Essential Newborn Care

Save the Children

at a glance

Why Invest in Newborn Health?

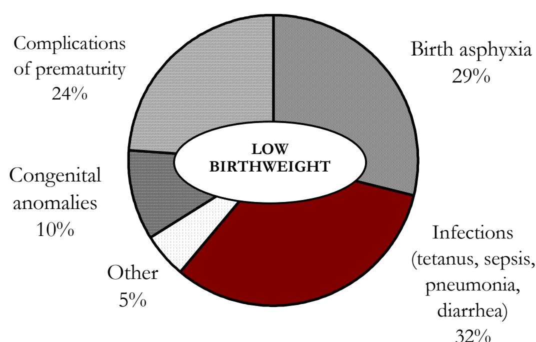
Newborn mortality represents 40 percent of all deaths of children under age five. Each year,

- 4 million babies die within 30 days of birth,
- another 4 million are stillborn,
- 98% of these deaths are in developing countries – most in the home without any skilled care,
- newborns who lack appropriate care are at high risk of poor health and reduced productivity in childhood and later life.

Causes related to pregnancy, delivery and infections each cause about one third of newborn deaths, so interventions need to address mothers and newborns. Low birth weight underlies 40-80% of neonatal deaths. Birth intervals of less than 36 months significantly increase the risk of low birth weight, premature babies, and neonatal death.

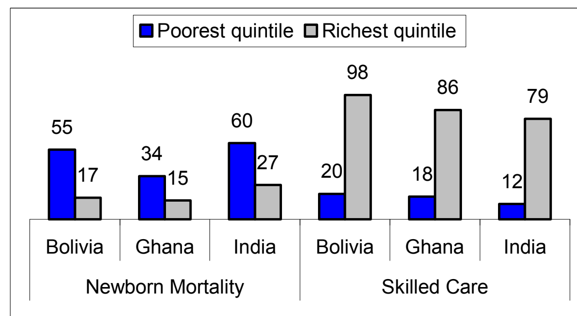
Two-thirds of neonatal deaths occur in the first week of life, and two-thirds of those deaths occur within the first 24 hours. For a more detailed view of global newborn health, see the State of the World's Newborns.

Improving newborn health is part of any poverty reduction strategy, given the wide gap between rich and poor in neonatal outcomes. Health experts agree that the Millennium Development Goal to reduce child mortality by two-thirds between 1990 and 2015 cannot be met unless neonatal mortality is halved. For more on newborn survival and the MDGs, see "Why Invest in Newborn Health?"



Source: WHO 2001 estimates based on data collected around 1999.

Neonatal Mortality Rates and Access (%) to Skilled Care at Delivery



Source: World Bank, DHS data collected 1998-1999

What can be done?

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. (See "Using Evidence to Save Newborn Lives".)

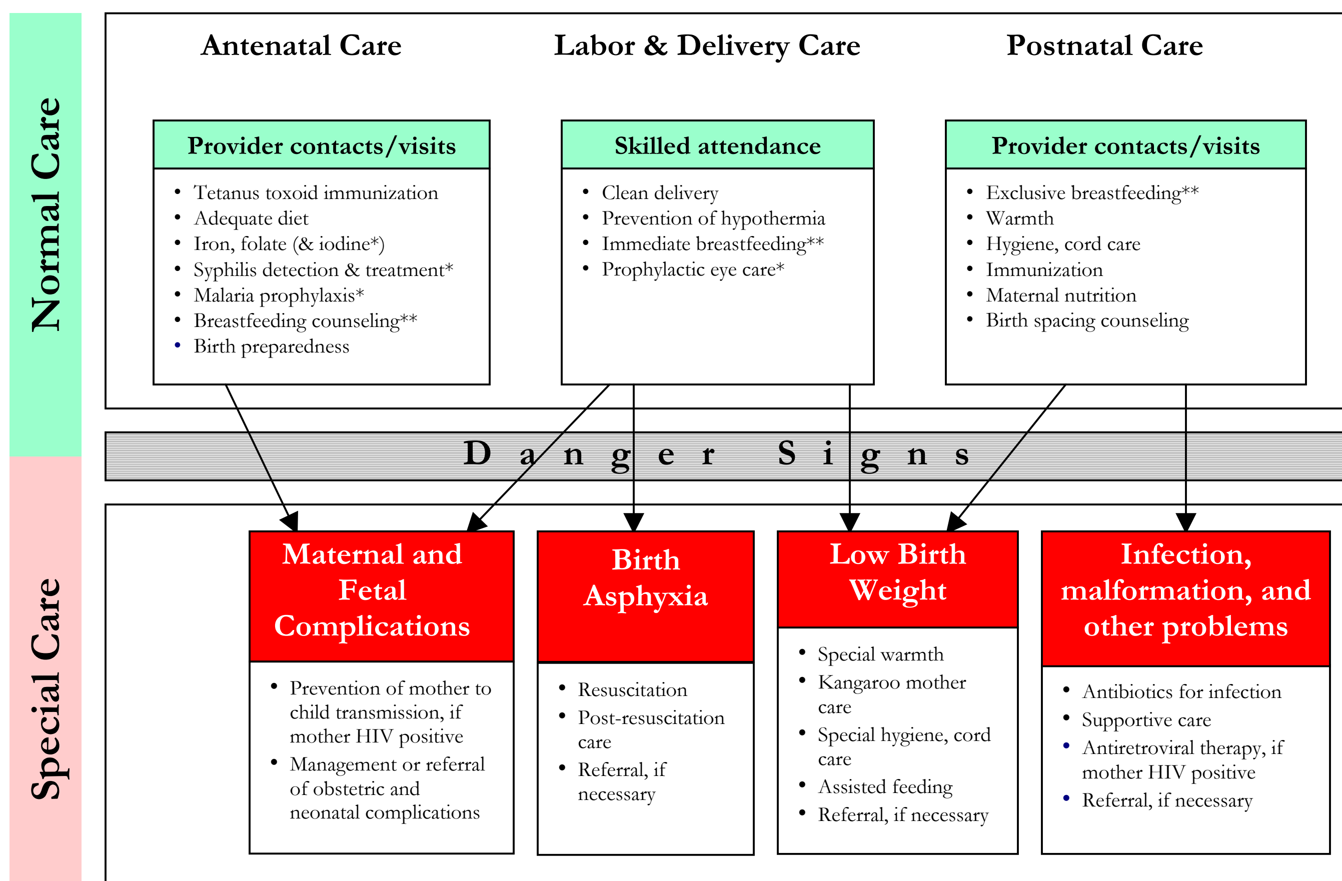
Focusing on quality of care is important where more births take place in health facilities.

Preventing newborn deaths begins with the health of the mother. Cost-effective prenatal and delivery interventions that improve maternal health and nutrition and save mothers' lives can save most newborns too. (See "Healthy Mothers and Health Newborns: The Vital Link").

First, essential care needs to be provided during pregnancy. Tetanus toxoid immunization, proper nutrition including iron/folate supplements, and treatment of maternal infections, such as malaria and sexually transmitted infections, have a strong influence on newborns' health and survival.

Second, two priority interventions during labor and delivery are critical, in addition to managing obstetric complications: reducing the risk of infection to mothers and newborns by keeping the birth attendant's hands and all contact with the umbilical cord clean, and resuscitating newborns who are not breathing normally.

Essential Newborn Care (ENC) Interventions



* Endemic areas ** Special counseling for HIV positive mother

Third, certain actions can make the postnatal period safer for newborns. Immediate and exclusive breastfeeding and keeping the baby warm and the umbilical cord clean contribute to the health and survival of newborns. Since most newborn deaths occur during the first hours or days after birth, contact with an appropriately trained health provider is key to newborn health and survival. In addition to counseling on newborn care practices, particularly careful management of low birth weight babies, and timely recognition and antibiotic treatment of infections such as pneumonia, sepsis, and meningitis are key.

Implementation Strategies

There is now consensus on a set of proven interventions that can save newborn lives (see ENC Interventions diagram). However, it will not be possible to introduce and sustain the whole package on a large scale at one time. Since newborn health status, infrastructure, and available resources vary among and within countries, scenario-based approaches will be required for program planning. In low resource settings, strategies can be phased so that more feasible interventions are introduced first, such as tetanus immunization, drying and warming and immediate breastfeeding, and more complex interventions like resuscitation by bag and mask are taken up incrementally as the scenario improves. Many essential newborn care interventions are easy to implement and affordable in resource poor settings.

Ensuring universal access to skilled care is the accepted strategy to make childbirth and the early postnatal period safe for mother and newborn. However, at present, only about half of developing country women deliver with a skilled attendant, and in several countries in Asia and Africa, the proportion is less than 25 percent. While additional skilled attendants are being trained and deployed, health systems strengthened, and demand for appropriate care increased, a simultaneous strategy supporting community-based providers can help save lives in the immediate term, especially in poor, high mortality

settings. Community-based workers can help improve household practices and provide a link between families and the health system. For more information, see the Safe Motherhood Initiative, "Skilled Care During Childbirth".

Costs

The WHO estimates that essential care during pregnancy, childbirth, and the newborn period costs an estimated US$3 a year per capita in low-income countries. The SEARCH project in India achieved good results with an intervention cost of $0.20 per person, or $5 per newborn (see box). These interventions do not need expensive technology or extensive health infrastructure and can be built into existing maternal and child health programs.

Research on Community-Based Neonatal Care

In rural Maharashtra, India, most births occur at home and functioning facilities are not accessible, so a nonprofit organization SEARCH introduced home-based neonatal care. Village health workers are trained to provide prenatal care, resuscitate asphyxiated babies, prevent and treat hypothermia, support breastfeeding, and recognize and treat infections. Traditional Birth Attendants are given training and basic supplies (clean delivery kits, iron/folate pills, condoms).

By the third year, there was a 62% decline in neonatal mortality, and significant declines in neonatal and maternal morbidities.

The national Reproductive and Child Health Program (RCH II), to be launched in 2005, will incorporate an adaptation of this home-based model for rural communities.

Research in Bangladesh, Nepal and Pakistan is testing community-based approaches in other settings.

SOURCES "Effect of home-based neonatal care and management of sepsis on neonatal mortality: field trial in rural India." *Lancet* 1999;354:1955-61.

"Cross sectional, community based study of care of newborn infants in Nepal." *BMJ* 2002;325:1063.

Where to start

❖ *Build policy commitment:* Strategies to reduce high levels of newborn mortality should be linked to policies and strategies in related fields, such as reproductive health, safe motherhood, child survival, and early childhood development, and incorporated in national health plans and PRSPs. Since 40 percent of under 5 mortality occurs in the first month, reducing newborn mortality should be added as a submeasure of progress towards the MDGs.

❖ *Develop a national strategy:* A neonatal health strategy document may not be needed; it is more important that newborn health is integrated into other strategies, such as safe motherhood and Integrated Management of Childhood Illness (IMCI). A situation analysis should provide the necessary information for developing a strategy, based on the newborn health situation, existing services and available resources, and understanding the priorities for introducing potential interventions.

❖ *Improve newborn health services and household practices:* An implementation plan should be developed based on analysis of maternal and newborn health status, existing services, newborn care practices, and agreement on objectives and priorities among relevant stakeholders. Interventions to improve newborn health should be built onto already established programs. For example, midwives can be trained in newborn care and skilled delivery care, and an early postnatal visit within the first three days added to safe motherhood programs. Integrated Management of Childhood Illness (IMCI) programs can extend their services to newborns as well as older children. STI and malaria control programs should focus more attention on reaching pregnant women.

❖ *Create demand for services:* Most newborns are born and die at home in developing countries. So research into attitudes and dynamics of decision-making at family and community levels will contribute to improved maternal and newborn care practices and appropriate use of services. For instance, in Pakistan, misconceptions about tetanus toxoid immunization and restrictions on women's mobility led to a social mobilization strategy involving teachers, religious leaders, men, mothers-in-law and community-based health workers which significantly increased the coverage of women of reproductive age.

❖ *Develop a monitoring and evaluation plan:* (see suggested indicators in the table).

For more information

People

- World Bank: Mariam Claeson, Flavia Bustreo, Viviana Mangiaterra, Elizabeth Lule, Khama Rogo
- WHO: Jelka Zupan (reproductive health), Jose Martines (child and adolescent health)

- Saving Newborn Lives, Save the Children: Anne Tinker

Key references

- *Healthy Mothers and Healthy Newborns: The Vital Link*. Population Reference Bureau and Saving Newborn Lives. http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=7167

- *Mother-Baby Package: Costing Spreadsheet.* World Health Organization. WHO/FCH/RHR/99.17

- *Mother-Baby Package: Implementing safe motherhood in countries.* World Health Organization. WHO/FHE/MSM/94.11

- *State of the Worlds' Newborns.* Saving Newborn Lives initiative, Save the Children, 2001. http://www.savethechildren.org/publications/newborns_report.pdf

- *Using Evidence to Save Newborn Lives*. Population Reference Bureau and Saving Newborn Lives. www.prb.org

- *Why Invest in Newborn Health?* Population Reference Bureau and Saving Newborn Lives. http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=8801

Key Websites

- Healthy Newborn Partnership www.healthynewborns.org

- MNH/JHPIEGO www.mnh.org

- Saving Newborn Lives http://www.savethechildren.org/health/newborns/index.asp

- World Health Organization www.who.org

Indicators for Newborn Health

(Priority indicators highlighted)

Outcomes and Processes	Indicators
Reduction in neonatal/perinatal mortality	Neonatal Mortality Rate
	Perinatal Mortality Rate
	Birthweight
Improved Family and Community Practices	
Pregnant women and new mothers educated on danger signs before, during, and after delivery and in newborns	% of new mothers who know at least 2 danger signs before, during, and after delivery and in newborns
Immediate breastfeeding	% of infants breastfed within 1 hour of birth
Improved Skills of Facility-Based Health Care Workers	
Facility-based health care workers trained in essential newborn care practices, including immediate newborn care and newborn resuscitation	% of facility-based health care workers trained, by cadre, in essential newborn care practices
Facility-based health care worker performance improved and maintained through follow-up after training and periodic supervision	Correct identification and treatment and/or referral by facility-based health care workers of newborn problems, assessed by direct observation, role play, patient exit interviews or clinic records.
Improved Skills of Community-Based Health Workers	
Community-based health workers trained in counseling on essential newborn care (e.g., birth preparedness, breastfeeding, clean delivery, cord care, and hypothermia prevention)	% of community health workers trained, by cadre, in counseling on essential newborn care, assessed by direct observation, role play, patient exit interviews or clinic records.
Community-based health worker performance improved and maintained through follow-up after training and periodic supervision	Correct counseling, identification, and treatment and/or referral by health workers of newborn problems
Improved Health System	
Health facilities have available staff, drugs, equipment, and supplies for normal deliveries, obstetric emergencies, and managing newborn problems, including asphyxia	% of health facilities, by type, staffed and equipped to provide newborn care
Sustainable financing and equity of access	% of newborns who have access (e.g., within 3 hours travel time) to a health facility able to manage newborn problems
Improved Coverage of Essential Newborn and Maternal Care	
Immunization to protect mothers and newborns against tetanus	% of women 15-49 who received at least two doses of tetanus toxoid during last pregnancy or at least 5 doses in her lifetime
Prenatal checkups by a trained or skilled provider	% of new mothers who received prenatal care at least once by a trained or skilled provider during last pregnancy
Attendance at delivery by a skilled provider	% of new mothers whose birth was attended by a skilled provider
Postpartum checkup by a trained or skilled provider	% of new mothers who received a checkup by a trained or skilled provider within 3 days after delivery
Newborn checkup by a trained or skilled provider	% of newborns who received a checkup by a trained or skilled provider within 3 days after delivery