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HIP NOTE TO THE FIELD

SEPTEMBER 2008

Hand Washing Reduces Mortality Risk in Newborns

A recent study in Nepal examining the relationship between hand washing practices and neonatal death demonstrated the strong positive effect that maternal and birth attendant hand washing had on lowering neonatal mortality.¹ This important finding could be significant in accelerating countries' attempts to reach the Millennium Development Goal to reduce deaths of children under age five by two-thirds.

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 had been 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 1 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. 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 25% lower risk of death compared with those who did not wash hands. Similarly, newborns had a 60% lower risk of death when mothers reported washing their hands before handling the baby sometimes or always. The study suggests that hand washing reduces overall newborn exposure to life-threatening pathogens, thus reducing mortality due

¹ 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.

to infection. While hand washing appeared to be more beneficial among newborns with high-risk characteristics such as low socioeconomic status, low birth weight, preterm birth, and younger maternal age the relative risk of death was still much lower when hand washing was practiced.

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. Simple additions of hand washing promotion could be an easy and cost-effective way to complement these activities while promoting importance of hand washing in newborn health and survival. Specific suggestions include the following:

- Ensure that soap is included in the clean birthing kit. Design a card on proper hand washing techniques and critical times related to the newborn for new mothers, caretakers and birth attendants in the clean birthing 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 every time 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. These include: plastic container, jug, gourd or other local material with a spigot or opening to provide a slow stream of water and rope to suspend the jug or gourd on a post (tree or other surface) near the latrine.
- Create birth attendant and maternal hand washing instructions to insert in the clean birthing kit and in the essential newborn care package.
- Include hand washing education and instruction in all community approaches to newborn health.
- Work with and build on existing water, sanitation and hygiene programs including public-private partnerships