

CDUHR news

Center for Drug Use and HIV Research

in the Institute for AIDS Research at the National Development and Research Institutes, Inc.

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The availability of HAART has led to declines in HIV-related mortality. By 2001, however, disparities became apparent, with IDUs having the highest mortality rate.

HIV Treatment for Drug Users: Barriers and Factors Associated with Initiation and Retention in HAART

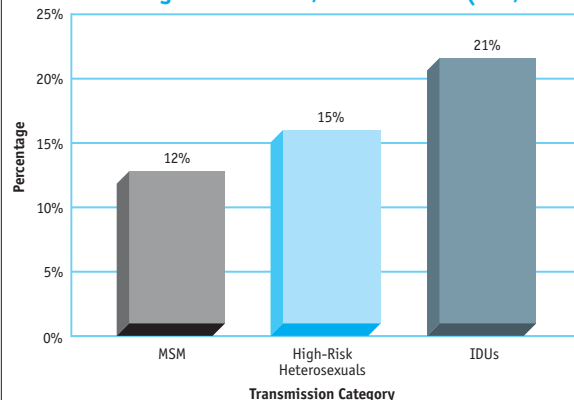
The introduction of highly active antiretroviral therapy (HAART) in the mid 1990s transformed treatment and prolonged the lives of persons living with HIV/AIDS. Despite the availability of HAART, traditionally underserved groups (e.g., injection drug users [IDUs], African-Americans, Hispanics, women and lower-income groups) are less likely to be in treatment.^{1,2} In New York City, trends in mortality rates showed that between 1993-1997, death due to HIV-related illness declined among all risk groups. By 2001, however, disparities in AIDS-related mortality became apparent, with IDUs having the highest rate compared to other groups.³ More recent data continue to show higher mortality among IDUs. For example, IDUs account for approximately 22% of HIV/AIDS cases in the city but 38% of its deaths.⁴ Several factors contribute to these higher rates, including late diagnosis of HIV (one-third of IDUs are concurrently diagnosed with AIDS)⁴ and disparities in access to treatment. This article will review some of the barriers that may limit access to HAART among drug users, and factors associated with initiating and maintaining access to treatment.

Provider, Organizational and Patient Barriers to HAART

Some barriers may be related to provider characteristics or attitudes. Injection drug users treated by physicians with negative attitudes towards IDUs were over two times less likely to receive HAART than other patients. Physician characteristics associated with negative attitudes included: having a lower percentage of HIV-infected patients with a history of injection drug use, having a lower HIV treatment knowledge score and seeing more patients per week.⁵ Physicians may believe that drug users will be less adherent to complex treatment regimens

and thus withhold treatment. However, evidence that drug users are less adherent is unclear. Moreover, it is often difficult to predict which patients are likely to be adherent. In assessing readiness for treatment and adherence, providers may not distinguish between active and former drug use, or between use of different illicit drugs. Some data suggest that illicit drugs may vary in their impact on medication adherence.^{6,7}

Percentage of Persons Dying within 36 Months of AIDS Diagnosis in 2001, United States (CDC, 2007)



In a study of provider barriers (which included physicians, nurse practitioners and physicians' assistants), about one-quarter were categorized as resistant to providing HAART to HIV-infected drug users, despite their medical eligibility. Non-physicians were more likely to be categorized as resistant. Provider resistance was associated with their perceptions of the following patient characteristics: the inability to keep appointments, alcoholism and homelessness. Provider resistance was also related to working in populations with high prevalence of both mental illness and injection drug use.⁸

In a survey among HIV+ patients (which included drug users and non-drug users) some of the difficulties in gaining access to treatment and services were related to organizational characteristics. The most commonly listed issues were eligibility requirements, inconvenient location, hours of operation, lack of bilingual staff and being placed on waiting lists.⁹

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Patients' attitudes and decisions may also play a role in their not being in care. In an analysis of patients (drug users and non-drug users) who met the clinical criteria for HAART eligibility, about one-third did not receive HAART. Of these, over half declined even though it was recommended by the provider. The most common reasons for refusing HAART were not being ready for adherence to the treatment regimen and fear of side effects. Other reasons included active drug use, homelessness and depression or mental illness. Additional reasons for patients not receiving HAART was that it was not discussed by the physician, or that it was not recommended to the patient. The most common reasons given for not discussing or recommending HAART were patients' active drug use and not being engaged in care.¹⁰

Initiation, Retention and Adherence to HAART

Some of the factors associated with initiating HAART among drug users include: discontinuing drug use, enrollment in methadone maintenance or other drug treatment, having health insurance, having a regular source of care, and having previously been treated with monotherapy or dual combination therapy (HIV treatments used before HAART).^{7, 11, 12}

In addition to the barriers to initiating HAART among drug users, there are barriers to the effective use of HAART, adherence to HAART, and retention in treatment. In a study that examined individual, interpersonal and structural factors related to achieving viral suppression among active IDUs, it was found that having social support, better patient-provider communication, stable housing and current enrollment in outpatient drug treatment were related to optimal HAART outcomes.¹³ Factors associated with the discontinuation of HAART included: recent incarceration, negative outcome expectations (medications will make them sicker), efficacy expectations (perceived inability to manage/remember medication requirements, or manage side effects) and self-regulatory expectations (perceived inability to take medications when using drugs or being in drug withdrawal). Almost half of the participants in the study discontinued HAART use; the most frequently cited reasons were incarceration and medication side effects.¹⁴

Adherence issues are often cited as reasons to withhold or delay HAART for drug users. However,

studies have shown that with the proper support, drug users can adhere to HAART and have positive outcomes. Opiate substitution treatment (e.g., methadone or buprenorphine) has been shown to improve adherence. Directly Observed Therapy (DOT) has also demonstrated promising results among drug users followed longitudinally in settings such as methadone maintenance (in DOT, patients are observed taking their HIV medication).⁷ DOT with peer outreach workers has also improved adherence among those with a history of non-adherence to HAART.¹⁵ In a pilot study among active drug users who were not in drug treatment, health care vans at syringe exchanges were used to help develop individualized regimens to encourage HAART adherence. For example, since heroin injection was identified as their most consistent daily activity, this was used as a reminder for dosing of HIV medications. An unintended benefit of the study was that 70% of the participants subsequently enrolled in drug treatment.¹⁶

Recommendations for Enhancing HIV Care and Research

The reasons for lower access to HAART among drug users are complex, with potential barriers at many levels. To increase and maintain HAART access, coordinated support services such as case management, drug and alcohol treatment, mental health services, social work services and health education are needed.⁸ Since many drug users decline HAART, interventions to improve readiness for treatment are recommended.¹⁰ Individualized, flexible patient treatment plans can address issues such as side effect management and strategies to help improve the probability of adherence.⁸ For clinicians, nonjudgmental interaction regarding history of drug use, education on drug use issues, linking goals for treatment of HIV and drug use, and establishing a multidisciplinary team to address the range of issues among drug users are needed.¹⁷ At the organization level, reviewing types of services offered, patient-staff ratios, geographic accessibility, hours of operation, availability of bilingual services and the organization's reputation in the community¹⁸ have all been related to enhancing access to care. Research conducted by interdisciplinary teams of biomedical and socio-behavioral investigators is needed to assess the effectiveness of efforts to address barriers to HIV care among drug users in and out of drug abuse treatment.

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Peer-Driven Intervention to Enroll Minorities/ Women in HIV/AIDS Clinical Trials (NIAID)

Principal Investigator: Marya Viorst Gwadz, Ph.D.
Project Staff: Charles M. Cleland, Ph.D.,
Co-Investigator/Statistician; Noelle R. Leonard,
Ph.D., Co-Investigator; Maya Tharaken, MSSW,
Research Associate



Maya Tharaken, Noelle Leonard & Marya Viorst Gwadz

Racial/ethnic minorities and women are disproportionately over-represented among those with HIV/AIDS in the U.S., yet they are under-represented in AIDS clinical trials (ACTs). This study will evaluate the efficacy of a peer-driven intervention to improve ACT screening and enrollment rates among racial/ethnic minorities and women living with HIV/AIDS (PLHA). It will also explore how the intervention might work by examining whether the effects on ACT screening and enrollment are mediated by changes in various individual/intrapersonal, attitudinal, and social/ structural influences. In addition the study will examine positive and negative effects of ACT screening for those not found eligible for ACTs. Lastly, a clinical description of PLHA who

are found ineligible for current ACTs will be disseminated to stakeholders to address a long-term objective of developing new ACT practices that will result in higher eligibility rates for these groups. To increase comparability between the intervention and control groups, both will be recruited using respondent-driven sampling. The design is equivalent to a randomized controlled trial. Participants will be interviewed at three intervals over 12 months. Study findings may also have valuable applications in other arenas where racial/ethnic and gender-related health disparities are found.

Adaptation to High School among Affluent Youth: Stress and Effective Coping Strategies (Charles Engelhard Foundation)

Principal Investigator: Marya Viorst Gwadz, Ph.D.
Project Staff: Noelle R. Leonard, Ph.D.,
Co-Investigator

Adjusting to high school requires that students develop effective strategies for adapting to multiple stressors and challenges. However, factors that promote or undermine youths' successful adjustment to high school are not well understood. Chronic stress may play a critical role in mental health and behavioral problems including addictive disorders, risk behavior and academic performance. In *(Continued next page)*

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a previous study of substance use among 10th grade high school students, youth in affluent suburbs were shown to have higher rates of cigarette, alcohol and marijuana use than their lower-income, inner-city counterparts. These affluent youth appear to struggle with a unique set of stressors including the intense pressure to succeed. The current study will extend this research to affluent youth in an urban setting.

It will examine the resources for stress regulation including coping skills, social support and participation in academic activities and their association with mental health symptoms, substance use, relationships, and adjustment to high school. In addition, it will explore the effective strategies youth have developed to maintain high levels of mental health, behavioral and academic adjustment. Findings from the study will be used to inform programs developed to foster adjustment of students in high school.

Recent Changes in HIV Testing Recommendations: Impact on Youth at Risk (amfAR)

Principal Investigator: Marya Viorst Gwadz, Ph.D.
Project Staff: Charles M. Cleland, Ph.D., Statistician;
Noelle R. Leonard, Ph.D., Co-Investigator

The CDC recommends routine annual testing for individuals at high risk for HIV such as homeless youth. However, homeless youth are not tested regularly, often do not return for test results, and are poorly linked to medical care and services. This study will describe the individual, attitudinal, structural/behavioral influences that impede or facilitate HIV (rapid and conventional) testing and access to care (if HIV-infected) from the perspectives of both homeless youth and the medical and non-medical providers that serve them. Further, the new CDC recommendations raise two critical ethical issues relevant to homeless youth. First, pre- and post-test counseling may be drastically reduced with the uptake of rapid HIV testing. Providers serving homeless youth argue that more thorough counseling is needed for at-risk groups lacking conventional sources of support. Second, HIV testing appears to be shifting from hospitals or health departments to less formal venues. This shift may have a negative impact on youths' abilities to access care if HIV-infected. In response to these ethical issues, the study will examine the

relationship between changing HIV testing practices and pre- and post-test counseling practices and access to care. Homeless youth will be recruited with respondent-driven sampling. Findings will inform a larger study to test interventions for homeless youth and/or their providers to enhance and expedite HIV testing and subsequent early entry into HIV care.



Naomi Braine

MSM Communities in NYC Respond to HIV and Methamphetamine (NIDA)

Principal Investigator:
Naomi Braine, Ph.D.
(Beth Israel Medical Center)

There are strong indications that the current wave of methamphetamine use among men who have sex with men (MSM) is associated with both unprotected sex and HIV infection. Prior research indicates that community action can significantly slow, or even halt, HIV and drug epidemics. Community response to an epidemic occurs at three levels: 1) individual attitudes and behavior; 2) norms and communication within social networks; and 3) the actions of community organizations and businesses. This study will explore the emerging community response to methamphetamine use and related HIV risk behavior. Semi-structured interviews will be conducted with MSM and stakeholders in the community (i.e., service providers, community activists and business owners). In addition, participant observation will occur within MSM communities and policy venues. Interviews with MSM will assess attitudes toward unsafe sex and methamphetamine use, identify social processes shaping attitudes and behaviors (including personal history, perceived peer norms, and encounters with health programs). Informal responses to methamphetamine use and unsafe sex within MSM networks, and social processes associated with indigenous efforts to influence norms regarding risk behavior, will be described. Interventions by stakeholders in response to methamphetamine use and the process of intervention development will be documented. Findings will be disseminated to health officials and service providers to support development of new prevention strategies.

Collaborative Injection Drug Users Study III/Drug Users Intervention Trial (CIDUS-III/DUIT)

Funding Agency:
Centers for Disease Control and Prevention

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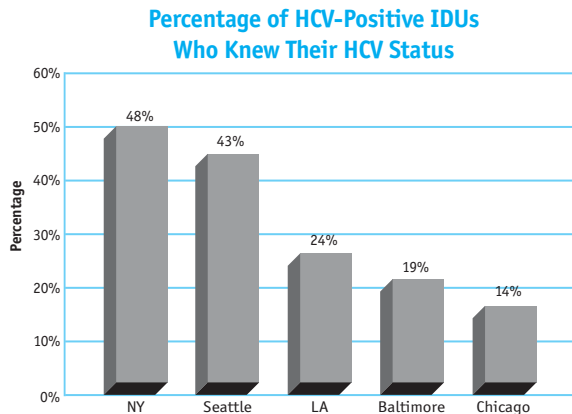
* Holly Hagan, Ph.D., is currently Deputy Director of CDUHR.

Background and Objectives

Young injection drug users (IDUs) who have recently been initiated into injecting have higher rates of HIV and HCV incidence than IDUs with longer histories of injection. Few studies have evaluated HIV prevention interventions specifically for young IDUs and none have directly addressed HCV infection. This study evaluated an intervention to reduce injection and sexual risk behavior and incidence of HIV and HCV among young injectors and took place in five U.S. cities: Baltimore, Chicago, Los Angeles, New York and Seattle.

Participants and Methods

Young injectors were recruited through street and agency outreach, advertising and respondent-driven recruitment. Participants were required to be 15-30 years of age, report injection drug use in the prior six months, complete the interview in English, intend to reside in the city in which they were recruited for the next 12 months, and agree to testing for HIV and hepatitis. The baseline interview assessed injection and sexual risk behavior using audio, computer-assisted self-interviewing (A-CASI) and tests were conducted for HIV and hepatitis A, B, and C (HAV, HBV, HCV). Those not infected with HIV and HCV were eligible to participate in the HIV/HCV prevention trial and were randomized into either the experimental or control group. Follow-up interviews were conducted at three and six months.¹



The experimental condition was a six-session peer education intervention (PEI) delivered over a three-week period with each session lasting about two hours. In the first four sessions, participants learned how to be a peer educator with content focused on reducing injection and sexual risk behavior. In the fifth session, participants practiced sharing risk-reduction information in a community setting. The sixth session was a debriefing of the previous session followed by a goal-setting activity to encourage peer education and to reduce personal risk. The control condition was a video discussion intervention (VDI) which had no HIV/HCV risk reduction content. VDI participants received six, two-hour sessions over a period of three weeks. Participants watched videos in the first hour and then engaged in facilitated discussions of the video.²

Baseline assessments were conducted with 3,285 participants. Approximately 70% were male; the average age was 24; 8% were Black, 17% Hispanic, and 64% White; 3% were HIV-positive (highest rate was in LA at 6%, lowest in Chicago at 0.9%); 34% were HCV-positive (highest rates were in NYC and Baltimore at over 50%, lowest in Chicago at 14%). A total of 854 IDUs were randomized into PEI or VDI.¹

Preliminary Findings

Pre-intervention, baseline: Self-reported HCV status and risk behavior — Of those infected with HCV, 72% were unaware of their status; more than half thought that they were negative based on previous testing. A higher proportion of participants in NYC (48%) and Seattle (43%) knew their HCV-positive status, compared to LA (24%), Baltimore (19%) and Chicago (14%). Accurate self-reporting of one’s HCV-positive status was associated with a history of being in drug treatment or recent use of a syringe exchange program (SEP). Approximately half of HCV-positive IDUs who knew their status reported passing on their used syringe to another injector.³

Pre-intervention, baseline: Receptive, distributive and indirect sharing and injecting alone — 54% of participants reported receptive syringe sharing (RSS; using a syringe that had been used by another person) in the previous three months. Greater levels of RSS were associated with recently exchanging sex for drugs or money, having multiple sex
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partners, and injecting in cars or shooting galleries.⁴ Distributive syringe sharing (DSS; passing a used syringe to another injector) was reported by 46% of IDUs. Factors associated with DSS included: perception that peer norms condoned sharing, injecting at least once a day, not obtaining syringes from an SEP, high anxiety levels, low self-esteem and unprotected sex.⁵ Among those who did not report RSS, indirect sharing, either through non-syringe paraphernalia-sharing or syringe-mediated drug-splitting was reported (54% and 26% respectively).⁶ Despite the large proportion of IDUs reporting syringe and indirect sharing, 15% reported that they always injected alone. Those who injected alone were far less likely to use injection equipment or paraphernalia used by another injector.⁷

Pre-intervention, baseline: Condom use among heterosexual men — Consistent condom use was reported by 12% (53 of 429) of men who reported having an exclusive main partner compared to 17% (151 of 862) of those who reported having a main partner and additional partners. Among the former, consistent condom use was associated with positive outcome expectancies from partners following requests for condom use and supportive partner norms regarding condom use; use was less consistent if they shared needles or if the main partner expressed an intention to become pregnant. Among men with multiple partners, consistent condom use with their main partner was associated with positive outcome expectancies, supportive partner norms, positive personal attitudes towards condom use, and recently giving money or drugs for sex; less consistent condom use was associated with injecting drugs with a used needle, having experienced intimate partner violence, or the partner expressing pregnancy intentions.⁸

Post-intervention results, six-month follow-up — All six injection and sharing risk behaviors (i.e., injection

with used syringe, used new syringe to divide drugs, shared cooker, shared cotton, shared rinse water, proportion of partners with whom the injector shared injection paraphernalia) decreased significantly among the PEI group and five of the six behaviors decreased among the VDI group. There were no significant differences in the individual behaviors between the experimental and control groups at the six-month follow-up. However, differences emerged when comparing the composite index of all six behaviors between PEI and VDI groups.⁹ Participants in both groups reported fewer unprotected sex acts at follow-up, although not all measures were statistically significant. There were no significant differences between the groups except on the reduction in frequency component of “anal sex with a main partner” for the PEI group. Incidence of HCV was 18.1/100 PYAR; there were no significant differences in incidence between PEI and VDI. None of the IDUs became infected with HIV during the study.⁹

Implications and Recommendations

This large, multi-site study of young injectors showed that prevention of HIV and HCV infection remains a significant challenge. Although HIV prevalence was quite low (3%), the high prevalence of drug and sex-related risk behavior demonstrate a gap in current HIV and prevention efforts. The modest results of the intervention may be explained by features of the study and its sample: the control condition exceeded what may represent a “community standard” of HIV/HCV prevention, the state of the art HIV and HCV counseling and testing received by participants may have led to behavior changes in both groups, and injectors volunteering to participate in a multi-session intervention were likely motivated to change behavior. The relatively high HCV seroconversion rate points to a need for more research to develop effective HCV prevention strategies.

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The NDRI Training Institute

The NDRI Training Institute (A. Osborne, Director) provides training for the New York State Department of Health AIDS Institute and conducts courses by special request. Following are courses available from August – December 2007, offered at no cost. All courses are held at the NDRI main offices unless otherwise noted. Please note: the schedule is subject to change. Go to www.training.ndri.org for the complete schedule, course requirements and to register for courses.

Date	Course
8/21-8/22 ^a	◆ Mental Health Services (Two days)
9/6	◆ Building Bridges to Cultural Competency (One day)
9/10-9/13	◆ Community HIV/AIDS Educator Training (Four days)*
9/18-9/19	◆ It's Time: Integrate Viral Hepatitis Into Your Work (Two days)
10/3 ^b	◆ Domestic Violence in Lesbian, Gay, Bisexual & Transgender Communities (One day)
10/10-10/11	Methamphetamine & MSMs (Two days)
10/16, 11/16	◆ Overview of HIV Infection and AIDS (3 hours)
10/16, 12/14	HIV & STDs (3 hours)
10/19	HIV Disclosure (3 hours)
10/23-10/25	Offering Rapid HIV Testing in CBOs Serving High Risk Communities (Three days)
10/30	What's New in HIV/AIDS? (3 hours)

^a Bronx AIDS Services
^b Samaritan Village, Queens

Date	Course
10/30, 12/14	HIV/AIDS Confidentiality Law (3 hours)
11/6-11/8	Skills Practice and Implementation of Stage-Based Behavioral Counseling (Three days)*
11/13	◆ Introduction to Case Management (One day)
11/16	◆ Promoting Adherence to HIV Treatment (3 hours)
11/20 ^b	◆ Enhancing the Partnership Between Client and Case Manager (One day)
11/26-11/27	Serving Families: From Assessment to Service Plans (1½ days)
11/29	Practicing the NYS Domestic Violence Screening Protocol (3 hours)
11/29	HIV Treatment Update (3 hours)
12/6-12/7	VOICES/VOCES (Video Opportunities for Innovative Condom Education and Safer Sex) (Two days)*
12/11 ^b	Addressing Prevention in HIV Case Management (One day)

◆ Training courses are provided under NYS OASAS Education and Provider Certificate Number 0305 and are acceptable for CASAC credits.

* Visit the website at www.training.ndri.org for requirements before registering for this course.

For a complete listing of courses, the curriculum of Special Request courses, CDUHR-sponsored Training Institute courses, and information on the courses listed above, call the Training Institute at (212) 845-4550.

The Center for Drug Use and HIV Research is funded by the National Institute on Drug Abuse (Grant # P30 DA011041) to provide an infrastructure to support the HIV/AIDS-related research projects at NDRI. It is the first center for the socio-behavioral study of drug use and HIV in the United States and is dedicated to increasing our understanding of the drug use-HIV epidemic.

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CDUHR Projects

Adaptation to High School among Affluent Youth: Stress and Effective Coping Strategies (Engelhard Foundation)
 PI: Marya Viorst Gwadz, Ph.D.

Applying Web Technology to Buprenorphine Treatment (NIDA)
 PI: Lisa A. Marsch, Ph.D.

Community Vulnerability and Response to IDU-Related HIV (NIDA)
 PI: Samuel R. Friedman, Ph.D.

Computer-Assisted HIV Prevention for Young Drug Users (NIDA)
 PI: Lisa A. Marsch, Ph.D.

Computer Delivery of Effective, Psychosocial Interventions in Methadone Treatment (NIDA)
 PI: Lisa A. Marsch, Ph.D.

Couples HIV Intervention Randomized Controlled Trial (NIDA)

PI: James M. McMahon, Ph.D. (IRYAR)

Etiology and Prevention of Blood-Borne Viruses in IDUs (NIDA)

PI: Holly Hagan, Ph.D.

Evaluation of Implementation of Harm Reduction Services in MMTTP (amfAR & NYCDOHMH)

PI: Naomi Braine, Ph.D. (BIMC)

Expanding Computer-Based Drug Abuse Prevention (NIDA)

PI: Lisa A. Marsch, Ph.D.

HIV and Hepatitis Care Coordination in Methadone Treatment (NIDA)

PI: David C. Perlman, M.D. (BIMC)

HIV Knowledge and Risk among Deaf Adolescents (NIDCD)

PI: Marjorie F. Goldstein, Ph.D.

HIV Risk and Substance Use in Adolescent Couples (NIDA)

PI: Noelle R. Leonard, Ph.D.

HIV/STD Infection in an Urban High Risk Population (NIDA)

PI: Larry Nuttbrock, Ph.D. (ITSR)

Increasing HCV Knowledge and Service Use in Drug Treatment Programs (NIDA)

PI: Shiela M. Strauss, Ph.D. (ITSR)

An Intervention for Migrant Puerto Rican Drug Users (NIDA)

PI: Sherry Deren, Ph.D.

MSM Communities in NYC Respond to HIV and Methamphetamine (NIDA)

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National HIV Behavioral Surveillance Among High-Risk Heterosexuals: New York City (NYCDOHMH)

PI: Holly Hagan, Ph.D.

Peer-Driven Intervention to Enroll Minorities/Women in HIV/AIDS Clinical Trials (NIAID)

PI: Marya Viorst Gwadz, Ph.D.

Recent Changes in HIV Testing Recommendations: Impact on Youth at Risk (amfAR)

PI: Marya Viorst Gwadz, Ph.D.

Risk Factors for AIDS Among IDUs (NIDA)

PI: Don C. Des Jarlais, Ph.D. (BIMC)

The Science of Addiction for Deaf High School Students – Phase 2 (NIDA)

PI: Marjorie F. Goldstein, Ph.D.

Science-Based Treatment for Opioid-Dependent Adolescents (NIDA)

PI: Lisa A. Marsch, Ph.D.

Secondary Analysis of Alcohol and Sexual and Injection HIV-Risk Behaviors (NIAAA)

PI: Kamyar Arasteh, Ph.D. (BIMC)

Staying Safe: Long-Term IDUs Who Avoided HIV & HCV (NIDA)

PI: Samuel R. Friedman, Ph.D.

STOP Hep C – Outpatient (Josiah Macy, Jr. Foundation)

PI: Shiela M. Strauss, Ph.D. (ITSR)

Supporting Alcohol Reduction in HIV+ Patients: A Training for HIV Care Providers (NIAAA)

PI: Shiela M. Strauss, Ph.D. (ITSR)

Synthesis: HCV Epidemiology and Prevention in Drug Users (NIDA)

PI: Holly Hagan, Ph.D.

WHO Survey Coordinating Center, Drug Injecting Study- Phase 2 (WHO)

PI: Don C. Des Jarlais, Ph.D.