STATE OF THE WORLD'S NEWBORNS: NEPAL

Saving Newborn Lives

Save the Children

In many ways, the story of newborn health in Nepal is dominated by a single statistic: more than 90 percent of all births take place in the absence of a skilled health provider.

SOME IMPROVEMENTS—AND ROOM FOR MORE

Ninety percent of the population of Nepal resides in rural areas, 50 percent in the lowland Terai areas and 45 percent in the mid-hills. Poverty, the lack of education, and poorly developed transportation and communication systems impede access to health facilities and medical expertise. While Nepal has made progress in a number of health indicators in recent years, including some with a direct bearing on neonatal health, newborns are still an at-risk and largely neglected population. On the positive side, the age at first marriage in Nepal has slowly risen and perinatal and neonatal mortality have declined by 17 percent and 15 percent respectively; numerous safe motherhood initiatives are being implemented; and family planning efforts have contributed to

SAVING NEWBORN LIVES: Recommendations for Improving Newborn Survival

CARE OF FUTURE MOTHERS

- Improve the health and status of women
- Improve the nutrition of girls
- Discourage early marriages and early childbearing
- Promote safer sexual practices
- Provide opportunities for female education

CARE DURING PREGNANCY

- Improve the nutrition of pregnant women
- Immunize against tetanus
- Screen and treat infections, especially syphilis and malaria
- Improve communication and counseling: birth preparedness, awareness of danger signs, and immediate and exclusive breastfeeding

SPECIAL ATTENTION

- Monitor and treat complications, such as anemia, preeclampsia, malpresentation, and bleeding
- Promote voluntary counseling and testing for HIV
- Reduce the risk of mother-to-child transmission (MTCT) of HIV

CARE AT TIME OF BIRTH

- Ensure skilled care at delivery
- Provide for clean delivery: clean hands, clean delivery surface, and clean cord care
- Keep the newborn warm: dry and wrap baby immediately, including covering the head; or put skin-to-skin with mother and cover
- Initiate immediate, exclusive breastfeeding, at least within one hour
- Give prophylactic eye care, as appropriate

SPECIAL ATTENTION

- Recognize danger signs/serious complications in both mother and baby and avoid delay in seeking care and referral
- Recognize and resuscitate asphyxiated babies immediately
- Pay special attention to warmth, feeding, and hygiene practices for preterm and LBW babies

CARE AFTER BIRTH

- Ensure early postnatal contact
- Promote continued exclusive breastfeeding
- Maintain hygiene to prevent infection: ensure clean cord care and counsel mother on general hygiene practices, such as hand-washing
- Provide immunizations such as BCG, OPV, and hepatitis B vaccines, as appropriate

SPECIAL ATTENTION

- Recognize danger signs/serious complications in both mother and newborn, particularly of infections, and avoid delay in seeking care and referral
- Support HIV positive mothers to make appropriate, sustainable choices about feeding
- Continue to pay special attention to warmth, feeding, and hygienic practices for LBW babies

WOMEN CAN BE RELUCTANT TO SEEK CARE

Mira's baby girl was born in the doorway of her mud-covered stone house with her sister and sister-in-law supporting her. The umbilical cord was cut with a new blade, after which mustard oil was rubbed into the stump. "I didn't go to the health post for check-ups," says Mira, "because I was shy of someone seeing my belly." Even if there had been complications, the family insists that they wouldn't have taken her to the hospital. "We're poor and prefer to die in our own houses," says Madan, Mira's husband.

reducing the rate of both maternal and neonatal mortality.

If Nepal has made advances in an absolute sense, the state of the newborn still compares poorly to that in almost all other developing countries. Nepal's neonatal mortality rate is the third highest in the world, as is its percentage of low birth weight babies, and it has the fourth lowest percentage in the world of births attended by skilled personnel. Neonatal mortality has continued to increase as a percentage of overall infant mortality—and now accounts for more than 60 percent of all deaths in infancy. Any further reduction in infant mortality in Nepal is thus dependent to a great extent on saving more newborn lives, yet by and large national policies and development plans overlook the newborn, addressing their issues—when they address them at all—within the context of safe motherhood programs.

WHY NEWBORNS DIE

In many ways, the story of newborn health in Nepal is dominated by a single statistic: more than 90 percent of all births take place at home in the absence of a skilled health provider. While there are other important dimensions to this story—most notably the status of maternal health and antenatal care—sooner or later the neonatal health conversation always comes back to this fundamental fact. It is the source of many of the risks to newborn health and survival and is, or at least should be, the starting point for policy discussions and intervention strategies.

While the available data on newborn health is inadequate, it is possible to piece together a general picture by extrapolating from a handful of national and district-level surveys, but even then—and this is symptomatic—there is much more data on maternal health than on newborn health. At 4.1, the fertility rate in Nepal is high. Perinatal mortality has declined in the last 15 years, from 63 to 52 per1000 total births, and neonatal mortality has declined from 45.2 to 38.6 per 1000 live births.

According to four hospital-based studies, a leading cause of perinatal mortality is intrapartum asphyxia. In

these studies, asphyxia contributed to 35 percent of neonatal deaths in one hospital in the capital city and 45 percent in another, and to 45 and 48 percent of deaths among newborns in the two rural districts of Jumla and Lalitpur respectively. More recent studies, however, seem to suggest that the rate of death from asphyxia may be declining, at least in urban areas.

Neonatal tetanus has long been another leading cause of newborn mortality in Nepal. A recent national study (1999/2000) revealed that mothers received the recommended dosage of the tetanus toxoid vaccine in only one third of all births, received only one dose in 13 percent of births, and received no doses at all in more than half of all births. UNICEF and the Ministry of Health are now immunizing women of childbearing age in selected districts with a high risk for neonatal tetanus. They have successfully increased the rate of coverage in these districts and are continuing to expand these efforts.

Other infections (such as those which cause sepsis and pneumonia) are also important causes of neonatal death. A recent hospital study in the Kathmandu valley found that more than half (52 percent) of infection-related deaths among newborns were caused by organisms other than tetanus.

Low birth weight infants are particularly at risk for infections and hypothermia. Twenty-seven percent of babies are born with a birth weight of less than 2.5 kilograms every year, the third highest percentage in the world (behind India and Bangladesh). A Maternal and Infant Research Activities (MIRA) study in four regional hospitals found that the prevalence of low birth weight newborns ranged from 20.4 percent to 34.7 percent. The majority of these babies were born at term, indicating that intrauterine growth restriction was a major cause of low birth weight. The MIRA study found that the top five factors associated with low birth weight were low maternal weight, height, and body mass index (BMI); previous history of a pre-term delivery; and a birth interval of less than two years.

CONTRIBUTING FACTORS

Key contributing factors in newborn mortality include the lack of skilled attendance at delivery, poor breastfeeding and other newborn care practices, and staff shortages in rural health facilities. As noted earlier, 90 percent of all births in Nepal occur in the home without skilled help, with the use of a clean delivery kit being reported in only two percent of all home deliveries. While women who have health problems during pregnancy are more likely to deliver in a health facility than those with no problems, the majority still deliver at home and are thus vulnerable in case of an obstetric emergency. It should be noted, moreover, that even in those rare cases where the delivery is attended by a skilled caregiver, the well-being of the newborn is often not a priority.

Breastfeeding in Nepal is almost universal, with 98 percent of women reporting breastfeeding some time after birth. But there are problem areas: colostrum is routinely discarded; only 18 percent of newborns are breastfed within an hour of birth; 40 percent of newborns are still not breastfeeding after the first 24 hours; and exclusive breastfeeding is often not continued for the recommended first 6 months of life. In addition, there is disturbing evidence that breastfeeding may actually be less common among women who deliver with the assistance of trained personnel than among those who deliver alone or without skilled help.

Certain other newborn care practices may also contribute to illness and death: newborns are not routinely kept warm, for example; the cord may be cut by an unclean razor blade, a sickle, or a piece of wood; and unhygienic substances such as cow dung or ashes may be applied after the cord is cut.

Another contributing factor to poor neonatal outcomes is the lack of staff in many of the country's health facilities, especially at the level of primary health care centers where there are chronic shortages of doctors and staff nurses. While attempts have been made to increase the number of health facilities in Nepal in recent years, the simple truth is that a facility without staff is a facility that cannot provide health care.

MOTHER AND CHILD

The survival of newborns is closely linked to maternal health and the care given to mothers during pregnancy, delivery, and the neonatal period. Important indicators of maternal health include the age at first pregnancy and childbirth, the number of pregnancies, the interval between pregnancies, and the nutritional status of the mother. In Nepal, the median age at first marriage is 17, and the median age at first birth is 20. This high rate of adolescent fertility is troublesome, as teenage mothers are more likely to suffer complications during pregnancy and childbirth, with potential risks for the health and survival of both the mother and child. The average number of pregnancies is 4.1 and the average birth interval is 32 months (but only 26 months for adolescent mothers). Short birth intervals (of less than 24 months) are still common in some areas of Nepal and have been associated with increased risk of death for the mother and the newborn.

Maternal nutrition, including micronutrient levels, is another key indicator of a mother's health. The cut-off point for chronic energy malnutrition is a BMI of 18.5. While the mean BMI in Nepal is 19.8, one quarter of all Nepalese women fall below the recommended minimum, indicating widespread malnutrition. The incidence of anemia among pregnant women is a risk factor for iron deficiency in newborns and is widespread in Nepal, with 75 percent of all pregnant mothers suffering from anemia. Malnourished, anemic mothers are at a substantially increased risk of having low birth weight babies.

On the care side of the equation, good antenatal care is an important factor both in maternal health and in a positive neonatal outcome. The Nepal Family Health Survey (NFHS 2001) showed that during the previous five years more than half (55.7 percent) of all pregnant mothers received no antenatal visits and only 9 percent received the recommended four visits, a significant finding given that the probability of a woman's delivering in a health facility increases with the number of antenatal care visits and that tetanus toxoid

immunization likewise tracks closely with antenatal care. The most common reasons given for the lack of antenatal care were no perceived need, the related fact that such care was not part of local tradition, and women not knowing the service was available.

As noted earlier, skilled care at delivery is the rule in only 10 percent of all births, and the use of clean delivery kits is extremely rare. Nearly three-quarters of women with post-delivery problems seek assistance, most in a district hospital or a private clinic, but one quarter do not. A routine postpartum check-up (within 24 hours of delivery) was not reported by a majority of Nepali women.

SAVING NEWBORN LIVES

Nepal faces a number of challenges to improving the health and survival of its newborns, but they are challenges that are being successfully addressed elsewhere in the developing world and which do not, by and large, require either high-tech or high-cost interventions. With the help of targeted assistance, aimed mainly at the home and the rural community and at the critical link between healthy mothers and their babies, Nepal can expect a brighter future for its newborns. The Saving Newborn Lives initiative (SNL) of Save the Children US, a worldwide effort of the Bill & Melinda Gates Foundation, can make an important contribution to this cause in four key areas.

Essential Newborn Care in the Community. SNL will focus on improving newborn care within the context of existing maternal and reproductive health programs, beginning with programs in the Kailali District of the western Terai and expanding into Siraha in the Eastern Terai. Working with key partners, SNL will prepare training curricula and materials and develop and implement behavior change strategies to improve the quality of newborn care services and increase the demand for antenatal, delivery, and postpartum services at the household and community level. Efforts will target mothers, family members, and community-based health care providers such as traditional birth attendants and village health workers. Special emphasis will be placed on such priority activities as: increasing birth preparedness for families (in collaboration with the Center for Development and Population Activities and the Save the Children/Nepal Field Office); supporting newborn parenting programs and maternal tetanus toxoid immunization (with UNICEF, WHO, and the Ministry of Health); and improving the monitoring and evaluation of health interventions. The Ministry of Health has also requested assistance from SNL in developing a national neonatal health strategy. In addition, SNL will advocate for increasing the knowledge of newborn health issues on the part of policymakers, program managers, health professionals, and service providers, and for allocating more financial and human resources at all levels to improve newborn care.

Training. Many of SNL's planned interventions will have to be supported by increased training and skills development for a variety of health providers, including maternal/child health workers, village health workers, and traditional birth attendants, as well as the staff in various health facilities. The SNL initiative will review and update the curricula of training programs, develop new materials, and support or carry out training in the following areas: the essential newborn care package for delivery and postnatal home care, counseling and facilitation skills (to support behavior change and as part of efforts to increase the demand for skilled care at delivery), and developing and field-testing job aids and other materials for service providers.

Behavior Change Communications (BCC). This component of the SNL initiative will emphasize changing the behavior of three key target groups: 1) family members and community health workers; 2) health providers; and 3) national, regional, and local leaders and decision-makers (to encourage their support of newborn care in their policies, programs, and investment strategies). In conformity with SNL's global strategy, activities in Nepal will be carried out in two main areas: behavior change as part of field interventions and in the context of advocacy for policy

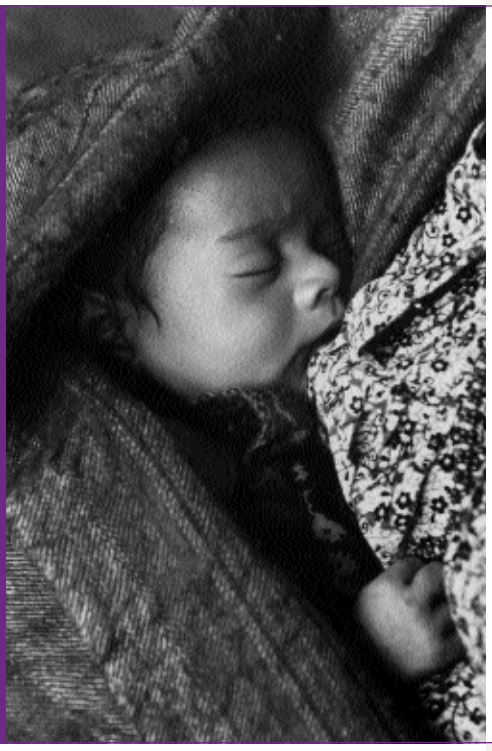
BLAME FOR PROBLEMS OFTEN FALLS ON MOTHERS

Gopini shows little sympathy for her daughter-in-law who has left for a two-month stay at her mother's house following the stillbirth of her first son. There has always been friction between Gopini and her daughter-in-law and the death of her grandson only adds to her enmity. She cannot understand why the baby died, since she herself gave birth to a breech baby 20 years ago without problems. "My daughter-in-law was very lazy, she was always sleeping," she says. "Perhaps because of this the baby didn't have enough space to move."

change. The following practices will be the primary targets of BCC efforts: essential newborn care (clean delivery, warming, drying, immediate and exclusive breastfeeding), birth preparedness, and postpartum home visits (increasing the demand for such visits within the first three days of life).

Research. Before the health problems of Nepal's newborns can be addressed, they must first be identified, documented, and publicized. Research, which will be driven by and coordinated with the other activities mentioned above, will focus on three areas: 1) the knowledge, attitudes, and practices of local communities vis-à-vis newborn care, and the social, cultural, and economic factors which influence them; 2) the attitudes and practices of health providers; and 3) the health-seeking behaviors of family members (especially with regard to the role played by traditional healers). Specific research topics will include such issues as family decision-making patterns and community-based management of newborn illness. SNL will support research on developing indicators to measure program achievements and the impact of new policies.

Nepal's newborns face serious challenges to their survival and well-being, but low-cost, low-tech solutions are within reach. There is no reason the interventions that have worked elsewhere to bring down newborn mortality will not work in Nepal. If the call goes out—if the players in Nepal's neonatal health drama will but take up the cause—help is at hand.



THE SAVING NEWBORN LIVES INITIATIVE, funded by the Bill & Melinda Gates Foundation, is a 15-year global initiative to improve the health and survival of newborns in the developing world. Saving Newborn Lives works with governments, local communities, and partner agencies in developing countries to make progress toward real and lasting change in newborn health.

Saving Newborn Lives is a key component of Every Mother/Every Child, Save the Children's global effort to improve the well-being of mothers and children in developing countries. Through this effort, Save the Children is helping to ensure that every mother has access to education, adequate nutrition, maternal and child health care, and economic opportunities so that she and her children can survive and thrive.

SAVE THE CHILDREN is a leading international nonprofit child-assistance organization working in over 40 countries worldwide, including the United States. Our mission is to make lasting positive change in the lives of children in need. Save the Children is a member of the international Save the Children Alliance, a worldwide network of 30 independent Save the Children organizations working in more than 100 countries to ensure the well-being and protect the rights of children everywhere.

Saving Newborn Lives
Save the Children
2000 M Street NW
Suite 500
Washington, DC 20036

Save the Children®

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