

**Title: Provision of Services and Care for HIV-Exposed Infants: A comparison of Maternal and Child Health (MCH) Clinics and Comprehensive Care Centre (CCC) models**

**Authors:** John Ong'ech MBChB, MMed, MPH, Heather J. Hoffman PhD, Judith Kose MBChB, MMed, Michael Audo MBChB, MPH, Lucy Matu MBChB, MSc, Peter Savosnick MA, Laura Guay, MD

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**Background:** Over 90% of pediatric HIV infections, acquired through mother-to-child transmission, are in sub-Saharan Africa. From routine service delivery data collected on uptake of testing for HIV among HIV exposed infants, Kenya's Ministry of Health realized that prevention of mother-to-child transmission of HIV and HIV care and treatment programs were parallel structures within the HIV care delivery system, negatively impacting the continuum of care for HIV-exposed infants. The Elizabeth Glaser Pediatric AIDS Foundation, with funding from the Bill & Melinda Gates Foundation, conducted a study in Kenya in 2009 – 2010 to evaluate the effectiveness of provision of routine care and HIV care for HIV-exposed infants in two facility models. These models are the Maternal and Child Health (MCH) Clinic model and the Comprehensive Care Centre (CCC) model. In the MCH model, infants receive immunizations, growth monitoring as well as HIV-related services including early infant diagnosis by polymerase chain reaction (PCR), initiation on cotrimoxazole (CTX), and infant HIV antibody test at one year of age in the MCH. In the CCC model, HIV-exposed infants receive routine immunizations and growth monitoring in the MCH and are referred to the CCC to receive all HIV-related services. Delivery of follow-up care for HIV-exposed infants was assessed. The evaluation measured and compared indicators such as the number of follow-up visits, early infant diagnosis by PCR testing or HIV antibody testing, and initiation on CTX prophylaxis for HIV exposed infants up to one year of age.

**Methods:** This quasi-experimental, observational, prospective cohort study enrolled 363 HIV-exposed infants at 6-8 weeks of age in two district hospitals in Western Province, Kenya throughout 2009. The hospitals differed in their service delivery models; one offered a CCC approach (n=184) and one a MCH approach (n=179). Both, however, catered to populations with similar HIV prevalence rates and socio-economic status. Both hospitals had the same client volume level and both had the same level of human resource capacity. Data were captured at the 6 – 8 week immunization visit and 14 week, 6-month, 9-month, and 12-month follow-up visits.

**Results:** Compared to infants receiving HIV-related services in the CCC model, the infants enrolled in the MCH model of care are 1.4 (95% CI; 1.04, 1.26) times more likely to attend the 14-week immunization, 1.8(95% CI; 1.49, 2.16) times more likely to attend the 6-month postnatal follow-up, 2.2 (95% CI; 1.73, 2.80) times more likely to attend the 9-month postnatal follow-up, and 1.35 (95% CI; 1.10, 1.67) times more likely to attend the 12-month postnatal follow-up visits. Infants in the MCH are 5.51 (95% CI; 3.23, 9.38) times more likely to attend all four follow-up visits than those in CCC. While infants in the MCH were 1.33 (95% CI; 1.10, 1.62)

times more likely to have HIV antibody test at 1 year of age than the CCC, there were no differences between uptake of PCR testing or CTX initiation at 6-8 weeks.

**Conclusion:** HIV services integrated in the MCH model yield better follow-up of HIV-exposed infants than the CCC model.