

Early cessation of breastfeeding by HIV+ women in poor countries and child survival

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A new study by researchers from Columbia University's Mailman School of Public Health addresses one of the most challenging issues in infant health and preventing mother-to-child HIV transmission in poor countries. In these settings, HIV-infected mothers had been advised that for the best outcome for their infants, they should exclusively breast-feed, followed by a rapid weaning four to six months after birth.

But according to the study conducted in Lusaka, Zambia by Mailman School researchers, which was published in the July 10 issue of the *New England Journal of Medicine*, abrupt cessation of breast-feeding by HIV+ mothers after the first four months of life did not result in any statistically significant benefit to infants in terms of HIV-free survival at 24 months, compared to those infants who were weaned at an average of 16 months of age (68.4% versus 64%). A further finding from the study indicated that infants who were HIV+ at four months of age had significantly higher death rates by 24 months if they were abruptly weaned than if breast-feeding were continued (74% versus 55%).

Among infants who were breast-fed and not infected with HIV at four months, there was no statistically significant difference in HIV-free survival at 24 months — 84 percent for those who stopped breast-feeding early compared to 81 percent who continued to breast-feed.

The study included 958 women with HIV and their infants. The proportion of new HIV infections between four and 24 months was not significantly different between the children whose mother abruptly

stopped breast-feeding and those whose mothers continued to breast-feed indefinitely, and no significant differences were found in survival between them. Seventy-six percent of infants whose mothers stopped breast-feeding at four months survived to 24 months of age versus 75 percent of infants whose mothers continued breast-feeding for as long as the women chose. Four months was selected as the weaning time because this was the minimum duration of exclusive breast-feeding that was recommended at the time the study was designed.

"We certainly did not anticipate that children who were already infected with HIV before weaning would have significantly worse outcomes if they were to forego breast milk, especially since, theoretically, formula and weaning cereal are nutritionally replete," said Louise Kuhn, PhD, associate professor of Epidemiology at the Mailman School of Public Health and in the Gertrude H. Sergievsky Center, College of Physicians and Surgeons, Columbia University. "Our observation of a clear benefit of breast-feeding for HIV-infected children highlights the importance of strengthening infant diagnostic services to triage infected children into HIV care and treatment and to provide encouragement for continued breast-feeding of infected children."

Prior to this latest research it was believed that in many poor countries, mothers with HIV face a stark choice -- to nurse their infants, and risk passing on HIV through their breast milk — or to formula feed, and deprive their infants of much of the natural immunity needed to protect against fatal diseases of early infancy.

"In the developed world, mothers with HIV forego breast-feeding and formula feed their infants," said Lynne Mofenson, MD, chief of NIH's National Institute of Child Health and Human Development's Pediatric, Adolescent and Maternal AIDS Branch (NICHD), which provided support for the study. "But in many poor countries, there are barriers to formula feeding. Sanitation is lacking, clean water to mix formula is

often not available, and many families have difficulty affording infant formula." Formula fed infants also miss out on protective antibodies — passed on through breast milk — needed to ward off the deadly infant diseases prevalent in many parts of the world. Formula feeding, also, may carry a social stigma for mothers and is often seen as acknowledgement that a woman has HIV.

With these latest findings, the researchers theorize that the chances of transmitting the virus may actually increase as a result of the weaning process. The breast swelling and infection (mastitis) that occurs when breast-feeding is sharply reduced may increase the likelihood that the virus will be transmitted in the few feedings that remain. "These results suggest that early, abrupt cessation of breast-feeding for HIV-infected women in low-resource settings should be avoided," Dr. Kuhn noted.

Source: Columbia University's Mailman School of Public Health

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