

Neonatal Health Strategies in Nepal



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Abstract

Nepal, the poorest developing country in south Asia, has highest maternal and neonatal mortality rate in the region. Out of 50,000 infant deaths per year, 30,000 newborn die within the 28th days of their lives. Three quarter of the neonatal death happens in the first week; highest risk of death is on the first day of life. Most of these deaths occur due to lack of skill attendance at birth and mostly at home. In addition to direct causes of death, many Newborns die because of their mother's poor health or because of lack of access to essential care.

Neonatal and Infant Mortality Rates clearly shows that share of NMR in IMR is increasing with each passing year, so to decrease the infant mortality rate further it is necessary to bring down neonatal deaths rate.

Newborn survival has become an important issue to improve the overall health status and for achieving the millennium developmental goals of a developing country like Nepal. Preventing newborn deaths begins with the health of the mother. Cost-effective prenatal and delivery interventions that improve maternal health and nutrition which save mothers' lives can save most newborns too. Also quality of care is important where more births take place in health facilities.

Introduction

Nepal has a population of about 23 million people, 80% of whom live in rural areas. With an estimated per capita income of \$289 per year, Nepal is a poor developing country in south Asia. Life expectancy at birth has increased, but at 60 years it is still lower than neighboring south Asian countries. Infant mortality rate is highest in the region. Due to high maternal mortality rate, life expectancy for women is lower than that for men. Gender disparities are also common in terms of literacy. Only 26% of Nepal's women are literate compared to 62% of men. Curative and preventive health care are organized primarily by the Ministry of Health through hospitals located at central, regional and district levels, and primary health centers, health posts and sub-health posts located at the community level. Private hospitals and clinics exist mostly in big cities only.

Health statistics show that worldwide about 4 million babies die each year, another 4 million babies each year are still born; most die in late pregnancy or labour. Out of the 4 million newborns that die each year, 1.5 million newborn deaths occur in the 4 countries of

South Asia including Nepal. These deaths account for about 40 percent of under-5 mortality and Neonatal deaths accounted for more than 60% of infant mortality. The majority of this (98%) of neonatal deaths occur in developing countries and at home. Despite much progress, achieving the Millennium Development Goals (MDGs) related to

maternal and child health is considered unlikely, given that the majority of high-burden, priority countries are not on track to reach MDGs 4 and 5.

Trend of Neonatal and Infant Mortality Rates over the past 15 years.

Year	IMR	NMR	Neonatal deaths as proportion of IMR
1991	80	46	58%
1996	79	50	63%
2001	64	38.6	60%
2006	48	33	69%
GOAL(2015)	34.5	17	33%

NB: health and Progress in Nepal, DOHS, SCF, US, and May 2007

The Two Third Rule-Health statistics also show that; about two-thirds of infant deaths occur in

the first month of life, of those who die in the first month, about two thirds die in the first week of life. Of those who die in the first week, two-thirds die in the first 24 hours of life.

"THE TWO-THIRDS RULE"

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Of those, about two thirds die in the first week of life.



Of those, about two thirds die in the first 24 hours of life.



Every hour 3-4 new borns die in Nepal !

It has been estimated that in 12 months period time 50,000 infant death occur in Nepal and two third of it consists of newborn deaths which indicates that 30,000 newborn die in one year period within the 28th days of their lives. Among these 20,000 in the first week of life and 16000 of deaths occur within 24 hours of their lives. This figure clearly shows that in every hour 3 to 4 newborn death occurs in Nepal.

Research from around the world has identified the main direct causes of newborn deaths are due to: Congenital anomalies (10%), Birth asphyxia (29%), Infections (tetanus,

sepsis, pneumonia, diarrhea) - (32%), Complications of prematurity (24%) other (5%).

In addition to direct causes of death, many Newborns die because of their mother's poor health or because of lack of access to essential care. Some time the family may leave hours away from referral facility or there may not be skilled provider in their community.

The newborn child is extremely vulnerable unless s/he receives appropriate basic care, also called essential newborn care. When normal babies do not receive this essential care, they quickly fall sick—and too often they die. For premature or low birth weight babies, the danger is even Greater.

One reason for the continued high newborn death rate is the gap between safe motherhood and child survival efforts. Safe motherhood program typically focused on the survival of the mother, and child survival strategies usually address the problem of children over one month. There have been little international efforts to develop maternal–child health approach that includes care during the first month of life. Ideally, maternal child program would target care of mothers, new born, and children up to age of five.

Nepal's Under-five, Infant and Neonatal, Perinatal mortality rate are 61, 48, 33, and 44 per 1000 live births respectively (DHS 2006). Although NMR has fallen from 58 per 1000 live births in 1991 to 33 in 2006, the share of NMR in IMR has increased from 58 to 69 % in the same period. The present high NMR and its major contribution to IMR illustrate the poor status of neonatal health in Nepal. Trend of Neonatal and Infant Mortality

Rates over the past 15 years shows that share of NMR in IMR is increasing with each passing year

The adoption of the millennium development goals (MDG) by the heads of states in 2000 has created a wave to invest in related activities in many developing countries. Various policies, strategies and activities have been developed and are implemented. Nepal has also taken into consideration the MDG in its policies and development agenda.

As the goals of achieving MDG 4 & 5 are programmatically and technically challenging, efforts to reduce child mortality and maternal mortality require multi-dimensional multisectoral approach. These approaches are briefly reviewed below.

• ***Community Interventions:***

Nepal has been one of the few countries where community based interventions has been successful and are well evident in Vitamin A program, CB-IMCI, National Immunization program, CB-NCP etc.

Clinical interventions:

Clinical intervention is very much important to achieve the MDG. As most of the deaths in children occur during newborn period and a significant number of maternal deaths occur in Hospitals, it is really a challenge to upgrade the services and offer quality service timely. The dilapidated structure of many referral centers and poor human resource management has been a serious question.

Policy Environment:

Policy environment for MDGs 4 & 5 has been very good in Nepal. The issuance of

various policies, strategies and guidelines are evident of this. Few examples in this respect are; Immunization strategy, IMCI strategy, Safe motherhood policy, Skilled birth Attendant policy etc. as a result subsequent implementation is being carried out.

Financing modalities:

Though there is very good policy environment, the financing for MDG 4&5 is rather insufficient and offer challenge for the programs. Committed and continued donor funding for MDG-4 has helped a lot in this aspect, whereas “scattered” funding for MDG-5 is a serious challenge.

Enabling Environment:

The environment to carry out the intervention has been good for community based

To decrease the infant mortality rate further, there has to be a decline in neonatal deaths. Thus the Goal of the National Neonatal Health strategy was set as:

Importance of interventions in improving newborn health is felt at a national and global scale. A study of neonatal deaths would help in finding appropriate strategies to reduce the present high neonatal mortality in the country.

Newborn survival has become an important issue to improve the overall health status and for achieving the millennium developmental goals of a developing country like Nepal. The Government of Nepal is implementing safe motherhood program as a mother-baby package. Guidelines published include neonatal care at the community and referral hospitals. Clean home delivery kits

THE NATIONAL NEONATAL HEALTH STRATEGY

Goal :

To improve the health and survival of newborn babies in Nepal

Strategic objectives:

- To achieve a sustainable increase in the adoption of healthy newborn care practices and reduce prevailing harmful practices
- To strengthen the quality of promotive, preventive and curative neonatal health services at all levels

interventions. However it remains challenging in clinical set up and at referral centers.

(CHDK) are prepared in Nepal and promoted. Use of low cost locally produced equipment supports essential neonatal care.

Saving Newborn Lives project has been initiated in Nepal. Several NGOs are supporting the safer motherhood project. Various professional bodies are assisting with training and advocacy relating to neonatal health. IMCI in Nepal proposes to include management of illnesses and promotion of health from 1 day - 2 months age. DFID, WHO and UNICEF, are developing and implementing MIRA Makwanpur project to improve mother and newborn care in the community. The project has adopted the strategy of facilitation through women volunteers one in each village development committee to activate, strengthen and support mother groups. This is aimed at increasing awareness of Perinatal problems provide knowledge of danger signs, increase demand for appropriate services and give knowledge of services available. This is complemented by health service strengthening using low cost technology. The use of antibiotics in the treatment of infections by community based workers after proper training is under consideration by His Majesty's Government (HMG), Nepal.

Implementation of an effective program for promotion of childbirth and newborn care practices requires understanding of the community and household traditional newborn care practices. Such information will enable the development of programs to promote culturally sensitive and acceptable change in practices. Information about the reasons for delivering at home is also necessary for healthcare planners to design appropriate maternity services. Information about reasons for delivering at home, home delivery and newborn care practices in urban areas of Nepal is lacking.

In order to reduce PNMR and under five mortality rate, it is very important to give attention on following points.

- **Health Education:** As far as possible, health education should be given to all expectant mothers on following topics;
 - Importance of nutrition during pregnancy.
 - Hazards of too early and too late pregnancy.
 - Hazards of smoking and drinking during pregnancy.
 - Hazards of heavy manual work during pregnancy.

Besides this, health education should be given about the importance of regular ANC visits.
- **Training:** Training of different level of health worker. As most of deliveries are conducted by untrained birth attendants, priority should be given to them. All health workers involve in delivery conduction of the babies must be trained in the resuscitation of the new born baby.
- **Referral Centers:** Establishment of the referral centers for lab our and delivery (Primary, secondary, tertiary level referral centers) according to the severity of risk factors. For those complications (of pregnancy and labour) which occur outside of hospital, improvement is desperately needed in the areas of community education, ANC, access to health care facilities.
- **Appropriate equipment:** Equipping the referral centers with appropriate equipment.

The referral center should be posted with the health personnel trained in safe delivery procedure and resuscitation of new born baby.

- **Cooperation:** Besides above recommendations, it is necessary to have good cooperation between pediatrician and obstetrician to provide quality services to the mothers and neonates. And the government should develop and implement such kind of national policy, which will help to reduce Perinatal mortality. Besides these, health worker of all levels should work in such a style that helps to reduce the present PNMR.

A recent review of evidence of the impact of newborn health intervention trials in developing countries identified the most effective measures for saving newborn lives; particularly focusing on communities and households, where most newborn deaths occur. The review identified key behaviors and interventions that should be integrated into existing maternal and child health programs to improve newborn health and survival. Focusing on quality of care is important where more births take place in health facilities.

Preventing newborn deaths begins with the health of the mother. Cost-effective prenatal and delivery interventions that improve maternal health and nutrition, which save mothers' lives can save most newborns too. The following national health programs directed at neonatal health:

- MINI (Morang Innovative Neonatal Intervention). Focused on management of neonatal sepsis by FCHWs.
- MIRA (Mother Infant Research Activities). BCC through mothers' groups in Makwanpur district of Nepal.

- CB-MNC(Community Based Maternal Neonatal Care). Focused on FCHWs initiating timely PNC and appropriate management or referral for:
 - i) low birth weight, ii) hypothermia, iii) danger signs in neonates, & iv) post partum hemorrhage prevention with misoprostol for home deliveries.
- Birth Preparedness Package. BCC through FCHVs – initiated in Siraha district and now expanding to over 50 districts in the country.
- Testing of community strategy for care of Low Birth Infants (Kanchanpur district).
- Support to Safe Motherhood Program (SSMP) DFID supported program under FHD/DoHS.
- Saving Newborn Lives Initiative (SNLII) of Save the Children.
- Safe Delivery Incentive Program.
- Community Based Newborn Care Program (CB-NCP).
- Integrated Management of Child Illness (IMCI).
- Nepal Family Health Program-CBMNC (NFHP).
- ACCESS

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Since 81% of births in Nepal take place in homes, the interventions is home based. And the service is provided by Female Community Health Volunteers (FCHVs) by

- Being present during delivery
- Home visiting on day three
- Home visiting on day seven

The package was introduced as pilot project in 5 districts in 2008-2010. Now the project is running in 15 districts and will be introduced to another 10 districts by the end of 2011.

Community Based Newborn Strategy according to Child Health Division;

Prior to delivery:

- Keep record of all pregnant women.
- Counseling on good delivery practices.

During home delivery:

- Provide free of charge a set of Clean Delivery Kit.
- Weigh the baby.
- Ensure proper thermal care (skin-to-skin technique).
- Teach KMC technique for LBW baby and refer to health facility.
- Asphyxia management (use “ambu bag” if necessary).
- Counseling on breastfeeding and other good practices.

After delivery (Postnatal visit on 3rd and 7th day)

- Counseling on Breastfeeding, Birth Spacing etc.

- Vaccination messages.
- Treatment with oral Cotrimoxazole to pneumonia/PSBI cases and Refer for Gentamycine Injection at community level health facility.

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