

Substance Use and HIV Risk Among People With Severe Mental Illness

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People with severe mental illness are often overlooked in the acquired immunodeficiency syndrome (AIDS) epidemic. For a long time it was assumed that those with schizophrenia, the most common diagnosis in public treatment settings, were too disorganized or withdrawn to engage in the drug use and sexual behaviors related to human immunodeficiency virus (HIV) exposure (Carmen and Brady 1990). The extent of these risk behaviors was unknown and uninvestigated. Unfortunately, this inattention may have facilitated the spread of HIV infection among people with the most severe psychiatric disorders.

This chapter reviews the literature on the role of substance use in HIV risk among people treated in public mental health settings who have recurrent or persistent psychotic illness and significant functional impairments. Most of these people have had multiple psychiatric admissions and courses of psychotropic medications. The majority are unemployed and rely on social welfare benefits. Some are homeless. They typically fit poorly into existing health care and substance abuse treatment programs—they receive inferior medical care, have higher morbidity and mortality, and are unwelcome in traditional treatment programs (Gelberg and Linn 1984; Kroll et al. 1986).

THE EMERGENCE OF THE AIDS EPIDEMIC IN THE PSYCHIATRIC POPULATION

In 1983, a 25-year-old woman hospitalized at a state psychiatric center in Brooklyn, New York developed a low white blood cell count. It was assumed to be caused by the antipsychotic medication she was taking, which was immediately stopped. However, her blood count did not improve. Ten months later she developed pneumonia and was transferred to a general hospital. There was no HIV antibody test at the time, but the organism causing her pneumonia was *pneumocystis carinii*, and a diagnosis of AIDS was made. This woman was one of the first of a series of patients who would make it clear that AIDS could have a significant impact on the psychiatric population.

This was a shock to psychiatric institutions. Clinicians and hospital administrators of the time thought of AIDS as a disease of men who either had sex with other men or injected drugs. In 1983, there were only 143 newly diagnosed cases of AIDS among women in the entire country, and one of them was at a public psychiatric hospital in New York City. In fact, the majority of early cases reported in the psychiatric literature were women (Cournos et al. 1990; Gewirtz et al. 1988; Horwath et al. 1989). Well into the second decade of the AIDS epidemic, such case reports were the only information in the peer-reviewed literature about HIV infection among psychiatric patients. To what extent these cases were typical or represented an accurate picture of the epidemic in this population was unknown.

THE PREVALENCE OF HIV INFECTION AMONG ADULTS WITH SEVERE MENTAL ILLNESS

The first published study of the prevalence of HIV infection among a psychiatric population appeared in 1991 (Cournos et al. 1991*a*). There are now 11 studies in the peer-reviewed psychiatric literature on the rates of HIV infection among psychiatric patients in treatment in the United States, 10 conducted in New York City and 1 in Baltimore. Rates of infection range from 4.0 to 22.9 percent (Cournos et al. 1991*a*; Empfield et al. 1993; Lee et al. 1992; Meyer et al. 1993; Sacks et al. 1992*a*; Silberstein et al. 1994; Volavka et al. 1991).

One small study conducted outside a hospital setting found that 19.4 percent of mentally ill men attending a day program in a large homeless shelter had a positive antibody test noted in their records (Susser et al. 1993).

Unfortunately, little peer-reviewed research examines seroprevalence among a defined psychiatric population in the United States outside New York City. Anecdotal reports suggest elevated rates of infection in comparison to the general population in other geographic areas (personal communications). Although some psychiatric hospitals have conducted seroprevalence studies without external funding, results have not appeared in scientific journals, possibly because of flawed methods of data collection.

Table 1 summarizes the seroprevalence literature and shows the methodology (anonymous or open), number of subjects, type of psychiatric setting, and percent infected.

TABLE 1. *Methodology, number tested, type of treatment setting, and percent infected in published HIV seroprevalence studies among people with severe mental illness in the United States.*

Study	Method	N	Site	% HIV+
Cournos et al. 1991a	Anonymous	451	Public hospital, consecutive admissions	5.5
Volavka et al. 1991	Anonymous and open	515	Public hospital, consecutive admissions	8.9
Sacks et al. 1992b	Anonymous	350	Private hospital, new admissions	7.1
Lee et al. 1992	Anonymous	135	Not-for-profit hospital, consecutive admissions	16.3
Empfield et al. 1993	Anonymous	203	Public hospital, homeless psychiatric inpatients	6.4
Meyer et al. 1993	Anonymous	87	Public hospital, homeless psychiatric inpatients	5.8
Susser et al. 1993	Open	62	Homeless shelter, psychiatric service	19.4
Meyer et al. 1993	Anonymous	199	Public hospital, longstay inpatients	4.0
Cournos et al. 1994b	Anonymous	971	Public hospital, acute-care, long stay, and homeless inpatients	5.2
Silberstein et al. 1994	Open	118	Public hospital, consecutive dual- diagnosis admissions	22.9
Stewart et al. 1994	Anonymous	533	Public hospital, new outpatient or inpatient admissions	5.8

Methodological Issues in Estimating Prevalence

Estimating how many people with severe mental illness are infected with HIV requires identifying a group to study, learning their demographic and risk characteristics, and obtaining blood samples to test. Differences in the HIV infection rates obtained in seroprevalence studies may be due to differences in sampling and methodology.

Sampling. To map the distribution of HIV and the factors that influence it in the psychiatric population, a representative sample is required. The published seroprevalence studies are all limited by the selection of populations in treatment in hospital settings, who represent only some of those with severe psychiatric disorders. In addition, all were conducted in New York City, where AIDS case rates

are higher than in other parts of the United States. In these studies, sampling was carried out over varying timeframes, ranging from 3 (Meyer et al. 1993) to 18 months (Empfield et al. 1993). Changes in rates among subgroups of patients have not been reported and information on the number of new cases (incidence) of HIV infection occurring in the population has not appeared.

Method. Anonymous serosurveys have been described in detail elsewhere (Cournos et al. 1991*a*). Such surveys have several advantages over studies in which patients consent to testing. They capture a larger and more representative proportion of the population under investigation because they sample all patients, not specifically those selected either because they request testing, are urged to have it because of a history of HIV-related risk behaviors, or are capable of giving informed consent. Larger sample sizes increase the statistical power to assess relationships between independent and dependent variables. In addition, infected patients are not individually identified, so there is little direct impact on staff and patients. Anonymous testing does not interfere with clinical judgments about the risks and benefits of testing, and pre- and posttest counseling can be tailored to individual patients. This method is best suited to hospital settings in which large patient pools permit anonymous blood collection.

By comparison, the major advantage of the open testing method, which is contingent on patient capacity to give informed consent, is the possibility of conducting structured diagnostic and risk assessment interviews to obtain detailed and reliable information that can be linked to HIV status. Open testing can be carried out in any setting.

In summary, the number of studies attempting to estimate HIV infection among people with severe mental illness is small. All were conducted in New York City and limited in the type and reliability of information obtained and by the selection of hospitalized people. Nevertheless, they represent the state of the art, and must be used as a basis for further research.

Comparing Rates of HIV Infection Among Psychiatric Patients and Other Groups Studied in New York City

Examining the variations in HIV seroprevalence among psychiatric patients in New York City, it is clear that the lower end of the range of seroprevalence estimates are from research conducted in areas of the city with relatively low AIDS case rates and on psychiatric units that exclude from admission those with primary substance abuse

diagnoses. At the high end are studies that have sampled high case rate areas such as the South Bronx and psychiatric units that accept patients with substance use diagnoses.

Rates of infection among psychiatric patients do not simply mirror those among other groups studied in the region. Sampling other populations between 1988 and 1991, the New York City Department of Health found rates of infection of 1.3 percent among women delivering babies, 1.6 percent at abortion clinics, and 1.4 to 2.7 percent at two sentinel hospitals (New York City Department of Health 1990). A study of mentally retarded adults found no HIV-infected individual (Pincus et al. 1990), but among groups considered to be at elevated risk for HIV infection, considerably higher rates were reported. Patients at New York City sexually transmitted disease clinics were found to have an 8.8 percent infection rate in 1990 (Weisfuse et al. 1989).

The relationship between HIV seropositivity and age or ethnicity appears comparable among people with severe mental illness and other groups examined in the epidemic. No clear association between HIV infection and age was found (Empfield et al. 1993; Silberstein et al. 1994), but patients belonging to ethnic minorities had significantly higher rates than caucasians (Cournos et al. 1991*a*, 1994*b*; Silberstein et al. 1994).

One of the distinctive features of the seroprevalence studies among psychiatric patients was that those examining gender differences found that women were as likely as men to be infected. Among men, between 3.8 and 24.0 percent were HIV positive (Cournos et al. 1991*a*; Empfield et al. 1993; Meyer et al. 1993; Silberstein et al. 1994; Volavka et al. 1991). Rates of HIV infection among women varied from 5.3 to 20.0 percent (Cournos et al. 1991*a*; Empfield et al. 1993; Meyer et al. 1993; Silberstein et al. 1994; Volavka et al. 1991). In the general population in New York City, HIV seroprevalence among men remains markedly higher than among women (New York State Department of Health 1992).

The large proportion of infected women in the psychiatric population reflects a pattern of infection that suggests a link to drug use by injection. Among women with AIDS in New York City, drug injection is a more prominent risk behavior than sex with men at risk (New York State Department of Health 1992).

Rates of HIV infection among people with severe mental illness are relatively low compared to those among injection drug users in New York City, for whom HIV infection has been estimated to range between 29.6 and 44 percent (New York State Department of Health 1992). Nevertheless, the implications of current HIV seroprevalence data for the public mental health system and for patients within that system are very disturbing.

Detection of HIV Infection in Psychiatric Settings

Few psychiatric patients are HIV symptomatic. Comparing anonymous results to infection control records within the same facility reveals that a large proportion are admitted and discharged with their HIV infection undetected (Cournos et al. 1991*a*; Mahler et al. 1994; Sacks et al. 1992*b*). Early in the epidemic there were many disincentives to learning that patients were HIV infected, including housing discrimination and other forms of stigmatization and the stress and anxiety attendant upon learning one is HIV positive. These concerns are now balanced by the important medical and public health benefits of early diagnosis.

In the absence of HIV-related symptoms, detection depends largely on the facility's motivation and resources. On public and private acute admissions units with high physician-to-patient ratios, about one-third of cases went undetected (Cournos et al. 1991*a*; Sacks et al. 1992*b*). The vast majority of cases at a large state hospital and an alcohol rehabilitation unit left undiagnosed (Cournos et al. 1991*a*; Mahler et al. 1994).

Detection of asymptomatic HIV infection is difficult without knowing an individual's risk history. A risk factor is any factor that increases the likelihood of a person developing a disorder. Although people with severe psychiatric disorders have elevated rates of infection, mental illness may not directly increase an individual's chances of acquiring HIV; rather, it appears likely that mental illness mediates the tendency to engage in risk behaviors. Certainly many other factors mediate risk behavior as well.

THE SOCIAL CONTEXT OF HIV INFECTION AMONG THOSE WITH SEVERE MENTAL ILLNESS

Every risk behavior occurs in a context. For people with serious psychiatric disorders, the social conditions under which they live exert influences that are just beginning to be studied systematically.

Severe mental illness can interfere with the normal life tasks of work, intimacy, and the creation of social networks. It is associated with institutionalization, homelessness, and poverty. These factors have been linked to HIV risk-related behavior (Cournos et al. 1991*b*).

THE RELATIONSHIP BETWEEN PSYCHIATRIC ILLNESS AND HIV RISK

How much of HIV risk activity is related to having a psychiatric illness? Little research has adequately addressed this question. One study of outpatients reported that those with personality disorder diagnoses may be at higher risk than those with Axis I syndromes alone (Kalichman et al. 1994). A large study among state psychiatric hospital patients found that women with bipolar disorder were particularly likely to report sex with drug injectors or partners with AIDS (Volavka et al. 1991). However, another study among both inpatients and outpatients showed no association between psychiatric diagnosis and injection drug use or sexual activity (Cournos et al. 1993).

The scarcity of evidence on the connection between specific psychiatric diagnoses or symptoms and HIV risk behavior is a major obstacle to targeted risk assessment. Until more research is conducted using standardized diagnostic and behavioral instruments, people with severe mental illness will continue to be treated as an undifferentiated population with indistinguishable needs. In the meantime, it is important to track both drug use and sexual risk behaviors in this population because they often co-occur.

The Prevalence of Substance Abuse Among People With Serious Psychiatric Disorders

Many studies of comorbidity show that people with alcohol and drug use disorders have high rates of personality disorder, depression, and, to a lesser extent, anxiety disorders. Whereas only a small number of substance users suffer from severe psychotic disorders, a sizable proportion of people with severe psychotic disorders appear to have comorbid substance abuse disorders.

Comorbid abuse of specific substances and methodological problems in assessing substance abuse in this population have been detailed elsewhere (Galanter et al. 1988; Mueser et al. 1990). Typical limitations are lack of diagnostic rigor, inadequate sample size, and failure to simultaneously assess the multiple substances abused.

Those studies examining the prevalence of any substance abuse disorder since AIDS first appeared show that between 25 and 75 percent of psychiatric patients meet lifetime criteria for alcohol abuse (Drake and Wallach 1989; Safer 1987). The Epidemiologic Catchment Area study found substance use disorders among 47 percent of people with schizophrenia and 61 percent of those with bipolar disorder (Helzer 1988). These high rates of comorbidity put people with severe mental illness at risk for HIV from drug-related behaviors.

Injecting drugs is the most direct drug use risk activity, but there has been very little investigation of this practice among people with severe mental illness. Only recently have a few studies begun to appear. These reveal recent injection among 1 to 8 percent of patients (Hanson et al. 1992; Horwath et al. 1996; Sacks et al. 1990*a*, 1990*b*) and a history of injection among 5 to 20 percent (Cournos et al. 1993; Hanson et al. 1992; Horwath et al. 1996; McDermott et al. 1994; Sacks et al. 1990*a*, 1990*b*). Table 2 shows known injection drug use rates in this population and the timeframes studied.

TABLE 2. *Studies of injection drug use risk behavior among people with severe mental illness.*

Study/State	Method/time frame	N	Site/sample	Prevalence of risk behaviors	
Sacks et al. 1990a, New York	Survey of therapists re current risk history of patients admitted over 4-mo. period	205	Private acute care psychiatric unit	•Intravenous drug users=6.3%	Intravenous
Sacks et al. 1990b, New York	Consecutive acute admissions; self-report questionnaire of risk for 5 previous years	113	Private acute care psychiatric unit	•Reported IV drug use = 5% •Shared needles or drug paraphernalia=5%	Reported IV Shared needles
Hanson et al. 1992, New York	Interview; risk behavior of past year	50	Dually diagnosed adults in hospital-based day treatment	•History of substance abuse: alcohol, cocaine, marijuana were used infrequently = 98% •Lifetime opiate abuse = 32% •Reported IV drug use in past year = 8% •Shared needles in past year = 4% •Injected cocaine in past 3 mos. = 2%	History of Lifetime o Reported I Shared needles Injected cocaine

TABLE 2. *Studies of injection drug use risk behavior among people with severe mental illness (continued).*

Study/State	Method/time frame	N	Site/sample	Prevalence of risk behaviors
Cournos et al. 1993, New York	Structured face-to-face interview using instrument w/ demonstrated reliability/previous 6 mos.	95	Chronic adult inpatients and outpatients	<ul style="list-style-type: none"> • Drug injections since 1978: men = 22%; women = 17% • Drug injections past 6 mos. = 1.1%
Kalichman et al. 1994, Wisconsin	Individual structured interviews	97	Outpatients	<ul style="list-style-type: none"> • Ever injected drugs: men = 6%; women = 2%
McDermott et al. 1994, Los Angeles	Structured interview of sexual risk behavior	61	Public general hospital psychiatric inpatients compared w/ nonpsychiatric controls	<ul style="list-style-type: none"> • Reported drug injection past 5 years: psychiatric = 15%; control = 3% • Diagnostic groups reporting IDU: Depressive disorder schizophrenia/controls
Horwath et al. 1996, New York	SCID diagnosis and parental drug use interview since 1978	192	Chronic adult inpatients and outpatients	<ul style="list-style-type: none"> • Lifetime substance abuse or dependence: alcohol = 43% • Cannabis = 33%; cocaine = 26%; any drug = 60% • Reported drug injection since 1978 = 20% • Reported drug injection past 6 mos. = 1% • Drug sniffing as predictor of injection = 32%

Only one interview study (Horwath et al. 1996), conducted in New York City, specifically ascertained drug injection since 1978, the year HIV began to spread in the U.S. population in general (Conant 1984) and among drug injectors in New York City (Novick et al. 1986). These investigators examined the pattern of drug use among inpatients and outpatients at two state-funded psychiatric hospitals, using the Structured Clinical Interview (SCID) for *Diagnostic and Statistical Manual of Mental Disorders*, 3rd. ed. rev. (DSM-III-R) to establish axis I and II diagnoses (Spitzer et al. 1989) and a parenteral drug use questionnaire (Williams et al. 1989).

Because the state hospital system in New York screens out patients believed to have primary alcohol or substance abuse or dependence, only 12 percent of patients met current diagnostic criteria for such a disorder. However, even with such a screen, 60 percent of patients met lifetime criteria for a diagnosis of alcohol or substance abuse or dependence (Horwath et al. 1996).

In addition, 20 percent of patients had injected drugs since 1978 (Cournos et al. 1993; Horwath et al. 1996). This was an unanticipated finding. Because so few people with mental illness are currently injecting, the extent of the previous history of this behavior has been overlooked. However, 70 percent of people who previously injected may resume this practice (van Ameijden et al. 1994).

Although the literature reveals virtually nothing about when, why, and under what circumstances this population injects drugs, one noteworthy report indicates that 32 percent of psychiatric inpatients and outpatients reported intranasal drug use, and the likelihood of also being an injector increased fourfold among those reporting this behavior compared to those who do not (Horwath et al. 1996).

The importance of drug injection in the transmission of HIV infection is illustrated by a small study of 42 known HIV-positive people hospitalized in a state psychiatric center in New York City. Here, injection drug use emerges as a very prominent risk behavior. Seventy-one percent of men and 56 percent of women had engaged in this practice (Meyer et al. 1995).

The relative contributions of injection drug use and sexual activity to HIV infection in this population are not yet known. One study that ascertained risk behaviors from patients' charts found that injection drug use and homosexual activity contributed about equally to the risk of HIV among mentally ill men. In addition, injection drug use

was the most powerful vector of transmission for women with serious psychiatric illnesses (Cournos et al. 1991a).

The Interaction of Substance Use and Sexual Risk Behaviors in the Psychiatric Population

For a long time, many clinicians assumed that people with severe mental illness were sexually inactive. There was little reason to think otherwise, since mental health professionals tended to believe that talking to psychotic people about sex would be distressing. They were right. It was distressing—but to the staff rather than the patients. In fact, psychiatric patients report enjoying talking about sex. In one interview study, patients reported feeling relieved not to have to talk about their psychiatric symptoms all the time and to be asked about a normal aspect of life (McKinnon et al. 1993). These researchers found that when staff are able to overcome their anxieties, the majority of patients are able to comfortably give reliable sexual histories.

A dozen studies have appeared that examine sexual risk behavior in the psychiatric population (Cournos et al. 1991b, 1994a; Hanson et al. 1992; Kelly et al. 1992; McDermott et al. 1994; Sacks et al. 1990a, 1990b; Stevenson et al. 1993). Across these, at least half of the patients who were asked about recent sexual activity with a partner, which occurred during the past 6 to 12 months, reported being active (Cournos et al. 1993, 1994a; Hanson et al. 1992; Kalichman et al. 1994; Kelly et al. 1992; McDermott et al. 1994; Stevenson et al. 1993). Although this demonstrates that a significant proportion of people have a recent history of abstinence, those not currently sexually active may nevertheless have engaged in sexual risk behaviors in the past.

Those patients who do report recent sexual activity have engaged in multiple risk behaviors. Between 19 and 62 percent of the people who were sexually active had had more than one partner in the past 6 to 12 months (Cournos et al. 1993, 1994a; Hanson et al. 1992; Kelly et al. 1992; Kalichman et al. 1994; Sacks et al. 1990a). The majority of sexual episodes involved heterosexual vaginal or anal intercourse.

When asked about their sexual orientation, the men who were interviewed in these studies almost all identified themselves as heterosexual (Cournos et al. 1993, 1994a; Kelly et al. 1992). Yet, 2 to 10 percent had had recent homosexual activity (Cournos et al.

1993, 1994a; Kelly et al. 1992; Stevenson et al. 1993; Susser and Valencia 1993), and about 1 in 5 reported lifetime homosexual behavior (Cournos et al. 1993, 1994a). This suggests that a substantial minority of mentally ill men engage in this behavior intermittently and that an accurate risk history cannot be obtained by asking patients about their sexual orientation. In addition, high rates of intermittent homosexual behavior among men may occur at times when they are living in all-male settings such as psychiatric wards, shelters, or prisons where condoms are typically not available on demand.

One confirmation of the importance of homosexual activity as a prominent vector for HIV transmission among psychiatric patients is a small study of 24 men hospitalized at a state psychiatric center who were known to be HIV infected. Of these, 42 percent had a history of homosexual activity (Meyer et al., in press).

Overall, condom use during intercourse is infrequent. Only 8 to 25 percent of patients surveyed reported using condoms consistently (Cournos et al. 1993, 1994a; Susser and Valencia 1993). Between 12 and 39 percent of sexual episodes were protected (Cournos et al. 1993).

In general, there is a well-known association between unsafe sexual activity and alcohol or drug use. Only a few studies have examined the co-occurrence of these behaviors among people with severe psychiatric disorders. These studies are summarized in table 3.

Patients with both psychiatric and substance abuse diagnoses have sexual contacts with other drug users (Hanson et al. 1992). Even patients without a comorbid alcohol or drug abuse disorder have sexual partners who are actively using drugs, including injected drugs. Between 8 and 12 percent of patients report sex with a partner who is an injection drug user (Cournos et al. 1994a; Kalichman et al. 1994).

Trading sex may occur because most people with severe mental illness are indigent. If they are in an institutional setting, they have minimal spending money. If they are living in the community, they usually receive entitlement benefits that keep them well below the Federal definition of poverty. Sex is a commodity that can be exchanged for money, drugs, a place to stay, and cigarettes. Research shows that between 12 and 69 percent of psychiatric inpatients and outpatients with recent sexual activity report exchanging sex in this manner (Cournos et

TABLE 3. *Studies of co-occurring sexual and drug use risk behavior among people with severe mental illness.*

Study/State	Method	Total N	Sexually active N	Site/sample	Prevalence of risk behaviors
Cournos et al. 1991b, New York	Structured face-to-face interview for sexual and drug use behaviors; previous 6 mos.	160	88	Adult inpatients and outpatients	<ul style="list-style-type: none"> • Frequent drug use during sex: alcohol, marijuana, crack/cocaine
Hanson et al. 1992, New York	Interview; risk behavior of past year	50	"most"	Dually diagnosed adults in hospital-based day treatment	<ul style="list-style-type: none"> • •
Susser and Valencia 1993, New York	Standardized interviews on sexual and drug use risk	89	44 (28 w/ women only; 6 w/ men only; 10 w/ both)	Homeless shelter for men	<ul style="list-style-type: none"> • •
Cournos et al. 1994a, New York	SCID diagnosis and structured face-to-face interview for sexual behaviors using instrument w/ demonstrated reliability; previous 6 mos.	95	42	Adult inpatients and outpatients w/ diagnosis of schizophrenia	<ul style="list-style-type: none"> • • •
Kalichman et al. 1994, Wisconsin	Structured interview	61	51 in past year	Psychiatric outpatients	<ul style="list-style-type: none"> • • •

al. 1991b, 1994a,b; Hanson et al. 1992; Susser and Valencia 1993; Kalichman et al. 1994).

Consistent with this practice are the findings of two studies conducted in the Midwest that examine the details of recent sexual encounters among mentally ill outpatients. Prevalent behaviors included sex with unfamiliar or transient partners, often met in bars, clinics, or on the street, and sometimes involving coercion (Kalichman et al. 1994; Kelly et al. 1992). Although these findings are suggestive, the

interaction between unsafe sex and drug use has not been specifically investigated among people with severe mental illness.

RESEARCH NEEDS

It is difficult to know whether people with severe mental illness engage in more types of HIV risk behaviors or do so more frequently than others. Very few data exist on the prevalence of these behaviors in the general population. A recent study on sex in America (Gagnon et al. 1994) showed that most people choose sexual partners who resemble them in race, religion, age, socioeconomic level, and education so that once AIDS enters a population, it tends to remain concentrated there. This finding is relevant to psychiatric inpatients and outpatients because HIV is already prevalent among them.

The cumulative evidence from the literature on HIV risk in this population indicates that a large proportion of people with recurrent or persistent psychotic illness will at some point meet criteria for alcohol or drug abuse or dependence. Risk of HIV infection increases both by unsafe sexual activity and drug injection. It is not yet clear to what extent noninjectable drug use contributes to HIV risk through sexual disinhibition or sex trading. Much more research in this area must be undertaken to understand the impact on HIV risk of substance use and abuse or dependence on those with psychotic illness.

AIDS is a preventable disease. In fact, psychiatric inpatients and outpatients are quite knowledgeable about AIDS, and are capable of learning the facts about how HIV is spread and the importance of prevention efforts (Herman et al. 1994). Prevention efforts must simultaneously address primary psychiatric disorders, sexual risk behaviors, drug use risk behaviors, and the difficult social conditions patients must deal with. Taking appropriate risk behavior histories from people in treatment is an important first step in preventing the spread of HIV among psychiatric patients. These histories must include an assessment not only of recent but also of past behaviors associated with increased risk of HIV exposure.

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