

## **EPIDEMIOLOGIC STUDIES FOR HIV PREVENTION IN PHNOM PENH, CAMBODIA**

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**PROJECT DESCRIPTION—** *This project consists of two studies*

### **(1) ASSESSMENT OF HIV INCIDENCE AND HIV RISK BEHAVIORS AMONG CLIENTS SEEKING HIV TESTING IN PHNOM PENH, CAMBODIA.**

This study is being conducted among male and female clients at the Anonymous HIV Testing Clinic in Phnom Penh. The primary objectives of this study are: (1) To estimate population incidence in newly identified cases of HIV-1 infection in individuals seeking HIV testing using the Calypte HIV-1 BED enzyme immunoassay (BED-EIA) test on venous samples; (2) To identify groups at high risk of newly acquiring HIV infection by assessing associated HIV risk behaviors with incident HIV infections using an anonymous interviewer-administered questionnaire linked to de-identified venous samples (3) To develop an archive of clinical specimens that may be utilized for future research projects related to newly identified HIV infections, such as transmission of antiretroviral drug resistance. This study will inform prevention programs and prevention research regarding risk and target populations.

#### **Interesting Findings**

Among 1,502 clients, 40.7% are female clients. The median age of this population is 26 years. 41.4% of them have ever tested for HIV before. HIV seroincidence among this population is 3.3 per 100 person-years (95% CI 1.7-4.9). HIV seroincidence among those who ever been tested for HIV is not significantly different from those who have ever tested. However, female clients had higher incidence than male clients (4.7%, 95% CI 1.6-7.8 vs 2.5%, 95% CI 0.7-4.2). We also found that client with age greater than 25 years are significantly more likely to be recently infected with HIV than those who are younger (OR: 3.1, 95%CI 1.02-9.4). Always use condom with commercial sex workers is also found to be a significantly protective factor for new HIV infection (OR 5.4, 95%CI 1.3-23.5).

### **(2) ESTABLISHMENT OF REFERENCE RANGES FOR HEMATOLOGY, CHEMISTRY, & CD4-POSITIVE LYMPHOCYTE PARAMETERS IN THE ADULT CAMBODIAN POPULATION**

In this study, 200 blood specimens from healthy male and female adult blood donors at the Cambodian Blood Bank in Phnom Penh shall be tested for hematology (CBC and prothrombin time/INR), chemistry and CD4 positive lymphocyte parameters in the National Institute for Public Health, National Public Health Laboratory. Collated data shall be statistically analyzed to derive population reference ranges for these parameters in male and female Cambodian adults. Access to accurate reference ranges is an essential part of interpreting clinical laboratory assays. The population distribution of reference ranges is known to vary by gender and by population. In Cambodia, no published national reference ranges exist for hematology, chemistry and CD4 positive lymphocyte parameters, which are therefore usually interpreted using values established in Caucasian populations.

#### **SIGNIFICANCE**

These epidemiology and laboratory studies provide essential biological information, which will inform future HIV preventive and therapeutic clinical trials in Cambodia.

**PROJECT END DATE:** June 2007