NEPAL

Improving Maternal and Newborn Health in Partnership with the Government of Nepal

INTRODUCTION

Nepal is making considerable progress toward achieving its Millennium Development Goals (MDGs) for child and maternal health. Between 1996 and 2006, the maternal mortality ratio dropped from 539 to 281 deaths per 100,000 live births, the infant mortality rate declined from 64 to 48 deaths per 1,000 live births, and neonatal mortality decreased from 39 to 33 per 1,000 live births.[56] To further improve MNH, Nepal is now focused on increasing skilled attendance at birth. With 80% of Nepal's population living in rural areas amid challenging topography, most women still deliver at home and without the care of a skilled health care provider. When the ACCESS Program began, just 10.9% of women in Nepal had been delivered with a health professional (doctor or nurse-midwife) and only 9% in a health facility.[57] And while remarkable reductions in child mortality rates have occurred in the country over the last decade, an estimated 32,000 children still die each year during their first month of life—with more than two-thirds not surviving their first week.

PROGRAM STRATEGIES AND INTERVENTIONS

At the request of USAID, ACCESS worked in partnership with the Government of Nepal (GoN) to contribute to MNH initiatives that focused on:

- Increasing skilled attendance at birth;
- Identifying and piloting new interventions to address leading causes of mortality with simple, low-cost approaches aimed at public health impact; and
- Exploring key programmatic and policy issues to inform national MNH strategies.

The Program rolled out planned interventions in collaboration with the Family Health Division (FHD), Child Health Division (CHD), the National Health Training Center (NHTC), the Nepal Family Health Program II (NFHP II), Support to Safe Motherhood Program (SSMP), Plan International, Nepal Society of Obstetricians and Gynecologists (NESOG) and other stakeholders.

KEY INDICATORS

Maternal mortality ratio: 281/100,000 live births

Infant mortality rate: 48/1,000 live births

Under-five mortality rate: 61/1,000

Births with skilled provider: <20%

ANC: 44% receive ANC from SBA

Total fertility rate: 3.1

Contraceptive prevalence: 44% (modern methods), 48% (all methods

Source: DHS 2007

[56] Demographic and Health Surveys from 1996 and 2006.
[57] Nepal Demographic and Health Survey 2001.

RESULTS

Increasing Skilled Attendance at Birth

Increased Provider Capacity to Provide Skilled Attendance at Birth

In support of the *National Skilled Birth Attendants Policy* (2006), ACCESS in collaboration with FHD developed the *Maternal and Newborn Care (MNC) Learning Resource Package (LRP)* with active participation from clinical trainers and key stakeholders. After field-testing and endorsement by the GoN in 2007, the MNC LRP became the national standard for all SBA training. NHTC received 400 copies from ACCESS in 2007 and reproduced hundreds more with other donor funding. To date, more than 1,000 health care providers have been trained in skilled birth attendance using the MNC LRP.

Assessed, Improved and Maintained the Quality of SBA In-service Training Sites

To assess, strengthen and monitor the quality of training sites, ACCESS, with participation from a variety of stakeholders, supported the NHTC to develop SBA in-service training site quality improvement tools. These tools include 201 standards and cover nine clinical areas and three training-related areas. After an orientation to the tools and process, participants at 10 sites assessed their performance, identified gaps and worked to make improvements. NHTC continues to use the quality improvement tools—which are now available in Nepal—in 15 sites. As of September 2009, 12 sites had achieved 80% (or more) of standards.

Identifying and Piloting New Interventions to Address Leading Causes of Mortality with Simple, Low-cost Approaches Aimed at Public Health Impact

Developed and Tested a Community Strategy to Prevent PPH Using Misoprostol

Because postpartum hemorrhage (PPH) is the leading cause of maternal mortality, ACCESS, FHD, NFHP II and development partners piloted a community-based intervention to prevent PPH among women who do not seek skilled birth attendance during delivery. Female community health volunteers (FCHVs) provided women with misoprostol to be taken immediately after delivery as well as the necessary counseling and instructions on appropriate use and potential side effects. The pilot demonstrated that pregnant women can safely and effectively take misoprostol and be protected from PPH (see Table 10). In total, 73% of women who received misoprostol took it, and an additional 21% did not take it but received protection from PPH through other means.[58] Moreover, neonatal mortality was significantly reduced, and the evidence suggested that maternal mortality also decreased. In 2009–2010, FHD is planning to scale up PPH prevention using misoprostol as part of its remote areas strategy, targeting women who still have limited access to skilled care.

Table 10: Women's Use of Misoprostol and Their Protection Status from PPH, among Misoprostol Recipients

	NOT PROTECTED FROM PPH	PROTECTED FROM PPH	TOTAL
Received misoprostol and took it	0 (0%)	447(73%)	447(73%)
Received misoprostol and did not take it	36 (6%)	132 (21%)	168(27%)
Total	**36 (6%)**	**579 (94%)**	**615 (100%)**

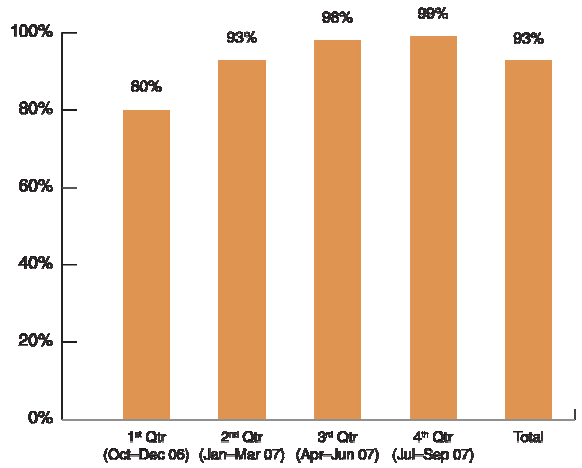
[58] In this project, a woman was considered to be protected from PPH if she meet one or more of the following criteria: 1) took misoprostol correctly; 2) delivered in the presence of a SBA; 3) received an injection in the thigh or buttocks immediately after delivery (presumed to be oxytocin); and/or 4) delivered in a health facility (hospital, primary health care center or health post).

Demonstrated the Feasibility of Community-based Management of Low Birth Weight (LBW) Infants

ACCESS—with FHD, NFHP II and the District Public Health Office—trained 220 female community health volunteers (FCHVs) to identify LBW babies using weighing scales, manage their care and educate their mothers on how to practice KMC at home in Kanchanpur District. Key findings from the pilot include:

- FCHVs are capable of identifying LBW and very LBW infants, and providing home-based counseling about exclusive breastfeeding, prevention from infection and KMC. They identified 980 infants as LBW or very LBW (17% of 5,865 live births registered in the FCHV registers).
- FCHVs provided early postnatal care (PNC) to mothers and their infants, reaching 80–100% of mothers and newborns each quarter with an average of more than four PNC visits.
- More than 70% of mothers with LBW newborns practiced KMC by the end of the project period.

Figure 25. Percentage of LBW Neonates Who Received PNC Visits from FBW/FCHVs by Quarter



- FCHVs were able to identify danger signs among LBW infants: 14% of the 980 LBW neonates were identified as experiencing a danger sign and referred to a health facility.
- FCHVs were effective in performing the five essential newborn care skills: counseling, weighing, temperature taking, recordkeeping and KMC. By the project's end, FCHVs correctly performed each of the five skills at the desired competency level of 85%.

Based upon the findings of this community intervention, ACCESS provided technical assistance to the CHD to develop *National LBW Neonate Management and Implementation Guidelines* in line with the *National Neonatal Health Strategy* of 2004.

Improved Management of LBW Newborns at Facilities Using KMC

To support LBW referrals, ACCESS introduced facility-based KMC services at two zonal hospitals and three primary health care centers,[59] and supported the integration of KMC with newborn care services. As a result, 53 LBW newborns (including several sets of twins) among 610 deliveries were managed with KMC from June to November 2007 at Mahakali Zonal Hospital. At Seti Zonal Hospital, 56 LBW newborns (including twins) received KMC from a total of 1,173 deliveries from July to November 2007. And at the three primary health care centers, KMC services were provided for six of seven LBW newborns from a total of 114 deliveries in two months.

Father doing Kangaroo Mother Care, Nepal

[59] The health facilities included Seti Zonal Hospital Kailali, Mahakali Zonal Hospital Kanchanpur, and three primary health care centers in Kanchanpur District.

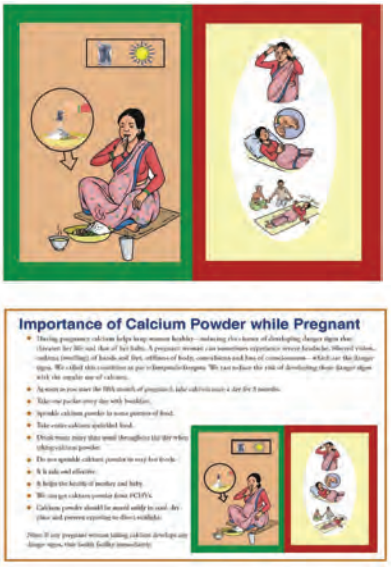
Designed and Initiated a Community-level Intervention to Prevent Pre-eclampsia/Eclampsia (PE/E)

Based on the WHO recommendation that calcium intake during pregnancy reduces the risk of PE/E by 67%,[60] ACCESS worked in collaboration with FHD and NFHP II to develop a PE/E prevention pilot of calcium supplementation to pregnant women. FCHVs distribute a three-month supply of calcium and educate pregnant women and their families (see Figure 14) about the dangers of PE/E, a leading cause of maternal mortality. A small-scale acceptability study comparing tablet and powder forms of calcium was started and will be continued under MCHIP. Plan International donated calcium tablets, and Jhpiego provided calcium powder in sachets. The study findings will inform a larger, district-wide pilot to assess the feasibility, acceptability and programmatic effort required to achieve high-level coverage with calcium supplementation during pregnancy.

Improved Management of PE/E at the Facility Level

ACCESS with the Nepal Society of Obstetricians and Gynecologists (NESOG) promoted and strengthened the use of magnesium sulphate and institutionalized this best practice in 22 health facilities. ACCESS worked with a NESOG team to develop standards, an in-service orientation package and job aids. The NESOG team then provided on-site orientations, support and coaching to service providers during several visits to each facility. Results showed that facilities can manage PE/E appropriately with support with average scores increasing from 26% at baseline to 60%. By the end, 11 of the 22 facilities (50%) were performing at 80% or higher.

Figure 26: Information for Women and their Families on the Importance of Calcium during Pregnancy



Exploring Key Programmatic and Policy Issues to Inform National MNH strategies

Reviewed and Recommended Options for Increasing Skilled Attendance at the Community Level

At USAID's request in 2005, ACCESS reviewed how best to operationalize the National Policy on Skilled Birth Attendants to increase skilled birth attendance at the community level in Nepal. ACCESS primarily recommended strengthening auxiliary nurse-midwife (ANM) training and adding a supplementary training package to ensure that graduate ANMs assigned to community posts have the requisite skills. Only those ANMs who were prepared to work at the community level could enter this "post-graduate" training to obtain the SBA skills that are not included in the ANM curriculum. The report was shared with GoN and development partners to help inform national nursing training and education discussions.

Identified Key Factors that Support Use of Skilled Birth Attendance in Nepal

ACCESS and FHD conducted a study identifying the key factors that contribute to successful utilization of SBA services. The study found that most women preferred and planned a home delivery, and sought care at the facility only for complications. Facilities associated with a high volume of delivery services include: "24/7" services and availability of BEmONC; easy geographic access; three or more trained staff available in primary health care centers; a referral system and/or ambulance on site; dynamic leadership of the facility; energetic community collaboration; and employment of local personnel. GoN shared "availability of maternal and

[60] Hofmeyr GJ, Atallah AN, Duley L. Calcium supplementation during pregnancy for preventing hypertensive disorders and related problems (Cochrane Review). In: The Cochrane Library, Issue 4, 2006. Chichester, UK: John Wiley & Sons, Ltd.

neonatal '24/7' services" from this study at the Scaling-up FP/MNCH Best Practices in Asia and the Near East Technical Meeting in 2007.

Identified Reasons for Maternal Mortality and Morbidity Reduction

In 2008–2009, USAID and SSMP supported FHD to design and conduct a Maternal Mortality and Morbidity Study in eight districts to prioritize interventions and approaches to address the leading causes of maternal mortality with a strong focus on community deaths. ACCESS supported the Technical Advisory Group and a number of implementation activities for the study. The study found a decreasing trend in MMR that is on track to meet the MDGs, as well as a decrease in death due to maternal causes among women of reproductive age. While the percentage of maternal deaths caused by eclampsia, abortion-related complications, gastroenteritis and anemia have increased, maternal deaths from obstructed labor and puerperal sepsis have more than halved since a similar study was conducted in 1998.

LESSONS LEARNED AND SUSTAINABILITY

ACCESS in its work with GoN found the partnership effective in identifying and conducting a number of pilot interventions and studies that contributed directly to national policies, programs and guidelines. For example, based upon the LBW and KMC project results, GoN developed and approved the *Implementation Guidelines for the Low Birth Weight Neonate Care*. GoN leadership fostered and demonstrated innovation—such as piloting misoprostol for PPH prevention for home deliveries. High levels of government commitment also led to scaling up of proven interventions, as illustrated by LBW neonate care and management now being provided by FCHVs in 10 districts. Based on a number of these successful community-based pilots, GoN has the opportunity to combine them into an integrated community-based maternal and neonatal care package.

ACCESS also found its technical assistance was most effective when collaboration with GoN and external development partners worked well to support a national strategy or priority. For example, the MNC LRP and quality improvement tools developed through a participatory process with government and stakeholders have been institutionalized by government systems that will continue to train thousands of health care providers as SBAs. As a result of ACCESS-supported activities, quality improvement in MNH services was measurable and evident at SBA training sites and other health facilities.