


SAVING NEWBORN LIVES

Postnatal Care: A Critical Opportunity to Save Mothers and Newborns

By Erin Sines, Uzma Syed, Steve Wall, and Heidi Worley



Newborn survival is inextricably linked to the health of the mother. Nowhere is this more evident than the high risk of death for newborns and infants whose mothers die in childbirth.¹ For both newborns and mothers, the highest risk of death occurs at delivery, followed by the first hours and days after childbirth. The postnatal period (the time just after delivery and through the first six weeks of life) is especially critical for newborns and mothers.

Given the exceptional extent to which the deaths of mothers and babies occur in the first days after birth, the early postnatal period is the ideal time to deliver interventions to improve the health and survival of *both* the newborn and the mother. Yet policies and programs have largely overlooked this critical time, hindering efforts to meet the Millennium Development Goals (MDGs) for maternal and child survival. These goals can be advanced, however, by integrating postnatal care for newborns and mothers, which is a practical and feasible strategy for reducing deaths and disability in newborns and women.

Why Focus on the Postnatal Period?

Every year, four million infants die within their first month of life, representing nearly 40 percent of all deaths of children under age 5.²

Almost all newborn deaths are in developing countries, with the highest number in South Asia and the highest rates in sub-Saharan Africa. Most newborn deaths occur at home, regardless of whether delivery was in the home or in a health care facility, and regardless of whether a skilled attendant was present at birth.

More than half a million women die each year as a result of complications from pregnan-

cy and childbirth. Most of these deaths occur in sub-Saharan Africa and South Asia. More than 60 million women deliver at home each year without the benefit of skilled care. As with newborn deaths, nearly all maternal deaths occur in developing countries.

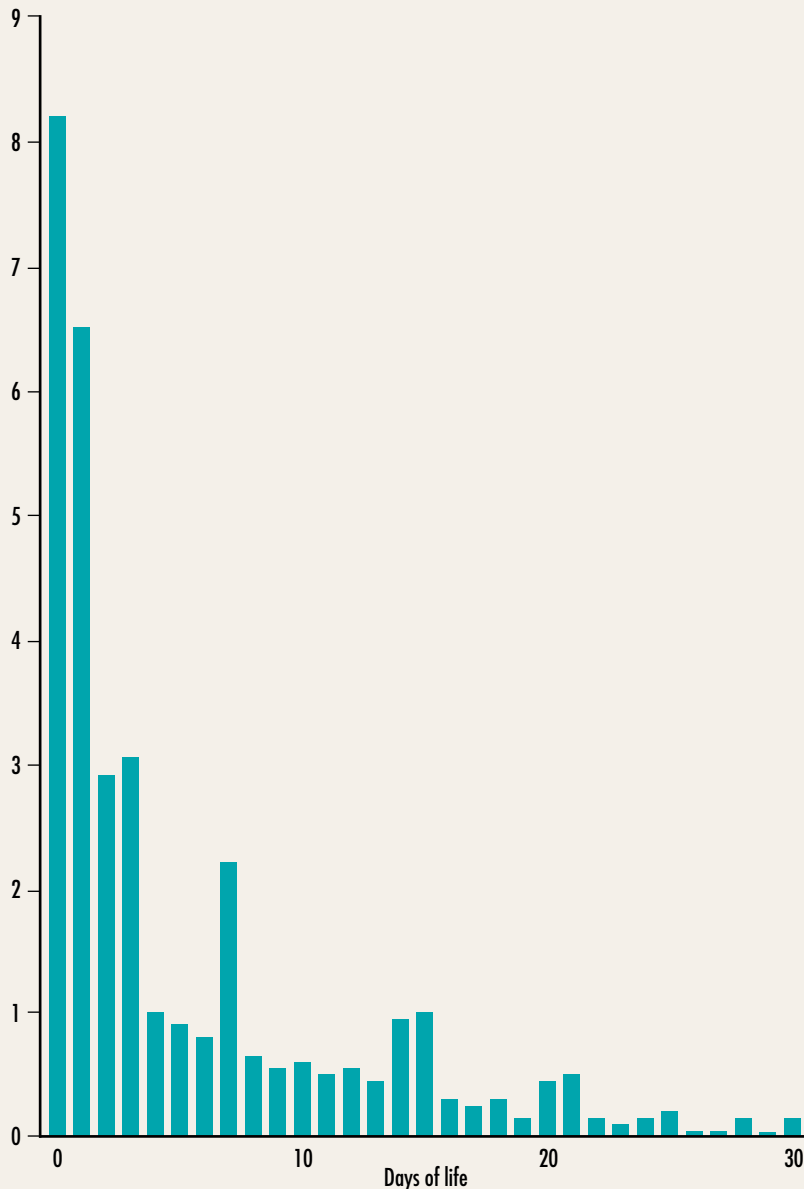
Both mothers and their newborns are vulnerable during the postnatal period, especially during the first 24 hours following the birth. **Figure 1 (page 2)** shows that more than two-thirds of newborn deaths will have occurred by the end of the first week after delivery, with up to one-half of all newborn deaths occurring in the first 24 hours.³ Similarly, approximately two-thirds of all maternal deaths occur in the postnatal period (see **Figure 2**).⁴ Evidence from Bangladesh indicates the majority of maternal deaths occur between the third trimester and the end of the first week after pregnancy.⁵ The time of highest risk of death is the *same* for mothers and for newborns—on the day of delivery and over the next few days after delivery. These data offer compelling evidence that *integrated* maternal and newborn postnatal care (PNC) during the first few days after delivery should be provided to all newborns and their mothers as a concerted strategy to improve survival of both.

Policy and program actions to provide early, integrated postnatal care will inevitably strengthen the linkages between maternal health and child health programs. PNC visits by a health worker help mothers and newborns establish and maintain contact with a number of health services needed in the short and long term. Furthermore, early postnatal care is critical to promote healthy household practices—such as exclusive breastfeed-

Figure 1

When Do Newborn Deaths Occur?

Daily risk of death (per 1,000 survivors)



SOURCE: Joy E. Lawn analysis based on 38 DHS datasets (2000 to 2004) with 9,022 neonatal deaths, using MEASURE DHS STATcompiler (www.measuredhs.com). Used in: Save the Children-U.S., *State of the World's Mothers 2006* (Washington, DC: Save the Children-U.S., 2006).

ing—that are key to child health and survival. For women, early postnatal care services are an opportunity to receive information and support for healthy behaviors such as getting proper nutrition during breastfeeding and using family planning.

Yet, despite the benefits of PNC, most newborns and mothers do not receive postnatal care services from a skilled health care provider during the critical first few days after delivery. The large gap in PNC coverage is evident in a recent analysis of Demographic and Health Surveys in 23 African countries. Approximately one-third of women in sub-Saharan Africa give birth in facilities, and no more than 13 percent receive a postnatal care visit within two days of delivery.⁶ In fact, whether women deliver at home or in a facility, postnatal care services are often absent. Moreover, PNC services, where available, often lack essential elements of care required for the optimum health of the mother and her newborn.

Addressing the gap in PNC coverage and quality requires facility and community actions to reach mothers and babies in the first days after birth. Under the Saving Newborn Lives initiative, integrated, community-based PNC programs were implemented in six countries (see Box 1, page 4). As with antenatal and delivery care, many cultural, social, and economic barriers delay or prevent women from seeking PNC services from facilities in the formal health system, even where these services are available. In many countries, maternal and child health intervention packages must be strengthened to provide routine PNC services to all newborns and their mothers in the first days after birth. Furthermore, health systems need to provide PNC services in a coordinated way across the home, community, and facility continuum of care.⁷

Postnatal Care: What, Where, When, and by Whom?

While there is not yet a standardized, evidence-based PNC protocol, there is consensus on most key elements of essential care that should follow delivery to improve the health and survival of newborns and mothers. The World Health Organization guidelines from 1998 recommend that postnatal care for all newborns should include immediate and exclusive breastfeeding,

warming of the infant, hygienic care of the umbilical cord, and timely identification of danger signs with referral and treatment.⁸ Since the majority of newborn deaths occur among low birth weight (LBW) babies, PNC should also include extra care of LBW newborns for breastfeeding, warmth, and early identification of danger signs.⁹ For mothers, recommended care includes monitoring and referral for complications such as excessive bleeding, pain, and infection; counseling on breast care and breastfeeding; and advice on nutrition during breastfeeding, newborn care practices, and family planning.

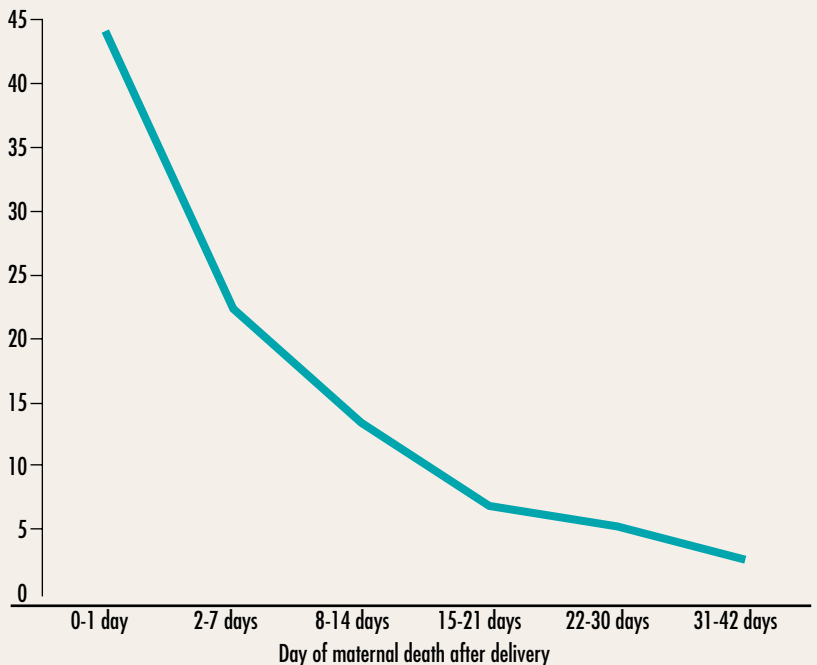
To be effective in reaching those most in need, PNC services must be located close to or at home so that identification, referral, and treatment of complications can occur as early as possible. PNC services can be delivered at a health facility, through home visits by health workers, or through a combination of care in facilities and at home.¹⁰ In most developing countries, however, postnatal care may only occur if provided through home visits, because geographic, financial, and cultural barriers typically limit care outside the home during the early postnatal period.¹¹ Countries must adopt strategies that take into account unique cultural and social contexts, available financial and human resources, and existing health systems. In addition, strategies to provide PNC within a country should vary or be modified to target the hard-to-reach, marginalized, and poorest groups of women and newborns.

There is no established evidence-based protocol defining optimal timing and number of PNC visits with a health provider as there is with antenatal care. The World Health Organization guidelines on postnatal care recommend postnatal visits within six to 12 hours after birth, three to six days, six weeks, and at six months (6-6-6-6 model).¹² However, because the majority of maternal and newborn deaths take place during the first few hours and days after birth, postnatal contacts should begin as early as possible in the postnatal period,

Figure 2

The Early Postnatal Period Carries a High Risk of Death to Mothers

Percent of maternal deaths in developing countries



SOURCE: X. F. Li et al., *International Journal of Gynecology & Obstetrics* 54 (1996): 1-10.

especially within the first 24 hours, then again within two to three days after delivery.¹³ Early postnatal care is needed to encourage preventive behaviors and practices, such as warming of the infant, and to increase the likelihood that potentially life-threatening complications in both newborns and mothers are detected, referred, and treated as early as possible.

Where families have poor access to or do not utilize services of formal health care systems, PNC should be provided via community providers making routine home visits. Existing cadres of health workers, such as nurse midwives, traditional birth attendants, community health workers, and community volunteers, could be trained to provide PNC during routine home visits to newborns and mothers. Providing PNC visits in community settings requires the collaboration of policymakers, health professionals, and community organizations with traditional local care-

Box 1

Incorporating Postnatal Care Into Community-Based Interventions: A Comparison of Survey Results From Six Countries by La Rue Seims

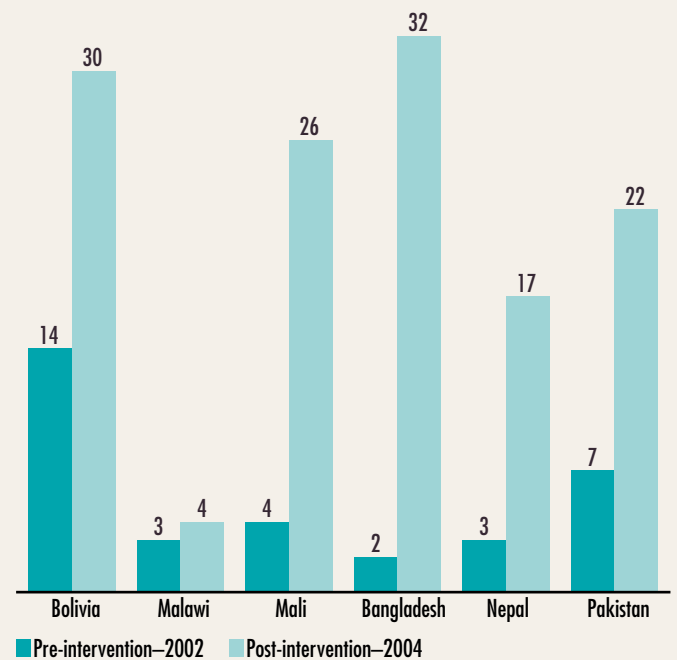
Save the Children's Saving Newborn Lives (SNL) program conducted surveys in six countries to determine whether newborns and their mothers who deliver at home in developing countries receive care after birth and whether postnatal care can be increased by an integrated, community-based intervention package. Pre-intervention surveys of between 300 and 4,500 women were conducted in Bangladesh, Bolivia, Malawi, Mali, Nepal, and Pakistan to determine the proportion of newborns and their mothers receiving care in 2002. These data were later compared to post-intervention survey results in 2004, after the introduction of an essential newborn care package.

SNL trained community-based health workers to provide essential newborn care in the home and used behavior change to promote healthful practices for the care of mothers and newborns in the community. The interventions were designed to raise awareness of newborn health in the community and create demand for services. Existing health care workers were trained, and no new staff or facilities were introduced. Interventions were implemented for a period of 6 to 18 months.

Before the intervention, few newborns born at home received care from skilled health workers within three days of birth. The highest coverage was in Bolivia, where 14 percent of the newborns received some care. As a result of the intervention (see figure), there were increases in the number of infants born at home who received care from a trained health worker within three days of birth in five of the six countries. The proportion receiving care from health workers increased from 2 percent to 32 percent in Bangladesh and from 14 percent to 30 percent in Bolivia. Despite the short intervention period, impressive increases in postnatal care coverage were seen in most countries.

SNL has demonstrated that the proportion of newborns and mothers receiving postnatal care can be increased within a short

Percent of Newborns Receiving Postnatal Care From a Trained Health Worker Within 3 Days of Birth



SOURCE: Saving Newborn Lives, baseline and endline surveys, 2002 and 2004.

period of time and that community-based health workers can provide effective home-based postnatal care. The SNL experience suggests that coverage can be expanded through long-term, sustained efforts.

givers, parents, and families. Traditional practices such as seclusion of mothers and their newborns after childbirth pose challenging obstacles to the delivery of PNC. But feasible approaches utilizing local caregivers to help overcome cultural barriers have proven to be successful at changing PNC practices and care-seeking by families.¹⁴

Regardless of the location and provider of PNC services, the focus should be to guarantee that the mother and the newborn receive

appropriate care throughout the entire postnatal period. Postnatal contact with the health provider should inform and reinforce the family's own care practices and care seeking behavior, empowering the family to provide appropriate care to both newborn and mother in the household. Ideally, even before birth, antenatal contacts with the family should promote the importance of early PNC for newborns and mothers.

Opportunities to Integrate Postnatal Care Into Existing Systems

To reduce newborn and maternal mortality, essential postnatal care should be promoted and supported in policies and integrated into existing health programs. Obvious opportunities to provide PNC are Safe Motherhood and Child Survival programs; however, important programs such as those addressing the prevention of mother-to-child transmission of HIV and maternal and child nutrition provide unique opportunities to provide mothers and newborns with essential PNC through a variety of service delivery strategies. Strengthening PNC in existing programs requires multifaceted commitments, such as providing community-based education and health promotion for families to adopt positive household practices and seek care, training health workers and supervisors to improve coverage and quality of PNC services, and conducting research to answer remaining questions about optimal timing and number of PNC visits.

In many countries, large-scale programs provide ideal opportunities to deliver integrated PNC services through existing systems. Examples include the Rural Health Mission initiative in India; Lady Health Worker program in Pakistan; the Health Extension Worker program in Ethiopia; and models of Integrated Management of Neonatal and Childhood Illness (IMNCI), such as in India and Bolivia. In all countries, providing integrated PNC is an important opportunity to bridge common policy and programming gaps between child health and maternal/reproductive health, including family planning.

Save the Children's Saving Newborn Lives (SNL) program is currently working with governments and other partner organizations in 19 countries. In many of these countries, SNL is developing research projects to design and test the integration of community-based PNC services into national strategies and protocols, such as IMNCI protocols; skilled birth attendant training; and district and national pro-

grams for maternal, newborn, and child health. Box 1 summarizes results from a recent SNL program to include integrated postnatal care visits into existing health packages in six countries. While the overall low PNC coverage indicates the magnitude of the PNC gap, the improvement in coverage seen in most countries indicates that PNC is feasible and can be rapidly strengthened by program commitments and policy support.

In addition to integrating PNC into both existing and new programs, PNC services must be tracked and monitored. There are few consistently measured indicators of PNC coverage, and none track the effectiveness of national PNC programs.¹⁵ The Demographic and Health Surveys, for example, may measure the timing of the first postnatal care visit but not where it took place, by whom it was given, or its content or quality. In contrast, data collected on antenatal care visits measure the number of visits, timing, provider, and components of the visit. More robust PNC data are needed to identify service delivery and quality gaps and target services and resources to where they are most needed. Examples of indicators to track PNC include: percent of mothers and newborns who receive care by a trained health care worker within three days of delivery; place and type of care provided; percent of mothers who know at least two maternal danger signs; percent of mothers who know at least two newborn danger signs; percent of babies who were breastfed within one hour of delivery; and neonatal mortality rate.¹⁶ Monitoring PNC indicators is becoming increasingly recognized as a necessary step to quantify and thus address health service gaps for newborns and mothers.

Recommendations and Next Steps

Postnatal care services must be made available to all mothers and newborns. Programs that target mothers and newborns should integrate PNC services into their existing delivery strategies. Safe Motherhood programs, for example,

can take the opportunity to encourage pregnant women to practice healthy postnatal care behaviors such as immediate and exclusive breastfeeding, and keeping the baby warm and dry. Routine integrated postnatal care services should be incorporated into existing or planned large-scale programs, such as the Lady Health Worker program in Pakistan and the Health Extension Worker program in Ethiopia.

To increase the availability of PNC services, global and local advocacy efforts are needed. Policymakers and health care professionals must be informed about the benefits of strengthening and expanding PNC and especially the importance of focusing on the early postnatal period as the key time to improve health and survival of *both* newborns and mothers. The health system in many countries is strongly committed to and effective in reaching pregnant women with antenatal care services, but a similar commitment to postnatal care services does not yet exist. Efforts must be made to inform families, communities, and policymakers that postnatal care is just as important as antenatal care. Until there are opportunities to obtain quality PNC services and education about its potential life saving importance, PNC services may continue to be regarded by many as having little value. Advocacy should make clear to policymakers, health providers, communities, and families that PNC is lifesaving and essential for improving the health and survival of both mothers and babies.

Improving postnatal care requires good data on newborn and maternal care in the household, care seeking, and the availability of PNC. When added to national surveys, such indicators will help determine whether, when, where, and by whom newborns and mothers are receiving care; will improve monitoring of PNC; and will enable program planners to more effectively target resources to improve quality and coverage.

Finally, research is needed to answer important remaining questions about PNC. These are largely “how” questions, because the essential

elements of postnatal care for newborns and for women are already known and established. The most important questions focus on how to integrate “packages” of PNC into existing programs and health delivery systems at the district, national, or regional level. Research is needed to better define the optimal number, timing, and content of PNC visits for maximum benefit to newborns and mothers.

If provided, promoted, monitored, researched, and further tested, PNC services will create lasting improvements in health systems and constitute major progress in meeting the MDGs. More importantly, postnatal care will save the lives of thousands of mothers and newborns every year.

References

- ¹ United Nations Population Fund (UNFPA), *State of the World's Population 2005* (Geneva: UNFPA, 2005).
- ² Joy E. Lawn, Simon Cousens, and Jelka Zupan, "4 Million Neonatal Deaths: When? Where? Why?" *The Lancet* 365, no. 9462 (2005): 891-900.
- ³ Joy E. Lawn analysis based on 38 DHS datasets (2000 to 2004) with 9,022 neonatal deaths, using MEASURE DHS STAT compiler (www.measuredhs.com). Used in: Save the Children-U.S., *State of the World's Mothers 2006* (Washington, DC: Save the Children-U.S., 2006).
- ⁴ Carine Ronsman, Wendy J. Graham, on behalf of the Lancet Maternal Survival steering group, "Maternal Mortality: Who, When, Where, and Why? Maternal Survival," *The Lancet Maternal Survival Series* (2006): 13-23.
- ⁵ Ronsman et al., "Maternal Mortality: Who, When, Where, and Why? Maternal Survival."
- ⁶ Charlotte Warren et al., "Postnatal Care," in *Opportunities for Africa's Newborns*, ed. Joy Lawn and Kate Kerber (Cape Town, South Africa: Partnership for Maternal, Newborn, and Child Health, Save the Children, UNFPA, UNICEF, USAID, WHO, and partners, 2006).
- ⁷ Erin Sines, Anne Tinker, and Julia Ruben, *The Maternal-Newborn-Child Health Continuum of Care: A Collective Effort to Save Lives* (Washington, DC: Population Reference Bureau, 2006).
- ⁸ World Health Organization, *Postpartum Care of the Mother and Newborn: A Practical Guide* (Geneva: World Health Organization, 1998).
- ⁹ Lawn, Cousens, and Zupan, "4 Million Neonatal Deaths: When? Where? Why?"
- ¹⁰ Warren et al., "Postnatal Care."
- ¹¹ Peter Winch et al., "Local Understandings of Vulnerability and Protection During the Neonatal Period in Sylhet District, Bangladesh: A Qualitative Study," *The Lancet* 366, no. 9484 (2005): 478-85.
- ¹² World Health Organization, *Postpartum Care of the Mother and Newborn: A Practical Guide*.
- ¹³ Warren et al., "Postnatal Care."
- ¹⁴ Neena Khadka, "Increasing Access to Quality Postnatal Care: Findings From PNC Project in Nepal," *MotherNewBorNews* 1, no. 1 (2005).
- ¹⁵ Warren et al., "Postnatal Care."
- ¹⁶ *MotherNewBorNet*, "Developing Indicators for Monitoring Progress Towards Maternal and Newborn Survival," *MotherNewBorNews* 1, no. 1 (2005); and Warren et al., "Postnatal Care."

Acknowledgments

This brief is the seventh in the "Policy Perspectives on Newborn Health" series, produced through a collaboration between the Population Reference Bureau and Save the Children's Saving Newborn Lives initiative. Developed for government decisionmakers and health care professionals, the series examines how incorporating newborn care into existing safe motherhood and child survival programs can ensure newborn survival as well as positively contribute to women's health and the well-being of future generations. Saving Newborn Lives, launched with funding from the Bill & Melinda Gates Foundation, is an initiative to improve the health and survival of newborns in the developing world. To read more briefs in this series, please visit www.prb.org.

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