

## Neonatal Resuscitator

### Health need

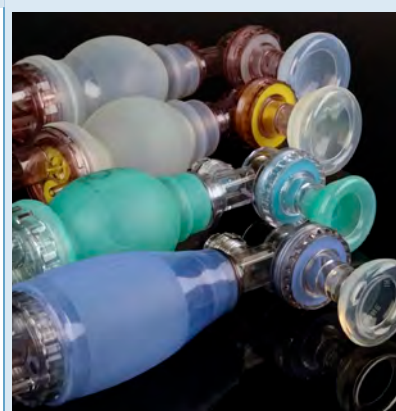
Birth asphyxia—when a baby does not breathe at birth—accounts for about 23 percent of the more than 3 million neonatal deaths that occur annually. Approximately 717,000 newborns die every year due to intrapartum-related hypoxic events including intrapartum-related neonatal deaths and intrapartum stillbirths, and 99 percent of these deaths occur in low- and middle-income countries. Two-thirds of the 10 million babies who do not breathe immediately at birth require basic neonatal resuscitation. Sixty million home- or community-based births occur every year, but most do not have access to resuscitation resources.

### Technology solution

Appropriate technology and neonatal resuscitation training should be available to all skilled birth attendants and to community health workers where skilled attendants are not available. According to the World Health Organization, basic newborn resuscitation requires a bag-and-mask resuscitator for ventilation, a mucus extractor for suctioning, a source of warmth for thermal protection, and a clock. Neonatal resuscitation devices are also available in a tube-and-mask design. Recently, Laerdal Global Health, a world-class manufacturer of resuscitation equipment, developed a low-cost, high-quality suite of neonatal resuscitation technologies for low-resource settings. Laerdal collaborated with the American Academy of Pediatrics to develop a comprehensive set of training materials to teach evidence-based resuscitation skills in low-resource settings—the Helping Babies Breathe (HBB) Global Development Alliance (GDA).

### Current status and results

PATH's focus is to enhance availability of appropriate devices in low-resource settings. We participate in the HBB GDA by providing assistance to strengthen logistics systems and create/increase demand for newborn resuscitation equipment and training. We have conducted studies to provide baseline information on availability, affordability, and use of products, including a survey to determine experts' practices and preferences related to neonatal resuscitators in developing countries; a global inventory of neonatal resuscitation devices; an evaluation of reusable, silicone bag-and-mask devices under US\$30 each; a situation analysis of essential newborn care in selected states in India; and market assessment studies in Southern and West Africa. We are conducting an independent, third-party evaluation of a new prototype resuscitator that will be easier to disinfect and more affordable in developing countries. The bench and user evaluations of the new design have been completed in the United States; the next step is the implementation of a user evaluation study in India. As a member of the Neonatal Resuscitator Technical Reference Team for the United Nations Commission on Life-Saving Commodities for Women and Children, we are working to strengthen the supply chain for neonatal resuscitation training and clinical equipment in selected priority countries through quantification tool development, estimation of market size, and determination of supply adequacy.



PATH/Jillian Zemanek

**Neonatal resuscitators for use by birth attendants.**

**“Neonatal resuscitation is positively associated with lower newborn mortality, both asphyxia-related and all neonatal mortality.”**

From March 2008 consultation “Newborn Resuscitation: Strategies for Settings from the District Hospital to the Community in Washington, DC.”

### Availability

For more information regarding this project, contact Patricia Coffey at [pcoffey@path.org](mailto:pcoffey@path.org).

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