | x | x | x | x | x |
| 2 | Build capacities in procurement and quality assurance at central and decentralized levels | Procurement | Event | x | x | x | x | x |
| 3 | Widen the scope of Multi-year contracts in health products (Drugs, Vaccine and FP commodities) | Procurement | Event | x | x | x | x | x |
| 4 | Implement framework contract system in procurement of selected health commodities | Procurement | Event | | x | x | x | x |
| 5 | Develop and approve standard specification bank for medicine and equipment | Procurement | Event | x | x | x | x | x |
| 6 | Expand e-submission and use of e-procurement for all procurement in health sector | Procurement | Event | x | x | x | x | x |
| 7 | Identify gaps for management of procurement processes | Procurement | Event | x | x | x | x | x |
| 8 | Enhance forecasting of health goods at district, regional and central level to minimize gap between supply and demand | Procurement | Event | x | x | x | x | x |

| OP1c2: Improved supply chain management | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 2 | Establish an efficient mode of transportation of procured materials to all levels | VSD/S&D | Event | x | x | x | x | x |
| 3 | Implement effective pull system for year round availability of essential drugs and other health commodities at all levels | S&D/Planning and LMIS | Event | x | x | x | x | x |

| OP2.1: Quality health service delivered as per protocols/standards | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Implementation of Effective Vaccine Management (EVM) Standard Operating Procedure (SOP) | VSD | Event | x | x | x | x | x |

| OP2.2: Quality assurance system strengthened | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Arrange for post shipment Quality Assurance | Procurement | Event | x | x | x | x | x |

| OP2.3: Improved infection prevention and health care waste management practices | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Improve management to prevent expiry of drugs and handling of expired drugs and non-functional equipment | S&D | Event | X | | X | | X |

| OP3.1: Improved access to health services, especially for unreached population | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| | Explore innovative approaches and technologies to improve availability of drugs and commodities up-to community level | VSD/S&D | Event | | x | x | x | x |

| OP8.1 Public health emergencies and disaster preparedness improved | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Prepare buffer-stock of drugs and other commodities for emergency management | All | Event | X | X | X | X | X |

| OP9.1: Integrated information management approach practiced | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN | Key interventions | Program component | Unit | Y1 | Y2 | Y3 | Y4 | Y5 |
| 1 | Develop Online operation of IMS for LMIS (Real time/live operation of IMS) at HFs, district, RMS, and central level to track expiry date, Lot No / batch no., VVM Status | Planning &LMIS | Event | x | x | x | x | x |
| 2 | Integrate cold chain equipment inventory (CCEI) with LMIS | VSD/ Planning & LMIS | Event | x | x | x | x | x |
| 3 | Expand online IMS at below district level HFs through mobile application | S&D/Planning&LMIS | Event | - | x | x | x | x |
| 4 | Conduct data quality assessment of IMS | S&D | Event | x | | x | | x |
| 5 | Expand the use of LMIS up-to facility level | Planning & LMIS | Event | x | x | x | x | x |

## 1.2 Logistics Management Division: Results Framework

| Code | Indicator | Baseline | | | Milestone | | | | Target | Data Source | Monitoring Frequency | Responsible agency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Date | Year | Source | 2016 | 2017 | 2018 | 2019 | 2020 | | | |
| Outcome 1: Rebuilt and strengthened health systems: Infrastructure, HRH management, Procurement and Supply chain management | | | | | | | | | | | | |
| OC 1.3 | % of procurements completed within the planned timeline as per consolidated procurement paln | 77 | 2015 | LMD | | 80 | | | 100 | NHSS | 3 years | LMD |
| OC 1.4 | % of health facilities with no sotck out of tracer drugs | NA | 2015 | NA | | 80 | | | 95 | NHSS | 3 years | LMD |
| LMOC 1.5 | % of free BHS drugs procurement completed using standard specifications | 36 | 2016 | LMD | 36 | 70 | 80 | 90 | 100 | | Annual | LMD |
| OP 1C1: IMPROVED PROCUREMENT SYSTEM | | | | | | | | | | | | |
| OP 1C1.1 | % of procurement contracts awarded against consolidated annual procurement paln | 48 | 2015 | LMD | 70 | 80 | 80 | 80 | 90 | NHSS | Annual | LMX |
| LMOP1C1.2 | % of procurement contracts managed using online/ofline PPMO portal | 30 | 2015 | LMD | 50 | 60 | 70 | 80 | 90 | | Annual | LMD |
| OP1C2: IMPROVED SUPPLY CHAIN MANAGEMENT | | | | | | | | | | | | |
| OP1C2.1 | % of health facilities receiving tracer commodities within less than two weeks of placing the order | NA | 2015 | NHFS | 70 | 80 | 85 | 90 | 100 | LMIS | Annual | LMD |
| OP1C2.2 | % of health facilities complying good storage practices for health commodities | NA | NA | NHFS | 60 | 70 | 80 | 90 | 100 | LMIS | Annual | LMD |
| OP2.1: HEALTH SERVICES DELIVERED AS PER STANDARDS AND PROTOCOLS | | | | | | | | | | | | |
| LMOP2.1.1 | % of vaccines, family planning commodities and tracer drugs wasted due to expiration or damage at regional and district warehouse | NA | 2016 | IMS | | | <5 | <5 | <10 | IMS | Annual | LMD |
| OC9.1 Improved availability and use of evidence in decision-making process at all levels | | | | | | | | | | | | |
| OC9.1 | % of health facilities electronically reporting to LMIS | | | | | | | | | | | |
| | DOH/DPHO | 0 | 2013/14 | LMIS | | | 80 | 90 | 100 | LMIS | Annual | LMD |
| | PHCC | 0 | 2013/14 | LMIS | | | 50 | 60 | 70 | LMIS | Annual | LMD |
| | HP | | 2013/14 | LMIS | | | 20 | 30 | 50 | LMIS | Annual | LMD |
| OP9.1: INTEGRATED INFORMATION MANAGEMENT APPROACH PRACTICED | | | | | | | | | | | | |
| LMOP9.12 | % of health institutions operating online IMS in practice | 0 | 2016 | IMS | 60 | 70 | 80 | 90 | 100 | IMS | Annual | LMD |

# Annex 2

## 2.1 Disbursement Linked Indicators

**Nepal: Health Sector Management Project**

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| **DLI 1:** Systems and organizational reforms at MoH carried out, based on Procurement Reform Action Plan. | Procurement Reform Action Plan not implemented | **DLI Target 1.1** Establish units within LMD to manage critical procurement functions as per O&M survey recommendations (2015) | **DLI Target 1.4** Key staff in the agreed units as per the O&M survey in LMD in place and appropriately trained, including on software | **DLI Target 1.5** 50% of value of total contracts managed by LMD in Year 3 done through e-procurement.<br><br>(***Disbursement rule***: minimum of 40% value of total contracts managed by LMD in Year 3 done through e-procurement) | **DLI Target 1.6** 60% of value of total contracts managed by LMD in Year 4 done through e-procurement<br><br>(***Disbursement rule***: minimum of 50% value of total contracts managed by LMD in Year 4 done through e-procurement) | **DLI Target 1.7** 80% of value of total contracts managed by LMD in Year 5 done through e-procurement<br><br>(***Disbursement rule***: minimum of 70% value of total contracts managed by LMD in Year 5 done through e-procurement) |
| *DLI Value (in SDR)* | | [SDR-equivalent of USD3,000,000] (SRD equivalent amounts for each of the DLI Values to be included at negotiations based on the USD-SDR exchange rate prevailing as of the last day of the month preceding negotiations) | [SDR-equivalent of USD5,000,000] | [SDR-equivalent of USD 3,000,000 for 40% of total contracts managed by LMD done through e-procurement and [SDR-equivalent of US$100,000] for every percentage point over 40% up to a maximum of 50%] | [SDR-equivalent of USD 2,000,000 for 50% of total contracts managed by LMD done through e-procurement and [SDR-equivalent of US$. 100,000] for every percentage point over 50% up to a maximum of 60%] | [SDR-equivalent of USD 2,000,000 for 70% of total contracts managed by LMD done through e-procurement and [SDR-equivalent of US$ 100,000] for every percentage point over 70% up to a maximum of 80%] |
| *Carry forward?* | | Yes | Yes | No | No | N/A |
| *Scalable?* | | No | No | Yes | Yes | Yes |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| | | **DLI Target 1.2** Install procurement and contract management software | | | | |
| *DLI Value* | | [SDR-equivalent of USD2,000,000] | | | | |
| *Carry forward?* | | Yes | | | | |
| *Scalable?* | | No | | | | |
| | | **DLI Target 1.3** LMD linked with PPMO portal for e-bidding | | | | |
| *DLI Value* | | [SDR-equivalent of USD1,000,000] | | | | |
| *Carry forward?* | | Yes | | | | |
| *Scalable?* | | No | | | | |
| *DLI 1 Total Allocation (in SDR)* | | [SDR-equivalent of USD21,000,000] | | | | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| DLI 2: Percentage of procurements done by LMD using standard specifications | Procurement not based on standard specifications | **DLI Target 2.1**MoH endorses standard specifications for basic package of free drugs to be procured by LMD | **DLI Target 2.2** 100% of procurement of basic package of free drugs based on the use of standard specifications[2]<br><br>(***Disbursement rule***: minimum of 70% of procurement of basic package of free drugs based on the use of standard specifications) | **DLI Target 2.4** 100% of procurement of basic package of free drugs based or continues to be based on the use of standard specifications<br><br>(***Disbursement rule***: minimum of 80% of procurement of basic package of free drugs based on the use of standard specifications) | **DLI Target 2.6** 100% of procurement of basic package of free drugs based or continues to be based on the use of standard specifications<br><br>(***Disbursement rule***: minimum of 90% of procurement of basic package of free drugs based on the use of standard specifications) | **DLI Target 2.8** 100% of procurement of basic package of free drugs based or continues to be based on the use of standard specifications<br><br>(***Disbursement rule***: minimum of 90% of procurement of basic package of free drugs based on the use of standard specifications) |
| *DLI Value* | | [SDR-equivalent of USD4,000,000] | [SDR-equivalent of USD 500,000 for 70%procurement of basic package of free drugs based on the use of standard specifications and [SDR-equivalent of US$50,000] for every percentage point over 70% up to a maximum of 100%] | [SDR-equivalent of USD 500,000 for 80%procurement of basic package of free drugs based on the use of standard specifications and [SDR-equivalent of US$50,000] for every percentage point over 80% up to a maximum of 100%] | [SDR-equivalent of USD 500,000 for 90%procurement of basic package of free drugs based on the use of standard specifications and [SDR-equivalent of US$50,000] for every percentage point over 90% up to a maximum of 100%] | [SDR-equivalent of USD 500,000 for 90%procurement of basic package of free drugs based on the use of standard specifications and [SDR-equivalent of US$50,000] for every percentage point over 90% up to a maximum of 100%] |
| *Carry forward?* | | Yes | No | No | No | N/A |
| *Scalable?* | | No | Yes | Yes | Yes | Yes |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| | | | **DLI Target 2.3** MoH endorses standard specifications for essential equipment to be procured by LMD[3] | **DLI Target 2.5** 100% of procurement of essential equipment based on the use of standard specifications<br><br>(***Disbursement rule***: minimum of 70% of procurement of essential equipment based on the use of standard specifications) | **DLI Target 2.7** 100% of procurement of essential equipment based or continues to be based on the use of standard specifications<br><br>(***Disbursement rule***: minimum of 80% of procurement of essential equipment based on the use of standard specifications) | **DLI Target 2.9** 100% of procurement of essential equipment based or continues to be based on the use of standard specifications<br><br>(***Disbursement rule***: minimum of 90% of procurement of essential equipment based on the use of standard specifications) |
| *DLI Value* | | | [SDR-equivalent of USD1,000,000] | [SDR-equivalent of USD 750,000 for 70%procurement of essential equipment based on the use of standard specifications and [SDR-equivalent of US$25,000] for every percentage point over 70% up to a maximum of 100%] | [SDR-equivalent of USD 500,000 for 80%procurement of essential equipment based on the use of standard specifications and [SDR-equivalent of US$25,000] for every percentage point over 80% up to a maximum of 100%] | [SDR-equivalent of USD 500,000 for 90%procurement of essential equipment based on the use of standard specifications and [SDR-equivalent of US$50,000] for every percentage point over 90% up to a maximum of 100%]. |
| *Carry forward?* | | | Yes | No | No | N/A |
| *Scalable?* | | | No | Yes | Yes | Yes |
| *DLI 2 Total Allocation (in SDR)* | | [SDR-equivalent of USD14,000,000] | | | | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| **DLI 3:** Percentage of districts stores reporting based on LMIS | LMIS not in place | | **DLI Target 3.1** LMIS installed in all central and regional warehouses | **DLI Target 3.2** Training on, and installation and operationof, LMIS completed for central and regional warehouses, and all district stores and baseline data generated for stock-outs of tracer drugs | **DLI Target 3.3** LMIS reports received from central and regional warehouses, and all district stores.<br><br>(***Disbursement rule***: LMIS reports received from central and regional warehouses and all district stores of a minimum of two of the five Regions) | **DLI Target 3.4** LMIS reports received or continues to be received from all central and regional warehouses and all district stores<br><br>(***Disbursement rule***: LMIS reports received or continues to be received from central and regional warehouses and all district stores of a minimum of two of the five Regions) |
| *DLI Value* | | | [SDR-equivalent of USD3,000,000] | [SDR-equivalent of USD3,000,000] | [SDR-equivalent of USD 2,500,000 for LMIS reports received from central and regional warehouses and all district stores of two Regions and additional [SDR-equivalent of US$500,000] for each additional Region. | [SDR-equivalent of USD 4,500,000 for LMIS reports received from central and regional warehouses and all district stores of two Regions and additional [SDR-equivalent of US$500,000] for each additional Region. |
| *Carry forward?* | | | Yes | Yes | No | N/A |
| *Scalable?* | | | No | No | Yes | Yes |
| *DLI 3 Total Allocation (in SDR)* | | [SDR-equivalent of USD16,000,000] | | | | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| **DLI 4:**Percentage reduction of stock outs of tracer drugs | Percentage as evidenced by LMIS data in Year 3 for at least two of the five Regions | | | | **DLI Target 4.1** 15% reduction in stock-outs of tracer drugs over the baseline established in Year 3 through the LMIS for at least two of the five Regions | **DLI Target 4.2** 25% reduction in stock-outs of tracer drugsover the baseline established in Year 3 through the LMIS for at least two of the five Regions |
| *DLI Value* | | | | | [SDR-equivalent of USD4,000,000] | [SDR-equivalent of USD6,000,000] |
| *Carry forward?* | | | | | Yes | N/A |
| *Scalable?* | | | | | No | No |
| *DLI 4 Total Allocation (in SDR)* | | [SDR-equivalent of USD10,000,000] | | | | |
| **DLI 5:**Percentage improvement in EVM score over 2014 baseline | Average EVM score of 64%, with two attributes achieving 80% | | **DLI Target 5.1** Average EVM score of 70% (based on 2016 survey) | | **DLI Target 5.3** Average EVM score of 80% (based on 2018 survey) | |
| *DLI Value* | | | [SDR-equivalent of USD1,000,000] | | [SDR-equivalent of USD1,000,000] | |
| *Carry forward?* | | | No | | No | |
| *Scalable?* | | | No | | No | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| | | | **DLI Target 5.2** Any 3 attributes in EVM score achieve 80% | | **DLI Target 5.4** Any 6 attributes in EVM score achieve 80% | |
| *DLI Value* | | | [SDR-equivalent of USD1,000,000] | | [SDR-equivalent of USD1,000,000] | |
| *Carry forward?* | | | No | | No | |
| *Scalable?* | | | No | | No | |
| *DLI 5 Total Allocation (in SDR)* | | [SDR-equivalent of USD4,000,000] | | | | |
| **DLI 6:**Percentage of all MoH spending entities submitting annual plan and budget using eAWPB | Not all spending units submit their annual plan and budget using eAWPB | **DLI Target 6.1** MoHand all its departments, divisions, and centers are given access to operate on eAWPB | **DLI Target 6.2** eAWPB used for planning and budget submission by MoH and all departments, divisions, and centers | **DLI Target 6.3** eAWPB used for planning and budget submission by MoH and all departments, divisions, centers, and 25% of decentralized spending units | **DLI Target 6.4** eAWPB used for plan and budget submission by MoH, alldepartments, divisions, centers, and 50% of decentralized spending units | **DLI Target 6.7** eAWPB used for plan and budget submission by MoH and alldepartments, divisions, centers, and alldecentralized spending units |
| *DLI Value* | | [SDR-equivalent of USD2,000,000] | [SDR-equivalent of USD1,000,000] | [SDR-equivalent of USD4,000,000] | [SDR-equivalent of USD4,000,000] | [SDR-equivalent of USD4,000,000] |
| *Carry forward?* | | Yes | Yes | Yes | Yes | N/A |
| *Scalable?* | | No | No | No | No | No |
| *DLI 6 Total Allocation (in SDR)* | | [SDR-equivalent of USD15,000,000] | | | | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| **DLI 7:**Percentage of MoHannual spending captured byTABUCS | 70% | **DLI Target 7.1** MoHhas issued a circular mandating expenditure reporting through TABUCS by all spending units | **DLI Target 7.2** 80% of MoH'sspendingin Year 2 captured by TABUCS<br><br>(***Disbursement rule***: minimum of 75% of MoH's spending captured by TABUCS to be eligible for disbursement) | **DLI Target 7.3** 85% of MoH'sspending in Year 3 captured by TABUCS<br><br>(***Disbursement rule***: minimum of 80% of MoH's spending captured by TABUCS to be eligible for disbursement) | **DLI Target 7.4** 90% of MoH's spending in Year 4 captured by TABUCS<br><br>(***Disbursement rule***: minimum of 85% of MoH spending captured by TABUCS to be eligible for disbursement) | **DLI Target 7.5** 100% of MoH's spending in Year 5 captured by TABUCS<br><br>(***Disbursement rule***: minimum of 85% of MoH spending captured by TABUCS to be eligible for disbursement) |
| *DLI Value* | | [SDR-equivalent of USD4,000,000] | [SDR-equivalent of USD,3,000,000 for 75% of MoH's spending captured by TABUCS and [SDR-equivalent of US$200,000] for every percentage point over 75% up to a maximum of 80%] | [SDR-equivalent of USD3,000,000 for 80% of MoH's spending captured by TABUCS and [SDR-equivalent of US$200,000] for every percentage point over 80% up to a maximum of 85%] | [SDR-equivalent of USD1,500,000 for 85% of MoH's spending captured by TABUCS and [SDR-equivalent of US$500,000] for every percentage point over 85% up to a maximum of 90%] | [SDR-equivalent of USD1,000,000 for 85% of MoH's spending captured by TABUCS and [SDR-equivalent of US$200,000] for every percentage point over 85% up to a maximum of 100%] |
| *Carry forward?* | | Yes | No | No | No | N/A |
| *Scalable?* | | No | Yes | Yes | Yes | Yes |
| *DLI 7 Total Allocation (in SDR)* | | [SDR-equivalent of USD20,000,000] | | | | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| **DLI 8:**Percentage of audited spending units responding to OAG's primary audit queries within 35 days | Percentage as derived from MoH inventory of responses in Year 1 | **DLI Target 8.1** All reports containing primary audit queries received by audited spending units are available at MoH | **DLI Target 8.3** 10 percentage points increasein audited institutions responding to primary audit queries within mandated 35 days over percentage derived from the MoH inventory of responses in Year 1 | **DLI Target 8.4** 20 percentage points increasein audited institutions responding to primary audit queries within mandated 35 days over percentage derived from the MoH inventory of responses in Year 2 | **DLI Target 8.5** 20 percentage points increasein audited institutions responding to primary audit queries within mandated 35 days over percentage derived from the MoH inventory of responses in Year 3 | **DLI Target 8.6** 10 percentage points increasein audited institutions responding to primary audit queries within mandated 35 days over percentage derived from the MoH inventory of responses in Year 4 |
| *DLI Value* | | [SDR-equivalent of USD2,000,000] | [SDR-equivalent of USD3,000,000] | [SDR-equivalent of USD3,000,000] | [SDR-equivalent of USD3,000,000] | [SDR-equivalent of USD3,000,000] |
| *Carry forward?* | | Yes | No | No | No | N/A |
| *Scalable?* | | No | No | No | No | No |
| | | **DLI Target 8.2** Inventory of responses by date provided by individual audited spending units available at MoH | | | | |
| *DLI Value* | | [SDR-equivalent of USD1,000,000] | | | | |
| *Carry forward?* | | Yes | | | | |
| *Scalable?* | | No | | | | |
| *DLI 8 Total Allocation (in SDR)* | | [SDR-equivalent of USD15,000,000] | | | | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| **DLI 9:**Percentage of facilities reporting annual disaggregated data using District Health Information System (DHIS 2) | 0% | **DLI Target 9.1** Plan for roll out of DHIS 2 finalized | **DLI Target 9.3** Reports based on DHIS 2 available from allDHOs | **DLI Target 9.5** Disaggregated DHIS 2 reports available for all facilities in 25% of districts | **DLI Target 9.7** Disaggregated DHIS 2 reports available for all facilities in 50% of districts | **DLI target 9.9** Disaggregated DHIS 2 reports available for all facilities in 75% of districts |
| *DLI Value* | | [SDR-equivalent of USD1,000,000] | [SDR-equivalent of USD1,500,000] | [SDR-equivalent of USD2,000,000] | [SDR-equivalent of USD2,000,000] | [SDR-equivalent of USD5,000,000] |
| *Carry forward?* | | Yes | Yes | Yes | Yes | N/A |
| *Scalable?* | | No | No | No | No | No |
| | | **DLI Value 9.2** DHIS 2 rolled out upto DHO level | **DLI Target 9.4** DHIS 2 rolled out to facilities in 25% of districts | **DLI target 9.6** DHIS 2 rolled out to facilities in 50% of districts | **DLI Target 9.8** DHIS 2 rolled out to facilities in 75% of districts | |
| *DLI Value* | | SDR-equivalent of USD2,000,000] | [SDR-equivalent of USD1,500,000] | [SDR-equivalent of USD2,000,000] | [SDR-equivalent of USD3,000,000] | |
| *Carry forward?* | | Yes | Yes | Yes | Yes | |
| *Scalable?* | | No | No | No | No | |
| *DLI 9 Total Allocation (in SDR)* | | [SDR-equivalent of USD20,000,000] | | | | |

| Disbursement-Linked Indicators | Baseline | Year 1 (March 14, 2016 – July 15, 2017) | Year 2 (July 16, 2017 – July 15, 2018) | Year 3 (July 16, 2018 – July 15, 2019) | Year 4 (July 16, 2019 – July 15, 2020) | Year 5 (July 16, 2020 – until Closing Date) |
|---|---|---|---|---|---|---|
| **DLI 10:** Citizen feedback mechanisms and systems for public reporting operational | No institutionalized citizen feedback mechanisms in place | **DLI Target 10.1** Citizen engagement mechanism options and public reporting systems developedby MoHfor citizens' feedback, including on availability of drugs and facility level services | **DLI Target 10.2** Citizen engagement mechanisms piloted in6 targeted districts | **DLI Target 10.3** Citizen feedback reports, including on availability of drugs and facility level services, from 6 targeted pilots are made public on MoH's website<br><br>(***Disbursement rule***: citizen feedback reports from minimum of 3 targeted pilots made public on MoH's website) | **DLI Target 10.4** Citizen feedback reports, including on availability of drugs and facility level services, from 6 targeted pilotsare made or continue to be made public on MoH's website<br><br>(***Disbursement rule***: citizen feedback reports from minimum of 3 targeted pilots made public on MoH's website) | **DLI Target 10.5** Citizen feedback reports, including on availability of drugs and facility level services, from 6 targeted pilotsare made or continue to be made public on MoH's website |
| *DLI Value* | | [SDR-equivalent of USD3,000,000] | [SDR-equivalent of USD3,000,000] | [SDR-equivalent of USD1,500,000 for citizen feedback reports from minimum of 3 targeted pilots made public on MoH's website and [SDR-equivalent of US$500,000] for reports from every additional targeted pilot up to a maximum of 6 targeted pilots] | [SDR-equivalent of USD1,500,000 for citizen feedback reports from minimum of 3 targeted pilots made public on MoH's website) and [SDR-equivalent of US$500,000] for reports from every additional targeted pilot up to a maximum of 6 targeted pilots] | [SDR-equivalent of USD1,500,000 for citizen feedback reports from minimum of 3 targeted pilots made public on MoH's website) and [SDR-equivalent of US$500,000] for reports from every additional targeted pilot up to a maximum of 6 targeted pilots] |
| *Carry forward?* | | Yes | Yes | No | No | N/A |
| *Scalable?* | | No | No | Yes | Yes | Yes |
| *DLI 10 Total Allocation (in SDR)* | | [SDR-equivalent of USD15,000,000] | | | | |

## 2.2 DLI Verification Protocol Matrix

**Independent Verification Agency**: *Nepal Health Research Council (NHRC)*

| | DLI | Definitions/Description of Achievement | Protocol to Verify Achievement of DLIs | |
|---|---|---|---|---|
| | | | Data Source | Based on Submitted Documentation as Well as its Own Independent Review, as Necessary, NHRC will: |
| 1 | Systems and organizational reforms at MoH carried out, based on Procurement Reform Action Plan. (also IO indicator) | Four functional units in LMD as per O&M Survey: (a) Planning and Budgeting; (b) Procurement; (c) Supply chain; (d) Monitoring and Evaluation and Quality Control At least 3 staff in place in each unit reporting to the respective officer-in-charge, and trained. | MoH and LMD records | Year 1- Verify the establishment of the four units and corroborate through personal meeting that officers-in-charge for each of these units, reporting to the Director LMD, are in place. |
| | | | | Year 2- Verify that the staff (at least 3 in each) are in place and that they have received training, including on use of software, as evidenced by report of training provided by Director LMD. |
| | | Procurement and Contract Management software installed for entire procurement cycle (Procurement Plan to Payment for procurement) for procurement done by LMD. | – | Year 1- Verify through a test run, that the Procurement and Contract Management software has been installed in LMD. |
| | | LMD portal linked to PPMO Portal for e-submission of bids in readiness for eventual expansion to award of contract. | – | Year 1- Verify through a test run, that a functional link exists between LMD's Portal and PPMO Portal for e-submission of bids. |
| | | Percentage of value of total contracts awarded having the facility of e-submission made available by LMD and the notice of award is displayed on the LMD website | – | Year 3-Verify that at least 40% of value of total contracts awarded by LMD have the facility of e-submission available and notice of award is displayed on the LMD website by checking all the contracts awarded during the Year 3 by LMD. Also provide a report on the actual percentage of value of total contracts awarded by LMD through e-submission during Year 3. |
| | | | | Year 4- Verify that at least 50% of value of totalcontracts awarded by LMD have the facility of e-submission available and notice of award is displayed on the LMD website by checking all the contracts awarded during Year 4 by LMD. Also provide a report on the actual percentage of value of total contracts awarded by LMD through e-submission during Year 3. |
| | | | | Year 5- Verify that at least 70% of value of totalcontracts awarded by LMD have the facility of e-submission available and notice of award is displayed on the LMD website by checking all the contracts awarded during Year 5 by LMD. Also provide a report on the actual percentage of value of total contracts awarded by LMD through e-submission during Year 3. |

| | DLI | Definitions/Description of Achievement | Protocol to Verify Achievement of DLIs | |
|---|---|---|---|---|
| | | | Data Source | Based on Submitted Documentation as Well as its Own Independent Review, as Necessary, NHRC will: |
| 2 | Percentage of procurements done by LMD using standard specifications | Standard specifications for Basic Package of free drugs and essential equipment, to be procured by LMD, developed, endorsed and used by MoH. | LMD's data source, LMIS, records, MOH records | Year 1- Verify that MOH has endorsed, through a public notification, standard specifications for basic package of free drugs procured by LMD |
| | | | | Year 2-Verify through examination of bid documents, that 100% of the procurement of Basic Package of free drugs is done by LMD using the endorsed standard specifications. |
| | | | | Year 2-Verify that MOH, through a public notification, has endorsed standard specifications for essential equipment procured by LMD. |
| | | Procurement of Basic package of drugs and essential equipment based on the specified and agreed standards. | | Year 3- Verify, through examination of bid documents, that 100% of the procurement of Basic package of free drugs is done by LMD using or continues to use the endorsed standard specifications. |
| | | | | Year 3- Verify, through examination of bid documents, that 100% of the procurement of essential equipment is done by LMD using the endorsed standard specifications. |
| | | | | Year 4- Verify, through examination of bid documents, that 100% of the procurement of Basic Package of free drugs is done by LMD using or continues to use the endorsed standard specifications. |
| | | | | Year 4- Verify, through examination of bid documents, that 100% of the procurement of essential equipment is done by LMD using or continues to use the endorsed standard specifications. |
| | | | | Year 5- Verify, through examination of bid documents, that 100% of the procurement of Basic package of free drugs is done using or continues to use the endorsed standard specifications. |
| | | | | Year 5- Verify through examination of bid documents, that 100% of the procurement of essential equipment is done using or continues to use the endorsed standard specifications. |

| | DLI | Definitions/Description of Achievement | Protocol to Verify Achievement of DLIs | |
|---|---|---|---|---|
| | | | Data Source | Based on Submitted Documentation as Well as its Own Independent Review, as Necessary, NHRC will: |
| 3. | Percentage of district stores reporting based on LMIS | Central web-based information on inventory of drugs available at district stores, regional and central warehouses. | LMIS | Year 2- Verify through site visits to Central and Regional Warehouses that Web-based LMIS at each location is installed. |
| | | Central and Regional warehouses and district stores personnel trained on LMIS. | | Year 3- Verify through MoH records that training has been conducted on LMIS for personnel at the Central and Regional Warehouses and all district stores and a baseline data for stock outs of tracer drugs is generated |
| | | LMIS report received from central and regional warehouses and district stores. | | Year 4 – Verify through an assessment that LMIS reports from the 2 Central and 5 Regional Warehouses and all district stores in minimum of two of the five Regions are accessibleaccessible at MoH. Also report on status of LMIS reports received from all district stores of remaining three Regions. |
| | | | | Year 5- Verify through an assessment that LMIS reports from the 2 Central and 5 Regional Warehouses and all district stores in minimum of two of the five Regions are accessible or continue to be accessible at MoH. Also report on status of LMIS reports received from all district stores of remaining three Regions. |
| 4 | Percentage reduction of stock outs of tracer drugs.[1] | Reduction in stock-outs of tracer drugs at district stores in two regions. These regions will be identified and notified to IDA by year 3 when the baseline will also be made available. | LMIS | Year 4: Verify through an analysis of LMIS data of tracer drugs from district stores, that there is an overall reduction in stock-outs of at least 15% over the year 3 LMIS baseline. |
| | | | | Year 5: Verify through an analysis of LMIS data of tracer drugs from district stores, that there is an overall reduction in stock-outs of at least 25% over the year 3 LMIS baseline. |

| | DLI | Definitions/Description of Achievement | Protocol to Verify Achievement of DLIs | |
|---|---|---|---|---|
| | | | Data Source | Based on Submitted Documentation as Well as its Own Independent Review, as Necessary, NHRC will: |
| 5. | Percentage improvement in EVM Score over 2014 baseline | Effective Vaccine Management (EVM) based on nine attributes[2] measured every two years in country by a joint team of MoH, WHO and UNICEF. | Joint MoH, WHO and UNICEF survey reports of 2016 and 2018 | Year 2- Verify from the joint MoH, WHO and UNICEF assessment, that the average EVM score improved from 64% (baseline:2014 survey report)to 70% (2016 survey report)<br>Year 2- Verify from the joint MoH, WHO and UNICEF assessment, that at least any 3 EVM attributes achieved 80% (2016 survey) compared to any 2 attributes achieving 80% in 2014. |
| | | | | Year 4- Verify from the joint MoH, WHO and UNICEF assessment, that the average EVM score improved to 80% (based on 2018survey report)<br><br>Year 4- Verify from the joint MoH, WHO and UNICEF assessment, that at least any 6 EVM attributes achieved 80% (based on 2018 survey) |
| 6. | Percentage of all MoHspending entities[3] submitting annual plan and budget using eAWPB | Annual work plan and budget submitted by all MoHspending entities using eAWPB | MOH reports/ records eAWPB software of MOH | Year 1- Verify that MOH and all its departments, divisions and centres have access to operate on eAWPB by observing log-in and log-out from eAWPB at every unit mentioned above. |
| | | | | Year 2- Verify through an online check, that eAWPB has been used by MoH and all departments, divisions and centers for submitting their annual work plan and budget |
| | | | | Year 3- Verify through an online check, that eAWPB has been used by the MoH, all departments, divisions and centers and 25% of decentralized spending units for submitting the annual work plan and budget |
| | | | | Year 4- Verify through an online check, that eAWPB has been used by the MoH, all departments, divisions, centers and 50% of decentralized spending units for submitting the annual work plan and budget |
| | | | | Year 5- Verify through an online check, that eAWPB has been used by the MoH, all departments, divisions, centers and alldecentralized spending units for submitting the annual work plan and budget. |

| | DLI | Definitions/Description of Achievement | Protocol to Verify Achievement of DLIs | |
|---|---|---|---|---|
| | | | Data Source | Based on Submitted Documentation as Well as its Own Independent Review, as Necessary, NHRC will: |
| 7 | Percentage of MOH's annual spending captured by TABUCS | Annual spend of MoH captured by TABUCS - an online expenditure tracking system - | MoH record and report from TABUCS and TSA (FCGO/ MOF) | Year 1-Verify the issuance byMoHof a circular mandating expenditure reporting through TABUCS by all spending units. |
| | | | | Year 2— Verify through an online check at MoH that expenditure reported through TABUCS comprises at least 75% of MOH's spending in Year 2, and provide report of actual spending. |
| | | | | Year 3— Verify through an online check at MoH that expenditure reported through TABUCS comprises at least 80% of MOH's spending in Year 3, and provide report of actual spending. |
| | | | | Year 4— Verify through an online check at MoH, that expenditure reported through TABUCS comprises at least 85% of MOH's spendingin Year 4 and provide report of the actual spend. |
| | | | | Year 5— Verify through an online check at MoH, that expenditure reported through TABUCS comprises at least 85% of MOH's spending in Year 5 and provide report of the actual spending. |
| 8 | Percent of audited spending units responding to OAG's primary Audit queries within 35 days | Audited spending units to respond to OAG's primary audit queries within 35 days of receiving the report | MOH records and OAG's primary and final reports | Year 1- Verify through scrutiny at MoH that copies of the reports containing primary audit queries received by audited spending units are available at MoH and match this with the number of spending units audited by OAG. |
| | | | | Year 1 – Verify at MoH the availability of an inventory of the responses sent by the audited spending units by date. Verification agency to provide a report containing analysis of time taken between receipt of primary audit report and the response to it by the spending unit in order to provide baseline indicating the percentage of audited institutions that responded within 35 days. |
| | | | | Years 2, 3,4,5 – Verify, each year, from MoH inventory data the percentage points increase, in number of audited institutions responding to primary audit queries within 35 days of receipt of audit report, over the achievement of the previous year. |

| | DLI | Definitions/Description of Achievement | Protocol to Verify Achievement of DLIs | |
|---|---|---|---|---|
| | | | Data Source | Based on Submitted Documentation as Well as its Own Independent Review, as Necessary, NHRC will: |
| 9 | Percentage of facilities reporting annual disaggregated data using District Health Information System 2(DHIS 2) | Data disaggregated by geography, gender, and ethnicity reported by facilities using DHIS 2 | MOH records and Website | Year 1—Verify at MoH, that Plan for implementation of DHIS2 is available |
| | | | | Year 1—Verify through a random check in at least 20% of the districts, that DHIS 2 is rolled out by checking that the software is installed in all District Health Offices (DHOs). |
| | | | | Year 2—Verify through online check at MoH, that reports based on DHIS 2 from all DHO's districts are accessible |
| | | | | Year-2- Verify through a random check by site visit to at least 5% of the facilities in each of the 25% of districts that DHIS 2 is rolled out by checking that the software is installed. |
| | | | | Year 3- Verify through online check at MoH, that disaggregated DHIS 2 reports from all facilities in 25% of the districts are accessible. |
| | | | | Year 3- Verify through a random check by site visit to at least 5% of the facilities in each of the additional 25% of the districts, that DHIS 2 is rolled out by checking that the software is installed in facilities. |
| | | | | Year 4- Verify through online check at MoH, that reports based on disaggregated DHIS 2 from all facilities in 50% of the districts are accessible. |
| | | | | Year 4- Verify through a random check by site visit of at least 5% of the facilities in each of the additional 25% of districts that DHIS 2 is rolled out by checking that the software is installed in facilities. |
| | | | | Year 5- Verify through online check at MoH, that reports based on disaggregated DHIS 2 from all facilities in 75% of the districts are accessible. |

| | DLI | Definitions/Description of Achievement | Protocol to Verify Achievement of DLIs | |
|---|---|---|---|---|
| | | | Data Source | Based on Submitted Documentation as Well as its Own Independent Review, as Necessary, NHRC will: |
| 10 | Citizen feedback mechanisms and systems for public reporting operational | Institutionalized Citizen feedback mechanisms and public reporting system in place | MoHreports and MoH website | Year 1- Verify at MOH, the availability of the document describing options for citizen engagement mechanisms and public reporting systems, for feedback on availability of drugs and facility-level services. |
| | | | | Year 2- Verify through random checks at various pilot sites, that citizen engagement mechanisms in 6 targeted districts in different geographical areas (mountains, hills and Terai) have been initiated. |
| | | | | Years 3, 4 and 5-Verify each year through online checks, that citizen feedback reports based on data from ongoing 6 pilots, including on availability of drugs and facility-level services is accessible on MoH web-site. |

1 While the list of tracer drugs remains to be officially endorsed by MoH, these currently include: Albendazole, Amoxicillin Tab/Cap, Benzoic acid compound ointment, Chloramphenicol Caps/Application, Ciprofloxacin infusion/ear/eye-drop, Cotrimoxazole suspension or dispersible pediatric dozed tablet, Iron+folic acid combination tablet, Gentamycin Injection, Metronidazole tab/syrup, ORS, Oxytocin (or other uterotonic), Paracetamol tablet/injection, Povidone Iodine solution, Salbutamol tab/inhaler, Zinc Sulphate tab, Isoniazid+Rifampicin+Pyrazinamide(RHZ), Ringers Lactate, and Vitamin A

2 Pre-shipment and arrival procedures-applies to primary store level only; Storage within recommended temperature ranges; Cold storage, dry storage and transport capacity. Including NUVI capacity; Buildings, cold chain equipment and transport systems; Maintenance; Stock management; Distribution; Appropriate vaccine management policies; Information systems & supportive management functions.

3 Spending entitieswithin MoH- MOH and its 3 Departments, 7 Divisions, 5 Centers, and 240 decentralized spending units at regional and district levels. The total number of these spending units could change during the project period. This change will be notified to IDA and recorded.

# Annex 3 : Photo Gallery

*Monitoring/Supervision Visit at DHO Makawanpur*

*Auctioning of Unusable Commodities at DHO Mugu*

*Well Organized Cold Chain Room*

*Pathalaiya Warehouse*

*Nepalgunj Warehouse Supervision*


*Logistics Review Workshop at Kathmandu*