

Innovations for maternal and newborn health

PATH's Maternal and Child Health Technology Initiative works to reduce mortality in South Africa's KwaZulu Natal Province

South Africa's maternal and newborn mortality trends highlight the country's lingering inequities. In lower-resource settings throughout the country, newborns and their mothers die at alarming rates from preventable complications of labour and delivery. These deaths are especially disheartening given that 95 percent of women in South Africa attend antenatal care, and nearly 85 percent give birth in a medical facility.

PATH's Maternal and Newborn Health Technology Initiative (MNTI) was established in 2007 to reduce these preventable deaths by introducing and advancing innovative lifesaving technologies and techniques in South Africa's KwaZulu Natal Province. PATH's integrated approach focuses on providing essential maternal and newborn care during the final stage of labour and immediately after birth—crucial stages at which effective interventions can prevent the leading causes of maternal and newborn deaths.

Working closely with the provincial health department and with funding from The Atlantic Philanthropies, PATH is demonstrating how these technologies can reduce maternal and newborn morbidity and mortality when they are fully integrated into the health care service delivery system—and how health systems can, in turn, be strengthened by the effective introduction of new technologies and techniques.

STRENGTHENING NEONATAL RESUSCITATION

Birth asphyxia, or breathing problems at birth, affects 5 million infants in developing countries each year. The condition results in more than 1 million deaths and an additional 1 million disabilities. In South Africa, birth asphyxia is responsible for one of every three neonatal deaths.

To reverse these trends, PATH is working to expand the accessibility, availability, and use of appropriate and effective neonatal resuscitator devices. These low-cost, relatively simple lifesaving devices should be available to birth attendants at every delivery. Ensuring that health care providers receive proper training and have access to these important tools can significantly reduce birth asphyxia-related mortality.

STANDARDIZING SELECTED PRACTICES FOR SKILLED BIRTH ATTENDANTS

Labour and delivery complications take the lives of countless women and newborns in South Africa. To keep mothers and their newborns safe, it is crucial to have the support of highly trained health care providers at every birth with the knowledge and skills to manage the delivery and complications that arise.



PATH/Amy MacIver

Project highlights

MNTI training strategy

This innovative, competency-based training model is designed to develop independent clinicians and standardize evidence-based practices at the facility level. It is implemented in three districts in KwaZulu Natal—Ilembe, Sisonke, and Umzinyathi—that include 13 districts hospitals and two community health centres.

Mentor training

MNTI's focus on mentor training helps ensure the continuity of care despite heavy workloads and high turnover rates among maternity ward staff. In addition, the combination of onsite skills training and facility strengthening is improving the quality of maternal and newborn health care.



Active Management of Third Stage of Labour: A Clinical Tutorial

PATH and the KwaZulu Natal Department of Health produced this essential training video on active management of the third stage of labour. Using real clinical footage, the video presents the information, skills, and practices that birth attendants need to routinely provide this lifesaving intervention and prevent postpartum haemorrhage. To view the video or obtain a free copy, please visit www.path.org/publications/details.php?i=1589 or email a request to publications@path.org.

Global Inventory of Neonatal Resuscitators

This global inventory provides manufacturer and product information on all neonatal/infant manual resuscitators available worldwide. It includes information on bag-and-mask and tube-and-mask models. The inventory is available online at www.path.org/publications/details.php?i=1280.

Comparative Study of the Functionality and Acceptability of Four Neonatal Resuscitation Devices

This report documents a participatory evaluation that sought to expand the accessibility, availability, and use of appropriate and effective neonatal resuscitator devices for South African populations. The report is available online at: www.path.org/publications/details.php?i=1775.

To ensure that health care workers receive training that standardizes and updates their knowledge, PATH's maternal and newborn health experts have developed an innovative training strategy that integrates maternal and newborn care elements through a series of training modules. Designed to increase provider knowledge and skills in several effective, proven interventions, the modules focus on:

- Active management of the third stage of labour (AMTSL) to prevent postpartum haemorrhage.
- Partograms for the early identification of complications.
- Newborn resuscitation.
- Immediate postpartum and essential newborn care.
- Quality assurance using the Perinatal Problem Identification Program (PPIP).

This training strategy uses an efficient onsite learning model and is being implemented in three districts in KwaZulu Natal, specifically at facilities that have a large number of deliveries. To support these activities, PATH has produced an essential training video that contains clinical footage and presents the information, skills, and practices needed to perform this lifesaving procedure. PATH believes that combining lifesaving skills training and site strengthening will lead to substantial improvements in quality of care and ensure lasting gains in the health of South Africa's mothers and newborns.

ENCOURAGING USE OF OXYTOCIN IN THE UNIJECT® DEVICE

Postpartum haemorrhage (PPH)—excessive vaginal bleeding after delivery—is one of the leading causes of maternal mortality worldwide. In South Africa, PPH is responsible for 16 percent of all maternal deaths. AMTSL is an evidence-based intervention that can reduce PPH by up to 60 percent. One of the three major components of AMTSL is the administration of a uterotonic drug that stimulates contractions of the uterus and prevents excessive blood loss. Oxytocin is the uterotonic drug of choice and has been shown to reduce rates of PPH by approximately 50 percent.

To administer oxytocin, health care providers currently use standard syringes, which require the time and focus to precisely measure and administer the dose—luxuries not always available in settings with high patient volumes. To overcome these barriers, PATH is developing an evidence base for the introduction and expansion of Uniject devices prefilled with oxytocin. Developed by PATH to improve injection safety, the Uniject device is a prefilled, single-use, easy-to-use delivery system that ensures an accurate dose is administered with a sterile, nonreusable needle and minimal preparation or waste. PATH is evaluating how coverage of oxytocin for PPH improves with the introduction of the Uniject device.

IMPROVING THE ACCURACY OF REPORTING ON MATERNAL AND NEONATAL MORTALITY

PATH is working with district managers and health care providers to develop and adapt appropriate methods for capturing data on cause-specific maternal and neonatal deaths. Strengthening the health system's existing reporting tools, effectively using data to inform providers, and integrating a model of continuous quality improvement has a lasting impact on the health of South Africa's mothers and newborns.

Uniject is a registered trademark of BD.



PATH is an international nonprofit organization that creates sustainable, culturally relevant solutions, enabling communities worldwide to break longstanding cycles of poor health. By collaborating with diverse public-and private-sector partners, PATH helps provide appropriate health technologies and vital strategies that change the way people think and act. PATH's work improves global health and well-being.

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