



## Nepal Family Health Program Technical Brief #12

### Logistics Management Information System



*LMIS supervisor showing Mahottari store-keeper how to generate an LMIS feedback report.*

### BACKGROUND

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 implementing logistics system improvement activities, an LMIS for the Ministry of Health and Population (MOHP) was designed in 1994 and tested in four districts of the Eastern Region with support from JSI and USAID. In 1997, the system was expanded nationwide. The Logistics Management Division (LMD) of the MOHP took responsibility for a well-functioning LMIS with continued technical support from JSI Research & Training Institute, Inc. and USAID. The LMIS is capable of generating accurate and timely data on logistics indicators, such as stock levels and consumption rates, for making supply decisions at all levels of the government health system. LMIS became a major 'success story' for the MOHP, operating reliably and eventually processing quarterly data from more than 4,000 health facilities (HFs) to guide the operations of the MOHP logistics management system.

Nepal Family Health Program (NFHP) has continued to provide technical assistance to the MOHP's LMIS Unit.

### STRATEGIC APPROACH

During earlier projects, JSI's approach was to first design a system, test it in some districts, and then expand to all 75 districts of the country. LMIS was also initiated and expanded using this approach.

LMIS is now established as a credible information system in the MOHP and is being used in health sector reform documents defining procurement indicators and reporting on stock situations. LMIS, at the central level, has been used extensively for procurement planning, forecasting, and distribution management. The LMIS Unit at LMD compiles the data into quarterly reports that are distributed to districts, regions, to concerned MOHP divisions at the central level and to external donor partners. Some districts use the LMIS reports to determine quantities of commodities to be sent to each health facility (HF). Centrally, LMIS data is used to help determine national estimates of commodity needs.

Today, LMIS is an integrated system and includes commodities for nine different programs. These are:

- Family planning (five contraceptives).
- Expanded Program on Immunization (EPI) (six vaccines plus immunological agents).

#### Key Achievements

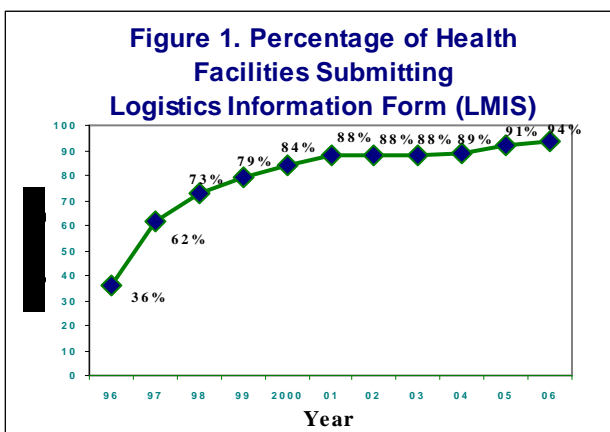
- A nationwide LMIS producing reliable logistics data for decisionmaking at all levels of the health system (forecasting, inventory management, pipeline monitoring, and prevention of stock outs).
- Policymakers accept LMIS data as credible and use them to make nationwide policy and operational decisions.
- LMIS reporting has improved storage practices, thus reducing waste and expiry of commodities.
- LMIS made possible the successful introduction of the 'pull system' for essential drugs in half the districts of Nepal.
- LMIS expanded from only tracking contraceptives to include 17 key commodities (including ORS, iron tabs, vitamin A, malaria drugs, and vaccines).

- Malaria/Kalazar Program (seven malaria drugs).
- Tuberculosis Program (ten TB drugs as well as glass slide and sputum container).
- Control of Diarrheal Disease (CDD) Program (ORS and Zinc Sulphate).
- Acute Respiratory Infection (ARI) Program (Cotrim-P 100/20 mg, and Cotrim-P 200/40 mg).
- Nutrition Program (vitamin A, iron tablets, and Albendazole).
- Leprosy Program (four leprosy drugs).
- Essential drugs (56 standard plus other essential drugs).

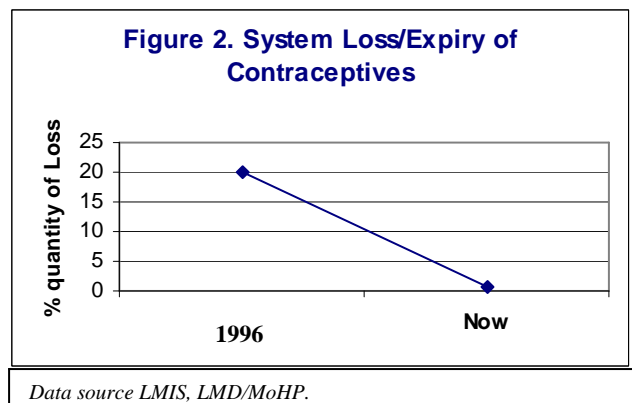
In total 184 items are tracked at the district level including cold chain accessories and surgical and miscellaneous items. NFHP continues to support the LMIS and has initiated decentralized processing of LMIS data at the district level.

## RESULTS

Reporting of the national LMIS has improved. The percentage of LMIS forms submitted from HFs on a timely basis has increased from 62% in 1997 to 94% in 2006. Information is updated in the HFs and there is increased use of LMIS at both HF and district levels. A logistics data bank has also been created and is extensively used in monitoring the stock situation for seven key commodities at district and HF levels.



In 2005/2006, after realizing the need to decentralize LMIS processing and information use to district level, computerized processing of LMIS data was attempted in seven of NFHP's 17 core program districts (CPDs). In three of these districts (Morang, Nawalparasi and Rautahat) this innovation resulted in more effective and efficient district-level decision making—notably supply decisions were made quickly to prevent stock-out at health facilities., Performance was weaker, however, in the other four districts due to the lack of appropriate skill level and motivation of the local staff.



## MONITORING

LMIS is monitored effectively by the LMIS Unit. LMD takes responsibility at the national level and Regional Medical Stores (RMSs) and District Health Offices (DHOs) monitor at field level. The LMIS unit sends the monthly reporting status to all 75 districts and RMSs and sends the quarterly feedback report to all districts and regions. The most common problem encountered has been the reporting of the opening balance each quarter. When this or other problems are identified, the LMIS unit sends the Individual Error Report to the HF experiencing the problem. NFHP and its district field staff also assist in monitoring the LMIS data. The flow of LMIS data is mapped out in Figure 3.

## LESSONS LEARNED

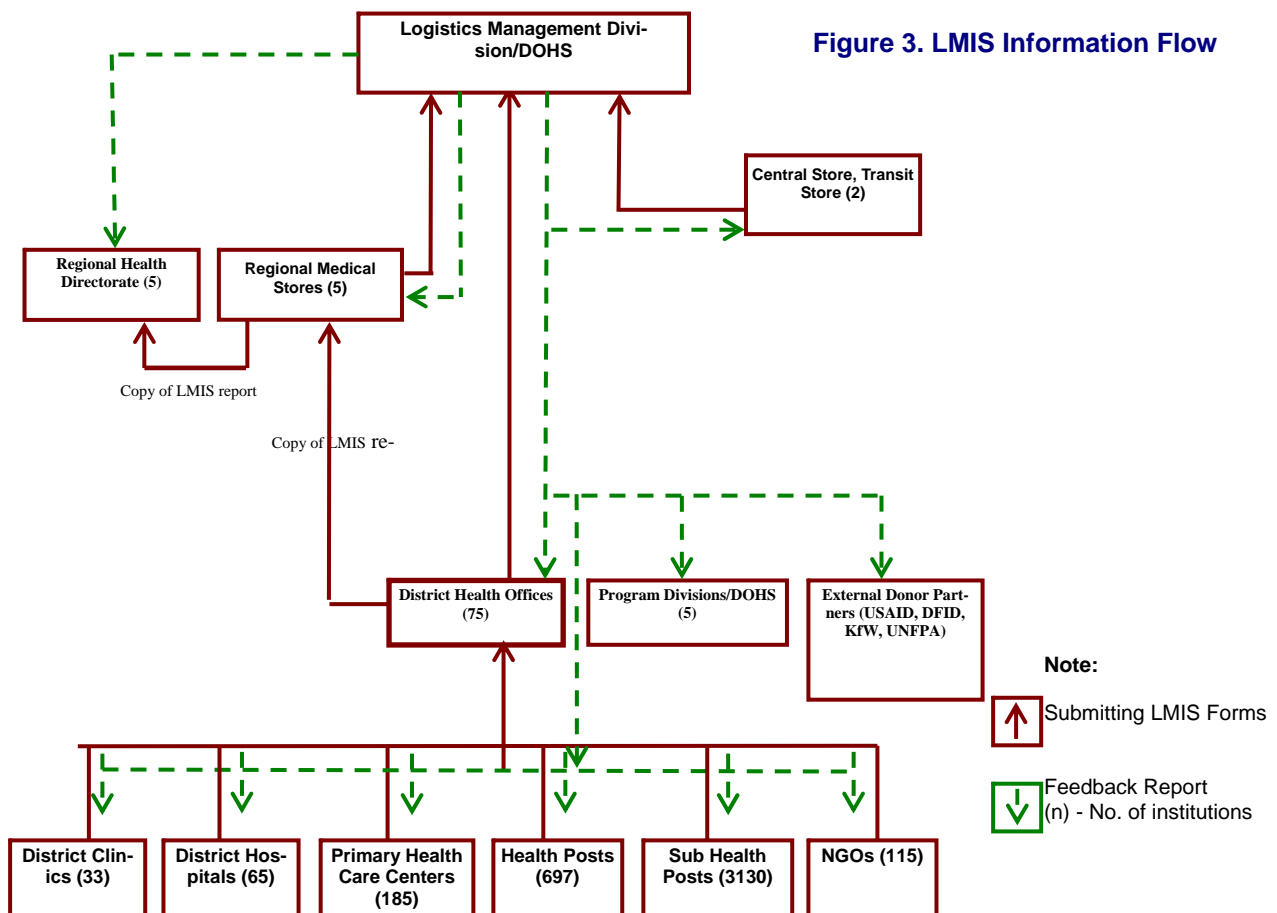
- **Sustained support for LMIS is critical for logistics achievement.** LMIS has been established as a key information resource for national-level forecasting, monitoring national health commodity stock levels, and monitoring consumption patterns in districts to orient the Annual Commodity Distribution Program (ACDP). ACDP is a collaborative distribution program supported by UNFPA (transportation cost) through which 16 months of contraceptive stocks are distributed to all 75 districts).
- **Local storekeepers require ongoing computer support and training.** Decentralized processing of LMIS was not very successful. Although storekeepers were trained and oriented in LMIS software, they were reluctant to use computers and were only comfortable manually processing LMIS. In districts, storekeepers were less skilled working with computers (even with computer training).
- **Donor commitment to LMIS support needs to have a long time horizon.** Sustained long term support for LMIS is needed until the MOHP is able to fully absorb the LMIS unit into the MOHP's structure.

## CHALLENGES

The LMIS at the district level and below is sustainable and health personnel have skills to use it. However, LMIS is still vulnerable at the central level. The government has still not assumed full management and funding responsibility for the system. Other donor partners have not yet come forward to support this activity and the MOHP, to this point, has not fully institutionalized the national LMIS unit within the MOHP system. Despite widespread recognition of the usefulness of the LMIS, it is still a challenge to sustain an LMIS unit within the LMD. Options for the future include:

- Advocate with government to create civil service positions for staff of the LMIS unit (currently donor-supported).
- Approach other donors who to fund LMIS unit.
- Advocate with government and donor partners to contract out the LMIS unit using development funds or any other possible resources.
- Integrate within a revised comprehensive HMIS

The frequent transfer of district storekeepers has also delayed and hindered the operation of LMIS.



## FUTURE PROSPECTS

Considerable progress has been made in building capacity of government personnel and preparing for complete transfer of ownership. LMD has proposed to contract out the services of LMIS unit staff to the private sector using the government development budget for the financial year 2007/2008.

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