

## Spotlight on Injectable Antibiotics for Neonatal Sepsis

The risk of death is great for newborns with serious infections—whether hospitalized or at home—due in part to late or inadequate administration of necessary antibiotics. Because newborn infection occurs quickly, urgent diagnosis and treatment is needed.

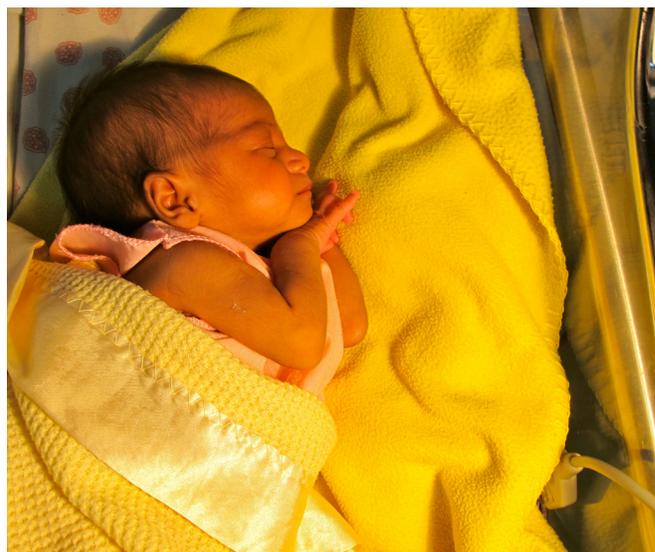
The World Health Organization (WHO) lists four injectable antibiotics for the treatment of neonatal sepsis on the *Essential medicines list for children* (WHO, 2013). However, injectable antibiotics for newborns remain underutilized and as such, have been identified by the UN Commission on Life-Saving 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 injectable antibiotics demand and utilization, examine effective practices in implementing demand generation programs, and inform future programming. The evidence review found seven studies related to demand generation specifically for injectable antibiotics that met the inclusion criteria, documented from India (1), Bangladesh (1), Nepal (3) and multi-country settings (2).

### Social and Behavioral Drivers

Current WHO guidelines recommend that injectable antibiotics for treatment of neonatal sepsis are delivered by skilled health providers (WHO, 2012). However, there are a number of social and behavioral barriers that hinder the uptake of this commodity by skilled providers. Sick newborns often present with non-specific signs and symptoms, making the diagnosis of neonatal sepsis difficult in low-resource settings and as a result, treatment—if sought at all—is often received too late.

Community-level barriers also can limit the use of injectable antibiotics to treat neonatal sepsis. In countries such as Ethiopia, low demand for neonatal health care limits the use of health services. Additionally, limited access to media, few irrelevant



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or inappropriate messages, the use of traditional practices and fatalistic beliefs also contribute to lack of demand for neonatal care (Knippenburg et al., 2005).

Not all countries include the antibiotics used to treat neonatal sepsis in their national policies—including their essential medicines lists—and little is known about the availability and use of these drugs at various levels of national health systems. National strategies need to address community-based treatment and management of neonatal sepsis by lay health workers. However, current research indicates that there is no clear agreement by policymakers on the optimal antibiotic treatment in the community (Every Woman Every Child, 2012; Coffey et al., 2012).

### Demand Generation Interventions

Current guidelines recommend treatment of neonatal sepsis by a trained health worker, yet this is often difficult to achieve in rural and/or low-resource areas. Interventions in India, Bangladesh and Nepal have tested the treatment of newborn sepsis by community health workers (CHWs). In these studies, CHWs were trained to diagnose and treat sepsis during visits to households with newborns. The majority of lay health workers were able to correctly diagnose sepsis cases and case-fatality rates were lower for those infants who were treated by CHWs (Bang et al., 2005; Baqui et

al., 2009). Although these studies demonstrated that community-based management of neonatal sepsis is feasible and effective, WHO suggests additional research and evaluation is needed in this area.

Evidence shows that home-based management of neonatal infections is possible, but programs should include the following minimum requirements: an enabling policy environment including policy decisions to implement home-based management, community education and mobilization, supportive supervision, and strong monitoring and evaluation (Bang et al., 2005; Baqui et al., 2009).

## Conclusions and Recommendations

Newborn infection has a rapid onset, and urgent diagnosis and presumptive treatment is needed. However, a number of social and behavioral barriers hinder the uptake of injectable antibiotics by health care providers. Recommendations to overcome the major barriers include: (1) educating communities about danger signs in newborns and the importance of seeking care and treatment for neonatal sepsis; (2) supporting additional research in various countries on community management of neonatal sepsis by lay health workers; (3) supporting policymakers to reach consensus on the optimal antibiotic treatment for community scenarios; and (4) ensuring consistent, adequate and affordable supply.

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

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

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