

## Spotlight on Neonatal Resuscitation for Birth Asphyxia

Globally, about one quarter of all neonatal deaths are caused by birth asphyxia (WHO, 2012). Effective resuscitation at birth could prevent a large portion of these deaths. With a neonatal bag and mask, suction device and a resuscitation training mannequin, successful newborn resuscitation can be accomplished in cases that otherwise would end in death—about 30 percent among full-term babies and 5 to 10 percent among preterm births (Every Woman Every Child, 2012). However, this basic equipment is not available in many low-resource settings, and was therefore identified by the UN Commission on Life-Saving Commodities for Women’s and Children’s Health as one of 13 commodities that if more widely accessed and properly used, could save the lives of more than six million women and children worldwide.

A review was conducted to analyze and synthesize current key evidence in order to understand the social and behavioral drivers of resuscitation devices demand and utilization, examine effective practices in implementing demand generation programs, and inform future programming. The literature review found four articles—documenting evidence from Senegal, Pakistan, Kenya and Malawi—related to provider attitudes, knowledge, skills and practice regarding neonatal resuscitation, all of which were published in the peer-reviewed literature.

### Social and Behavioral Drivers

Lack of clear protocols for neonatal resuscitation among providers is a major barrier to performing consistent resuscitation. Qualitative research at an urban hospital in Malawi highlighted four dominant themes: (1) nurse-midwives were very experienced and confident in their ability to deal with the serious issue of neonatal asphyxia; (2) the lack of resources, especially protocols, caused significant frustration; (3) a clear belief that nurse-midwives could successfully institute and sustain a basic newborn resuscitation program; and (4) confidence that long- and short-term solutions could be implemented. However, providers indicated that they did not feel comfortable initiating the procedure on babies who might not respond or require more than five minutes of

resuscitation. Nurse-midwives were also concerned about not knowing when to stop resuscitation and the likelihood of being accused of stopping too soon. They were often faced with a decision to care for the baby, the mother and the baby, or another mother or baby, often resulting in prioritization of the mother. Although the results are from only one hospital, they reflect the global lack of protocols, training and ethical dilemmas regarding “futile care,” and identifying newborns that should not be resuscitated (Bream, Gennaro, Kafulafula, Mbweza, & Hehir, 2005).

A study in Kenya found that resuscitation protocols should be developed by an interdisciplinary group within the hospital and should not be specific to the labor ward, given that newborn resuscitations could occur anywhere in the facility (Opiyo et al., 2008). The study also revealed that confusion about what team or role had the responsibility for instituting newborn resuscitation sometimes resulted in unnecessary barriers to successful resuscitation.



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### Demand Generation Interventions

Limited evidence was available regarding demand generation for neonatal resuscitation—either with the public or with health providers. What was available focused on skilled birth attendants at health facilities as the primary target audience for demand creation of neonatal resuscitation devices.

Studies in Kenya and Pakistan focused on provider training that utilized the ABC (Airway, Breathing,

Circulation) approach to resuscitation. In Kenya, trained providers demonstrated a higher proportion of adequate initial resuscitation steps compared to the control group (Opiyo et al., 2008). In Pakistan, 90 percent of respondents who had been trained reported the use of acquired skills and the structured ABC approach in handling emergencies (Zaeem-ul-Haq et al., 2009). Participants in both studies also noted barriers to neonatal resuscitation including the need for policy, ongoing training, lack of equipment and lack of support from higher levels.

At the community level, linked facility-community committees—that may exist in some countries, such as Senegal—can be an important target audience for demand creation. As governments promote births at health facilities, these committees can be particularly important to ensure support to the peripheral facilities. Additional audiences may include skilled health workers at the community level, such as community midwives and assistant nurse midwives.

## Conclusions and Recommendations

The results presented here are limited in their generalizability due to the insufficient number of studies regarding provider attitudes, knowledge and behaviors regarding the use of neonatal resuscitation equipment. No articles were identified that explored individual or community knowledge about the availability of neonatal resuscitation. Additionally, no information was available on the knowledge and skills of birth attendants related to resuscitation of newborns. However, the four studies highlighted some barriers that hinder the uptake of use of neonatal resuscitation. Recommendations to

overcome those barriers include the following: (1) adopting a standard multidisciplinary approach to newborn resuscitation, which includes continual re-certification of providers; (2) increasing knowledge of technical specifications at various levels; and (3) developing local protocols and guidelines.

To read the full report, visit <http://sbccimplementationkits.org/demandrmnch/evidence-synthesis/>.

For tools and resources on demand generation for life-saving commodities, visit <http://sbccimplementationkits.org/demandrmnch/>.

## References

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