

A. SPECIFIC AIMS

The purpose of this study is to determine HIV prevalence and incidence of HIV infection among recently initiating adolescent and young adult injection drug users (initiates) and **noninjection drug users (NIUs)** and to examine the independent and interactive role of social networks, physical/sexual abuse, and level of psychiatric co-morbidity as they relate to HIV prevalence, HIV incidence and known risk factors of HIV infection. Earlier studies have shown higher rates of HIV incidence among initiates and among women. These data indicate that to combat the epidemic of HIV infection in injection drug users (IDU), efforts need to be aimed early. Also, while early literature suggested that higher rates in women could be due to their being initiated into injection drug use by men (with the implication that women are more likely to be passive sharing partners), our earlier studies showed that most men and women were initiated by same sex **initiators**; this finding suggests that interventions need to be tailored accordingly (i.e., not just to women through men, but uniquely to women, also). Our early studies also highlighted the importance of both injection and sexual risk for HIV infection. A recent cross-sectional study showed that high risk sexual practices (trading sex, having ≥ 100 lifetime partners, being gay/bisexual) surprisingly demonstrated stronger associations than the high risk injection practices (injection ≥ 5 times per day and backloading). Reasons for this still remain unclear. Recently, attention has been given to factors associated with the transition from **noninjection drug use to injection drug use**. One study found current use of heroin, ethnicity, and current sexual relationship with an IDU to be significantly associated with **the transition** into injection or resuming an injection career. **In another recent study conducted in crack smokers**, initiation of injection was significantly associated with ever snorting heroin and snorting heroin while smoking crack. In this proposed study, we will work with our experienced field staff to refine these earlier issues and to address new questions regarding initiates. Specifically, we are interested in studying the role of social networks, physical/sexual abuse and psychiatric co-morbidity on HIV prevalence and incidence among adolescent and young adult initiates **and NIUs**. As HIV incidence is highest soon after initiating injection drug use and declines thereafter, we hypothesize that social network characteristics (i.e., who people inject or use drugs with) are different over time (**i.e. from pre-initiation to post-initiation**). Also, prior literature shows associations between child abuse and psychiatric condition with HIV infection; the role and interrelationship of these variables need to be clarified. In an effort to further elucidate the transitional phase into injecting, we will recruit a sample of **NIUs**, describe in detail the events and behaviors leading into transition as well as the role of these events and behaviors on HIV infection. **To complete the initiation period, we will also recruit a sample of initiates, describe in detail their pre- and post-initiation behaviors as well as their role on HIV infection.** We plan the following specific aims:

- 1) to determine the prevalence and incidence of HIV in recently initiated IDUs, referred to as new injectors or initiates.
- 2) to identify correlates and risk factors of HIV infection among new injectors and noninjectors, including demographics (*age, sex, race*), circumstances of initiation (*age at initiation, difference of initiator, **drug type**, etc.*), sex practices (***multiple sex partners, trading sex, etc.***), *injection practices (*needle sharing, etc.*), physical/sexual abuse (*childhood, adolescent and/or young adult*), psychiatric condition (***drug dependence, anxiety and depression***) and social networks/social support (*changes over time, characteristics of social integration, network size and density, size of drug subnetworks, transition, etc.*).
- 3) to compare and contrast the above correlates (e.g. physical/sexual abuse, psychiatric condition, social networks) on HIV seroprevalence between initiates and NIUs.
- 4) to formally test for interaction between **high risk sex practices and circumstances of initiation, **high risk sex practices and physical/sexual abuse, **high risk sex practices and psychiatric condition, **high risk sex practices and social network/social support, psychiatric condition and physical/sexual abuse, and **psychiatric condition and social network/social support** as it relates to HIV seroprevalence among a combined population of young initiates and transitioned NIUs.
- 5) to estimate rate of transition from noninjection to injection drug use by the **above** covariates including sociodemographics, drug use, sex practices, physical/sexual abuse, psychiatric condition, and social networks/social support.

To address these aims, we plan to extend the field methods we have developed over the last several years in the ALIVE and REACH studies to recruit 400 initiates who have initiated injection drug use within the prior 5 years, between the ages of 15-30. We also plan to recruit 200 NIUs who have initiated noninjection drug use **no less than 1 years prior to enrollment and no greater than 10 years, between the ages of 15-30, and currently use drugs at least 3 times per week in the past month**. In this prospective study we will obtain serum and conduct risk interviews at baseline, and at 6 and 12 month follow-up visits at a fixed special study clinic and a mobile study clinic over a 5 year study period.

*this will be measured in new injectors only, **trading sex, number of unprotected sexual acts