

*IAS 2012 Abstract:*

**Evaluating the effect of the use of point-of-care CD4 machines on access to antiretroviral therapy (ART) eligibility screening and ART initiation for HIV-positive pregnant women in Zimbabwe: Towards elimination of new paediatric HIV**

*Background:*

Treatment-eligible HIV-positive pregnant women have the highest risk (>75%) of transmitting HIV to their infants, but only a small proportion of women are being initiated on antiretroviral therapy (ART) during pregnancy in Zimbabwe, partially due to limited access to CD4 testing to determine treatment eligibility. We assessed whether introducing point-of-care (POC) CD4 machines at 43 high-volume, Elizabeth Glaser Pediatric AIDS Foundation supported, PMTCT sites in Zimbabwe increased the proportion of HIV-positive pregnant women assessed for ART eligibility and subsequently initiated on ART.

*Methods:*

A quasi-experimental before and after study design was conducted, with 43 high-volume PMTCT sites selected based on number of HIV-positive pregnant women seen. POC CD4 machines were deployed to all 43 sites in June 2011 following health worker trainings on usage of machines and tools (registers, summary sheets). Data were collected before (April-June 2011) and after (July-September 2011) deployment of POC CD4 machines (intervention). Data were analyzed using SPSS v15.0. Differences between proportions were tested using Wilcoxon signed rank test.

*Results:*

Before introduction of the POC machines, 617 (51%) of 1,210 HIV-positive pregnant women received a CD4 test at the 43 sites. After the machines were introduced, 890 (81%) of 1,100 women received a CD4 test. There was a significance difference between the proportion of women tested for CD4 count before and after the intervention ( $P=0.023$ ) and between the proportion initiated on ART before and after the introduction of the CD4 machines (9% [104] before versus 25% [276] after;  $P=0.001$ ).

*Conclusions:*

Deployment of POC CD4 machines was associated with increased CD4 testing and ART initiation for HIV-positive pregnant women at the 43 intervention sites. Based on these early results, expansion of POC CD4 machines to all high volume PMTCT sites in Zimbabwe is recommended to increase access to ART eligibility towards elimination of new HIV infections in children by 2015.