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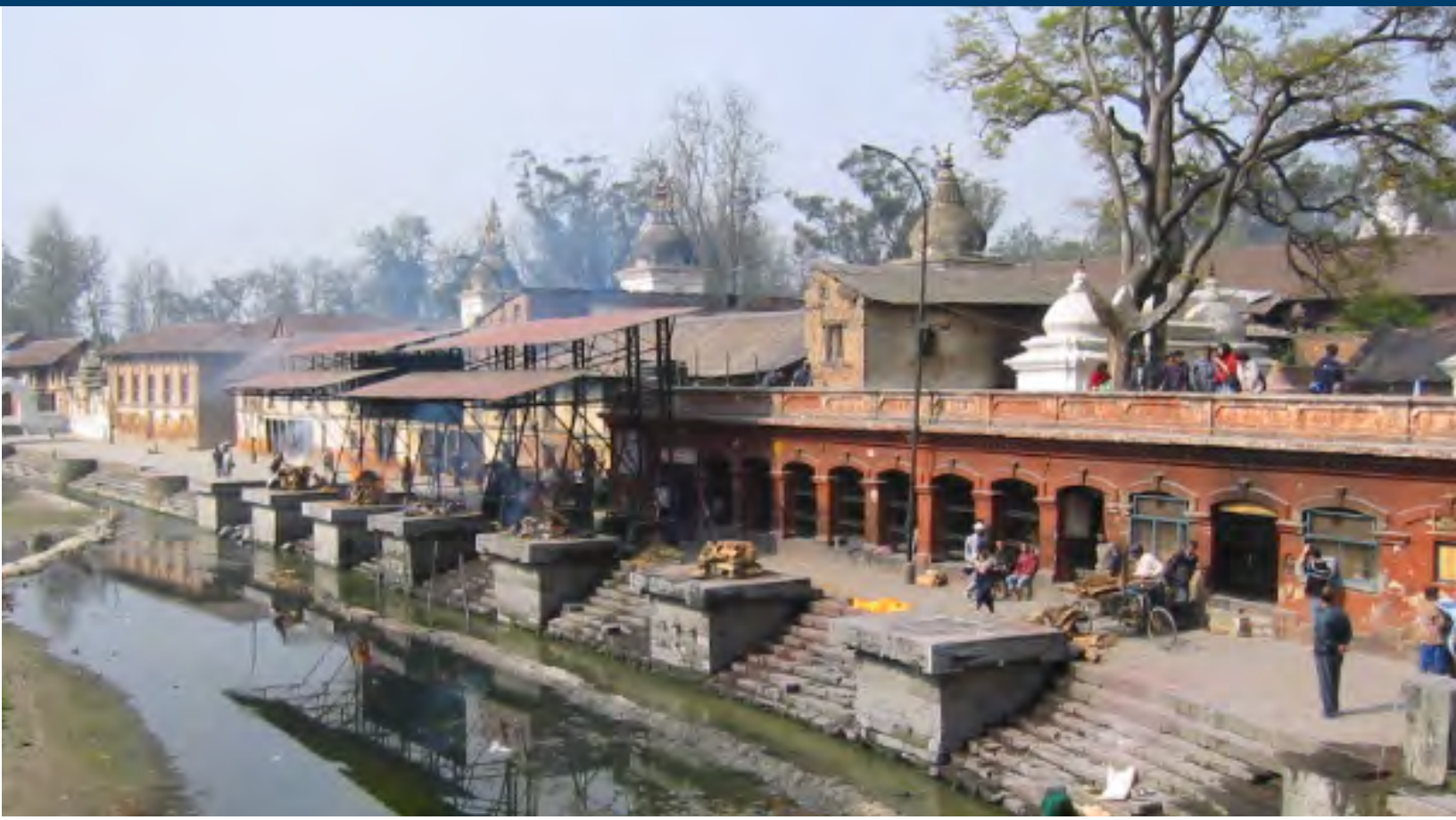

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DELIVER
No Product? No Program. Logistics for Health

NEPAL: FINAL COUNTRY REPORT

DELIVER

DELIVER, a six-year worldwide technical assistance support contract, is funded by the U.S. Agency for International Development (USAID).

Implemented by John Snow, Inc. (JSI) (contract no. HRN-C-00-00-00010-00) and subcontractors (Manoff Group, Program for Appropriate Technology in Health [PATH], and Crown Agents Consultancy, Inc.), DELIVER strengthens the supply chains of health and family planning programs in developing countries to ensure the availability of critical health products for customers. DELIVER also provides technical management of USAID's central contraceptive management information system.

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Abstract

Logistics is a mission-critical function in any health program. Health care management is a challenge in Nepal because of geographical adversities, resource constraints, and the recent conflict situation. The goal of DELIVER's technical assistance to the Ministry of Health and Population's health logistics activities is to improve the availability of contraceptives and other key program commodities at the health facility and community level, thereby increasing service utilization. Availability of key commodities at the service delivery points, increased reporting percentages, and improved storage standards at all levels of the health institutions are key to delivering essential health care services to the Nepalese people. DELIVER support focuses on capacity building and skills transfer to the government system for long-term sustainability of the program.

DELIVER
John Snow, Inc.
1616 North Fort Myer Drive, 11th Floor
Arlington, VA 22209 USA
Phone: 703-528-7474
Fax: 703-528-7480
Email: deliver_project@jsi.com
Internet: www.deliver.jsi.com

CONTENTS

ACRONYMS

AIDS	acquired immunodeficiency syndrome
BHSP	Basic Health Services Program
BLT	basic logistics training
BUCEN	U.S. Bureau of the Census
CPD	core program district
DFID	Department for International Development (UK)
DOHS	Department of Health Services
D(P)HO	District (Public) Health Office
DHP	District Health Program
DHS	Demographic and Health Survey
ED	essential drug
EDP	external development partner
EPI	Expanded Programme on Immunization
FCHV	female community health volunteer
FHP	Family Health Program
FY	fiscal year
GON	Government of Nepal
HFMC	health facility management committee
HIV	human immunodeficiency virus
HLCCM	health logistics and cold chain management training
IMS	inventory management software
IPPF	International Planned Parenthood Federation
JICA	Japan International Cooperation Agency
KfW	*Kreditanstalt für Wideraufbau* (German Development Bank)
LMD	Logistics Management Division
LMIS	logistics management information system
MCHW	maternal and child health worker
MOHP	Ministry of Health and Population
NCASC	National Center for AIDS and STD Control
NFHP	Nepal Family Health Program
NHTC	National Health Training Center

NR	Nepalese rupee
OI	opportunistic infection
RMS	regional medical store
SCMS	Supply Chain Management Systems
SDP	service delivery point
SOP	standard operating procedures
STI	sexually transmitted infection
TOT	training of trainers
UNAIDS	Joint United Nations Program on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

ACKNOWLEDGMENTS

The achievements described in the Nepal final country report are the result of a collaborative effort from 2000 to 2006 among the Ministry of Health Logistics Management Division (LMD), Department of Health Services, U.S. Agency for International Development (USAID)/Nepal, and the DELIVER project. DELIVER is a USAID technical assistance project implemented in collaboration with the Nepal Family Health Program.

The DELIVER team would like to express sincere appreciation to the many people who contributed to the completion and success of the DELIVER-supported activities in Nepal.

A special acknowledgment is given to the Director of the Logistics Management Division (LMD) and Family Health Division and all LMD personnel charged with implementing an effective and efficient health logistics system. Their continued efforts are reflected in the improvements in the logistics indicators. Support from successive teams in USAID's Office of Health and Family Planning and other offices within USAID has enabled the DELIVER team to work successfully. Special gratitude goes to collaborating partner organizations *Kreditanstalt für Wideraufbau* (KfW), United Nations Population Fund (UNFPA), Japan International Cooperation Agency (JICA), UNICEF, and Department for International Development (DFID) for their support to the DELIVER mission.

Community-based health workers, particularly the female community health volunteers, have contributed significantly to improvements in health logistics over the years. DELIVER is proud to have been associated with training, supporting, and empowering the pillars of primary health care in thousands of villages in Nepal.

Finally, special thanks are given to a wide range of people involved in the process who make the logistics system work by spending their valuable time planning needs estimates, allocating resources, ensuring timely procurement, and delivering the supplies to the service delivery points and users.

EXECUTIVE SUMMARY

This report reviews the activities undertaken by DELIVER during the funding period October 2000 to September 2006. Under the new USAID organizational arrangement, DELIVER logistics services were integrated within the Nepal Family Health Program (NFHP), a five-year USAID bilateral project starting in December 2001. NFHP's activities were located primarily in 17 core program districts (CPDs). With the change in the scope of work under the NFHP, the DELIVER logistics team was reduced from 14 to four staff members over a five-year period, during which most of the logistics activities were handled through the NFHP. NFHP regional field offices were limited to providing assistance to CPDs. The Ministry of Health and Population (MOHP), NFHP, and USAID felt a need to continue the logistics work to prevent deterioration of the already established national logistics system. To address the needs from the second year onward, the number of staff supported through DELIVER was increased from two to 11.

With DELIVER support, logistics management information system (LMIS) reporting, stock balances, and storage conditions have improved, and supervision/monitoring of the logistics system has increased. The DELIVER staff, through NFHP, consistently monitor LMIS reporting at the national level by conducting joint supervision and monitoring at regions, districts, and service delivery points (SDPs). The proportion of health facilities that adequately maintain the seven key commodities in the NFHP CPDs increased significantly. LMIS reporting rates across the nation are also maintained at or around 88 percent.

Strengthening the LMIS at both central and regional levels has improved the turnaround rate of information and the quality of supply decisions. Faster LMIS processing using the central LMIS database at the LMIS Unit, Teku, is critical to processing LMIS reports received from health facilities across the nation. Similarly, regional medical stores' (RMS) inventory management software has helped theses facilities to make supply decisions within the region in time to prevent stockouts of health commodities. Continuing warehouse modernization, cleanup, auctioning, and disposal of unusable supplies at different levels of the system have freed usable hospital space and generated revenues. The reorganization and dejunking have also helped stores to maintain storage standards.

Bir Hospital is the only national referral hospital in Nepal that serves the entire country, especially the poor and underprivileged. The hospital was in serious need of logistics management improvements, but lacked the funds to strengthen and develop the required technical expertise. The Ministry of Health and Population asked DELIVER, through USAID support, to clean and reorganize the stores, provide limited store equipment, repair storerooms, provide logistics training and orientation to storekeepers and department managers, and devise an automated inventory management system with an LMIS monitoring component networked for commodity tracking.

In an attempt to raise the overall skill level of health personnel in health commodity logistics, logistics training for various levels of these personnel was conducted with the goal of improving the quality of health services delivered at the SDPs. Logistics training for maternal and child health workers (MCHWs), basic logistics training (BLT), health logistics, and Expanded Programme on Immunization (EPI) cold chain management, procurement training, and pull system for essential drugs was an attempt to improve the quality of health services at the community level as well as the marginalized section of the population's service utilization.

NFHP and DELIVER also supported HIV/AIDS logistics activities with the National Center for AIDS and STD Control. These activities focused on system assessment, logistics system design, and rollout. The system has received approval and support from the Director General of the Department of Health

Services. DELIVER also produced a three-year forecast for the following HIV/AIDS commodities: HIV tests, antiretrovirals (ARVs), sexually transmitted infection (STI), and opportunistic infection (OI) drugs.

The level of support at the community level will play an important role in making health services more effective, efficient, and accessible to all segments of the population at the community level for high-intensity and high-impact services.

PROGRAM BACKGROUND

COUNTRY CONTEXT

Nepal is a land-locked country nestled in the foothills of the Himalayas. While land area of the country is 147,181 square kilometers, geographically Nepal is divided into three distinct regions based on climatic condition and ecological diversity. The Terai region is a narrow belt lying at the foothills of the Himalayas covering about 23 percent of the land area. The hill region constitutes a broad complex of hills and valleys spanning 42 percent of the total land area. The mountain region is a perpetually snowy region covering 35 percent of the total area; only 2 percent of the mountain region is habitable.

Administratively the country is divided into five development regions and 75 districts. Each district has been divided further into the smallest administrative unit, the village development committees and municipalities. According to the 2001 census, the population of the country was 23,151,423, with 11,563,921 males and 11,587,502 females and a population density of 157 people per square kilometer.

Nepal is predominantly a rural and agrarian economy, and the Nepalese population relies on agriculture for its livelihood. Only 14 percent of the population lives in urban areas; however, there is increasing migration to the Terai and the urban centers. Nepal is among the 10 poorest nations in the world and remains one of the poorest countries in Asia, with 31 percent of the population still living below the poverty line. The ongoing political instability has made it harder for reform initiatives to be effective. In 2005, the gross domestic product per capita was $260.[1] Life expectancy at birth in 2005 was 60.2 years, and the adult literacy rate was 56 percent.

Health indicators are poor by international standards, especially in rural areas. Leading diseases and illnesses include diarrhea, gastrointestinal disorders, goiters, intestinal parasites, leprosy, and tuberculosis. Nepal also has high rates of child malnutrition (72 percent in 2001) and under-five mortality (91.2 deaths per 1,000 live births in 2001). According to United Nations data for 2003, approximately 60,000 persons aged 15 to 49 had HIV, and the HIV prevalence rate was 0.5 percent. See table 1.

Table 1. Nepal Profile

Population	**23,151,423 (Census 2001)**
Maternal mortality rate	539/100,000 live births
Neonatal mortality rate	39/1,000 live births
Infant mortality rate	64.4/1,000 live births
Under-five mortality	91.2/1,000 live births
Births within a health facility	18.3 percent of all births
Contraceptive prevalence rate	39 percent
Total fertility rate	3.7 percent
Knowledge of family planning methods	99.6 percent
Antenatal care provided during first visit as percentage of expected pregnancies	66 percent
Life expectancy at birth*	62.2 years

Source: (Demography and Health Survey 2001)
*(Government of Nepal, Central Statistics Office, 2003)

[1] All dollar amounts are U.S. dollars until stated differently.

KEY PLAYERS AND ROLES

An efficient LMIS for health care commodities involves technical, managerial, and administrative expertise from all stakeholders involved in the area. Various external development partners (EDPs) are actively involved in facilitating health care logistics activities with which DELIVER has worked collaboratively. Below is a summary of the EDPs involved in health care logistics activities in Nepal.

LOGISTICS MANAGEMENT DIVISION/DEPARTMENT OF HEALTH SERVICES

The Logistics Management Division (LMD) was established within the Department of Health Services (DOHS) of the Ministry of Health and Population (MOHP) in 1994 to facilitate health care logistics activities at all levels of health institutions. The objective of the LMD is to plan and carry out logistics activities for the uninterrupted supply of essential drugs (EDs), vaccines, contraceptives, and equipment using the LMIS and health management information system to deliver health care services efficiently to all health institutions in the country.

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

USAID, which has been supporting health sector programs in Nepal for over 50 years, focuses on four major areas: family planning, maternal and child health, HIV/AIDS, and infectious diseases. USAID provides financial support for technical assistance, training, behavior change communication, and logistics management. The primary USAID-supported bilateral technical support to the Government of Nepal (GON) is The Nepal Family Health Program (NFHP).

NEPAL FAMILY HEALTH PROGRAM

NFHP is a six-year USAID-funded bilateral program, started in 2000, that is designed to support the GON in family planning, safer motherhood, community-based integrated management of childhood illness, prevention and control of vitamin A deficiency, health commodity logistics, behavioral change communication, pre- and in-service health care training, and quality assurance. NFHP emphasizes community level service delivery in 17 core program districts (CPDs) and 10 limited technical assistance districts.

KREDITANSTALT FÜR WIDERAUFBAU (KfW)

KfW, on behalf of the German government, finances and supports health sector programs in Nepal through three programs: the Basic Health Services Program (BHSP), the Family Health Program (FHP), and the District Health Program (DHP). BHSP provides consulting services and quality assurance during the procurement tendering process for ED and basic medical equipment; NFHP focuses on procurement of contraceptives, drugs, and consulting services to its components; and DHP supports renovation of health facilities in various districts.

DEPARTMENT FOR INTERNATIONAL DEVELOPMENT

The Department for International Development (DFID) works in the health sector toward three health-related millennium development goals: reducing child mortality, improving maternal health, and combating HIV/AIDS. DFID works closely with MOH/DOHS and other EDPs to increase contraceptive prevalence rate, reduce unmet need of contraceptives, and fight the HIV/AIDS epidemic.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

JICA support extended in the health sector is provided in two main areas: promotion of public health activities focusing on maternal, child, and community health, and promotion of the health care delivery system. JICA is also providing technical cooperation in the fight against HIV/AIDS.

UNITED NATIONS POPULATION FUND (UNFPA)

UNFPA seeks to contribute to reducing poverty and improving the quality of life of Nepalese people by improving reproductive health; ensuring a balance between population dynamics and socioeconomic development; and enhancing gender equity, equality, and women's empowerment. UNFPA plays a major role in mobilizing financial resources for population and reproductive health programs in Nepal.

UNITED NATIONS INTERNATIONAL CHILDREN'S FUND (UNICEF)

UNICEF supports the GON by providing technical support to the Expanded Programme on Immunizations (EPI), prevention and control of vitamin A deficiency, iron supplementation, deworming, etc.

KEY CHALLENGES

The logistics systems in Nepal exist despite environmental and systematic challenges. Topographical barriers and a limited infrastructure make service delivery of health commodities to remote areas impossible or prohibitively expensive, resulting in constrained health programs. The environmental constraints of the system include geographical restrictions, health facilities with limited resources (financial, human, infrastructure, etc.), and political unrest that restricts free movement around the country. In addition to the environmental challenges, logistics lacks prioritization within the MOHP, and accountability for logistics activities is not fully developed within the health system.

From a programmatic point of view, the logistics system functions in the wake of commodity insecurity at the community and facility level, low LMIS reporting rates, minimal stock level monitoring, and an unstable distribution system. Of particular note, the district and lower levels have difficulty maintaining adequate stock. Transportation of supplies is irregular and unreliable because of lack of transportation resources or uncertainty about transportation availability. Inadequate procurement planning and insufficient funding for health supplies result in stockouts and overstock of commodities. Finally, lower-level facilities in particular lack the skills and resources to manage all of the logistics activities and have inadequate storage space for the supplies that are available.

Although the health area is not directly affected by the ongoing political conflict, certain restrictions and precautions are observed when conducting field visits. The project has to constantly make alternative plans, keeping in view the closure of transport and lack of mobility.

The Nepal LMIS is still fragile and vulnerable, and the government still has not taken responsibility for the LMIS in the system, except for printing of LMIS forms. The government does not currently have plans to maintain and operate the LMIS on its own; however, the MOHP has started funding the printing of LMIS forms and stock books. This is one of the key areas that needs special support until it is fully integrated into the government system.

A major outstanding challenge is the sustainability of logistics work when and if the current EDPs phase out of their current activities. The EDPs have been funding key logistics activities for over a decade, and current reality might suggest that the MOHP is not able to manage all of these activities by itself without outside technical assistance. The big challenge will be to convince the MOHP that the external funds should be used for advanced activities while the MOHP manages the rudimentary and routine functions already well established.

GOALS AND OBJECTIVES

DELIVER OBJECTIVES

The DELIVER technical assistance provided to the MOHP from 2000 to 2006 focused on achieving contraceptive and essential health commodity security by strengthening logistics systems. The outcomes of the technical assistance minimized stock imbalances at the service delivery sites. Additionally, DELIVER supported the delivery of essential health care services, as mentioned in the *Health Sector Reform and Long-Term Health Plan* of MOHP.

RELATIONSHIP TO USAID AND CLIENT OBJECTIVES

USAID/Nepal is involved in DELIVER logistics system strengthening activities through the regular communications mechanisms of NFHP. DELIVER communicated directly and simultaneously with USAID/Nepal and the NFHP regarding USAID/Washington Central Commodity Management/NEWVERN issues. Similarly, DELIVER kept both USAID/Nepal and the NFHP informed of global and regional commodity security developments that may affect Nepal such as the regional contraceptive security meeting.

DELIVER'S ROLE IN RELATION TO OTHER ORGANIZATIONS

Since the logistics component is understood to be integral to NFHP's implementation plan, the NFHP Logistics Unit Team Leader remained in constant communication with the U.S.-based DELIVER Country Team Leader for Nepal. The NFHP Logistics Unit Team Leader was responsible for ensuring that all parties in the field were included in technical logistics discussions and decisions as appropriate.

DESCRIPTION OF STRATEGIES

DELIVER focused on developing commodity management guidance for local-level village development committees; monitoring and evaluating district health office effectiveness based on logistics data; overseeing construction and operationalization of district stores built with funding from other donors (e.g., KfW); improving both design and functionality of the MOHP LMIS; modernizing and renovating the central warehouse; and building logistics capacity for central, regional, district, and service delivery point (SDP)-level health personnel.

SUMMARY OF DELIVER FUNDING AND STAFFING

FUNDING

Funding for DELIVER field support is summarized by fiscal year (FY) in table 2. During the report period, Nepal received $1,240,000 of which 45 percent was for population activities and 30 percent was allocated to support HIVAIDS activities. Additionally, 15 percent was used for managing supplies for infectious disease and 10 percent for child survival. All of the funding was used to support the integrated system of Nepal. In addition to the funding shown in table 2, USAID/Nepal has allocated $250,000 for HIV/AIDS technical assistance through the Supply Chain Management Systems (SCMS) project.

Table 2. Funding for DELIVER Field Support by Fiscal Year

Fiscal Year	Funding Allocation (U.S.$)
2001	315,000
2002	125,000
2003	—
2004	150,000
2005	200,000
2006	450,000
Total	**$1,240,000**

STAFFING

Made up of core personnel, DELIVER staff worked with the NFHP staff that had logistics responsibilities. The DELIVER staff were hired throughout the six years as needed by the program. Four of the staff are headquarters-based technical staff; five logistics support officers are located at the regional level; and two are community-level coordinators (Ilaka). As of March 2006, all DELIVER staff except the headquarters-based project finance officer have been transferred to the NFHP. A summary of the DELIVER staff hiring dates is shown below.

June 2002	Two Program Officers
August 2003	Four Logistics Support Officers
October 2003	One Logistics Support Officer
July 2005	One Admin/Finance Officer
September 2005	Two Ilaka-level Coordinator and One Logistics Support Officer

PROGRAM RESULTS

ELEMENT I: IMPROVED LOGISTICS SYSTEM

DELIVER provided technical assistance as well as limited funding for local costs associated with NFHP's logistics-strengthening activities. NFHP's logistics activities include Ilaka-level interventions; strengthening of logistics information systems; regional logistics workshops to address emerging logistics issues; joint technical support visits to address such issues as stockout, supply imbalances, decentralized processing of LMIS, use of LMIS, LMIS reporting, and use of the pull system; and district storeroom construction with warehouse modernization, repair, and renovation of the MOHP central warehouse, etc. Funding for construction was received from KfW. All of these activities contributed to improved logistics indicators.

INCREASED STOCK AVAILABILITY

Over the past three years there have been reports of continual stockouts in the health facilities as well as at community levels in NFHP CPDs,[2] mainly in Siraha, Bara, Bardiya, Banke, Sunsari, Mahottari, and Parsa districts. Although there has been an increase in the percentage of health facilities that have year-round availability of seven key commodities,[3] many districts still experienced high stockout rates. The NFHP Logistics Team designed and developed a special LMIS report to monitor stockouts of the seven key commodities in districts and health facilities. The team began intensive monitoring and supervision of the CPDs to minimize stockouts of these commodities in health facilities. Analysis of the monitoring data allowed the team to identify the key program item that regularly has the highest stockout rate. DELIVER technical support staff from the capital frequently provided supervision to the poorly performing districts to identify and resolve the cause of the high stockout rate. NFHP field offices and logistics support officers stationed at regional medical stores (RMS) were mobilized to assist with this supervision and provide oversight to the problem CPDs. With all of these efforts, availability of key commodities at the SDPs increased significantly. Table 3 indicates the successful decrease in stockouts of the seven key commodities since the start of the Ilaka-level orientation.

Ilaka-level meeting in Dhanusha (June 2005)

[2] NFHP Core Program Districts are Jhapa, Morang, Sunsari, Siraha, Dhanusha, Mahottari, Rautahat, Bara, Parsa, Chitwan, Rasuwa, Nawalparasi, Banke, Bardiya, Bajura, Kailali, and Kanchanpur.

[3] Condom, pills, injectables, oral rehydration salts, vitamin A, cotrimoxazole, and iron tablets

Table 3. Percentage of Health Facilities with All Seven Key Commodities Available in All Four Quarters

District	58/59 (2001/02*)	59/60 (2002/03)	60/61 (2003/04)	61/62 (2004/05)	62/63 (2005/06) (2nd Qtr)
Jhapa	20	14	44	90	80
Morang	23	24	42	79	90
Sunsari	12	10	65	100	100
Siraha	6	8	24	71	72
Dhanusha	17	22	27	69	86
Mahottari	2	4	38	84	78
Rautahat	43	32	67	93	98
Bara	13	12	15	27	47
Parsa	23	20	44	66	81
Rasuwa	39	53	67	82	53
Chitwan	48	59	56	68	85
Nawalparasi	46	45	40	56	66
Banke	38	28	19	81	94
Bardiya	30	33	27	70	74
Kailali	47	40	79	26	47
Kanchanpur	14	19	67	48	52
Bajura	41	44	26	4	7
17 CPDs	**27**	**27**	**44**	**66**	**71**

*Nepal calendar years

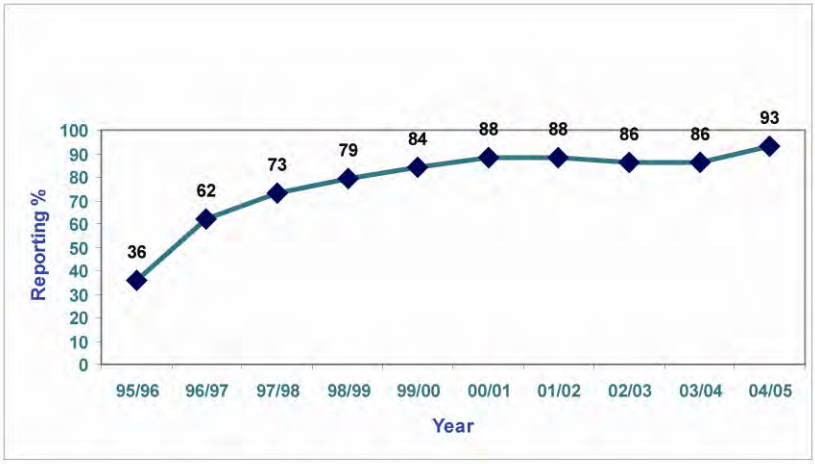
STRENGTHENED REPORTING RATE

As illustrated in figure 1, the LMIS national health facility reporting rate improved from 36 percent in 1995 to 93 percent in 2005. From 2000 to 2005, the reporting rate was maintained well above the milestone of 85 percent. Health facilities information is updated regularly, and the districts are increasing the use of LMIS data for decision making. The LMIS data bank is used regularly to monitor the stock status of the seven key commodities in districts and health facilities.

STRENGTHENED LOGISTICS MANAGEMENT INFORMATION SYSTEMS

A major success for the MOHP, the LMIS operates reliably, processing data from more than 4,000 health facilities each quarter to produce data needed for operational management of the MOHP logistics system, including regular stock resupply decisions. The LMIS Unit of the LMD compiles these data into quarterly reports that are distributed to districts and regions, to concerned MOHP divisions at the central level, and to EDPs where appropriate. With the successful increase in logistics data managed at the central level, the Microsoft Access-based server in the LMIS Unit has become slow. As a result, this server must be replaced with faster, more efficient LMIS software at the central level to save time for data entry, data verification, and feedback report generation activities.

Figure 1. Percentage of Health Facilities Submitting LMIS Forms



Given the volume of supplies that RMSs have to manage throughout the year, faster turnaround of inventory information is required to make effective and efficient supply decisions for the country. To address this, the RMS inventory management software (IMS) was developed to monitor the stocks by the DELIVER Logistics Team in coordination with the LMD. The benefit of the IMS at the central level has led to the belief that RMSs could benefit from a similar system. Establishing a well-functioning inventory management system with the creation of an inventory database of expendable items at the RMS level will enhance the resupply decision and transfer critical skills to RMS staff, thus strengthening the capacity of RMS staff.

STRENGTHENED BIR HOSPITAL LOGISTICS

Bir Hospital is the only national referral hospital in Nepal that serves the entire country, especially the poor and underprivileged. The hospital was in serious need of logistics management improvements, but lacked the funds to strengthen and develop the required technical expertise. In April 2003, the MOHP asked USAID to assist in strengthening the Bir Hospital logistics system. The first stage of technical assistance strengthened the storage capacity of Bir Hospital by repairing, refurbishing (roofing and other repair), and refurnishing the store room (provided racks and pallets for storage), which was vacant and not in use. Additionally, DELIVER assisted in dejunking the unusable supplies that had accumulated in the hospital over the years. The general hospital store was moved to the newly refurbished room, which emptied the old store and allowed the hospital to install 48 additional patient beds.

DELIVER developed an automated IMS at the hospital to strengthen the health logistics management for providing effective and efficient essential health services in different service delivery units and wards. The local area network-based computer system was installed in four wards. Four computers, printers, uninterruptible power supplies, computer tables, and chairs were also delivered to the hospital as part of program support, and key staff received basic health logistics training to improve their knowledge and skills in this field.

Success Story: Additional Space for 48 Patient Beds

There was heavy pressure to increase the number of beds in Bir Hospital, but management was unable to meet this need because the required construction was too expensive. Additionally, there was no available space or land for the required construction. After cleaning and reorganizing the general store, the big hall on the ground floor of the facility, which had been occupied by the store, was freed. This free space allowed for 48 additional beds: 24 for general care and 24 for intensive care. The old hospital building was renovated and the general store was moved. The 48 additional beds resulted in a 12 percent increase in the number of beds, now allowing 17,520 indoor hospital days per year.

WAREHOUSE MODERNIZATION/DEJUNKING AND CLEANUP

Increasing district-level storage capacity has been a successful DELIVER activity. In addition to the district focus, many health facilities below the district level are in critical need of storage equipment such as racks, pallets, and cupboards. Many peripheral health facility stores also require assistance and have requested DELIVER support for storeroom accessories such as racks, pallets, and cupboards. DELIVER assessed the need of the health facilities in coordination with the respective District/Provincial Health Offices (D/PHOs). Based on the report from the D/PHOs, the required storage equipment was provided to health facilities in Kanchanpur, Kailali, Dhanusha, Jhapa, and Mahottari districts. This initiative improved the storage quality of health commodities and maintained storage standards at the facility stores. The goal of improving storage standards at the sub-district health facilities is to minimize waste and expiry of valuable health commodities, thereby saving people's lives, increasing service utilization, and conserving valuable resources.

In 2005, the LMD asked DELIVER to clean and reorganize the Mechi Zonal Hospital and Narayani Subregional Hospital. In addition to dejunking and reorganizing the storage space, this DELIVER-supported activity was able to free a total of 5,730 square feet of space at the facilities, and the Narayani Subregional Hospital was able to generate Nepalese rupees (NRs) 338,000 (approximately $5,000) by auctioning off items to be disposed of in a public forum. This profit was deposited into the National Treasury. The DELIVER logistics team also provided technical assistance to the D/PHO in the Kathmandu and Sagarmatha (Rajbiraj) Zonal Hospitals for cleanup, auctioning, and disposable of unusable commodities. A total of NRs 29,000 (approximately $430) has been collected from this activity and deposited in the National Treasury, and a 1,050-square-foot area has been vacated, which can now be used for health care purposes.

In 2005, unusable health commodities, old vehicles, and vehicle parts were auctioned and disposed of in the LMD complex at Teku. This auctioning and disposal vacated a total of 2,800 square feet and generated NRs 865,001 (approximately $12,700), which was deposited into the National Treasury. The free space is now used for packing and loading commodities for transportation. DELIVER has participated in similar activities in the Teku complex premises.

LMD: Brick Soling

Cleaned Pavement: LMD

One simple, yet effective activity undertaken to improve warehousing facilities throughout the country was to procure eight electronic weighing machines for the LMD to distributed to central, transit, and regional warehouses. These weighing machines have the capacity to weigh 300 kg and increase the efficiency of day-to-day activities, such as packing cartons to the right weight to fit into a vehicle and estimating the price for a carrier, in the warehouses.

TRANSPORTATION OF COMMODITIES TO DISTRICTS IN EMERGENCY SITUATIONS

During FY 2004/2005, the RMSs in Nepalgunj and Biratnagar asked the LMD to provide support for the transportation of annual indent drugs by air because, due to the conflict prevailing in the region, these commodities could not be transported by road. The LMD director requested financial support from donors to airlift the annual indent drugs (EDs) because the SDPs were having problems providing the curative services needed. These drugs were already packed and to be delivered in December 2004–January 2005, but due to the conflict, the RMSs were not able to deliver to the districts. USAID/Nepal, through DELIVER, provided financial support to deliver these drugs to the conflict areas of Solukhumbu and Okhaldhunga, ensuring availability of critical drugs at the SDPs that otherwise would have been stocked out.

ELEMENT II: IMPROVED HUMAN CAPACITY IN LOGISTICS

Human resources make the supply chain work effectively and efficiently. Everyone who interacts with the supply chain has a customer service role, and each person must be customer-oriented for the logistics system to function optimally. Therefore, people in the supply chain need specific skills, knowledge, attitudes, and motivation or internal drive to succeed. DELIVER is strengthening human resource capacity in logistics. Efforts to date in human resource capacity building have been directed principally toward strengthening the LMD at the central level and providing basic training for staff at the district and at the SDPs. The training materials from these interventions have been prepared and published. DELIVER supported the following trainings to improve the logistics capacity of health personnel at different levels.

LOGISTICS TRAINING FOR MATERNITY AND CHILD HEALTH WORKERS/FEMALE COMMUNITY HEALTH VOLUNTEERS

Female community health volunteers (FCHVs) are considered one of the best resources to improve utilization of health commodities at the community level. The community-based maternal and child health workers (MCHWs) are the best linkage to work with FCHVs because they are based in the community and act as paramedics. Therefore, MCHWs were linked to FCHVs, who were used to distribute health commodities effectively for providing quality health services at the community level.

In a subhealth post there is no separate position to manage logistics activities, so such management often is the responsibility of other personnel, such as MCHWs and FCHVs. Therefore, it is strategically necessary for these positions to receive logistics management training. In FY 2005/2006, over 400 MCHWs and FCHVs in five districts were given logistics training. The intended outcome of this training is twofold. First, commodity availability at the community level will be increased and MCHWs and FCHVs will be empowered to undertake logistics activities regularly in their daily work. Second, providing these workers with logistics training helps health facilities submit accurate and timely reports to ultimately improve the quality of health services at the community level.

HEALTH LOGISTICS AND EPI COLD CHAIN MANAGEMENT TRAINING

EPI campaigns have great impact on reducing childhood mortality because they protect against preventable diseases, making EPI one of the MOHP's most important public health programs. The products required for EPI campaigns are often more delicate than other important program items, and

quality immunization services require rational storage practice, transportation, and availability of adequate stock of vaccines.

Prior to the start of the NFHP, incorporation of EPI items into logistics training curriculum was recognized. A training curriculum and procedures manual were developed for a three-day training in April 2001, conducted in all five regional health training centers by government trainers with the technical and financial support from NFHP and DELIVER.

DISTRICT LEVEL PROCUREMENT CAPACITY TRAINING

The MOHP has revised the procurement act to encourage decentralization of procurement to the district level. Procurement-related problems, such as lack of, delayed, or low-quality procurement, hinders implementation of the government's decentralized procurement policy at the district level. It was recommended that the district level receive strengthening in procurement practices, particularly in the districts where a pull logistics/procurement system for EDs was used.

A new initiative, the procurement training system for the district level focuses on rules and regulations for procurement of health-related goods. The DELIVER logistics team participated in the development of a training curriculum and provided procurement training for Sunsari, Nawalparasi, Dhanusha, Mahottari, Rautahat, Bara, Chitwan, and Sarlahi districts in close collaboration with the LMD, the National Health Training Center (NHTC), and the NHFP. Training was completed in March 2006.

The training is expected to improve the timeliness of procurement by the D/PHOs to reduce the effects of stock imbalances and increase the effectiveness of health services. With strengthened procurement capacity, districts are empowered to procure drugs and other health commodities. Of particular importance is the procurement of oral rehydration salts and cotrimoxizole, as these commodities have experienced significant stockouts in the past.

BASIC LOGISTICS TRAINING FOR NURSING IN-CHARGES AND STAFF OF REFERRAL HOSPITALS

The main objective of providing basic health logistics training to referral hospitals' staff from different units and wards is to update and upgrade knowledge and skills on health logistics to provide effective and essential health services.

A two-day basic health logistics training was conducted at Bir Hospital, Maternity Hospital, and Kanti Children's Hospital, resulting in significant changes in logistics management at these referral hospitals. According to the matron of Bir Hospital, the training is very useful for providing services to the client. After the training sessions were conducted at each facility, monitoring trips were conducted to understand the impact of the training. One significant improvement that was noted was how equipment, products, and registers/records, which had not been kept in an organized manner. Staff now use a general cleanliness checklist to maintain these critical areas.

PULL SYSTEM TRAINING FOR ESSENTIAL DRUGS

In August 2003, a task force was formed to implement the pull system for Essential Drugs under the LMD. The pull system for EDs decentralizes the resupply decision-making responsibility for all government-provided commodities to the local level. Local levels will pull supplies from the regional level, instead of having commodities pushed to them as has been done in the past. Subsequently, a workshop on initiating the pull system for EDs in Health Care Logistics was organized jointly by the LMD, KfW, and NFHP in November 2003. This workshop ensured policy endorsement for implementation of the Pull System, which will unite all government-provided health commodities under a single distribution strategy, and will complete the effort to decentralize resupply decision making.

The NFHP, in coordination with the NHTC, LMD, and KfW, developed the curriculum to implement the pull system for EDs. Training was implemented following construction of the district storerooms by LMD in six initial districts[4] in FY 2004/2005, and eight more districts in FY 2005/2006.[5]

The pull system for EDs is in line with the GON's devolution and decentralization policy. Additional efforts to scale up this pull system for EDs are envisioned by the Health Sector Reform Implementation Plan to deliver essential health care package services. Implementation and scale-up of the pull system for EDs will address the MOHP's chronic stockouts of essential drugs in health facilities, thereby improving the quality of health services to the consumer.

LMD Director Dr. M. K. Chhetri addressing the Pull System for EDs Workshop (August 2003)

ACHIEVEMENTS

From 2003 to 2006, a total of 2,363 government personnel were trained in the DELIVER-supported health logistics trainings. The pull system training for EDs and program commodities and Ilaka (subdistrict)-level meetings have contributed significantly to increasing product availability (from 27 percent to 70 percent) in CPDs. In addition, central- and regional-level supervision and monitoring improved the LMIS reporting from 80 to 90 percent. See table 4.

Table 4. Health Logistics Personnel Training 2003–2006

Title of Training	Number of Personnel Trained
Health Logistics and Cold Chain Management Training	407
BASIC LOGISTICS Training Logistics Training for Nursing In-Charges and Officers of Central (Referral) Hospital	81
Logistics Training for Maternal And Child Health Worker/Village Health Worker	400
Pull System Training on Health Logistics Management	1,400
Procurement Training for District-level Store Personal	75

ELEMENT III: IMPROVED RESOURCE MOBILIZATION FOR CONTRACEPTIVE SECURITY

The major players contributing to contraceptive security in Nepal are the MOHP, Family Planning Association of Nepal, and social marketing programs. Nationally, $32 million is required for the period 2006–2010 to meet the estimated contraceptive need of Nepal. Of the $32 million, only $11.23 is committed by donors and MOHP, leaving a shortfall of more than $20.77 million for contraceptives starting in mid-2007.

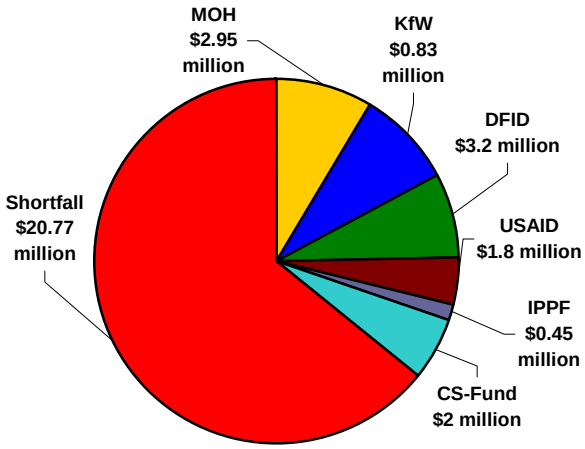
4 Bara, Rautahat, Chitwan, Sarlahi, Dhanusha, and Mahottari.

5 Sunsari, Siraha, Parsa, Tanahu, Nawalparasi, Kapilvastu, Bardiya, and Kanchanpur.

DELIVER has played a key role in meeting contraceptive requirements by organizing a consensus forecasting meeting twice a year in coordination with the LMD of MOHP. The semi-annual meeting, attended by donors and stakeholders, reviews the contraceptive forecasts and pipeline and allows for resource allocation for contraceptives procurement, including MOHP's funding (see figure 2).

Obviously, any shortfalls noted here will be in the main agenda for discussion and action in the next consensus forecasting meeting.

Figure 2. Sources of Funds to Meet Contraceptive Requirements (U.S.$) (2006–2010)



ELEMENT IV: IMPROVED ADOPTION OF ADVANCES IN LOGISTICS

HIV/AIDS AND SEXUALLY TRANSMITTED INFECTION COMMODITY LOGISTICS SYSTEM

A well-functioning logistics system and effective supply chain are essential to the success of every HIV/AIDS program, leading to the phrase, "No product, No program." Over the last 15 years, evidence has shown that the right programmatic approach, applied quickly and thoroughly, can result in lower HIV infection rates and a higher quality of life for those affected by the AIDS epidemic. A strong supply chain is critical to the success of any effective HIV/AIDS program in that it ensures delivery of the right products to the intended recipient, thereby minimizing the possibility of diversion or unregulated use of drugs.

Since fall 2005, NFHP and DELIVER staff have been involved in HIV/AIDS activities with the National Center for AIDS and STD Control (NCASC). Initial activities involved carrying out a field assessment; developing a three-year forecast for HIV tests, ARVs, and sexually transmitted infection (STI) and opportunistic infection (OI) drugs; and forming a national HIV/AIDS Logistics Committee, chaired by the Director of NCASC. DELIVER organized a logistics system design workshop and developed an HIV/AIDS commodity logistics standard operating procedures (SOPs) manual (which was translated into Nepali). Following the logistics system design workshop, the DOHS Director General granted approval for implementation of the logistics system for HIV/AIDS commodities. A Memorandum of Understanding was developed between NCASC and key players to negotiate the management of ARVs, HIV test kits, and other HIV/AIDS-related commodities. DELIVER has transitioned the rollout of the system (SOP manual, training of trainers [TOT] and training) to the SCMS project, funded by USAID and implemented by JSI and partners.

LESSONS LEARNED AND FUTURE DIRECTIONS

Global trends in health reform and donor policies are always a challenge to developing countries such as Nepal. Despite Nepal's geographical adversities and resource limitations, many other countries consider Nepal's logistics system to be exemplary. Nepal is a strong model of coordination and collaboration between the government and EDPs in delivering health care services to the people.

The major lesson learned from DELIVER support in logistics and health care delivery is that, in addition to the necessary central and regional-level interventions, support should focus on the community level. This is seen in the Ilaka-level intervention where Ilaka-level health facility personnel were oriented in health logistics. This orientation has brought garnered impressive results in the availability of key health commodities in health facilities.

Strategies of social inclusion, minority group representation, and encouraging the participation of MCHWs, FCHVs, representatives from health facility management committees (HFMCs), local and international NGOs, and representatives of disadvantaged communities could also benefit from enhanced logistics management. The amount of support at the community level plays an important role in making health services more effective, efficient, and accessible to all segments of the population at the community level.

Although peripheral public sector health services in Nepal are constrained by manpower and infrastructure limitations, the following can still be accomplished at the community level:

- improving quality of services through making health commodities available at the SDPs
- improving access to essential drugs through improved transportation mechanisms from the district to health facilities
- encouraging and enforcing wider use of LMIS for inventory management and procurement forecasting
- involving more community-based health workers and empowering staff at the SDPs to maintain logistics information on health commodities.

Many of the activities that DELIVER has focused on in the last six years will be critical to continue in the future. In particular, the areas mentioned below are vital to sustaining these programs.

- Institutionalization of logistics activities, including LMIS, in the MOHP will create more sustainability in logistics systems. MOHP needs EDP support to build capacity and take full ownership of the logistics systems. In the future, a phaseout plan for some of the EDPs' major needs to be created.
- Improvement of storage standards and storage facilities at all levels will help manage the limited resources for commodities. In particular, continuing development and implementation of the IMS at the RMSs will decentralize resupply decision making and build logistics capacity at lower levels in the system.

- With the successful increase in logistics data managed at the central level, the Microsoft Access-based server in the LMIS Unit has slowed down. As a result, this server must be replaced with faster, more efficient LMIS software at the central level to save time for data entry, data verification, and feedback report generation activities.
- Maintenance of contraceptive security activities and, ultimately, using this successful model for other health commodities will build security for all health products. This is particularly important in the age of HIV/AIDS where commodity security of antiretroviral drugs is essential.
- Continuation of HIV/AIDS logistics support will contribute to expansion of the HIV/AIDS program. As HIV/AIDS programs are scaled up, it is critical to have effective, efficient, and flexible logistics systems to manage the associated commodities.

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APPENDIX 1

CS BRIEF

NEPAL 2003–04

Contraceptive Security Brief	
Population	26,469,569 (BUCEN 2003)
Population Growth Rate	2.3%
Fertility Rate	4.1 (DHS 2001) 4.4 (BUCEN 2003)
CPR - modern methods, married women modern methods, all women	35.4% (DHS, 2001) 33.8% (DHS 2001)
Total Demand Unmet Need	67.1 (DHS 2001) 27.8 (DHS 2001)
Source • Public sector • Private medical • Other private	 79% (DHS 2001) 7% (DHS 2001) 7% (DHS 2001)
HIV/AIDS Prevalence Rate (adults)	0.5% (UNAIDS 2002)
Health regions, districts, and SDPs providing RH/FP services *(Source: LMIS)*	Regional Medical Store: 5 District Health Office: 75 ***RH/FP Service Provider*** District Clinics: 33 PHC Center 176 Health Post 712 ***Sub Health Post 3,132*** NGO Clinics 83

Forecasting	
1. Current method mix and projected trend (DHS 2001)	Female sterilization: 42% Injectable: 24% Male sterilization: 18% Condom: 8.3% Oral: 4.4% Implant: 1.8% IUD: 1.2%
2. Presentation and use of CPTs in management decision making	CPTs are used by USAID for ordering contraceptives and are prepared in close collaboration with USAID and social marketing (CRS) staff. CPTs are prepared for social marketing only. Major donors to the Nepal program, JSI, and the MOH annually prepare 5-year consensus forecasts of contraceptive need that are shared among all parties. These forecasts are used to gain donor commitment for the medium term. At the end of 2001, the MOH organized a contraceptive security forum that included all donors. At the forum the MOH presented the consensus forecast and progress on logistics system improvement and USAID lead a discussion on contraceptive security. In November 2003 a presentation on contraceptive forecasts, requirements and commitments was made to stakeholders. For the MOH, funding for contraceptives is secure to 2007. However, as a result of a recent agreement between the MoH and FPAN, MoH will provide 10% of KfW donated commodities to FPAN. This will likely result in a small shortage for the MoH beginning in 2004. The projected shortfall in 2008 is over $3.0 million. The MOH and JSI maintain a pipeline tracking system to monitor shipping schedules, identify when schedules need to be changed, and provide quarterly short-term pipeline projections to all donors.
3. Assumptions related to data used in the CPTs *(approach used)*	Sales data from social marketing (PSI/CRS) and dispensed data from SDPs are used in completing CPTs.
4. Sources and accuracy of data used in forecasting *(data quality)*	Data quality is, in general, good. There is a functioning LMIS with a relatively high reporting rate. Over the past 8 quarters that rate has been between 87 to 93 percent. The information on expected shipments for most suppliers is kept up to date by JSI and the MOH through the pipeline tracking system described above.
5. Role of Technical Assistance	Technical assistance is provided by JSI and USAID as described above (and below).
Procuring	
1. Existence and role of the Procurement Unit	The procurement unit of the MOH's Logistics Management Division procures contraceptives, vaccines, and other essential drugs. They prepare local and global tenders for such procurements. Currently, the MoH provides roughly $100,000 towards procurement of contraceptives and nearly 60% of the funds for essential drugs. KfW financing for contraceptives is given to the MoH procurement unit, with consultant approval of each tender.

2. Stock Status Analysis over one year period (overstocks, stock outs, and consistency of procurement plans)	The MOH consistently uses pipeline data from the LMIS to guide procurement plans. Overstocks and stock outs of contraceptives are rare.
3. Contraceptive supplier situation for MOH *(percentage of commodities provided by supplier*)	Contraceptive sources for (2004–2008) in U.S.$: MOH – 780,000 (6%) KfW –980,000 (8%) DFID –10,600,000 (86%)
4. Historical, current, and future role of USAID as a contraceptive donor	USAID has completely phased out as a contraceptive donor for the MOH in Nepal, and has no future plans to donate contraceptives to the MOH (condom donation in early 2001 being the exception). USAID continues to be the major source of contraceptives for the social marketing program. Social Marketing is now headed by PSI in partnership with CRS. USAID continues to provide important and substantial support to the MOH in logistics through its bilateral project, the Nepal Family Health Program (NFHP) and the DELIVER contract.
Financing	
1. Commodity funding mechanism *(i.e., basket funding, cost recovery, local public funds, etc.)*	Currently there are a number of financing mechanisms to procure contraceptives in Nepal. The German development bank KfW finances procurements for the MoH, the Family Planning Association of Nepal (FPAN) and, to a lesser extent, the social marketing organization, PSI/CRS.[6] USAID procures and delivers contraceptives directly to social marketing. The British Department for International Development (DFID) uses UNFPA as a procurement agent to provide contraceptives to the public sector. Minor, but still significant procurements occur by IPPF to FPAN. HMG procured, in 2003, nearly $90,000 in contraceptives using internally generated funds (IGF). Finally, a significant CS issue (product availability, financing) is the impending shortfall in contraceptives for FPAN. They have no adequate source of contraceptives past the end of 2002. USAID can no longer supply them (through IPPF) because of the Mexico City policy. Reluctantly, as a result of donor pressure, the MoH has recently concluded an agreement with FPAN to supply 10% of the public sector stock to FPAN free of charge. This arrangement has created some tension on the part of the MoH, as FPAN sells these contraceptives to clients, albeit at a subsidized price.

[6] Until 2003 Commercial Retail Sales (CRS) was the sole social marketing agent in Nepal. Recently, Population Services International (PSI) was awarded a contract by USAID to manage the social marketing program. Presently, both CRS and PSI coordinate sales and marketing efforts. It is likely, however, that PSI will become the primary social marketing entity in Nepal.

2. Current and future donor contribution in commodity financing plan over the next five years	Funds required for the period 2004-2008 for the MOH (and FPAN): $18,200,00. Through 2008 the MOH's contraceptive needs will be met primarily through DFID, KfW, HMG and IPPF respectively. The MOH is procuring Implants and injectables from its own funds. Funds required for the period 2004–2008 for Social Marketing (CRS/PSI): $13,700,000. Through 2008 only $2,900,000 has been committed by USAID. KfW support totals $480,000 for the same period. USAID has stopped contraceptive contributions to FPAN.
3. USAID/Mission intervention strategies *(strategic objectives and plan for contraceptive security)*	Contraceptive procurement fits under USAID/Nepal's Strategic Objective 2: Reduced Fertility and Improved Maternal and Child Health. USAID will contribute to reducing the TFR from 4.6 in 1996 to 4.0 in 2001. Under SO 2, Intermediate Result 2.1 is "Increased Use of Quality FP Services." Indicators for this result are modern prevalence rate and annual couple years of protection for the MOH and other USAID-supported programs. JSI and numerous other Cooperating Agencies provide technical assistance to achieve these objectives through USAID's Nepal Family Health Program (NFHP).
Delivering	
1. Length of the pipeline	Length of the pipeline is 6 months from the time an order is placed to reach the central store. The MOH keeps 24 months of stock.
2. Major institutions involved in RH/FP activities	Department of Health Services/MOH (Family Health Division, Logistics Management Division), UNFPA, USAID, KfW, DFID, FPAN, PSI, JSI, and a number of other technical partners and NGOs.
3. LMIS status (*level of efficiency*)	LMIS is countrywide and all the SDPs report. The aggregate reporting rate from all facilities was 87% in the 3rd quarter of 2003.
4. Commodity availability at SDPs	Approximately 90% of around 4,000 SDPs have contraceptives year-round.

APPENDIX 2

PROGRAM RESULTS MATRIX

Objectives/Strategies	Results	Contribution to DELIVER's Elements	Remarks
• Strengthen contraceptive and other essential health commodity security efforts. • Strengthen the LMIS. • Streamline distribution and strengthen and implement the Pull System of EDs in districts. • Manage the store (e.g., dejunking, auctioning unusable commodities, reorganizing stores). • Improve and strengthen human resources in health logistics with a focus on capacity building at the district and subdistrict levels. • Logistics system design for Nepal's HIV/AIDS and STI program.	• Increased availability of contraceptives and other key essential commodities in health facilities. • Improved LMIS at center and inventory system at regions, and increased LMIS reporting from SDPs. • Strengthened warehousing at national, regional, zonal, district, and at subdistrict levels. • Improved human resource in health capacity in logistics. • System design and implementation of logistics system for HIV/AIDS and STI control.	Technical assistance from local and DELIVER/DC personnel	• Increased year-round availability of 7 key health commodities[7] at SDPs—27% in 2001/02 to 71% in 2005/2006. • LMIS reporting maintained at 90% per quarter; improved and strengthened inventory management system at RMSs. • Pull System for EDs and program commodities implemented in 14[8] districts. • A total of 2,363 government personnel trained in different types of health logistics training.

[7] Condom, injectables, pills, oral rehydration salts, vitamin A, iron tablets, and cotrimoxazole

[8] Sunsari, Siraha, Dhanusha, Mahottari, Sarlahi, Rautahat, Bara, Parsa, Chitwan, Nawalparasi, Tanahu, Kapilvastu, Bardiya, and Kanchanpur

APPENDIX 3

COUNTRY FACT SHEET

Country: NEPAL			Total Funding: **$1,240,000 (approximate)**			
DELIVER Field Office	No. of local staff: 9–11		Presence established on: 2000 (DELIVER)			
Technical Focus Areas	Family Planning	√	Tuberculosis		Donor Coordination	√
	Integrated Systems	√	Contraceptive Security	√	Market Segmentation	
	Information Systems	√	EPI	√	Financing	
	HIV/AIDS	√	Essential Drugs	√		
Principal Client Organizations	Ministry of Health and Population/Department of Health Services, Logistics Management Division, Family Health Division, Child Health Division, NCASC, NHTC, USAID, Nepal Family Health Program (NFHP), KfW, DFID, World Bank, UNFPA, UNICEF, JICA, and others					
DELIVER's Objectives	DELIVER's objective in Nepal is to provide technical assistance in the MOHP's health logistics activities to make contraceptives and essential health commodities available at service delivery sites. • Strengthen contraceptive and other essential health commodity security efforts. • Strengthen the LMIS. • Streamline distribution. • Improve and strengthen human resources in health logistics. • Strengthen and implement Pull System of Essential Drugs in districts. • Manage the store (e.g., dejunking, auctioning unusable commodities, reorganizing stores). • Design logistics system for Nepal's HIV/AIDS and STD program. • Build capacity building at the district and subdistrict levels.					
Major Interventions	• Ilaka-level logistics intervention (developing commodity management guidance for the community level (subdistrict level)). • Monitoring and evaluating district health office effectiveness based on logistics data. • Overseeing construction and operationalization of district stores built with funding from other donors (e.g., KfW, DFID). • Improving both design and functioning of the Ministry's LMIS and inventory system for RMSs. • Modernizing and renovating the warehouses. • Building capacity of the health personnel at the center, region, and districts, and at SDPs. • Assess system for HIV/AIDS commodities. • Design system workshop for logistics for HIV/AIDS and STD program. • Do three-year forecast for HIV tests, ARVs, and STI and OI drugs.					
Primary Results	Increased availability of contraceptives and other key essential commodities in health facilities (increased year-round availability of 7 key health commodities[9] at service delivery sites—27 percent in 2001/2002 to 71 percent in 2005/2006). Strengthened LMIS reporting (maintained at 90% per quarter); improved and strengthened inventory management system at RMSs. Strengthened warehousing at national, regional, zonal, and district, and the subdistrict level. Improved human resources in health capacity (2,363 government personnel were trained in different types of health logistics training with DELIVER support, beginning in 2003).					

[9] Condoms, injectables, pills, oral rehydration salts, vitamin A, cotrimoxizole, and iron tablets

	Improved adoption of advances in logistics (system design and implementation for HIV/AIDS logistics).
Related Publications	• *Guidelines for Storing Essential Medicines* (The book originally published by DELIVER is translated into Nepali; distributed to all government health facilities across the country.) • *Curriculum for Pull System for Essential Drugs Training* (reference manual, trainer's Guide, participant handbook) • *Curriculum for District Level Procurement Training* (reference manual, trainer's guide, participant handbook) • *Curriculum for Basic Logistics Training for Maternal and Child Health Workers (MCHW)* • *User Manual for Inventory System of Expendable Items for Regional Medical Stores*

For more information, please visit www.deliver.jsi.com.

DELIVER

John Snow, Inc.

1616 North Fort Myer Drive, 11th Floor

Arlington, VA 22209 USA

Phone: 703-528-7474

Fax: 703-528-7480

www.deliver.jsi.com