

## HIV-1 Incidence Estimates among Young Thai Men Using IgG-Capture BED-Enzyme Immunoassay (BED-CEIA) during 2005-2006

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### Abstract

**Background:** Knowledge about the most recent HIV epidemic among young generation in Thailand is crucial for improving the prevention programs. It is important to distinguish between recent and long-term HIV-1 infections among the sero-surveillance populations to estimate the HIV-1 incidence.

**Objective:** To obtain the HIV-1 incidence estimates in young Thai men from the HIV-1 sero-surveillance among the Royal Thai Army (RTA) conscripts inducted between November 2005 and November 2006.

**Material and Method:** The confirmed HIV-1 positive serum samples obtained from the November 2005, May 2006, and November 2006 rounds of RTA conscripts induction were selected to be included in the study. The recent HIV-1 infections were detected among the confirmed HIV-1 positive serum samples using an HIV-1 BED incidence EIA Kit (Calypte HIV-1 BED Incidence EIA, Calypte Biomedical Corporation, Maryland, USA). The incidence estimates were obtained in each round of the induction using a consensus formula was agreed upon at the US Centers for Disease Controls and Preventions (CDC).

**Results:** Eighty seven thousand one hundred seventy eight RTA conscripts were tested for HIV-1 infection between November 2005 and November 2006. The prevalence of HIV-1 infection was 0.51%, 0.60%, and 0.50% for the period of November 2005, May 2006, and November 2006, respectively. The HIV-1 incidence estimates were 0.14%/year (95% CI, 0.09-0.20), 0.20% year (95% CI, 0.13-0.28), and 0.17%/year (95% CI, 0.10-0.29) in November 2005, May 2006, and November 2006, respectively.

**Conclusion:** We reported the HIV-1 incidence estimates obtained from the IgG-capture BED-enzyme immunoassay (BED-CEIA) method in the RTA conscripts sero-surveillance population. The incidence estimates were ranging from 0.14% - 0.20%/year between November 2005 and November 2006. The estimates could serve as the recent baseline information for future HIV prevention interventions in Thailand

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