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EXECUTIVE SUMMARY

Study Objectives

This is a study of the needs for services and barriers to accessing services experienced by individuals living with HIV/AIDS who also have a history of problem alcohol or drug use. This research is part of a larger evaluation of service utilization and service needs of HIV-positive individuals currently living in the five boroughs of New York City. Specifically we investigate: 1.) What are the patterns of alcohol and drug use among NYC residents living with HIV and how do drug use patterns vary by sociodemographic characteristics and sexual practices? 2.) How do persons with different substance use patterns compare with regard to economic and housing resources, family and social supports, and sexual risk behaviors? 3.) What is the relationship between different patterns of substance use and physical health, mental health, and social functioning? 4.) How if at all does substance use affect entry into medical care and health service utilization? 5.) What are current needs for services among individuals with different patterns of substance involvement? 6.) What are barriers to care experienced by HIV positive individuals with different histories of drug involvement? 7.) What is the relative efficacy of different models of care for reducing substance problems or facilitating entry into care?

Background and Methodology

Data for the present analysis were obtained from interviews, conducted between October 1994 and August 1995, with almost 700 persons living with HIV in New York City. Study participants are being re-interviewed at about six month intervals. The participants in this project are broadly representative of all persons living with HIV in New York City. They were recruited in one of four ways. The largest number, 390, were selected through a two-stage random sampling process in which 30 HIV health and social service agencies were selected at random and assisted the research team in contacting a random sample of their clients. Another 258 individuals were recruited through an open enrollment process at 8 agencies; all persons who visited the clinic or agency on a specific day during a limited time period were invited to join the study. A smaller group of 48 individuals are also included in this study who had minimal or no connection to HIV service providers. Persons eligible for the “unconnected” sample had to be aware of their HIV positive status for at least three months, did not have a regular source of medical care, and were not receiving HIV case management services. To recruit respondents outside of HIV care institutions, the research team utilized chain referral or acquaintance sampling and street outreach efforts.

Findings and Discussion

Drug use is widespread among persons living with HIV/AIDS in New York City. Almost 90% of all respondents have used one or more illicit drug in their lifetime, more than
three-fourths are multiple drug users, and two-thirds of the sample have used at least one drug on a daily basis at some time in their lives. Crack/cocaine and heroin are the clearly the drugs of choice with 43% ever using heroin and 74% using cocaine or crack. Rates of current substance use are considerably lower than lifetime rates. Nonetheless, if we consider either current use of cocaine/crack or heroin or problem drinking, we find that about one-third of all persons with HIV/AIDS are also currently problem drug users.

Drug use behaviors vary by sociodemographic characteristics. There are consistent differences by race/ethnicity. Almost all white respondents have used drugs but for at least a subset, their drug histories appear to be less involved. African American and Latino respondents are more likely to have used cocaine/crack and heroin and to be using drugs currently. Blacks are more likely to be using crack/cocaine currently while Latinos have the highest rates of current heroin use.

Drug use also differs by participant’s sexual history. Women who have sex with women (WSW) are among the most drug involved of any subgroup of persons living with HIV/AIDS. Over 90% have used crack/cocaine and 75% are using currently; 59% have used heroin with 50% using currently. They also have the highest rates of problem alcohol use. Most women in our sample who report same sex experiences do not identify as lesbian but rather as bisexual or heterosexual. It is clear that WSW who are also HIV positive and active substance users have special service needs that may not be currently addressed by the existing service system.

Individuals who are HIV positive and outside of or marginal to the service delivery system are more often than not active substance users. Three-fourths of our sample who are not in care are currently using cocaine/crack and/or heroin. They have significantly higher rates of current heroin use, current crack/cocaine use, and problem drinking than those in the agency sample. They report the highest rates of injecting behavior, including needle sharing. There is a continued need to support and expand outreach efforts, especially high intensity efforts, that attempt to engage such populations with HIV-related services.

Substance users who are also HIV positive can be classified into heroin dominant or crack/cocaine dominant based upon level of involvement with each substance and current use pattern. Very few respondents maintained sustained use of any other drug without also using either cocaine/crack or heroin. This holds for problem drinking as well. Rates of problem alcohol use are relatively low (12% of the entire sample) and among these, 90% are also users of cocaine or heroin.

Persons living with HIV/AIDS in New York City are largely an impoverished group. Substance users are the most impoverished of all. The median individual income for heroin dominant respondents who are still actively using is $5,822 per year (i.e. half of heroin dominant current users is have even less than this inadequate amount). Current problem drug users are poorer than past problem drug users, who are in turn poorer than participants who have no
history of problem drug use. For several economic indicators and health indicators, individuals with a history of heroin or crack/cocaine but who are not currently using drugs compare favorably with those who have never had a period of heavy drug use.

Drug users interviewed reported high rates of sexual risk behaviors. A significant proportion of substance users have had multiple sexual partners, however patterns by history of substance involvement. In general, both past and current users among heroin dominant respondents have had relatively high rates of multiple heterosexual partners whereas only current users among the crack/cocaine dominant tend to have multiple heterosexual partners. Cocaine/crack dominant users are more likely to have multiple MSM partners as well as opposite sex partners. Relatively high proportions of all categories of drug user report that they have had sex with a known IDU. About one-quarter of current problem substance users regardless of drug of choice have exchanged sex for money or drugs. Rates of unprotected sex with an HIV negative or status unknown partner during the six months prior to interview average about 20% across all user groups. Needle risk behaviors are relatively low in the sample - only 1% report sharing needles within the last six months.

Sexual risk appears to be a much greater threat in terms of behaviors that expose other persons to HIV infection or drug users to re-infection. Harm reduction programs to address high risk sexual behaviors are imperative. The majority of substance users interviewed stated that receiving counseling regarding sexual behavior and sexual relationships is important to them. However less than half of current users are receiving such counselling.

Substance use affects entry into HIV medical care and health service utilization. The earlier report (CHAIN Report #9) as well as the present investigation found that substance users are more likely than non users to delay entry into care or to remain outside of the HIV services system altogether. Over 20% of substance users delayed one year or more before entering into care. Fourteen percent of heroin dominant current users have never seen a physician for HIV. The needs of the unconnected/ delayers are particularly salient, both from the perspective of early HIV intervention and from that of secondary prevention -- especially since high rates of sexual risk behavior and injecting drug use will only accelerate the present course of the epidemic among drug users and their sexual partners. As therapeutic regimens are developed, particularly the antiretroviral therapies and protease inhibitors whose promise is often evident at the earlier stages of the illness, it is ever more critical to develop multiple avenues for allowing substance users to find easier and more timely ways into care.

There are some differences in service utilization and quality of medical care among individuals with different substance use histories. Especially active drug users are less likely to have received recommended HIV related diagnostic or therapeutic treatments. However, at this point in the research it is difficult to determine if the quality of care received by substance users is less or whether the differential rates reflect that current users are more likely to remain outside of care altogether. On a number of measures, substance users who are in care are less likely to
be receiving good primary care services. Women's health services appear to be adequate for former but not active substance users.

The majority of substance users have received some type of alcohol or drug treatment at some point in their lives. Heroin dominant users were much more likely than cocaine/crack dominants to have ever received drug treatment. Among the crack dominant users who are no longer using any drugs, only about half report ever having had drug treatment, indicating that a substantial proportion of users ceased drug use without the benefit of formal treatment intervention. Peer led, self-help groups, many of which would come under the classification of "recovery readiness" or "relapse prevention" were attended by more than half of those who received any treatment at all during the prior six months.

There is considerable need for substance abuse treatment and desire for treatment among the substance users we interviewed. We used four indicators to determine the extent to which drug treatment services were needed among study participants: a respondent reported current drug use, or he or she reported a problem with alcohol or drugs during the 30 days prior to interview, or reported that treatment was important to him/her, or reported dissatisfaction with their current treatment program. A sizeable proportion of persons who report drug related problems or who want drug treatment are not currently receiving any alcohol or drug treatment services. Considering the four indicators jointly we begin to get a picture of the tremendous unmet need for drug treatment services among HIV positive persons living in New York City. Almost 40% of heroin dominant current users and over 60% of cocaine/crack dominant current users are in need of treatment services but not receiving any treatment at all.

Substance users experience a compelling need for social services beyond treatment for problem substance use. However, need for services does appear to vary according to history of substance involvement. In several service areas, drug users, former and current, were less likely to seek help from an agency or paid provider. Overall, most pressing unmet need among drug users is for housing and financial assistance, as would be expected from our earlier investigation of economic and housing resources. Current users also had the lowest rates of resolution of their housing problems. Having a case manager has been shown to contribute to the resolution of service needs, with the biggest impact on low income clients. Substance users, especially those who are currently using, are less likely to have a case manager, which contributes to a lack of resolution of multiple service needs. This points to continued need especially for "low threshold" programs that can offer enhanced case management services targeted to substance abusers.

The lack of case management services is one barrier to accessing services by substance users. We also asked respondents directly what they perceived as barriers to their getting the services they needed, including drug treatment services. Clients report a number of practical impediments such as lacking transportation or not knowing where to go. However, they are equally or more likely to report what might be called perceived unresponsiveness to the
individual’s needs: concerns that staff at clinics or agencies are disrespectful, not good at listening to people, lack understanding, or are incompetent to deal with their problems. This interpretation is corroborated by review of the narrative descriptions of problems encountered when attempting to access services. Many participants found what they perceived to be staff inadequacies, either through lack of respect, understanding, sensitivity, or listening skills, to be a problem for them. In some instances, individuals have had specific experiences with "rude and uncaring" providers. More often it appears to be an anticipation that providers will not be welcoming to persons "like us" - i.e. drug user, homeless, poor, etc.

These findings point to a need to educate HIV providers as to the particular needs of individuals who are dealing with both substance use problems and HIV/AIDS and to sensitize them to perceived barriers (unwelcomeness, bureaucratic rules) that often dissuade individuals from pursuing services. At the same time, HIV positive substance users need to be better educated about the benefits of accessing services, especially the benefits of early medical intervention. The models of care developed by the Alcohol and Other Substance Work Group emphasize the need for a harm reduction perspective and programs to engage unserved or underserved populations, and facilitate entry into primary medical care. An initial exploration of the differential impact of different treatment modalities for individuals in our sample offered some suggestive findings that such an approach to a continuum of care will serve to reduce barriers to care previously encountered.
A. INTRODUCTION AND STUDY QUESTIONS

Currently half of all CDC defined AIDS cases in New York City are among persons with a history of drug use and there is considerable evidence that the epidemic is growing most rapidly among drug users and their sexual partners (AIDS Surveillance Dec 1995; Holmberg, 1996). At the same time, drug users often present special needs for service because they are more likely to remain outside of the care system than individuals from other risk exposure groups (Aidala et al., 1995; Mor et al, 1992; Solomon et al, 1991), demand for substance abuse treatment and support services far exceeds supply, and not all providers are prepared to meet the multiple needs of substance using clients (CHAIN Technical Report 9; HRSA 1994).

This is a study of the needs for services and barriers to accessing services experienced by individuals living with HIV who also have a history of problem alcohol or drug use. This report is one of a series of analyses being conducted by The Community Health Advisory and Information Network (C.H.A.I.N.) Project of Columbia University School of Public Health for the work groups of the Ryan White CARE Act Title I Health and Human Services Planning Council. Specifically we investigate: 1.) What are the patterns of alcohol and drug use among NYC residents living with HIV and how do drug use patterns vary by sociodemographic characteristics and sexual practices? 2.) How do persons with different substance use patterns compare with regard to economic and housing resources, family and social supports, and sexual risk behaviors? 3.) What is the relationship between different patterns of substance use and physical health, mental health, and social functioning? 4.) How if at all does substance use affect entry into medical care and health service utilization? 5.) What are current needs for services among individuals with different patterns of substance involvement? 6.) What are barriers to care experienced by HIV positive individuals with different histories of drug involvement? 7.) What is the relative efficacy of different models of care for reducing substance problems or facilitating entry into care?

B. METHODOLOGY

1. Study Participants

The CHAIN Project is intended to provide a quantitative profile of the need for, utilization and impact of the Health care delivery system in New York City for persons living with HIV. Data for this study were obtained from interviews, conducted between October 1994 and August 1995, with 696 persons living with HIV in New York City. Participants are volunteers in an ongoing study of the service needs of persons living with HIV, their encounters with service providers, and their physical, mental and social well being. Study participants are being re-interviewed at about six month interviews. The second round of interviews began in July 1995 and were completed this Spring. A third round of interviews began in March 1996. The data reported here are from the first round of interviews.
The participants in this study are broadly representative of all persons living with HIV in New York City. They were recruited in one of three ways. The largest number, 390, were selected through a two stage sample process. In which 30 health and social service agencies were selected at random from a list of about 300 providers in New York City with 20 or more HIV clients or patients. With assistance from CHAIN project staff, the 30 agencies approached a random sample of their clients to ask if they would participate. Another 258 individuals were recruited through an open enrollment process at 8 agencies. In addition, a small group of 48 individuals are also included in this study who had minimal or no connection to HIV service providers. Persons eligible for the “unconnected” sample had to be aware of their HIV positive status for at least three months, did not have a regular source of medical care, and were not receiving HIV case management services. Those not in care were recruited by referrals from our client-based participants and by accompanying street outreach workers from several AIDS service organizations. (The interested reader is directed to CHAIN Technical Reports #2,# 7R and #9 for information on sample design and the characteristics of this sample.)

2. Questionnaires

All interviews were conducted in person by trained interviewers, matched wherever possible by race/ethnicity and gender. Major topics covered during the interviews include: initial encounter with the health care delivery system, need for services, access, utilization and satisfaction with health and social services, sociodemographics characteristics of respondents, informal caregiving from friends, family and volunteers, and quality of life with respect to health, psychological and social functioning. The questionnaire was developed in collaboration with the HIV Planning Council’s Planning and Evaluation Committee, the New York City Department of Health and MHRA. The survey took between two to three hours to complete, depending on the issues relevant to each client’s unique service needs. Most interviews were conducted in English, although Spanish and Creole versions were administered to respondents with these language needs or preferences (no other language needs were presented).

C. FINDINGS

1. WHAT ARE DRUG USE PATTERNS OF PERSONS LIVING WITH HIV AND HOW DOES DRUG USE VARY BY SOCIODEMOGRAPHIC CHARACTERISTICS AND SEXUAL PRACTICES?

Measures

Drug use is measured by respondent self-reports. "Ever Used" refers to lifetime use of a substance five or more times, and "current use" refers to any reported use during the six months prior to interview. A respondent is classified as an injecting drug user (IDU) if he or she reports ever injecting or skin popping any drug. Participants were asked whether they had ever used marijuana, cocaine, crack, heroin, inhalants, stimulants, pcp, and hallucinogens. For most analyses, we do not separate crack from powdered cocaine since most users of cocaine have also
used crack or free based cocaine, and respondents found it difficult to distinguish details of using one form of the substance from the other. Problem alcohol use was indicated by: (1) 5 or more drinks a day, one or more times a week in the past 6 months, or (2) two or more affirmative responses on a standard index (CAGE, Ewig, 1984), which asks about drinking in the morning, feeling the need to cut down on drinking, feeling annoyed by criticism of drinking, and feeling guilty about drinking.

Patterns of drug use were cross tabulated by four broad participant characteristics. Gender refers to the biological construct of "male" and "female," rather than psychological perception. For Race/Ethnicity, we followed the federal classification of "white" (non-Hispanic), "black" (non-Hispanic), and "Latino." The sample includes two participants who are Asian/Pacific Islanders, and one Native American. Unfortunately these numbers are too small to be broken out for statistical presentation of findings. In response to a request from the Alcohol and Other Drugs Work Group, we have provided breakdowns of substance use behavior by sexual practices of respondents. Sexual Experience refers to reported sexual behaviors regardless of self-identified sexual orientation: "men who had sex with men" (MSM) and "women who had sex with women" (WSW) and "exclusively heterosexual" (heterosexual). Note that the sample includes too few transgendered individuals to enable analysis of their particular substance related needs. Finally Care Status refers to whether participants were "in-care" or "unconnected" to HIV services.

Findings

Drug use is widespread among persons living with HIV in New York City; 88% of respondents have used one or more illicit drug in their lifetime (either marijuana, cocaine, crack, heroin, other opiates, inhalants, stimulants, sedatives, phencyclidine, or hallucinogens). More than three-fourths (77%) have used more than one of these substances (Table 1). Two-thirds of the sample used at least one drug on a daily basis at some time in their lives and 40% are using some type of drug currently, although at differing levels of intensity. It is notable however that rates of current use are much lower than lifetime use.

The greatest number of respondents have used marijuana (78% ever used; 25% currently using) but rates are only slightly lower for cocaine/crack. About three-fourths of the sample (74%) have used cocaine or crack and 24% are current users. Heroin use was reported by 43% of the sample and 9% are current users. About 40% of respondents have at one time used some other drug - either hallucinogens, sedatives, stimulants, inhalents, or phencyclidine (PCP) - but only 3% have continued use to the present time. Despite the variety of drugs ever used, the "drug of choice" for most respondents is either cocaine/crack or heroin; less than 5% of the sample reported sustained use of other substances without also reporting cocaine/crack or heroin.

Forty-three percent of those interviewed have ever injected or skin popped drugs, most often
heroin and/or cocaine. Relatively few, 7%, report any injecting behavior during the six months prior to interview (Table 1). However one in six of these (1% of the total sample) say they have shared needles or works (See Appendix A).

Almost all respondents have used alcohol and we have some informal reports of prior history of alcohol problems (detailed questions about past use of alcohol were not asked). Focusing on current use patterns, relatively few respondents (12%) report problem drinking. In addition, we found that almost all individuals reporting problem drinking are also currently using other drugs, again, primarily cocaine/crack or heroin (data not shown).

We consider either problem drinking or current use of cocaine/crack or heroin as an indicator of ongoing problem drug use. By this measure, almost one-third (31%) of the entire sample are currently problem drug users.

Drug use behaviors vary by sociodemographic characteristics. Table 2 presents a summary of difference in drug use behaviors by gender, race/ethnicity, sexual experience, and care status. More detailed breakdowns regarding prevalence, onset, intensity of use, recency etc. can be found in Appendix A. In contrast to the general U.S. population (NIDA, 1993), we found few gender differences in drug use behaviors among persons living with HIV/AIDS in New York City. Men are slightly more likely to have ever used some type of illicit drug but rates of crack/cocaine and heroin use, multiple drug use, and injecting behavior are the same. More women (47%) in the sample than men (37%) have used crack/cocaine daily. There are consistent differences by race/ethnicity. Almost all white respondents have used illicit drugs (95%) but for at least a subset of white respondents, their drug histories appear to have been less involved. They have lowest rates of ever using crack/cocaine or heroin, and they are less likely to have ever used these substances daily or engaged in injecting behavior. Fewer whites than respondents from other race/ethnic groups report current problem substance use. Latinos are more likely than individuals from other backgrounds to be currently injecting or skin popping any drug.

Women who have had sex with women (WSW) have the highest rates of drug use among either men who have had sex with men or respondents who report exclusively heterosexual experiences (Table 2). For example, 92% of women who have sex with women have used crack/cocaine and 70% have used it daily. More than half (59%) have used heroin and the same percentage report injecting behavior. WSW have the highest rates of multiple drug use of any subgroup studied and they have a relatively high rate of alcohol abuse (Appendix). We found that 42% of women in the sample who have same sex experience are currently problem substance users. Men who have sex with men tend to have lower rates of use, especially for heroin and injecting drug use. Nonetheless, two-thirds of men who have sex with men have used crack/cocaine and over one-quarter (26%) are currently problem substance users. Almost one-half (48%) of men who have sex with men have used inhalants but fewer than 10% use at the
present time (data not shown).

Consistent with other investigations of HIV-positive individuals who are outside the care system, we found exceptionally high rates of current substance use among the unconnected respondents in our study (CHAIN Report #9; Warren, et al. 1995). Lifetime rates of cocaine/crack use are higher compared to the agency sample (93% vs. 73%) but the most striking differences are with regard to current use patterns (Table 2). Almost three-fourths (73%) of the unconnected report problem substance use during the six months prior to interview -- crack/cocaine, heroin, problem drinking or all three -- a rate almost three times that of individuals better integrated into the care system (28%). The highest rates of sustained injecting behavior is found among the unconnected (23%) and, although rates are low, the unconnected are five times more likely than participants in care to have shared needles recently (5% v. 1%; see Appendix).

2. HOW DO PERSONS WITH DIFFERENT SUBSTANCE USE PATTERNS COMPARE WITH REGARD TO RESOURCES, SUPPORTS, AND SEXUAL RISK BEHAVIORS?

Measures

In prior CHAIN reports, we created a typology of risk exposure that classified respondents with regard to their alcohol and drug use behavior: 1. Problem drug users (PDU); 2. Men who have sex with men and no problem drug use (MWM); 3. Men who have sex with men and who are also problem drug users (MWM/PDU); 4. All others (OTHER). A problem drug user was a respondent who had ever injected or skin popped a drug; used heroin three or more days a week at any time in the past; or, in the six months prior to interview, used crack/cocaine three or more days a week, or reported problem drinking. This classification was developed in consultation with the HIV Planning council and MHRA and DOH advisors with a mind to understanding service needs, as well as risk exposure (C.H.A.I.N. Technical Reports #7R and #9, present service needs and service utilization of persons classified according to the risk exposure typology).

Members of the Alcohol and Substance Use Work Group felt that the above PDU categorization was at once too broad and too limiting for the purposes of a detailed examination of the special needs of substance users. It is too broad because it lumps together individuals who may have had very different substance use histories, for example heroin users and crack users. More importantly, no distinction is made between those who are former and current drug users. In addition, it excludes individuals who may have had a significant history of substance use problems at but at a threshold below those defined in the PDU criteria.

Drug User Typology. Based upon feedback from the Workgroup, we created a typology of drug use for this study that takes into consideration not only whether or not an individual ever
used drugs, but drug of choice, level of use, and whether or not he or she is currently using any addictive substance. Note that this classification focuses exclusively on likely differences in service needs a person might present, regardless of possible infection vector. Thus it does not separate out injection drug users (IDUs) as a special category. In the context of New York City, it is not informative to separate HIV-infected IDUs as a population with special needs in planning services. The problems and service needs of dysfunctional IDUs resemble those of other drug users more than they differ (cf. HSA Needs Assessment, 1993).

The first step in this classification was to divide participants into those who were non-experimental users (used more than 5 times) of either heroin or crack/cocaine. We focussed on these drugs since with very few exceptions, individuals who reported sustained use of other substances (marijuana, inhalants, stimulants, etc) also reported heroin and/or crack/cocaine use. In addition, there were no respondents who self-reported a problem with drug use who had not used either heroin or crack/cocaine. Respondents who had not used either heroin or crack/cocaine were classified as "no problem drug use" although they may have engaged in the occasional use of marijuana, inhalants, or other drugs.

Participants with a history of problem drug use were further subdivided into groups with "heroin dominant" histories or "crack/cocaine dominant" histories. Participants who had used only heroin were categorized as heroin dominants while participants who had used only crack/cocaine were considered cocaine dominants. Not surprisingly, many individuals had used both drugs. Individuals who had used both drugs were classified by examining the onset and duration of the peak use period. Drug careers of users of these substances show that for some individuals, crack use followed an extended period of heroin use and was used primarily in combination with heroin (speedball) suggesting that heroin was for them their drug of choice. For others, heroin was initiated after an extended period of crack use, often in the attempt to moderate the intense highs and lows associated with heavy crack consumption. If both drugs were initiated at about the same time with periods of peak use coterminous, we examined current use patterns and classified individuals as either heroin dominant or crack dominant depending upon the intensity of current use of either drug, assuming this to be an indicator of current drug of choice.

Within each of the drug history categorie, respondents were further divided between those who are currently problem drug users (current PDU); that is, they currently use heroin or crack or report problem drinking, and those who currently do not report problem substance use (past PDU). Thus heroin dominants and crack dominants were further divided into those with and without any current problem substance use, regardless of the specific drug(s) currently used. Note that a few (n=9) respondents without a history of problem drug have some evidence of problem alcohol use. To preserve the consistency of the "no problem drug use" category, these cases will be excluded from analyses using the drug user typology.

Findings
Classifying respondents according to the drug user typology, we find that 34% of our sample have had heroin dominant histories, 42% are crack/cocaine dominant and 23% participants had no history of problem drug use (Table 3). A closer examination of each classification group reveals different use patterns. An overwhelming majority (91%) of the heroin dominant also have a history of crack/cocaine use while only 22% of the cocaine dominant have a history of heroin use. Heroin dominants have used a wider variety of different drugs than those for whom crack/cocaine has been the drug of choice; however, a greater proportion of crack/cocaine dominants are currently engaged in problem drug use. More than a third of the heroin dominant current substance users are also problem drinkers; a higher rate than is found among crack/cocaine dominant current users. Needle use is more common among heroin dominant drug users but is found among cocaine users as well.

**Sociodemographics.** Individuals with different drug use histories differ on in terms of personal background characteristics, but again, there are no differences by gender. The gender breakdown within each drug user category is approximately the same as among the sample overall. There are race/ethnic differences. Heroin dominant current PDUs are more likely to be Latinos and crack/cocaine dominant current PDUs are more likely to be black. One-quarter of heroin dominant current PDUs were born in Puerto Rico; respondents with no history of problem drug use had the highest proportion of persons born outside the US. Regarding current residence, heroin dominant current users are overrepresented in the Bronx (Table 4).

**Economic Resources.** We have consistently found that persons living with HIV in New York City have relatively few economic resources and considerable financial need (CHAIN Technical Report #9; Rapid Response #1). Whether cause or consequence of drug consumption, drug users have the fewest economic resources of all (Table 5). For example, the median income of individuals with no history of problem substance use is only $10,775. Nonetheless, this is $2,000 to $5,000 per year. However, those who are no longer using heroin or crack/cocaine appear to be somewhat better off than their counterparts who have continued problem substance use, and on many indicators, approach levels comparable to individuals with no history of serious substance involvement. For example, about a third of former crack/cocaine dominant users have completed post-secondary higher education, a rate comparable to individuals who have never used drugs. Rates of employment are uniformly low, lowest of all among active heroin users. The median income in this group is only $5,833 meaning that half of respondents in this category get even less than this inadequate amount. There were no intergroup differences in the proportion of participants who reported not having enough money for rent or utilities; however current drug users often lack money for food and needed medical care. Among crack dominant respondents, current PDUs reported not having enough money for medical care four times more often than past PDUs (17% v 4%).

Active substance users are less likely than former users to be receiving SSI, SSD or other disability payments, for which many would surely be eligible. In a previous report (CHAIN 1995c) a measure of Department of AIDS Services (DAS) eligibility was created using criteria
provided by the NYC Human Resource Administration’s Income Support AIDS Services. We found that using income and stage of illness criteria, 26% of individuals with a history of problem drug use were eligible for DAS income support services but were not receiving such support. (data not shown). Current PDUs in both groups were more likely than past PDUs to have no health insurance of any kind. Insurance status of prior users is comparable to those with no history of substance involvement.

**Family and Living Arrangements.** Substance users are more likely than non users to experience housing instability. As Table 6 shows, nearly half of current PDUs regardless of drug of choice have lived in an SRO or welfare hotel, on the streets, in a shelter, in jail or temporarily doubled up with friends or relatives at some time during the year prior to interview. All of these represent substandard or transient living situations, and do not constitute a stable housing environment. Rates are lower for those who are no longer using drugs but the situation for many is still desperate as we shall see in more detail in later sections of this report. Respondents with a history of heroin use who are no longer using drugs had rates of housing instability (28%) that compare to participants without a problem drug use history (20%). It is worth noting that 25% of heroin dominant current PDUs and 11% of crack dominant current PDUs were incarcerated during the 12 months prior to interview.

Problem drug users, regardless of drug of choice, are less likely to be in a partner relationship or to have a close friend than persons with no history of substance involvement. Again, the general pattern appears to be that former users are more similar to those who have never used crack/cocaine or heroin. For example, heroin dominant current PDUs were the least likely to be in a partner relationship (68% no partner) or to have a close friend (29% no friends). However friends and partner relations among former heroin users are comparable to non users in the sample. Drug users are less likely than others to have their children living with them.

**Sexual Behaviors.** Table 7 shows past and current sexual behaviors among respondents with different drug use histories. Men who have sex with men are most often found among cocaine/crack users who are no longer using any drugs, or among those who have no history of problem drug use. MSM comprise over 70% of each of these drug user categories. Men who have sex with men comprise 56% of current problem users among the cocaine/crack dominant. In Table 7 we see that all categories of drug user both heroin and crack/cocaine dominant, current and former user have higher proportions of WSW than among respondents who have not used drugs. Consistent with our earlier findings on the high rates of substance use among women who have sex with women, we find that more than a quarter of the heroin dominant and crack dominant women reported same-sex experience compared to only 4% of the women without a history of heroin and cocaine use.

We examined a series of sex risk behaviors that may have exposed respondents to HIV infection, or which may expose other persons to the virus or themselves to re-infection. A significant proportion of substance users have had multiple sexual partners, however patterns of
same sex and opposite experience vary by history of substance involvement. Among crack dominants, 58% of past users and 36% of current users have had more than 20 MSM partners, and 33% of past users and 40% of current users have had more than 20 opposite sex partners. Among heroin dominants, high rates of multiple partners are found only among those with heterosexual partners (Table 7). Relatively high proportions of all categories of drug user report that they have had sex with a known IDU, most often during a heterosexual encounter. Rates are especially high among the heroin dominant respondents where three out of four past users report the experience and two-thirds of current users. Rates are also sizeable among crack dominant participants; 28% of former users and 43% of current users have had heterosexual relations with a known injection drug user. About one-quarter of current problem substance users regardless of drug of choice, have exchanged sex for money or drugs. Only 6% of those with no history of problem substance use have exchanged sex for payment and a similar low rate is found among former crack/cocaine users.

Regarding current behaviors, the majority of all respondents are sexually active but crack/cocaine dominant current drug users are the most likely to have been sexually active during the six months prior to interview (77%). In general, both past and current users among heroin dominant respondents have had relatively high rates of multiple heterosexual partners whereas only current users among the crack/cocaine dominant tend to have multiple heterosexual partners.

Rates of unprotected sex with an opposite sex partner were highest for crack/cocaine dominant current PDUs (21%); persons with a history of heroin use had relatively high rates, regardless of whether they were current PDUs or not (19% and 17% respectively). No intergroup difference were observed in the proportion of participants who had had unprotected sex with an HIV-negative or status unknown same-sex partner. The lowest rates of unprotected sex were among respondents with no history of problem drug use.

3. WHAT IS THE RELATIONSHIP BETWEEN PATTERNS OF SUBSTANCE USE AND HEALTH AND SOCIAL FUNCTIONING?

Measures

Stage of disease is based on the latest CDC definitions of AIDS symptomatology (see MMWR1992; 41, No. RR-17). "HIV asymptomatic" refers to individuals who have tested positive but whose T-cell count is above 200 and who have not experienced any of the CDC defined symptoms which constitute symptomatic stage (e.g. thrush, herpes simplex). "HIV symptomatic" individuals either have T-cell counts below 200 or they have experienced AIDS symptoms. "AIDS diagnosis," refers to individuals who have experienced any of the advanced symptoms identified by the CDC (e.g. Kaposi's sarcoma, pneumocystis carinii pneumonia etc.) or who have received an AIDS diagnosis by a physician. Note that classification of stage of HIV
illness is based upon respondent report of systems and T-cell count.

**Health status.** In addition to direct questions about perceived health, responses were tallied on multi-item scales which measured mental and physical health, and role functioning. "Physical health" measures limitations in specific physical activities such as walking, climbing, and personal grooming. "Role functioning" measures limitations in the ability to perform normal work or regular daily activities. The "mental health" scale measures feelings of both depression and anxiety. Standardized items were taken from the MOS-36 (Stewart, Hayes & Ware, 1988). All health measures presented in the tables that follow were coded such that higher values represent better health.

**Findings**

**HIV Diagnosis and Stage of Illness** No intergroup differences emerged when we examined the year at which participants became aware they were HIV-positive, or their current stage of disease. However, our results may be confounded by the fact that active substance users are more likely than others to remain unconnected to services. Thus they may not have sought medical care for conditions that would have classified them at a more advanced stage of illness, if the condition had been diagnosed (see CHAIN Technical Report #9). It is instructive to note that 17% of current users in both the heroin and crack dominant categories had never had a T-cell count or did not know their count (Table 8).

**Current Health Status** For several of the health indicators, participants in the different drug history groups appear to be comparable. However for self reported health status, bodily pain, and mental health, we see significant differences by history of substance involvement. The general trend is more compromised health among heroin dominants who are current problem users. Among heroin dominants, 41% of current users reported good or excellent health compared to 58%-65% of respondents with other drug use histories. Only 8% of heroin dominants who are currently using drugs are free from bodily pain compared to 20-30% of respondents in the other categories. Heroin dominant current drug users scored lowest on the mental health score. They also scored lowest on overall physical health, and role functioning scales although differences are not statistically significant (Table 9).

Scores on these health measures are obviously affected by progression of HIV disease so we examined the relation between health and substance use controlling for stage of HIV illness in a separate set of analyses not shown here. Among respondents who are asymptomatic or symptomatic but without AIDS diagnosis, non users tend to score higher on the health measures then those who have a history of problem drug use, but differences are modest. There are greater differences in mental health and role functioning. For example, the mean role functioning score for asymptomatic respondents who never had a problem with drug use was 68.6 while scores for the respondents who are former and current substance users range in the 40s and 50s (data not shown).
4. HOW DOES SUBSTANCE USE AFFECT ENTRY INTO MEDICAL CARE AND HEALTH SERVICE UTILIZATION?

Measures

Entry into care. Respondents answered a series of questions regarding their testing and counselling experiences and the process by which they entered into medical care or, if appropriate, their reasons for remaining outside of care. "Saw MD after HIV+" refers to the time between HIV testing and seeing a medical doctor, whether or not help had previously been sought from a nonmedical provider. "Health problems at first medical visit" refers to respondents perception of major or minor health problems at the time of first visit for HIV care, not provider diagnosis of symptoms.

Health services utilization. We will examine adequacy of primary care using a scale that considers good care to entail having one provider in charge of health care; having a source of care for routine medical care; a provider to go to for information and advice; and 24 hour access in case of medical emergency. We will also review receipt of a series of HIV related tests and treatments as a measure of possible differential service delivery for patients with different histories of substance use involvement. In addition, we will examine number of outpatient visits as an indicator of medical utilization. Rates presented combine visits to hospital clinics, community clinics and a private doctor's office.

Drug treatment services . Respondent description of services used were classified into treatment types (eg detoxification, outpatient, MMTP etc) and by classifying providers into three broad groupings: "professional private" which refers to private hospitals, CBOs and non public entities providing AOD treatment and counseling licensed by New York State Office of Alcohol and Substance Abuse Services (OASAS) or NYS Office of Mental Health or NYS Department of Health; "Professional public" refers primarily to municipal hospitals providing licensed AOD services; and "self help" refers to peer-support programs such as Alcoholics Anonymous (AA) Narcotics Anonymous (NA), Cocaine Anonymous (CA).

Findings

Entry Into Care  In the main agency sample, respondent narrative discussions of the process of entering care describe two very distinct trajectories. We found that the vast majority of individuals enter care relatively soon (within 3 months) after diagnosis. Their stories emphasize the need to know, and the importance, for them, of taking care of themselves. A woman from the Bronx typifies this response, "I saw a doctor after two days to make sure if there was anything I could do to get started taking care of myself." Others tend to enter care when they begin to experience symptoms. The earlier report (CHAIN Report #9) as well as the present investigation found that substance users are are more likely than non users to delay entry
into care or to remain outside of the HIV services system altogether. More than three-fourths (77%) of respondents with no history of drug use entered care within three months of learning their serostatus, compared to 58% of heroin dominant drug users who are currently active, and 63% of crack/cocaine current users. Over 20% of substance users delayed one year or more before entering into care. (data not shown) Fourteen percent of heroin dominant current users have never seen a physician for HIV. Heroin dominant users are more likely than other respondents to enter care only when they begin to experience symptoms. Fifty-eight percent were experiencing problems with they first saw a doctor for HIV compared to about half of individuals in the other drug user categories. 

Testing site may have an influence on entry into care. Heroin dominant users were more likely members of other groups to have been tested while they were in jail or a drug treatment program. This raises the possibility that testing was more of a process of "institutional capture" rather than individual desire to become aware of serostatus. If we combine individuals who were tested at either of these sites we find that 30% of past users and 39% of current users were tested in such sites. In separate analyses not shown here, substance users who entered into care in a timely fashion were more likely than others to have been tested in such an institutional setting. Crack dominant past users and participants without a history of cocaine and heroin use more frequently reported that they were tested for HIV in a doctor's office. Reasons for taking the test did not differ among the groups, although current users cited their risky behavior as impetus for testing more often than past users or non-problem drug users.

Adequacy of Primary Care Table 11 presents the source of medical care and types of treatment received by individuals in each of the the drug user categories. Consistent with the findings on delay of entry into care, we find that active drug users, both heroin and crack dominant, are more likely than former users or those with no history of problem drug use to report that they currently have no regular source of medical care - one-fifth of current users compared to half this many in the other user categories. Current PDUs also less likely to report having one provider in charge of their care, a place to go for routine medical care, a provider to go to for advice, or a health provider available to them at anytime of day. Taken all together, only about half of active drug users have good primary care (using the above mentioned criteria) compared to two-thirds of respondents with no history of substance use.

Medical Services Utilization. The number of outpatient providers that participants visited in the six months prior to interview did not vary according to drug history. The number of visits made to these providers did differ with heroin dominant users reported making fewer visits than crack dominants and participants without a problem drug history. Moreover, current heroin users made fewer visits than past users (4.7 v 7.3). However these differences are not statistically significant. The large standard deviation indicates a large variance in number of visits received with a limited number of persons making a large number of visits and many others none at all. The reasons for differential use of outpatient services must await availability of more detailed medical utilization data.
Substance users, especially active users, were less likely to have received different types of diagnostic or therapeutic treatments for their HIV condition (Table 11). For almost all the treatments listed current users were less likely to report receiving the service than past users. Past users were comparable to those with no history of problem drug use with regard to treatments received. At this point in the research, it is difficult to tell if the quality of care received by substance users is less or whether the differential rates we observe reflect the fact that current users are more likely to remain outside of care all together. Our baseline analysis of services received among those enrolled in care indicate very few differences between respondents who were problem drug users and others in the sample (CHAIN Technical Report #7R).

Women were also asked specifically whether they had received a breast exam or pap smear during the six months prior to the interview. It is interesting to note that heroin dominant women who were not current users were more likely than other women to have received these services. In many instances, gynecological care was provided as part of a drug treatment program.

**Drug Treatment Services**  Table 12 presents the history of and recent use of drug and alcohol treatment for participants in the heroin dominant and cocaine/crack dominant groupings. About one-fourth to one-third of respondents in all categories report receiving alcohol treatment at some point in their lives. This includes attending AA or similar peer lead self-help groups which many individuals report attending because such groups were a welcoming and accessible arena in which to address their addiction problems, not necessarily because their primary substance use problem was alcohol related. Heroin dominant users were much more likely than cocaine/crack dominants to have ever received drug treatment; 80% of heroin users have been in treatment at some time in their drug using career. Among the crack dominant users who are no longer using any drugs, only about half (54%) report ever having had drug treatment. This indicates that a substantial proportion of users ceased drug use without the benefit of formal treatment intervention. Heroin dominant users (over 60%) were much more likely to report receiving drug treatment in the six months prior to interview than were crack dominant users (40% or less).

Among those who had received treatment during the six months before the interview, self-help groups, many of which would come under the classification of "recovery readiness" or "relapse prevention" are attended by more than half (57%) of those who received any treatment at all. The general pattern is that for current users, the great majority receive professional, licensed treatment from a private facility and for former users, self-help groups are the norm. For 44% of former heroin dominant and 48% of crack dominant users, self help groups are their only ongoing source of treatment. Crack dominant current users were more likely than heroin dominant current users to have used only self-help groups (21% v 8%).

Among those attending drug treatment programs during the six month period before the interview, very few participants used a residential treatment facility, a halfway house or
thecapeutic community treatment. Inpatient treatment was also infrequently reported, though crack dominant participants were more likely than heroin dominant participant to have reported using this type of treatment program. Similar proportions of participants in each of the drug history groups received individual counseling and outpatient services. While heroin dominant users were more likely than crack dominants to have used an Methadone Maintenance Treatment program (MMTP), current users of both heroin and crack were also more likely than past users to have used an MMTP.

Participants who used professional drug treatment services (that is, any program that was not a self-help group) were asked about their satisfaction with the treatment they received. Individuals currently using drugs were less likely to be satisfied with their treatment program than individuals who had not used any drugs during the six months prior to interview. For example, among crack dominant past users, 73% of former users said they were very satisfied with their treatment compared to only 54% of active drug users.

5. WHAT ARE CURRENT NEEDS FOR SERVICES AMONG INDIVIDUALS WITH DIFFERENT PATTERNS OF SUBSTANCE INVOLVEMENT?

Measures

Need for services A variety of measures were used to determine need for drug treatment, mental health, and social services among individuals with differing histories of substance involvement. We used four indicators to determine the extent to which drug treatment services were needed among study participants: a respondent reported current drug use, or he or she reported a problem with alcohol or drugs during the 30 days prior to interview, or reported that treatment was important to him/her, or reported dissatisfaction with their current treatment program.

To determine need for mental health services we used a variety of self-report measures from asking the respondent to report on "emotional or psychological difficulties, including relationship problems" or "need for counseling". In addition, we administered the Medical Outcomes Survey (MOS-36) mental health scale (Stewart, Hayes & Ware, 1988) which measures symptoms of both depression and anxiety. We present the proportion of respondents who score below 50 on this scale, the cut point indicative of clinically-relevant mental health symptomatology.

Each respondent was asked whether he or she needed help or assistance in the past six months regarding specific services -- housing, financial matters, legal matters, employment, emotional or psychological difficulties, household items or clothing, child care, transportation, food or meals. Respondents were further asked about the type of help sought, what formal or informal help was enlisted, which agencies helped, how satisfied was the respondent with
professional services, perceived barriers to receiving professional services, and to what degree the problem was resolved. Problems were occasionally overlapping, in that a housing problem could also be a financial problem as well as a legal problem. We report such a multi-faceted problem within each service domain, especially since respondents perceived the problem as being a "housing" problem as well as a "financial" or "legal" problem.

Findings

Need for Drug Treatment Services. Not surprisingly, current users of both crack and heroin were much more likely to have experienced alcohol or drug related problems in the month prior to interview. Current users were more likely than past users to state that drug treatment is important to them, (80% of heroin dominant and 62% of crack dominant current users) although a high proportion of former users report that continuing treatment is necessary. A sizeable proportion of persons who report drug related problems or who want drug treatment are not currently receiving any alcohol or drug treatment services. Treatment readiness seems especially needed among crack dominant respondents where 50% of current users who report drug related problems and 40% of those who say treatment is important to them are not receiving any services (Table 13).

Considering the four indicators jointly (ie counting all current users and those unsatisfied with treatment as well as respondents reporting drug problems and/or need for treatment) we begin to get a picture of the tremendous unmet need for drug treatment services among HIV positive persons living in New York City. Almost 40% of heroin dominant current users and over 60% of crack dominant current users are in need of treatment services but not receiving them (Table 13).

Need for Mental Health Services. Between one-quarter and one-third of all participants report having emotional or psychological difficulties, with current drug users and those with no drug history reporting similar rates (Table 14). Close to one-half of current heroin users (47%) and over one-third of all respondents with crack dominant drug histories score below 50 on the mental health scale, indicating clinically relevant symptoms of anxiety or depressive disorder. Heroin dominant current PDUs appear to have the most need for mental health services; their rates of mental health service utilization are consistently the lowest yet indicators of need for services is comparable or exceeding that of other groups. About half of all participants expressed a need for counseling on issues of sexuality, sexual intimacy, and sexual relationships and this did not differ substantially among the drug history groups. Among current users, only about one-half of those who report that counseling regarding sexuality is important are receiving any type of counseling.

Overall, past users of both heroin and crack are the most likely to report receiving mental health services in the six months prior to interview. Past drug users are much more likely than current users and participants with no drug history to receive these services. All participants
who use mental health services seem to use multiple sources of counseling -- psychiatrists or psychologists, case managers, and support groups -- with between half and three-quarters of the participants using these services. Participants with no problem drug history are slightly more likely to use a psychiatrist or psychologist, while those with a problem drug history rely more on support groups. This may reflect differences in insurance reimbursement policy since nonusers are generally better off economically, are more likely to be working and more likely to have private insurance.

Need for Social Services. Table 15 presents participants' reported needs for social service assistance in nine categories (housing, finances, legal problems, employment, home care, psychological difficulties, household items and clothing, transportation, and food and meals) by the drug history categories. The first thing to notice is the compelling need for social services among all persons living with HIV in New York City. However, need for services does appear to vary according to history of substance involvement. In several service areas, drug users, former and current, were less likely to seek help from an agency or paid provider. For example, those who reported emotional difficulties were less likely than individuals who no history of problem drug use to seek assistance from any social service agency or individual provider (counselor, therapist), drug users with legal problems were less likely to seek assistance compared to non users.

Overall, current drug users were more likely to have problems with housing and household items, as would be expected from our earlier investigation of economic and housing resources. A large proportion of participants reported problem with housing, with current users of both crack and heroin reporting this problem most often. Current users also had the lowest rates of resolution of their housing problems. Our separate investigation of individuals unconnected to services found that the combination of active substance use and unstable living arrangements was predictive of individuals who remain outside of the care system or who delay into care. Having a case manager has been shown to contribute to the resolution of service needs, with the biggest impact on individuals with scarce resources. Substance users, especially those who are currently using, are less likely to have a case manager. Remaining outside of care contributes to lack of resolution of multiple service needs (CHAIN Report #9).

Summary of Unmet Service Needs. In determining an "unmet service need," we considered that if a respondent reported that he or she had a problem in the six months prior to interview, and that the problem was still unresolved or little progress had been, there was a clear unmet need. Or, for drug treatment services, no treatment had been received during the six months prior to interview despite current problem use or self-reported need for treatment. As Table 16 shows, the highest rates of unmet need is the need for AOD treatment services: 39% of heroin dominant current users and 62% of active crack users.

The next most pressing unmet need among drug users is for housing and financial assistance. These problems exist with nearly as great a frequency, as the greatest unmet needs for
persons with no history of problem substance use. Substance users also have greater continuing need for clothing and household items, as well as for transportation, when compared to non drug using counterparts. These needs are, of course, not unrelated to the severe lack of economic resources among drug users in the sample.

6. WHAT ARE BARRIERS TO CARE EXPERIENCED BY HIV POSITIVE INDIVIDUALS WITH DIFFERENT HISTORIES OF DRUG INVOLVEMENT?

Measures

We attempted to gather information about what respondents themselves perceived were barriers to care. Respondents were asked if at any time in the last six months they delayed or did not get assistance in obtaining medical or social services as a result of each barrier listed in Table 17. We also asked respondents to describe in their own words their biggest barrier in getting either medical or social services they needed and the answers to these open-ended questions were coded for a subsample of 230 individuals.

Findings

Self-Reported Barriers to Care Participants seemed to have similar experience with barriers to both medical and social services regardless of their problem drug history. Transportation was the most frequently mentioned barrier to getting medical services regardless of the drug use history, followed by "nervous or afraid of what the doctor would say" for all but prior heroin users. A significant barrier to social services was not knowing where to go for help; this was among the most frequently mentioned barrier regarding social services and 11% - 17% of the sample mentioned this as an impediment to getting medical services as well. Individuals in the sample with a history of substance involvement differ from those with no problem drug use in the greater proportions who anticipate that staff at the office or clinic would not listen, would not understand their needs, would be disrespectful or insensitive to their needs, or simply incompetent to deal with their problems. For example, only 5-7% of those with no problem drug use gave these as barriers to their getting social services compared to 12%- 20% of individuals with a history of substance use. The only exception is among the heroin dominant who are not longer problem drug users; their answers on these questions resemble those who never used drugs.

Thus we can see that the substance users report practical impediments such as lacking transportation or not knowing where to go. They are equally or more likely to report what might be called perceived unresponsiveness to the individual’s needs: concerns that staff at clinics or agencies are disrespectful, not good at listening to problems, lack understanding, or are incompetent to deal with their problems. This interpretation is corroborated by review of the narrative descriptions of problems encountered when attempting to access services. Many
participants found what they perceived to be staff inadequacies, either through lack of respect, understanding, sensitivity, or listening skills, to be a problem.

7. WHAT IS THE RELATIVE EFFICACY OF DIFFERENT MODELS OF CARE FOR REDUCING SUBSTANCE RELATED PROBLEMS OR FACILITATING ENTRY INTO CARE?

The ability to answer the questions about different models of care for substance users must await the availability of over time data that will allow us to trace the development and resolution (or lack of resolution) of client needs as they encounter (or fail to encounter) different service interventions. However we can begin to explore some of the program characteristics which might significantly contribute to meeting priority service goals as established by the Alcohol and Other Drugs Work Group.

Measures

We can classify respondents based upon alcohol and/or drug services received and examine the relationship between different treatment experiences and three patient outcomes: timely entry into care, adequacy of primary medical care, reduction in drug use, reduction in unprotected sexual behavior. With the data at hand we can divide our respondents into 1) problem drug users who have never had any alcohol or drug treatment; 2) those who have had treatment some time previously but no treatment at all during the past six months; 3) those who are receiving peer led support services such as NA, CA or other support groups but no other type of treatment currently. Over 90% of respondents in this category have received formal treatment at some time so that their involvement with peer support groups could be seen as relapse prevention activities. 4) those who are currently receiving drug treatment from a professional provider (eg impatient, MMTP etc); and 5) those who are receiving drug treatment from an agency provider that has received a Ryan White contract for AOD treatment and counseling services. While we do not have detailed information as to the exact nature of a Ryan White supported program that any individual respondent may have encountered, our agency data base will allow us to distinguish providers from whom respondents have sought assistance who have and have not received Ryan White support. Our logic is that the provision of Ryan White funds indicates an agency that has responded to program priorities to engage unserved or underserved populations, facilitate entry into primary medical care, and provide harm reduction reduction services, broadly understood, even though the specific program cannot be distinguished as such.

We will use the following outcome measures:

1. "Delayed entry into medical care" - time between HIV diagnosis and first seeing a medical provider about HIV is more than 3 months.
2. "No single primary care provider" - respondent says that no single doctor or medical provider is in charge of his/her overall health condition, a measure of inadequacy of primary care.
3. "Current drug use" - respondent reports heroin, cocaine/crack, or problem alcohol use during
the six months prior to interview.

4. "Unprotected sex" - respondent reports having unprotected sex with someone who is HIV negative or status unknown during the six months prior to interview.

We restrict our analysis to a target population of respondents who have used either heroin or crack/cocaine weekly or more often (n=351). In addition, we will and we will run separate analyses focusing only on black and Latino respondents who are also heavy drug users, drug users who have had a history of unstable living arrangements the past year, and drug users who had no regular source of medical care prior to diagnosis. Having no regular source of medical care prior to HIV diagnosis is an indicator of a person's longer history of being outside of the medical care system and one of the strongest predictors of delay in accessing HIV services. If treatment modalities are to meet Ryan White goals, we should see impacts especially on looking for impacts on the more marginal and traditionally most underserved populations.

Findings

As Table 18 shows, there are several outcomes associated with different treatment experiences. The most consistent differences are regarding current drug use and lack of a single medical care provider. Not surprisingly, the worst outcomes are among those who have never received any drug treatment. At least half are currently using drugs and about 40% do not have a single medical provider; current drug use and inadequate primary care are even more likely among nonwhites, respondents, those who had no source of medical care prior to diagnosis, and who are unstably housed. In general, the best outcomes were found among respondents who were in self help groups during the six months prior to interview, especially with regard to reduced rates of current substance involvement. Respondents who have encountered an agency with Ryan White funding compare favorably, especially to those who received treatment from professional providers who did not have Ryan White programs. Rates of continued substance use are lower. While results are not statistically significant, the clear trend is that respondents receiving services at Ryan White agencies are more likely to enter into care in a timely fashion and less likely to engage in unprotected sex. Figure 1 presents in graphic form the different rates of inadequate primary medical care, problem drug use, and unprotected sex among substance users who have been exposed to different treatment experiences.

These positive outcomes associated with continued self-help involvement and/or services from a Ryan White agency hold for the more marginalized and traditionally underserved respondents among drug users in our sample. For example, among those with no regular source of medical care prior to diagnosis, 79% who have never been in treatment continue active substance use compared to 33% who have received services from a Ryan White provider, and 61% who received treatment from a non-Ryan White professional provider. More than half (53%) of those who have not been in drug treatment report that there is no single medical provider managing their HIV condition, compared to 40% of individuals receiving services from an agency with no Ryan White contact, and 18% of those who benefited from a Ryan White
program for substance users.

In subsequent reports we will further explore the avenues for evaluation of different models of care suggested by this preliminary analysis.

D. SUMMARY AND CONCLUSIONS

Drug use is widespread among persons living with HIV/AIDS in New York City. Almost 90% of all respondents have used one or more illicit drug in their lifetime, more than three-fourths are multiple drug users, and two-thirds of the sample have used at least one drug on a daily basis at some time in their lives. A wide range of substances has been used by respondents but cocaine/crack and heroin are the clearly the drugs of choice with 43% ever using heroin and 74% using cocaine or crack. Rates of current substance use are considerably lower than lifetime rates. Nonetheless, if we consider either problem drinking or current use of cocaine/crack or heroin as an indicator of ongoing problem substance use, we find that 31% of the sample are currently problem drug users.

Drug use behaviors vary by sociodemographic characteristics. There are consistent differences by race/ethnicity. Almost all white respondents have used drugs but for at least a subset, their drug histories appear to be less involved. African American and Latino respondents are more likely to have used cocaine/crack and heroin and to be using drugs currently. Blacks are more likely to be using crack/cocaine currently while Latinos have the highest rates of current heroin use.

Drug use also differs by participant’s sexual history. Women who have sex with women (WSW) are among the most drug involved of any subgroup of persons living with HIV/AIDS. Over 90% have used crack/cocaine and 75% are using currently; 59% have used heroin with 50% using currently. They also have the highest rates of problem alcohol use. Most women in our sample who report same sex experiences do not identify as lesbian but rather as bisexual or heterosexual. Little existing research exists on the broader reasons for elevated rates of substance involvement among women who have sex with women although the pattern has been noted in other studies (Bradford et al. 1994). It is clear that WSW who are also HIV positive and active substance users have special service needs that may not be currently addressed by the existing service system.

Individuals who are HIV positive and outside of or marginal to the service delivery system are more often than not active substance users. Three-fourths of our sample who are not in care are currently using cocaine/crack and/or heroin. They have significantly higher rates of current heroin use, current crack/cocaine use, and problem drinking than those in the agency sample. They report the highest rates of injecting behavior, including needle sharing. There is a continued need to support and expand outreach efforts, especially high intensity efforts, that attempt to engage such populations with HIV-related services.
Substance users who are also HIV positive can be classified into heroin dominant or crack/cocaine dominant based upon level of involvement with each substance and current use pattern. Very few respondents maintained sustained use of any other drug without also using either cocaine/crack or heroin. This holds for problem drinking as well. Rates of problem alcohol use are relatively low (12% of the entire sample) and among these, 90% are also users of cocaine or heroin.

Persons living with HIV/AIDS in New York City are largely an impoverished group. Substance users are the most impoverished of all. The median individual income for heroin dominant respondents who are still actively using is $5,822 per year (i.e. half of heroin dominant current users is have even less than this inadequate amount). In stark contrast, the US average household income is currently $32,264 (Census Bureau, 1994). Current problem drug users are poorer than past problem drug users, who are in turn poorer than participants who have no history of problem drug use. For several economic indicators and health indicators, individuals with a history of heroin or crack/cocaine but who are not currently using drugs compare favorably with those who have never had a period of heavy drug use.

Drug users interviewed reported high rates of sexual risk behaviors. A significant proportion of substance users have had multiple sexual partners, however patterns by history of substance involvement. In general, both past and current users among heroin dominant respondents have had relatively high rates of multiple heterosexual partners whereas only current users among the crack/cocaine dominant tend to have multiple heterosexual partners. Cocaine/crack dominant users are more likely to have multiple MSM partners as well as opposite sex partners. Relatively high proportions of all categories of drug user report that they have had sex with a known IDU. About one-quarter of current problem substance users regardless of drug of choice have exchanged sex for money or drugs. Rates of unprotected sex with an HIV negative or status unknown partner during the six months prior to interview average about 20% across all user groups. Needle risk behaviors are relatively low in the sample - only 1% report sharing needles within the last six months. Sexual risk appears to be a much greater threat in terms of behaviors that expose other persons to HIV infection or drug users to reinfection. Harm reduction programs to address high risk sexual behaviors are imperative. The majority of substance users interviewed stated that receiving counseling regarding sexual behavior and sexual relationships is important to them. However less than half of current users are receiving such counselling.

Substance use affects entry into HIV medical care and health service utilization. The earlier report (CHAIN Report #9) as well as the present investigation found that substance users are more likely than non users to delay entry into care or to remain outside of the HIV services system altogether. About 80% of those with no history of problem drug use entered care within three months of learning their serostatus, compared to 58% of heroin dominant drug users who are currently active, and 63% of crack/cocaine current users. Over 20% of substance users delayed one year or more before entering into care. Fourteen percent of heroin dominant
current users have never seen a physician for HIV. The needs of the unconnected/delayers are particularly salient, both from the perspective of early HIV intervention and from that of secondary prevention -- especially since high rates of sexual risk behavior and injecting drug use will only accelerate the present course of the epidemic among drug users and their sexual partners. As therapeutic regimens are developed, particularly the antiretroviral therapies and protease inhibitors whose promise is often evident at the earlier stages of the illness, it is ever more critical to develop multiple avenues for allowing substance users to find easier and more timely ways into care.

There are some differences in service utilization and quality of medical care among individuals with different substance use histories. Especially active users are less likely to have received recommended HIV related diagnostic or therapeutic treatments. However, at this point in the research it is difficult to determine if the quality of care received by substance users is less or whether the differential rates reflect that current users are more likely to remain outside of care altogether. Using a multiple indicator of good of primary care (having one provider in charge of their overall health care, a place to go for routine medical care, a provider to go to for advice, and a health provider available to them at anytime of day) only about half of active drug users have good primary care compared to two-thirds of respondents with no history of substance use. Women's health services appear to be adequate for former but not active substance users.

About one-fourth to one-third of respondents in all categories report receiving alcohol treatment at some point in their lives. Heroin dominant users were much more likely than cocaine/crack dominants to have ever received drug treatment; 80% of heroin users have been in treatment at some time in their drug using career. Among the crack dominant users who are no longer using any drugs, only about half report ever having had drug treatment, indicating that a substantial proportion of users ceased drug use without the benefit of formal treatment intervention. Heroin users are more likely to report receiving drug treatment in the six months prior to interview than were crack dominant users. Peer led, self-help groups, many of which would come under the classification of "recovery readiness" or "relapse prevention" were attended by more than half of those who received any treatment at all during the prior six months.

There is considerable need for substance abuse treatment and desire for treatment among the substance users we interviewed. We used four indicators to determine the extent to which drug treatment services were needed among study participants: a respondent reported current drug use, or he or she reported a problem with alcohol or drugs during the 30 days prior to interview, or reported that treatment was important to him/her, or reported dissatisfaction with their current treatment program. Not surprisingly, current users of both crack and heroin were much more likely to have experienced alcohol or drug related problems in the month prior to interview and to state that drug treatment is important to them, although many former users report that continuing treatment is necessary. A sizeable proportion of persons who report drug related problems or who want drug treatment are not currently receiving any alcohol or drug treatment
services. Considering the four indicators jointly (i.e., counting all current users and those unsatisfied with treatment as well as respondents reporting drug problems and/or need for treatment) we begin to get a picture of the tremendous unmet need for drug treatment services among HIV positive persons living in New York City. Almost 40% of heroin dominant current users and over 60% of cocaine/crack dominant current users are in need of treatment services but not receiving any treatment at all.

Substance users experience a compelling need for social services beyond treatment for problem substance use. However, need for services does appear to vary according to history of substance involvement. In several service areas, drug users, former and current, were less likely to seek help from an agency or paid provider. Overall, most pressing unmet need among drug users is for housing and financial assistance, as would be expected from our earlier investigation of economic and housing resources. Current users also had the lowest rates of resolution of their housing problems. Having a case manager has been shown to contribute to the resolution of service needs, with the biggest impact on low income clients. Substance users, especially those who are currently using, are less likely to have a case manager, which contributes to a lack of resolution of multiple service needs. This points to continued need especially for "low threshold" programs that can offer enhanced case management services targeted to substance abusers.

The lack of case management services is one barrier to accessing services by substance users. We also asked respondents directly what they perceived as barriers to their getting the services they needed, including drug treatment services. Clients report a number of practical impediments such as lacking transportation or not knowing where to go. However, they are equally or more likely to report what might be called perceived unresponsiveness to the individual’s needs: concerns that staff at clinics or agencies are disrespectful, not good at listening to people, lack understanding, or are incompetent to deal with their problems. This interpretation is corroborated by review of the narrative descriptions of problems encountered when attempting to access services. Many participants found what they perceived to be staff inadequacies, either through lack of respect, understanding, sensitivity, or listening skills, to be a problem for them. In some instances, individuals have had specific experiences with "rude and uncaring" providers. More often it appears to be an anticipation that providers will not be welcoming to persons "like us" - i.e. drug user, homeless, poor, etc.

These findings point to a need to educate HIV providers as to the particular needs of individuals who are dealing with both substance use problems and HIV/AIDS and to sensitize them to perceived barriers (unwelcomeness, bureaucratic rules) that often dissuade individuals from pursuing services. At the same time, HIV positive substance users need to be better educated about the benefits of accessing services, especially the benefits of early medical intervention. The models of care developed by the Alcohol and Other Substance Work Group emphasize the need for a harm reduction perspective and programs to engage unserved or underserved populations, and facilitate entry into primary medical care. An initial exploration of
the differential impact of different treatment modalities for individuals in our sample offered some suggestive findings that such an approach to a continuum of care will serve to reduce barriers to care previously encountered.

**Literature Cited**


Steward AL, Hayes RD, Ware JE. The MOS Short-Form General Health Survey: Reliability and validity in a patient population. Medical Care 26: 724-730.

Appendix