

About PATH

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.

Headquartered in Seattle, Washington, PATH has 32 offices in 18 countries. PATH currently works in more than 70 countries in the areas of health technologies, maternal and child health, reproductive health, vaccines and immunization, and emerging and epidemic diseases. For more information, please visit www.path.org.

PATH in South Africa

In addition to implementing the MNTI project, PATH is working to improve the quality, availability, and uptake of services to prevent mother-to-child transmission of HIV in partnership with the Eastern Cape Department of Health, Health Information Systems Programme, and South African Partners. PATH is using community radio to expand access to reproductive health services in partnership with Kagiso Communication and TV, and PATH is developing print materials and job aids on infant feeding and nutrition in all 11 national languages in collaboration with the National Department of Health and Jacana Media Ltd. PATH also manages the secretariat for the Microbicides and Media Communication Initiative with the Global Campaign for Microbicides and is testing and evaluating a number of new technologies.

Contact PATH

Headquarters

Jim Litch, Maternal, Newborn, and Child Health Specialist
1455 NW Leary Way Seattle, WA 98122, USA
Tel: 206.285.3500, Fax: 206.285.6619
jlitch@path.org
www.path.org

Durban Office

Dolly Nyasulu, MNTI Project Director
PO Box 70241 Overport Durban 4067
Tel: 27.31.2087579, Fax: 27.31.2087549
dnyasulu@path.org

Johannesburg Office

Michelle Folsom, South Africa Country Director
PO Box 1985 Parklands 2121 Johannesburg, South Africa
Tel: 27.11.447.1641, Fax: 27.11.447.1353
mfolson@path.org

1 MRC Research Unit for Maternal and Infant Health Care Strategies. *Saving Babies 2003-2005: Fifth Perinatal Care Survey of South Africa*. Pretoria: South Africa; 2007. Available online at: <http://www.ppip.co.za/savbab.htm>.

2 South Africa's National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD). *Saving Mothers Triennial Report (2001-2004)*. Pretoria: NCCEMD.

3 World Health Organization (WHO). *The World Health Report 2005: Make Every Mother and Child Count*. Geneva: WHO; 2005.

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PATH's Maternal and Newborn Health Technology Initiative

PATH uses innovative technologies and techniques 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 from labor and delivery complications that can be prevented. The country's estimated newborn mortality rate is 21 deaths per 1,000 live births and the maternal mortality rate is estimated at 150 to 175 deaths per 100,000 births.^{1,2} These high death rates in South Africa are especially disappointing considering that 95 percent of women 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 use of innovative lifesaving technologies and techniques in selected districts in South Africa's KwaZulu Natal Province (KZN). PATH's integrated approach focuses on providing essential maternal and newborn care during the final stage of labor and immediately after birth—crucial stages at which effective interventions can prevent the leading causes of maternal and newborn deaths.

Working closely with the KZN Department of Health, and with funding from The Atlantic Philanthropies, PATH demonstrates how these technologies can reduce maternal and newborn morbidity and mortality when their use at birth is 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.



Project Objectives

PATH is working to introduce, monitor the impact, and promote the use of health technologies and interventions in four key areas:

- Newborn resuscitation
- Standardizing selected practices for skilled birth attendants
- Use of oxytocin in the Uniject™ device
- Accurate reporting of maternal and neonatal mortality

Practical Solutions

Neonatal resuscitation

Birth asphyxia, or breathing problems at birth, affects five million infants in developing countries each year, resulting in more than one million deaths and another one million disabilities.³ In South Africa, birth asphyxia is responsible for one in three neonatal deaths.⁴

Solution: Neonatal resuscitators are low-cost, relatively simple lifesaving devices that should be available to birth attendants at every delivery. PATH is working to expand accessibility, availability, and use of appropriate and effective neonatal resuscitator devices throughout KZN. 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

Labor 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. In lower-resource communities, staffing shortages mean that skilled providers are in extremely high demand. It is important to offer these health care workers innovative training opportunities to standardize and update their skills with minimal disruption to the essential services they provide each day.

Solution: PATH's maternal and newborn health experts have developed an innovative training strategy that fully integrates maternal and newborn care elements through a series of training modules to increase provider knowledge and skills in several effective, proven interventions. The modules focus on: (i) Active Management of the Third Stage of Labor (AMTSL) to prevent postpartum hemorrhage, (ii) Partograms for the early identification of complications, (iii) Newborn Resuscitation, (iv) Immediate Postpartum and Essential Newborn Care, and (v) Quality Assurance using the Perinatal Problem Identification Program (PPIP). This training strategy utilizes an efficient onsite learning model and will be employed in three selected districts of KZN, specifically at facilities that have a large

number of deliveries. PATH has produced an essential training video on AMTSL to support these activities that contains actual clinical footage to clearly present the key information, skills and practices needed to perform this lifesaving procedure. PATH hopes 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.



Use of oxytocin in the Uniject device

Postpartum hemorrhage (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 postpartum hemorrhage 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 lower-resource settings with high patient volumes.

Solution: PATH is developing an evidence base for the introduction and expansion of prefilled oxytocin Uniject devices across a range of service delivery settings. 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 given from a nonreusable, sterile device with minimal preparation and minimum waste. PATH will be evaluating how coverage of oxytocin to prevent PPH improves with the introduction of the Uniject device.

Accurate reporting of 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, using that data effectively to inform providers, and integrating a model of continuous quality improvement could have a truly lasting impact on the health of South Africa's mothers and newborns.