COMPLIANCE WITH AND OUTCOMES OF CD4-BASED NATIONAL GUIDELINES FOR PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV FOR THAILAND, 2006-2007

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Abstract. The 2006 Thailand national prevention of mother-to-child transmission of HIV (PMTCT) guidelines recommended antiretroviral (ARV) regimen use during antenatal care (ANC) be based on CD4 results: highly active antiretroviral therapy (HAART) should be used for a CD4 <200 cells/mm³ and zidovudine/single-dose nevirapine should be used for a CD4 count ≥200 cell/mm³. We evaluated compliance with and outcomes of these guidelines. We conducted a retrospective chart review of HIV-infected women and their infants born during October 2006 - December 2007 at 27 hospitals in 11 provinces of Thailand. The infant HIV-infection status was determined using laboratory test results and death reports. Mother-infant pairs were classified as fully, partially, or non-compliant with PMTCT guidelines based on CD4 testing history and ARV received. Factors associated with compliance were analyzed using univariate and multivariate generalized estimating equations (GEE). Among 875 mother-infant pairs reviewed, 387 mothers (44%) had ANC CD4 testing done, of whom 75 (19%) had a CD4 count <200 cells/mm³. Proportions of pairs fully, partially and non-compliant with guidelines were 38, 34 and 28%, respectively. A definitive infant HIV-infection status was determined in 578 infants (66%). The overall mother-to-child transmission (MTCT) rate was 5.1% [95% confidence interval (95%(CI): 3.8-6.9] and the MTCT rates for the fully, partially and non-compliant groups were 1.2% (95% CI: 0.4-3.3), 6.0% (95%CI: 3.7-9.5) and 9.5% (95% CI: 6.2-14.0; p<0.001). Factors associated

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The findings and conclusions in this article are those of the authors and do not necessarily represent the views of the US Centers for Disease Control and Prevention.
with compliance were: having ANC, awareness of the mothers’ HIV status before delivery, and having first ANC prior to 24 weeks gestation. Compliance with the 2006 national PMTCT guidelines was low, and the MTCT rates were high among non-and partially compliant mother-infant pairs. The simplified PMTCT guidelines introduced in 2010, might increase compliance with and improve outcomes for Thailand’s PMTCT program.

**Keywords:** PMTCT, HAART, early infant diagnosis, policy compliance, Thailand