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## Study Title

Predictors of HIV disclosure amongst HIV positive Thai men who have sex with men (MSM) and associated sexual risk behavior

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## Study Purpose and Rationale

The nature of the HIV epidemic in Thailand has evolved since the first reported case of a Thai bisexual male with AIDS over 25 years ago (Sittiral & Brown, 1993; Tunthanathip et al. 2009). In the early years of the epidemic, Thai men who have sex with men (MSM) were not viewed as a high-priority group in need of widespread HIV prevention programs (Manergh et al., 2006; Sittiral & Brown, 1993); however, recent studies suggest that MSM have emerged as a population at high risk for HIV infection. In 2003, the first community-based study assessing HIV prevalence and associated risk behaviors amongst MSM in Bangkok demonstrated a surprisingly high HIV prevalence of 17.3% (van Griensven et al., 2005). A follow-up study in 2005 showed this prevalence had increased to 28.3% (CDC, 2006). Furthermore, several studies have demonstrated high levels of sexual risk behaviors amongst HIV-positive MSM in Thailand (Mansergh et al., 2006; van Griensven et al., 2005). These findings suggest that interventions to reduce risk behavior and thereby reduce HIV acquisition and transmission should be an important focus in this population. However, further examination of the factors which promote the secondary transmission of HIV amongst Thai MSM is needed to help guide prevention efforts.

It is clear that HIV positive individuals everywhere face challenges in disclosing their status, and it is felt that failure to disclose may put partners at risk for HIV infection. Encouraging HIV positive individuals to disclose to their partners may help to decrease HIV transmission. This prevention strategy, where the focus is placed on educating and changing the behaviors of HIV positive individuals to reduce transmission is part of what is known as positive prevention.

Disclosure has been well studied in Western countries, and various factors have been shown to influence the likelihood of disclosure amongst HIV positive MSM. Studies have shown differential rates of disclosure by partner type, such that individuals disclose more often to their primary or steady partners, and less often to their secondary or casual partners (Klitzman et al., 2007; Wolitski, Parsons, & Gómez, 2004; Wolitski & Rietmeijer, 1998). Knowledge of partner status and seroconcordance have also been found to be associated with disclosure. Men are less likely to disclose to partners of unknown status (Crepaz & Marks, 2001; Semple, Zians, Grant, & Patterson, 2006), but more likely to do so when their partner's serostatus is known, especially if that partner is also HIV positive (DeRosa & Marks, 1998).

Disease stage and health status may also influence likelihood of disclosure, such that individuals at a later stage of disease will be more likely to disclose. In two studies examining predictors of disclosure amongst HIV positive MSM, both found that longer time since diagnosis was associated with disclosure (Klitzman et al., 2007; Simon Rosser et al., 2008). One of these studies found that knowledge of CD4 count and detectable viral load led to greater rates of disclosure, and that STI history was not associated with disclosure (Simon

## IRB PROTOCOL

Rosser et al., 2008). The second study, however, found no association between disclosure and measures of disease stage, including viral load, being on HAART, and HIV-related symptoms (Klitman et al., 2007).

Sexual orientation and HIV-related beliefs may play a role in the decision to disclose for HIV positive MSM. Studies have found that being extremely out as MSM (Simon Rosser et al., 2008) and having experiences of gay discrimination (Zea, Reisen, Poppen, & Díaz, 2003) are positively associated with disclosure, while identifying as gay (versus bisexual) is negatively associated (Klitzman et al., 2007). Little investigation into the relationship between HIV-related knowledge and disclosure is reported in the literature.

There continues to be no clear association between sexual risk behavior and disclosure. Some studies have revealed that disclosers more likely to practice safe sex (Kalichman & Nachimson, 1999; Simon Rosser et al., 2008) while others have shown no relationship (Crepaz & Marks, 2003; Crepaz & Marks, 2001); there are also discrepancies on whether the riskiest sexual behavior is seen amongst those who inconsistently disclose or never disclose (Hart et al. 2005; Parsons et al., 2005; Simon Rosser, 2008). This relationship is further complicated by the fact that some individuals may practice safe sex to avoid disclosure (Kalichman & Nachimson, 1999), while others may disclose in order to practice unsafe sex without feelings of personal responsibility (Wolitski et al., 2003).

While disclosure amongst HIV positive MSM has been researched extensively in other countries, it remains an area which is under-studied in Thailand. In fact, there have been very few Thai studies on positive prevention in general. One study assessing the risk for HIV transmission amongst people with HIV showed that HIV-positive men (both heterosexual and homosexual) were less likely to disclose their serostatus than women (Tunthanathip et al., 2009). This study also found that individuals reporting protected sex with their steady partners had higher rates of disclosure, suggesting that disclosure is, as previous studies have shown, associated with safer sexual behavior.

While it may be that Thai men are less likely to disclose, studies addressing disclosure in Thailand thus far have mainly focused on female populations, and none have explicitly examined disclosure amongst HIV-positive MSM. The goal of this study is to examine the factors which influence the likelihood of disclosure amongst HIV positive MSM in Thailand. Our primary objective is to evaluate the association between disclosure and sexual risk behavior. While prior research has found no clear association between these two factors, we predict that HIV positive Thai MSM who disclose will be more likely to practice safe sex. Our secondary objective is to evaluate the association between disclosure and several other factors, including partner type and seroconcordance, measures of disease stage and health status, sexual orientation and degree of outness, and level of HIV-related knowledge.

### Study Design and Statistical Analysis

Cross-sectional questionnaire survey study. Primary outcomes will include serodisclosure to most recent sexual partner and unprotected anal intercourse (UAI) at most recent sexual encounter. Serodisclosure and UAI will be modeled using logistic regression. An adjusted odds ratio between unprotected sex and serodisclosure will be computed. Subjects will be divided into 4 behavioral patterns based on serodisclosure and unprotected sex: disclose/safe, non-disclose/safe, disclose/unsafe, non-disclose/unsafe. These behavioral patterns will be modeled using logistic regressions, comparing the safest group (disclose/safe) to each of the other three groups.

# **IRB PROTOCOL**

## Study Questionnaire

Each participant will complete a questionnaire using Audio Computer-Assisted Self-Interviewing (ACASI). Subjects will be asked whether they performed a variety of sexual behaviors in their most recent sexual encounter. They will also be asked whether or not they had made their most recent partner aware of their status before this sexual encounter. Other questions will relate to partner type and perception of partner status, comfort with sexual orientation, disease stage (including knowledge of CD4 count and viral load), HIV knowledge, and demographic information. All questions will be translated into Thai.

## Study Subjects

The subjects will be included in the study if they meet the following inclusion criteria:

1. Male gender at birth
2. Older than 18 years of age
3. Able to speak and read Thai
4. HIV positive confirmed on prior testing
5. Reporting oral or anal sex with a male in the past 6 months
6. Able and willing to provide written informed consent

The subjects will be excluded from the study if they meet the following exclusion criteria:

1. Unable to provide informed consent
2. Not sexually active for the past 6 months

## Recruitment of Subjects

Participants of the study will be enrolled from a cohort of MSM clients at the Thai Red Cross Anonymous Clinic in Bangkok, Thailand. Individual subjects will be recruited by clinic staff at their follow-up clinic appointments.

## Confidentiality of Study Data

Questionnaires will remain anonymous and study data will be stored in secure locations, only accessible to investigators.

## Location of the Study

The study will take place at the Thai Red Cross Anonymous Clinic in Bangkok, Thailand, as part of research activities coordinated by the South East Asia Research Collaboration with Hawaii (SEARCH) Thailand. IRB approval for this study will also be obtained from Chulalongkorn University in Bangkok, Thailand.

## Potential Risks

We do not foresee any potential risks to study participants.

## Potential Benefits

Subjects are unlikely to benefit from participation in the study, as this is a survey study without treatments/interventions. However, each participant will be compensated for their time, and the information gained from this study may be used to guide future health interventions.

## Compensation of Subjects

Subjects will be compensated 50 baht (~\$1.50 USD) in the form of coupon vouchers for free soft drinks at a local vendor.

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# IRB PROTOCOL

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## IRB PROTOCOL

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