



*Well-stocked storage room in Parbat district now uses the pull system to ensure a more consistent level of commodities in stock year-round.*

### *Old Push System*

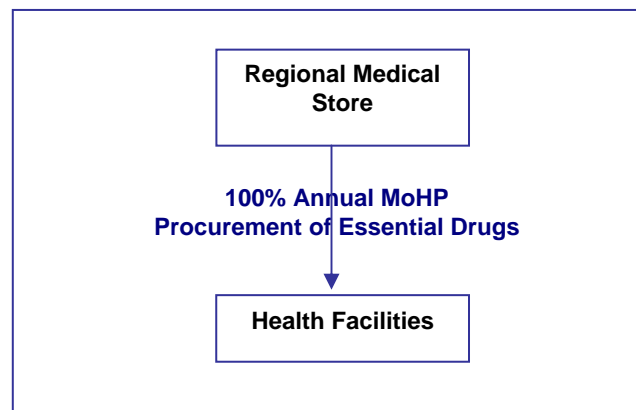
Prior to 2003, the Ministry of Health relied entirely on a ‘push system’ (Figure 1) to allocate health commodities based on historical consumption patterns and equitable rationing of national drug stocks. Separate distribution protocols existed for different commodities—vaccines, contraceptives, essential drugs, etc. Although this push system grew more sophisticated over the years, it increasingly failed to ensure reliable commodity availability within the Ministry’s expanding network of health facilities (HFs); the main reasons being that it could not accommodate any significant increase in demand such as epidemics and that frequently drugs that were not in high demand would expire and become wasted.

## **BACKGROUND**

In 1994, the Ministry of Health and Population (MOHP), with technical assistance from JSI, USAID and other external donors, began a process to institutionalize an effective health logistics system for the public sector. The Logistics System Improvement Plan (LSIP) was jointly developed by MoHP, JSI, USAID, and CDC in early 1994. Under LSIP, the storage infrastructure was improved, distribution rationalized, a Logistics Management Information System (LMIS) put in place, and logistics standards and procedures established at central, district, and sub-district levels. By 2006, stock outs had declined to below seven percent (from 40 percent in 1994) and this increased availability of health commodities improved service quality and gained Nepal recognition as having successfully established an effective health logistics system.

Since 2002, NFHP has continued to provide technical assistance to support the MoHP’s overall logistics system.

**Figure 1. Push System**



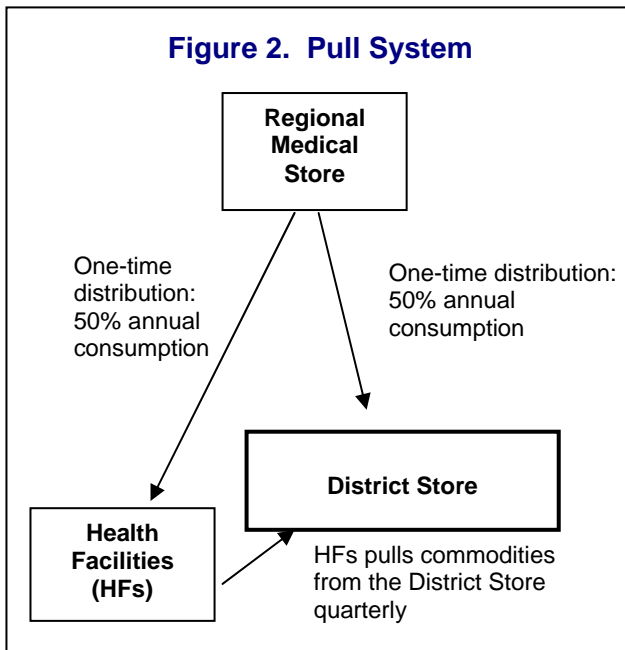
### **Key Achievements**

- Reduced stock outs and wastage and increased availability of health commodities at HFs in districts using the pull system.
- Acceptance and support for the pull system at both policy and operational levels.
- Increased utilization of health services in districts using the pull system.
- Increased and more accurate use of HMIS.
- Strengthened the Nepal Community Drug Program (NCDP).

## STRATEGIC APPROACH

### New Pull System

A pull system is a demand-based approach for ensuring the reliable availability of health commodities at all service delivery points within a health system. In 2003, the MOHP began a phased shift to a “pull system” (Figure 2) that provides more flexibility and control (with the ultimate goal of enhanced commodity availability). Under this new system—a hybrid ‘push-pull’ system designed specifically for Nepal—half the annual estimated consumption of an HF is dispatched directly to the facility. The remaining half is stored at district level for demand-based supply. Health facilities use the established LMIS to forward their demands quarterly to the appropriate district store. Meanwhile, regional medical stores maintain buffer stocks of 20 key essential drugs to supply district stores as per need. All HFs maintain six-month maximum stock levels with regular quarterly re-supply.



Two key advantages of this new pull system are: 1) all government-provided health commodities (vaccines, contraceptives, essential drugs) are merged under a single logistics distribution system—making the sub-district distribution system more efficient and 2) field-level health personnel are empowered because of decentralizing logistics decision-making.

A separate program of district store construction funded by KfW and DFID (31 new district stores including Cold Chain Room by KfW and 5 new district stores by DFID during 2002-2006), smoothed the way for the introduction of the pull system by providing the necessary district storage infrastructure.

### Phased Introduction to the Pull System:

In 2004/5, the pull system was introduced in six districts and in 2005/06 was extended to a further eight. In 2007/8, the Ministry expanded the system to another three, and committed to six more districts. So, by the end of the fiscal year 2007/08, 23 of 75 districts will be using the pull system. The MOHP has planned to expand the pull system gradually. They have proposed a government development budget for pull system training in six districts in the financial year 2008/09.

## ACTIVITIES

During the period 2003–2005, USAID (through JSI’s DELIVER Project) provided US\$55,700 for pull system training in 14 districts. During FY 2007/08, the Government of Nepal (GON) agreed to fund this training in three more districts (US\$ 11,400) and KfW is providing support for 6 districts (US\$ 96,500.)

The sequence of activities for the implementation of the pull system is as follows:

- Pull system task force formed within the MOHP.
- Pull system design workshop conducted (with external technical assistance).
- Pull system policies, procedures, and implementation plan developed.
- Pull system training curriculum and training of trainers completed; pull system training conducted for logistics personnel and health providers.
- Pull system monitoring system with tools developed; supervision and monitoring begins (GON and external partners share monitoring responsibilities).

After the pull system implementation was underway, the MOHP needed additional donor funds to ensure full supply of essential drugs. An incomplete supply was found to undermine the smooth operation of the pull system.

## RESULTS

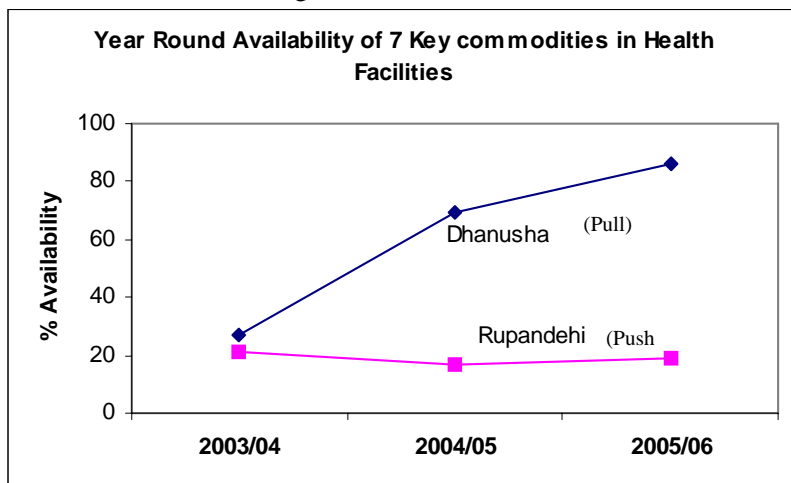
- In districts using the new pull system, **wastage and expiry of drugs** declined and reliable availability of health commodities increased (Ref: LMIS, MoHP) reflected in reduced stock-outs. The pull system also appears to have contributed to improving LMIS reporting (up from 90 to 98 percent reporting in the pull districts).
- An unanticipated result of introducing the pull system was a **strengthened Nepal Community Drug Program (NCDP)**. Under NCDP, HFs fund some of their operations by selling essential drugs. The enhanced availability of commodities resulting from the pull system allowed NCDP sites to sell more commodities and raise more revenue.
- **Acceptance and support for the pull system at both policy and operational levels.** Government policymakers see the pull system as supporting their broader goal of decentralization; districts see it as enhancing district control over health resources; health providers see it providing their clients with a more reliable supply of commodities.
- **Increased utilization of health services in districts using the pull system.** For example, the due to better availability of Cotrim-P, the number of new cases treated Dhanusha District under the pull system increased markedly, while the cases in Rupandehi District—using the push system—remained unchanged.

## LESSONS LEARNED

- **By shifting logistics decision-making to lower levels, a pull logistics system can support the overall government policy of decentralization.**



*New storeroom with well-stocked shelves.*



- **A full supply of essential drugs and regular technical support visits are needed during the initial implementation period.** Though full supply of essential drugs was not possible due to budget limitations, regular supervision and monitoring visits contributed to managing the supply of essential drugs and to preventing wastage and expiry.
- **Initial skepticism was overcome by showing positive results.** Because of the limited supply of essential drugs there was some uncertainty and skepticism about the functioning and acceptance of the pull system. However, after implementation on a limited scale with demonstrated success, health providers and policymakers accepted that the pull system was effective and advocated and supported its expansion.

- **Successful introduction of a pull system is best achieved by a carefully phased change from an old push system.** The change from a *push* to a *pull* system brings about positive changes among health providers by enhancing their control of health commodities. A pull system reduces stock outs and increases reliable availability of health commodities.

## CHALLENGES AND CONSTRAINTS

- Significantly increased workload, especially for district storekeepers.
- Some district logistics staff were reluctant to use modern technology (computers and software), despite training.
- District transportation budgets were inadequate for the now-required quarterly distribution to HF's. NFHP is working with the MOHP to increase the district transportation budgets.
- There were insufficient quantities of essential drugs to meet full demand, requiring a temporary return to rationing (push)—an approach to logistics management that tended to undermine the newly introduced pull system.
- There is a lack of trained logistics personnel at HF level to manage the pull system due to 1) frequent staff transfers and 2) staff vacancies.
- There is inadequate supervision and support (and accountability) for district store personnel, who are the mainstay of the new pull system.
- Inadequate resources for effective monitoring/ supervision of the system.

The MOHP has already taken steps to address some of these challenges. For example, HF staff have been directed to assist district stores at the time of the quarterly distribution and the MOHP intends to increase district transportation budgets in the next government budget cycle.

## SCALE UP

With the benefits of the new pull system now well documented, the MOHP wants to expand it to the remaining 52 districts where it has not yet been implemented. The MOHP is exploring implementation strategies that reduce reliance on external donor support and that rely more on the government's own resources and capabilities; MOHP envisions a nationwide pull system within three years.

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