



# Hand Washing Reduces Mortality Risk in Newborns

A recent study in Nepal has demonstrated a significant reduction in neonatal mortality due to maternal and birth attendant hand washing.<sup>1</sup> This important finding could be significant in accelerating countries' attempts to reach the Millennium Development Goal to reduce deaths of under-five children by two-thirds by 2015.

About 4 million newborns die every year in low and middle-income countries. A third of these deaths are due to infections. Current evidence suggests that low cost, high-impact infection prevention and management interventions could reduce the death rate significantly. Hand washing has been demonstrated to reduce the risk of gastrointestinal infections, pneumonia and nosocomial infections among children under five. Yet few, if any, studies have measured the effect of maternal and birth attendant hand washing practices on newborn survival.

## STUDY METHODOLOGY AND FINDINGS

A study conducted by Johns Hopkins University and the Nepal Nutrition Intervention Project in southern Nepal enrolled 23,662 newborns. All participating women were counseled about clean and safe birthing practices including hand washing by the birth attendant before delivery and by the mother prior to handling the baby. They also received a clean birthing kit that included a small bar of soap. Researchers questioned mothers on days one and 14 to assess care practices and risk factors for mortality and infection. The self-reported hand washing behaviors included 1) birth attendants washed hands with soap and water before assisting with delivery, 2) mothers washed hands with soap and water before handling the baby, 3) both birth attendant and mothers washed hands.

Overall neonatal mortality was 32.1 per 1000 live births. Birth attendants washed their hands prior to delivery for 59.2% of live births, whereas only 14.8% of mothers reported washing their hands. Mortality was significantly lower among newborns whose birth attendant and/or mother washed their hands with soap or antiseptic. Birth attendant hand washing resulted in a 19% lower risk of death compared with those who did not wash hands. Similarly, newborns had a 44% lower risk of death when

<sup>1</sup> Rhee V. et al. 2008. "Maternal and Birth Attendant Hand Washing and Neonatal Mortality in Southern Nepal." *Archives of Pediatrics & Adolescent Medicine*. Vol. 162 (No. 7), pp 603-608. July 2008.

mothers reported washing their hands before handling the baby sometimes or always. Among newborns exposed to both birth attendant and maternal hand washing, the risk of death was 41% lower. The study suggests that hand washing reduces overall newborn exposure to life-threatening pathogens, thus reducing mortality due to infection.

## PROGRAMMING IMPLICATIONS

USAID is currently strengthening its focus on newborn health. Program approaches that work—such as essential newborn care, linking maternal and newborn programs in a continuum of care and early postnatal visits—are being integrated into USAID interventions around the world. Increased emphasis on hand washing promotion could be an easy and cost-effective way to complement and strengthen these activities. Specific suggestions include the following:

- Ensure that soap is included in the clean birthing kit. Design a card on proper hand washing techniques for new mothers, caregivers and birth attendants for inclusion in the kit.
- Develop a session on hand washing to include in all birth counseling. Objectives: Ensure birth attendants wash hands with soap before delivery. Ensure mothers and caregivers wash hands with soap before handling the newborn.
- Address barriers to hand washing, such as water scarcity, by demonstrating how to build simple water saving devices (such as a tippy tap) from locally available materials. A tippy tap should be placed in the clinic or household in an easily-accessible location to facilitate hand washing among birth attendants and new mothers in water-scarce settings.
- Include hand washing information and education in all community approaches to newborn health.
- Include newborn care messaging in existing water, sanitation and hygiene programs including public-private partnerships.