

IMPROVING MATERNAL & NEONATAL OUTCOMES



# EMONC SIMULATION-BASED TEAM TRAINING IN LIMITED-RESOURCE SETTINGS



**Coordinated Emergency Response** 

In PRONTO scenarios, healthcare teams must manage both maternal and neonatal complications in the critical minutes before and after delivery, when their actions can make a life-saving difference.



#### **Low-tech Simulation Tools**

PRONTO uses a low-tech birth simulator, PartoPants,<sup>™</sup> which are made from recycled surgical scrubs and worn by a patient actress. They are a component of the PRONTOPack, which is a low-cost, low-tech complete simulation training kit, to make simulation affordable and accessible in any setting. We are a non-profit organization dedicated to improving maternal and neonatal health worldwide. PRONTO envisions birth as a safe and respectful experience for all mothers, babies, and healthcare providers.

#### Who We Are

We are an NGO dedicated to improving maternal and neonatal health outcomes, and the quality of care women receive in healthcare facilities. We implement innovative, highly-realistic, low-tech, and low-cost Emergency Obstetric and Neonatal Care (EmONC) simulation-based team training programs in limited-resource settings.

#### **PRONTO's Approach**

Healthcare provider teams require opportunities to practice skills in highstress environments to ensure appropriate responses during an emergency. PRONTO's approach to delivering simulation and team training for obstetric and neonatal emergency response helps ensure optimal and timely care for mothers and infants during life-threatening emergencies.

Our highly realistic simulations ask healthcare teams to manage emergency scenarios in their own clinical settings. PRONTO has shown that the same concepts and techniques that have proven to be effective in transforming delivery of efficient in high-resource settings can, and must, be applied to improve outcomes in low-resource settings. To make the training affordable and accessible, PRONTO uses low-cost portable supplies and materials.

#### What We Do

PRONTO collaborates with partner organizations worldwide to develop simulation and team training programs relevant to each settings' specific needs. While tailored to fit the needs of our partners, our curriculum is always built on evidence-based adult learning methodologies and helps learners translate knowledge and skills into practice.

PRONTO's methods focusing on training teams to respond to obstetric and neonatal emergencies. Nurses, obstetricians, midwives, pediatricians, general medicine doctors, technicians, and traditional birth attendants all work together and, therefore, all train together. We use evidencebased communication strategies from TeamSTEPPS to facilitate teamwork, create team cohesion, and increase efficiency in an emergency.

Since 2009, PRONTO's training solutions have been included in maternal health and development projects in 14 countries and on a variety of topics including: our work in Kenya and Uganda as a part of the Preterm Birth Initiative, in numerous nurse mentoring programs in Bihar, Uttar Pradesh, and Madhya Pradesh, in Mozambique as part of the Alcancar Project to make simulatino and team training sustainable, in Madagascar and Malawi with focus on PPH, in Nigeria as part of a test of different mentorship models, and most recently on the Kulawa Project in Niger. In all countries, the aim is the same, train healthcare providers to effectively manage obstetric and neonatal emergencies using simulation and team training.

## **Growing Base of Evidence**

Our research provides evidence that our simulation-based training program has a positive impact on provider knowledge levels and patient outcomes.

In Kenya and Uganda, as part of the PreTerm Birth Initiative, PRONTO was included in an unblinded, pair-matched cluster randomized control trial. PRONTO was one of four interventions including data strenghtening, QI, and the safe childbirth checklist studied in the PreTerm Birth Initiative. The full intervention package reduced the odds of combined fresh stillbirth and neonatal mortality among eligible infants, 28 days after discarhge, by 34% compared with the control group.

In our implementation trial in Mexico, we found that intervention hospitals receiving our training had a 40% relative reduced risk of facility-based neonatal mortality at eight months follow-up when compared to control hospitals. Additionally, incidence of cesarean deliveries was 21% lower in the intervention group. The decreased incidence of cesarean in the intervention group could be attributable to enhanced provider confidence and ability to handle obstetric emergencies, allowing them to permit more women to progress normally.

To assess the impact of PRONTO's activities on intrapartum and newborn care in India, deliveries were observed to examine whether healthcare providers completed certain essential practices during live births after participating in a mentoring program that included PRONTO simulation and team training. We saw a 37-percentage point improvement overall for the intrapartum practice score and a 26-percentage point improvement in the newborn care scores from baseline to endline.

PRONTO continues to be studied through rigorous implementation science research to refine training modules that improve projects.

# **An Integrated Solution**

PRONTO's team approach extends beyond our trainings.

PRONTO works because we collaborate with partner organizations worldwide to meet their needs, incorporate our approach into existing training programs, and reinforce local ministry of health and internationally established care guidelines.

For more information about PRONTO, please visit our website: prontointernational.org. **V** 





### **Born in Mexico**

PRONTO started in Mexico, where the third delay of receiving adequate healthcare, has led to unacceptably high rates of maternal and neonatal mortality.



# **Meeting Worldwide Demand**

Since 2009, PRONTO has partnered with Ministries of Health and INGOs in 17 countries to train over 6,500 providers.

# OUR IMPACT



Relative decrease in perinatal mortality rates in intervention hospitals 8 months after training in Mexico (p=0.01)

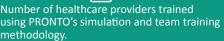


Relative increase in the use of oxytocin for active management of the third stage of labor to prevent postpartum hemorrhage in intervention hospitals 8 months after training in Mexico (p=0.08)

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Relative decrease in risk of cesarean section in intervention hospitals 12 months after training in Mexico (p=<0.001)

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