

Chlorhexidine umbilical cord care can save newborn lives

February 8 2012

Cleansing a newborn's umbilical cord with chlorhexidine can reduce an infant's risk of infection and death during the first weeks of life by as much as 20 percent, according to a study led by researchers at the Johns Hopkins Bloomberg School of Public Health. The study, conducted in rural Bangladesh in partnership with ICDDR,B and a Bangladeshi NGO Shimantik and funded by the United States Agency for International Development (USAID) and Save the Children's Saving Newborn Lives program, is the latest in a series of studies showing that umbilical cord cleaning with chlorhexidine can save lives. The latest findings will be published online February 8 by *The Lancet*.

For the study, Johns Hopkins researchers and colleagues in Bangladesh enrolled more than 29,000 [newborns](#) in a [randomized trial](#) to determine the effectiveness of single cleansing with 4 percent chlorhexidine or 7-day cleansing with chlorhexidine as compared to the standard dry cord care. According to the study, infants that received a single cleansing with chlorhexidine were 20 percent less likely to die compared to infants that received the standard dry cord care. Reductions in mortality were not statistically significant among the 7-day cleansing group compared to dry care, but they did have fewer signs of cord infection.

"Chlorhexidine cord cleansing is a simple, safe, effective, and inexpensive intervention. Large-scale implementation of this intervention with universal coverage has the potential to avert an estimated half a million neonatal deaths per year," said Abdullah Baqui, MBBS, DrPH, senior author and principal investigator of the study and

professor in the Bloomberg School's Department of International Health.

An early study conducted by Johns Hopkins researchers in Nepal, showed cleansing the [umbilical cord](#) with chlorhexidine for 7 days of the first 10 days of life resulted in a 24 percent decrease in mortality compared to children who received dry-cord care. A separate study by researchers from Aga Khan University in Pakistan, which also appears in the current issue of The [Lancet](#), found that cord cleansing with chlorhexidine reduced infant mortality 38 percent and infections by 42 percent.

"Giving birth and a child's first week is a risky time for a mother and her newborn," said Dr. Rajiv Shah, the Administrator of the U.S. Agency for International Development. "These studies provide evidence of a simple, low-cost technology that can prevent illness and death for the most vulnerable children. USAID is committed to transforming research into better results and access to life saving interventions."

[Neonatal deaths](#) account for more than 40 percent of the estimated 8.8 million deaths of children under 5 each year worldwide. In high mortality settings, more than half of those neonate deaths are the result of serious infection.

More information: Authors of "The effect of cord cleansing with chlorhexidine on neonatal mortality in rural Bangladesh: a community-based, cluster-randomised trial" are Shams El Arifeen, Luke C. Mullany, Rasheduzzaman Shah, Ishtiaq Mannan, Syed M. Rahman, M. Radwanur R Talukder, Nazma Begum, Ahmed Al-Kabir, Gary L. Darmstadt, Mathuram Santosham, Robert E. Black, Abdullah H. Baqui.

Provided by Johns Hopkins University Bloomberg School of Public

Health

Citation: Chlorhexidine umbilical cord care can save newborn lives (2012, February 8) retrieved 5 May 2024 from

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