

Strengthening National Health Systems for Improving Efficiency of Health Service Delivery in Nepal

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ABSTRACT

The success of Nepal's community-based health programmes in promoting maternal and child health has been achieved due to an overall improvement in service delivery facilities and health support systems. This article assesses the progress made by the Government of Nepal in improving health service delivery by introducing three key components: an improved health logistics management, facility-based maternal and neonatal health services, and decentralized health facility management.

Keywords: facility-based maternal and neonatal health services; health logistics system; local health governance.

INTRODUCTION

Nepal has made notable progress over the last few decades in improving access to maternal, neonatal, and child health services despite poor infrastructure, resource constraints, political instability, and difficult logistical circumstance.

Some underlying reasons for the success have been the improvements in leadership and governance, service delivery, and medical technologies, three of the six components outlined in the WHO Health Systems Thinking Framework.¹ It is widely held that they will continue to play an important role in Nepal's overall health system.

This article, fifth in the six article series, provides a descriptive analysis of the national health logistics system, facility-based maternal and neonatal health services, and local health governance to see how they have improved the efficiency, equity, access to and quality of health care service delivery, particularly maternal and child health.

LITERATURE REVIEW

Secondary desk review was conducted for this article. Authors looked at published documents, reports, journal articles, as well as relevant websites.

National Health Logistics System

Despite the harsh reality of poverty and the terrain, Nepal has done reasonably well in extending its people's average life span by reducing the major health risks.² Both infant/child mortality and fertility rates have declined since the 1990s.³

According to the National Health Policy (1991) and the Eighth Plan (1992-97), a new organizational structure was introduced in July 1993.⁴ Major structural changes took place at the central level. All vertically organized structures were integrated into five divisions in the Department of Health Services.⁴ The establishment of the Logistics Management Division (LMD) significantly contributed to improve the overall health system. Over the last two decades, this system was carefully scaled-up and enhanced, with the creation of the Logistics Management Information System (LMIS), logistics management training and capacity building, construction of commodity warehouses and the introduction of the pull system, among others. These activities have contributed to an increased availability of contraceptives (condoms, injectables, and oral pills) and other health commodities improving both access and quality of health services.

Implemented in 1994, the Logistics System Improvement Plan (LSIP) piloted the LMIS in four Eastern districts.⁵

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Because the LMIS generates accurate and timely data on logistics indicators such as stock levels and consumption rates, it assists decision-makers in procurement and supply of commodities.⁶ This in fact was key to the success of the LMIS in the pilot districts, which prompted its expansion to all 75 districts by 1997.⁵ In 2008, a new web-based component was added to the LMIS significantly improving communication between the center, the five development regions, and the districts.⁷ While LMIS was already effective at generating accurate information, transforming the system into one that allowed for real-time generation of mouths-of-stock-on-hand meant improved forecasting, quantification, and procurement of commodities.⁸ This results in timely and increased availability of essential family planning/maternal and child health drugs at health facilities and consequently enhanced access to them by the people.

Consensus forecasting and quantification, which identifies long term need of health commodities and achieves health commodity security, began in Nepal for family planning commodities in 1999.⁵ Within a few years, the LMD included essential medicines for maternal, child, and neonatal health into the consensus forecast exercise, which has greatly strengthened the procurement system. This method and approach of quantifying and forecasting key commodities has helped determine resource and funding needs in advance which has not only ensured timely procurement and allocation of funds and resources but also allowed the Ministry of Health and Population (MoHP) to fund contraceptive procurement on its own.⁹ In addition, consensus forecasting and quantification has also enhanced FP/MNCH's commodity security through effective coordination of public, private and donor partners.

Despite the significant improvements in the overall health logistics system; development of the LMIS and improved forecasting and quantification; the 'push' supply chain system that the LMD had used was unable to ensure reliable commodity availability.⁵ This was primarily so because the Logistics Management Division (LMD) could neither handle increases in demand during epidemics, nor could it prevent drugs from expiring when demand was low. In 2004, the LMD introduced the 'pull' system in six districts, and was rapidly expanded to all by 2009.⁵ The stock out rates of essential commodities and drugs for maternal and child health services have dramatically decreased since the 'pull system' has been in place (Figure 1).

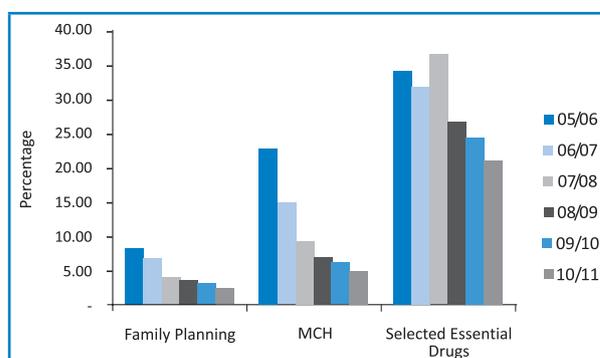


Figure 1. National quarterly stock-out percentage of health commodities in health facilities.⁸

Nepal is one of the few countries in South Asia with a mature integrated LMIS. The system was only recently introduced in Pakistan,¹⁰ and is used selectively in Bangladesh such as for family planning.¹¹ Also, while the procurement of family planning commodities in countries like Myanmar, the Philippines, East Timor, Bhutan, and Pakistan, is mostly dependent on donor funding, in Nepal they are procured using Government resources. In addition, Bangladesh is still using a vertical logistics system.¹² These examples demonstrate the maturity of and should be there strong government commitment to strengthen the health logistics system in Nepal, thereby contributing to improved efficiency of health care service delivery in the country.

Facility Based Maternal and Neonatal Health Services

Post-partum hemorrhage (PPH), obstructed labour, and eclampsia are the major causes of maternal deaths in Nepal. They can be easily identified, prevented and managed if basic arrangements are made available, specifically trained skilled birth attendants (SBA) and obstetric emergency facilities.¹³ To this end, the government has undertaken an ambitious goal of increasing the proportion of SBA-assisted deliveries to 60% by 2017.¹⁴ However, this will remain a challenge in the short run, especially given that new birthing centres are rapidly expanding.² Health workers who are currently providing care during pregnancy, labor, and childbirth in many of these centres do not necessarily have the full range of skills to be considered SBAs.

Training health workers to detect, prevent, and manage complications during delivery is therefore vital. In addition, the MoHP's community-based activities and programmes have resulted in demand-creation for institutional delivery if any problems are encountered during pregnancy, delivery and post-partum periods for both mothers and newborns. Therefore, it is important that demand-creation complement better service facilities. For this reason, the Family Health Division (FHD) began the "Strengthening Maternal and Newborn

Health Services in Rural Health Facilities" program between 2009 and 2011 in 12 districts, now extended throughout the country.¹⁵

"Strengthening Maternal and Neonatal Health Services in Rural Health Facilities" is a set of interventions aimed at improving the overall quality of maternal and neonatal health.¹⁵ This includes training of service providers on essential SBA skills, i.e. the maternal and newborn health (MNH) update as well as the creation of an enabling environment to translate their new found knowledge and skills into practice.

The maternal and neonatal health update is a three-day training of health workers and imparts necessary knowledge and skills to detect, prevent, manage, and provide referral service to women with PPH, obstructed labour and eclampsia through partograph use, active management of third stage of labour (AMTSL), additional uterotonic use, aortic compression and magnesium sulphate (MgSO₄).¹⁵ They are also trained on immediate essential newborn care and neonatal resuscitation for management of neonatal asphyxia, one of the major contributors of neonatal mortality in the country.¹⁶ Another important part of the training is orientation on infection prevention and waste management practices.

To ensure that service providers retain the newly acquired knowledge skills, reference manuals and job-aids are provided upon the completion of the training.

To create an enabling environment in health facilities, there are regular on-site coaching and technical visits, as well as help with repair and maintenance of medical instruments.¹⁵ Similarly, interactions with community stakeholders not only increase users' confidence in institutional delivery but they also promote community involvement and demands that ensures 24-hour birthing facilities.¹⁵

Though this intervention was implemented in 12 districts and progress was closely monitored against the pre-established indicators, a complete evaluation was conducted only for Dailekh and Sindhuli by the Nepal Family Health Program II (NFHP)-USAID's largest family planning and maternal and child health bilateral project in Nepal. Therefore, this article will compare results only from these two districts. The comparison will be made between data collected 12 months before and after the intervention.

Data from Dailekh and Sindhuli showed a significant increase in partograph use, from 2% of health institutions to 100%, and from 0% to 76%.¹⁵ Similarly, AMTSL became routine practice in both districts compared to 60% and 58% of facilities earlier in Dailekh and Sindhuli, respectively.¹⁵ Oxytocin became available

in all intervention facilities, 40% in Dailekh and 50% in Sindhuli.¹⁵ A significant increase in MgSO₄ availability from 2% to 91% in Dailekh and 0% to 100% in Sindhuli was also observed.¹⁵

Improvement in infection prevention practice was seen in both districts as evidenced by increases in the use of sterilised equipment during delivery from 13% to 39% in Dailekh and 3% to 22% in Sindhuli.¹⁵ Improvement in waste disposal as measured by construction and usage of a placenta pits was also remarkable, increasing from 4% of facilities having a placenta pit to 18% in Dailekh and 11% to 44% in Sindhuli.¹⁵

Similarly, there was a considerable increase in the number of health facilities providing 24-hour birthing facilities, with a resultant rise in the number of institutional deliveries by SBAs.¹⁵

Countries around the globe have demonstrated success during similar interventions. One such study was conducted in two health centers in Rajasthan, India which demonstrated that after a practical on-the-job training of health workers there was a significant improvement in maternal and neonatal care in rural areas of Rajasthan.¹⁷ Similarly in Ecuador, facility-based intervention inputs in the form of refresher trainings, strengthening of availability of drugs and supplies and regular supervision, among others activities, resulted in a significant improvement in the quality of care.¹⁸ Among other factors, interactions with community stakeholders have been instrumental in establishing and continuing services in new birthing facilities at several sites.

The proportion of SBA-assisted deliveries has become a proxy indicator for measuring maternal mortality reduction under MDG 5.¹⁹ Nepal's strategy towards promotion of skilled attendance at birth consists of two essential components, training of health providers and creation of an enabling environment.²⁰ The "Strengthening Maternal and Neonatal Health Services in Rural Health Facilities" addresses both aspects. The improvements in quality of care, infection prevention, and waste disposal practices provide evidence in support of this intervention. One can possibly argue that in addition to other factors such as the *Aama Surakshya Karyakram* (maternity incentive scheme),²¹ improvement in the overall quality of care at intervention sites have undeniably contributed to the increase in the number of institutional deliveries assisted by SBAs in intervention districts.

Local Health Governance

Community participation and equity are two key principles of the primary health care approach adopted

in the Alma Ata Declaration.²² As a signatory of this declaration and in line with the Interim Constitution 2007 and key national policies such as the Nepal Health Sector Programme (NHSP) Implementation Plan I and NHSP II,² the GON has embraced the idea of community engagement, ownership and equity in the health sector, a mark of good decentralised health management and health governance. In doing so, Nepal is moving towards a health system that is responsive, transparent and accountable to community needs, which in turn has the potential make health care service delivery more efficient and accessible.

Communities play a major role not only as users, but also as contributors to the management of health services and health facilities.²³ It is widely recognised that decentralised health governance, with active engagement of the community, helps achieve equitable and quality health services conducive to downward accountability, transparency with regards to utilisation of funds, community ownership, and better access.²⁴ The Local Self Governance Act 1999 highlighted the importance of health sector decentralisation. It is a key health sector reform strategy and approach to achieve the MDGs.²

In 2002, recognising the importance of good health governance, the GON, under the leadership of the National Health Training Centre (NHTC) and with support from external development partners, initiated the handover of the management of peripheral government health facilities to Health Facility Operation and Management Committees (HFOMCs). These Committees are formally established local health bodies that govern the affairs and management of health facilities and comprise of a variety of community representatives including village development committee (VDC) elected members, school teachers, female community health volunteers (FCHVs), *dalits* (regarded as untouchables within the caste system) and women members, among others,²⁵ thereby acting as an important bridge between the community and health facility.

Mere hand-over of health facilities however was not enough, and thus capacity building of HFOMCs was deemed necessary. Initially, capacity building of HFOMCs was not thought of as a process, but was equated to a one-time event or training.²⁹ For this reason, in 2009, a refined and consolidated approach that focuses on continual and intensive capacity building was developed, named the Health Facility Management Strengthening Programme (HFMSp).³⁰ HFMSp's objective is to strengthen the management efficiency and governance of health facilities, mobilise local resources for health and increase

service utilisation by the community, particularly the excluded groups. This approach uses Nepal Health Training Center-endorsed training manuals³¹ and tools and is being implemented by both the GON and external development partners in 13 districts.³⁰

In the two years since HFMSp was initiated, programme and monitoring data from the 13 HFMSp implemented districts, supported by NFHP II, show that the three key and interlinked areas that the intervention target, community engagement, social inclusion and local health governance, have been strengthened in a significant way. It is expected that these three components will ultimately improve health care service delivery

Before the implementation of the HFMSp, the status of HFOMCs was poor. Monthly meetings were irregular with only 38% of meetings taking place, action plans were not developed, dalit and female participation was low, and local resource mobilisation was negligible.²³

This situation changed drastically once HFMSp was implemented. Latest data shows 86% of HFOMCs have been meeting regularly, 76% have prioritized issues and more than 70% have developed and implemented action plans.³² Dalit and women representation in meetings is very high, at 78% and 97%, respectively. Participation during HFOMC meetings has greatly empowered these two often under-represented groups - data demonstrates that 67% of dalit and women members raised issues during the meetings.³⁰ Eighty-six percent discussed and shared with the community decisions made during HFOMC meetings.³² Furthermore, 47% of HFOMCs have ensured that local health needs are identified during development of action plans and 36% of HFOMCs have implemented special activities that target unreached communities. For example, although dalits account for only 14% of the catchment population in HFMSp-implemented districts, they represented 21% of the total number of health facility clients.³⁰ These numbers indicate more motivated and empowered HFOMC members and enhanced community ownership over the management of their respective health facilities. Active participation from empowered local community members means they will ensure that health care services are equitable and of the highest quality, consequently increasing accessibility to the services.

In addition more involvement of HFOMCs in supervising health facilities, informing clients about services through citizen charters, and involving them in social audit processes have resulted in more transparency and accountability. This has the potential to contribute to an efficient and responsive health care service delivery

system. For example as a result of HFOMCs active involvement and participation in decision-making, 61% percent of health facilities remained open all day and 99% had at least one technical staff available.³⁰ Again this will ultimately lead to increased access to health services and simultaneously strengthen local health governance.

Many countries are implementing health sector decentralisation as a sector reform, but the extent and context of decentralisation and results from such efforts vary from country to country. In the Philippines, local health boards, established to encourage community participation, have resulted in improved links between the community and health boards, increased fund-raising and initiation of additional health activities.³¹ In Mexico, the effects of decentralisation on health financing and governance were related to a diversification of financing sources and a greater decision-making space around the use of resources.³² Similarly, in Kenya, health facility committees have been found to play an essential role in the management of health facilities, particularly when they were provided enough funds and the authority and flexibility to manage these funds.³³ The Kenyan study showed a great potential for these committees to contribute significantly to health facility management, much like the HFOMCs in Nepal. A study in Kerala, India indicated a reduction in inequity over selected indicators with regards to infrastructure, utilisation, and outcomes of health after the implementation of health sector decentralisation.³⁴ However, other evidence from South-East Asia demonstrates the potential risk for inequity, including dominance of local elites in decision making and improper resource allocation.³⁵

Health sector decentralisation is a major sector reform strategy adopted by the GON, although it is not being fully implemented, financial and administrative authority are not decentralised.^{2,26} However, despite this limitation, HFOMCs, through the capacity building efforts of the HFMS, have helped foster local health governance. The experience from Nepal and other countries have shown the importance of capacity building and authority over direct funds and its link community ownership and engagement, and consequently better quality and delivery of health care services. As such, the GON is currently piloting a local health governance strengthening programme in several districts which provide HFOMCs with more flexibility with regards to financial and administrative decisions.³⁶ Finally, with Nepal's changing political scenario, which includes complete political restructuring into federalism, the relevance of health sector decentralisation will be even

more significant and meaningful in the coming years.

WAY FORWARD

Much progress has been made in maternal, neonatal and child health indicators in Nepal over the past twenty years, despite the many obstacles observed along the way. Supporting this achievement are several system components, including health logistics and more recently, institution-based maternal and child care and better governance of health facilities at local level. The latter two are relatively new approaches, thus careful analysis of the interventions' broader results and their implications is needed. However, it is clear that these three components have played and will continue to play an increasingly vital role in ensuring improved provision and access to not only maternal, neonatal and child health services, but health care services in general and optimal health system performance in the years to come.

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CONFLICT OF INTEREST

We declare no conflict of interest for this article.

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