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# Risk of HIV infection in psychiatrically ill patients

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**Abstract** *The growing spread of HIV infection and AIDS incidence has led the medical milieu to increase efforts in the study of the at-risk population and in the development of prevention programmes. Nevertheless, little attention has been focused on psychiatric patients as a vulnerable and disadvantaged segment of the population with high risk of HIV infection. In fact, several studies in the last years have shown that high-risk behaviour, especially intravenous drug abuse and non-protected at-risk sexual intercourse, is reported by 20–50% of psychiatric patients, particularly those affected by bipolar disorders and schizophrenia. The prevalence of HIV infection has also been found to be higher in psychiatric patients than in the general population. In general, only a proportion (15–50%) of HIV-positive psychiatric patients have knowledge about their serological status, while the others do not know that they have been infected. Preliminary studies show that educational programmes specifically developed for psychiatric patients improved knowledge of HIV infection and reduced the patients' HIV-risk behaviour. Specific intervention strategies should also be known when dealing with mentally ill HIV-positive patients. Open problems and further issues to be addressed by future research are discussed.*

## Introduction

Since the discovery of the first case in 1981, the incidence of AIDS has increased exponentially in every part of the world, especially in Southern Europe, with standardized rates (AIDS cases per million inhabitants) approaching in 1992 in some European countries (Spain, France, Switzerland and Italy) to those registered in the United States (Maso *et al.*, 1994). These figures are destined to increase in the future, as recent estimations of the World Health Organization (WHO) (1994) indicate that about 15 million people are HIV-positive world-wide and that 30–40 million people will be infected by the year 2000.

Although the major epidemiological patterns are represented by intravenous drug users (IVDU) and homosexual and bisexual contacts, the distribution of patients among various categories of HIV-exposure is shifting and heterosexual contact is growing as a new and important at-risk category world-wide. Moreover, differences are present according to different countries (e.g. HIV-infection more prevalent in IVDU in Southern Europe, in homosexuals in North America, and in heterosexuals in Northern Europe and Asia) (Brookmeyer & Gail, 1994). A lot of information is now available regarding the so called 'high-risk' groups,

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in particular homosexuals and IVDU. Nevertheless, research has shown that over-reliance on such segments of population can deflect attention from others whose behaviour places them at risk of HIV infection, thereby favouring a dangerous association of AIDS with deviant and stigmatized minorities. Contrarily, by using the concept of high-risk behaviour, an increasing awareness about the spread of HIV-infection and the possibilities of preventing it becomes possible.

Those among the population that show remarkable high-risk behaviour but have been undervalued as potential victims of HIV infection by public opinion and the scientific milieu are mentally ill patients. Several factors may be responsible for the risk of contagion in this population. Patients suffering from mental disturbances have been traditionally marginalized and stigmatized, while because of their vulnerability and social disadvantage they are easily victimized by individuals who expose them to HIV infection (e.g. by unwanted sexual advances or even sexual violence and prostitution). Furthermore, the characteristics of mental illness by themselves, such as impaired reality testing and appreciation of the consequences of one's behaviour, affective instability, low levels of impulse control, suicidal intent and self-destructive behaviour, may lead psychiatric patients into HIV-related behaviour, in particular non-protected sexual activity and drug abuse. Although sexuality in psychiatric patients is not often mentioned or studied in literature, mentally ill people are sexually active and sexual behaviour such as homosexuality, intercourse with prostitutes and unprotected sex is not uncommon in these patients (Akhtar & Thomson, 1980; Gift *et al.*, 1988). Comorbidity of psychiatric disorders with substance abuse has been documented in several studies (Galanter *et al.*, 1988; Regier *et al.*, 1990; Toner *et al.*, 1991), so much so that the phenomenon is well-known by the term 'dual diagnosis' (Smith & Hucker, 1993). On the other hand, alcohol consumption and illicit drug use (not necessarily i.v. substances) have been shown to be associated with unsafe sex and risk-taking behaviour in HIV-negative as well as HIV-positive subjects (Trocki & Leigh, 1991; Kennedy *et al.*, 1993).

In spite of these data, a clear-cut awareness of the dimensions of AIDS pandemic seems to be inadequate among mental health providers. Whereas education and prevention programmes both for the population at risk and for HIV-infected subjects have been developed over the past 10 years to sensitize public opinion and to reduce the spread of HIV infection (DiClemente & Peterson, 1994; Choi & Coates, 1994), education of psychiatric patients and HIV-related syndromes and AIDS still remains fragmentary. Inaccurate information and knowledge about several aspects of HIV transmission is, for instance, reported by 38% to 43% of psychiatric patients in different studies carried out in the USA (Aruffo *et al.*, 1990; Sacks *et al.*, 1990a; Kelly *et al.*, 1992; Katz *et al.*, 1994). Uneasiness in taking sexual history, time pressure problems, concerns about the risk of emotional turmoil, worsening of psychopathological symptoms or possible further discrimination, and pessimism in effective intervention represent the main reasons causing clinicians to undervalue and consequently not properly assess HIV-related issues in patients with psychiatric disorders (Hellerstein & Prager, 1992; Mahler *et al.*, 1994).

The well-known psychiatric consequences of HIV in infected patients (see Catalan, 1988, Maj, 1990 and Holland *et al.*, 1992 for reviews) make it vitally necessary to examine in more detail the above-mentioned problem in psychiatric patients. In fact, because of their pre-existing mental illness, aspects related to antibody testing, reaction to notification and counselling, psychological adaptation, impact on interpersonal and family functioning, onset of HIV-related syndromes and AIDS and the consequent neuropsychiatric complications may be expected to be extremely complex to deal with in such individuals.

A number of recent studies carried out in the USA have focused attention on this subject, while, to our knowledge, only very little data are available in European countries, in

**Table 1.** HIV-related risk behaviour in psychiatrically ill patients

Author	Population	HIV-risk behaviour
Sacks <i>et al.</i> (1990a)	205 acutely ill psychiatric in-patients	19% high risk behaviour (8.8% homosexuality, 6.3% IVDU, 11.7% high-risk sex)
Sacks <i>et al.</i> (1990b)	113 acutely ill psychiatric in-patients	20.35% high risk behaviour (11.5% unprotected intercourse, 5.2% shared needles, other 3.7%)
Baker & Mossman (1991)	23 psychiatric in-patients	57% at-risk sexual activity
Kelly <i>et al.</i> (1992)	60 chronic mentally ill out-patients	5% IVDU, 3% anal intercourse; 7% sex with IVDU; 15% unwanted sex
Hellerstein & Prager (1992)	101 psychiatric out-patients (53 mood disorder, 17 psychosis, 8 organic mental disorder)	27.7% high risk behaviour (75% IVDU, 28.6% high-risk sex, 7% homosexuality)
Susser <i>et al.</i> (1993)	90 psychiatric out-patients (59 schizophrenia, 31 mixed)	24.71% IVDU, 13.3% homosexuality
McDermott <i>et al.</i> (1994)	61 psychiatric in-patients (35 schizophrenia, 10 bipolar disorder, 16 depression)	14.75% IVDU; 23% homosexuality; 57.37% non-use of condom; 21.31% sex with prostitutes
Kalichman <i>et al.</i> (1994)	95 chronic mentally ill out-patients	33% one risk-factor, 19% two risk factors, 15% three or more risk factors
Cournos <i>et al.</i> (1993; 1994)	95 schizophrenic in/out-patients	27.36% multiple partners, 41.05% non-use of condom
Susser <i>et al.</i> (1995)	122 homeless mentally ill (76 schizophrenia, 21 mood disorder, 9 schizoaffective, 16 other)	50–60% of sexually active non-use of condom and non-monogamous partners

spite of the widespread movement to shift 'mental illness' from hospital-centred to community-based services.

Thus, the purpose of the present study is to review the current knowledge about HIV-risk-related behaviour and the prevalence of HIV-seropositivity in psychiatric patients. Possible methods of education and intervention will be presented. Open problems and future aims of the research will also be discussed.

### HIV-related risk behaviour in psychiatric patients

Evaluation of HIV-related risk behaviour in patients with psychiatric disorders has been one of the main areas investigated in the last 7 years (Table 1). The results of various researchers agree inasmuch as an elevated presence of HIV-related risk behaviour is found in every study. Sacks *et al.* (1990b) studied 113 patients admitted to a facility for acute mentally ill patients over a period of 3 months. Fifty per cent of the patients reported a history of HIV-related risk behaviour and 10% were at high risk for HIV infection. Patients were also found to have a low awareness and perception of their risk-behaviour. Zafrani and MacLaughlin (1990) obtained a high-risk behaviour prevalence of 21% in a sample of chronic mentally ill patients and similar data were reported by Volavka *et al.* (1991; 1992) by studying a population of about 500 newly-admitted psychiatric patients. Almost half of them were in fact classified as a high-risk group by using a specifically devised questionnaire. Parenteral drug abuse was the

main risk factor in both sexes, while in the female subjects high-risk sexual behaviour (intercourse with i.v. drug users, HIV + /AIDS subjects and bisexual men) was also reported, especially by patients with bipolar disorders.

Among a sample of adolescent girls admitted to an in-patient psychiatric unit, over half reported high-risk sexual activity (Baker & Mossman, 1991). Drug use was also significantly associated with multiple sexual partners. Similarly, DiClemente and Ponton (1993) showed that among 76 psychiatrically hospitalized adolescents lack of usage of condoms, homosexuality and sex with IVDU were the most frequent high-risk behaviours commonly reported, higher than that found in a control group of 802 similar-aged school-based control subjects.

Comparing 61 patients consecutively admitted to a psychiatric in-patient unit to a matched control group, McDermott *et al.* (1994) found a higher rate of homosexual intercourse in patients affected by schizophrenia or bipolar disorders, while a higher prevalence of i.v. drug abuse was shown in depressed patients. Similar results ensued when out-patient psychiatric populations were investigated. Hellerstein and Prager (1992) showed that, among 101 out-patients, 27.7% were at risk for HIV infection. Thirty-seven per cent of these cases were women. Interestingly, in no case did the clinicians document their recognition of HIV exposure and transmission risk as far as this population was concerned nor did they mention that the patients had received any HIV-related counselling intervention. Kalichman *et al.* (1994) noticed that a high proportion of chronic mentally ill out-patients reported high-risk behaviour, such as having multiple partners often in conjunction with substance abuse. Many sexual partners were met in mental health clinics, often involving exchange of money or drugs. In agreement with these observations, use of drugs and sexual activity in psychiatric units and bars accounted for 34.3% of the statistical variance of HIV-risk behaviour. In this study, 40% of these patients did not believe they were at risk of HIV infection. Similar results were reported by other authors who showed that casual sex, sex with IVDU or sex in exchange for money, drugs or for a place to sleep (Katz *et al.*, 1994) and infrequent use of condoms and sharing of needles (Knox *et al.*, 1994) were frequent high-risk behaviours detectable in chronic mentally ill patients. With regard to sexuality in psychiatric patients, Cournos *et al.* (1994), by interviewing 95 schizophrenics, found that 44% had been sexually active during the previous 6 months and 62% of them reported having had multiple partners. A worrying fact is that in 12% of these cases the partners were HIV positive or injected drug abusers.

In a recent study of 122 homeless mentally ill (84% of whom had a psychotic disorder) Susser *et al.* (1995) noticed that the majority of patients who engaged in sexual behaviour reported at-risk intercourse (i.e. having sex without condoms and with non-monogamous partners). Furthermore, the authors found that comorbid cocaine abuse or dependence was associated with higher sexual risk behaviour.

### **Prevalence of HIV-seropositivity in psychiatric patients**

The obvious consequence of HIV-risk behaviour and the exposure of individuals to sources of infection is the possible contagion with subsequent development of HIV-related syndromes and AIDS. The real prevalence of HIV-infection in psychiatrically ill patients has been documented in a number of recent studies (Table 2), some of which were carried out on an anonymous basis, and the rest by evaluating the available HIV testing after obtaining informed consent from the patients.

With regard to anonymous seroprevalence studies, Cournos *et al.* (1991) evaluated blood samples of 451 patients admitted to two psychiatric hospitals, most (75%) having already been hospitalized for psychiatric problems. The commonest diagnoses were schizophrenia

Table 2. Prevalence of HIV infection in psychiatrically ill patients

Author	Methodology	Population	HIV-positivity
Cournos <i>et al.</i> (1991)	Anonymous testing	453 psychiatric in-patients	5.5%
Sacks <i>et al.</i> (1992)	Anonymous testing	350 acute in-patients	7.0%
Volavka <i>et al.</i> (1991)	Anonymous testing	150 psychiatric in-patients	6.0%
	Voluntary testing	365 psychiatric in-patients	10.1%
Empfield <i>et al.</i> (1993)	Anonymous testing	203 psychiatric in-patients	6.4%
Susser <i>et al.</i> (1993)	Voluntary testing	90 psychiatric out-patients	19.4%
Mahler <i>et al.</i> (1994)	Anonymous testing	300 alcoholic out-patients	10.3%
Silberstein <i>et al.</i> (1994)	Voluntary testing	118 dually diagnosed in-patients	22.9%
Naber <i>et al.</i> (1994)	Voluntary testing	623 psychiatric in-patients	4.8%
Chen (1994)	Voluntary testing	834 psychiatric in-patients	0.0%
Cournos <i>et al.</i> (1994)	Anonymous testing	971 psychiatric in-patients	5.2%

(45%) and affective disorder (25%). The authors found a seroprevalence rate of 5.5% with the highest percentage of HIV-positivity in patients 18–29 years old (6.34%) and with minor differences between the two hospitals (6.3% and 5.2%). Similarly, Volavka *et al.* (1991) reported a 6% seroprevalence in 150 patients consecutively admitted to a state psychiatric hospital in New York and Sacks *et al.* (1992a), by studying 350 psychiatric patients voluntarily admitted to a psychiatric hospital, showed that 7.1% were HIV-infected. Separate analysis according to psychiatric diagnosis indicated a prevalence of HIV-seropositivity in 29.1% patients with an organic mental disorder (all of whom were already known to be HIV-positive on admission), 10.5% in patients with substance abuse (excluding IVD abuse), 5.4% and 4.9% in those with a bipolar and depressive disorders respectively, and 3.4% in schizophrenic patients. A higher prevalence was shown by Mahler *et al.* (1994) who found that among 300 patients admitted to an alcohol-rehabilitation unit, 10.3% of their discarded blood samples were HIV-positive.

Unlike anonymous studies, investigations, which are based on a review of patients for whom an HIV result is available or are carried out on populations that give informed consent for being tested, introduce a selection bias in seroprevalence. In the above-quoted study by Volavka *et al.* (1991), the seroprevalence for 365 psychiatric in-patients who consented to be tested was 10.1% (14.3% in females and 8.6% in males). Empfield *et al.* (1993) found a seroprevalence of 6.4% among 203 homeless patients admitted to a psychiatric unit. The prevalence was of 10.6% among patients aged between 18 and 39. In a study of 62 homeless schizophrenic and bipolar patients discharged from a shelter psychiatric programmed to community housing, Susser *et al.* (1993) reported that 19.4% were HIV-positive. Sexual violence, prostitution and promiscuous sexuality, strengthened by alcohol abuse, may represent factors responsible for this fact.

In Germany, Naber *et al.* (1994) found a seroprevalence of 4.8% (4.5% in males and 5.3% in females) in 623 psychiatric in-patients admitted to a psychiatric hospital during an 8-year period. This group of 623 represented only about 5% of all psychiatric admissions (12,603) during the period under consideration. In a different cultural context, Chen (1994), by surveying 834 psychiatric patients admitted to two large psychiatric hospitals in Taiwan, did not identify any HIV-positive cases. The low incidence of HIV infection in China in comparison with other parts of the world and the total absence of dual diagnosis may represent important epidemiological and cultural differences shown by this study.

As expected, the prevalence of HIV infection tends to be higher in psychiatric patients with a current history of risk behaviour. In the quoted studies, Sacks *et al.* (1990a) indicated a prevalence of 41% in high-risk psychiatric patients, particularly if affected by bipolar

disorders. Cournos *et al.* (1991; 1994) and Volavka *et al.* (1992) found a prevalence ranging from 15% to 20% in groups of mentally ill patients at high HIV risk. More recently, Silberstein *et al.* (1994), by evaluating 118 patients with a dual psychiatric diagnosis (primary mental disorder and substance abuse) who were consecutively admitted to a psychiatric ward in a general hospital, found that 22.9% were HIV-positive and that a history of HIV-risk related behaviour and depression were significantly associated with HIV infection.

Alarming data are reported by some studies showing that most patients did not know their HIV status and were not tested during their stay in the hospital. Only half of the HIV-infected psychiatric patients already knew their status before blood testing in the study by Silberstein *et al.* (1994), while Sacks *et al.* (1992b) found that 80% of acute psychiatric HIV-seropositive in-patients were discharged with their HIV status still unrecorded and presumably undetected. Furthermore, in 51% of the cases with HIV-related risk behaviour there was no indication whether or not the patients had been tested before or during hospitalization. Similar results were reported by Mahler *et al.* (1994) who noticed that 77.4% of the patients with alcohol abuse disorder (and subsequently found to be HIV-seropositive) were discharged with their HIV infection undetected, while only 5% received HIV testing with counselling, despite the adequate length of hospital stay (a mean of 3 weeks), the presence of education groups on HIV, and the involvement of the authors' unit in HIV prevention, care and research.

### **Prevention and intervention**

Overall, these findings underscore the necessity of improving the detection of HIV-risk behaviour in the psychiatric population and of implementing risk-reduction programmes. Intervention strategies are also needed when dealing with the HIV-seropositive psychiatric patients in both in- and out-patient settings.

#### *Prevention: educational and psychological approaches*

Because of the difficulty in taking into account all the variables of HIV-risk behaviour and dealing with the complex problem of drug abuse in various populations (e.g. prisoners and the homeless), the goal of prevention has not been completely achieved (Brewer & Derrickson, 1992; Booth & Watters, 1994). Nevertheless, educational programmes and counselling still represent the basis for reducing the dissemination of HIV infection.

Unlike massive preventive campaigns for the general population or specific communities (e.g. gay communities), preventive education for psychiatric patients needs to address the specific problems they have. A group approach seems to be especially advantageous in giving the patients the time, place and space in which to share anxiety and doubts. Carmen *et al.* (1990) devised a weekly group-based programme for out- and in-patients, mostly schizophrenics and dually diagnosed patients, in order to break institutional barriers concerning health education and AIDS. Different methods of education were used, including videotapes, games and role-playing focusing on AIDS characteristics and prevention (e.g. safe sex, distribution of condoms and correct use of them). A similar video-education programme was developed by Graham and Cates (1992) for persons with serious mental disorders. They noticed that the programme was more effective and positively received by the patients when the videos provided simple and non-judgmental information about HIV infection, used real situations, were brief and accommodated participants' questions. Presence of acute psychotic symptoms and the possibility that the patients had incorporated information from these programmes into their mental disturbance, thereby reinforcing delusional thinking and

anxiety, warranted particular attention during the programme. For these reasons, Seeman *et al.* (1990) suggested that topics of sex education programmes for chronic mentally ill patients should consider intimacy (friendship, love, lust and sexual abuse), sexuality (developmental and gender issues), sexual preferences (including autoerotism), substance use and sexual drive (including judgement and control), conception and contraception, sexually transmitted diseases and their medical treatment. Recently, Kalichman *et al.* (1995), in a control study of chronic mentally ill patients, found that a four-session AIDS prevention programme emphasizing condom use, sexual assertiveness and risk education and behavioural self-management was effective in reducing unprotected sexual intercourse.

Such programmes should, however, be flexible, responsive to individual needs and according to the patient's psychopathology. McDermott *et al.* (1994), for instance, noticed that schizophrenic patients tended not to change their at-risk behaviour on the basis of knowledge about HIV infection only. Other factors had to be taken into account, such as the patient's perception of cognitive control over AIDS and a strong belief in the future development of medical advances relating to this disease. These latter findings introduce another and more complex issue of prevention, that is the need to evaluate and treat underlying motives that might determine high-risk behaviour in patients with psychiatric disorders. It has been demonstrated that despite knowledge and awareness of the epidemiological pattern of HIV-infection, high-risk behaviour may persist (Fineberg, 1988), especially in individuals with psychological problems who underevaluate the risk of contracting HIV, thus exposing themselves to possible sources of infection (Stiffman *et al.*, 1992; Folkman *et al.*, 1992; Nyamathi, 1992; Valente *et al.*, 1993; Kennedy *et al.*, 1993). The high levels of denial in certain psychiatric disorders, beliefs of one's own omnipotence, and projective mechanisms on the one hand, and guilt feelings, the need to be punished, and marked suicidal thoughts on the other, make this problem even more complex and difficult to deal with while establishing prevention programmes. Therefore, it is extremely important that prevention programmes take into account and address, either in group or individual settings, these aspects.

Educational approaches have been shown to be of use for both HIV-positive and HIV-negative psychiatric patients, and for the staff as well. Lauer-Listhaus *et al.* (1988) devised a psycho-educational programme dealing with the nature of AIDS and its transmission, physical and psychological consequences, prevention and treatment approaches and life-style modification. Results indicated that HIV-infected patients appreciated the group experience, were less marginalized by non-infected psychiatric patients and were better supported by the health staff. Furthermore, their compliance and precautions improved.

#### *Intervention techniques*

Different types of intervention are needed in dealing with acute HIV-positive psychiatric patients. Threatening behaviour and sexual activity represent difficult problems to handle. In hostile and assaultive HIV-infected psychiatric patients, Cournos *et al.* (1989) indicated the need for restraint and seclusion, including use of gloves, restraining blankets and retractable needles to increase the safety of the clinical staff. Hypersexuality and sexual impulses may be managed by treating the patients with appropriate drugs (e.g. neuroleptics), placing them in private rooms and looking after them under one-to-one supervision (Cournos *et al.*, 1990).

Distribution of condoms should also be considered, weighting the threat of HIV infection and spread, on the one hand, against the general prohibition of sexual intercourse inside the hospital wards, on the other (Cournos *et al.*, 1990). Discharge and care of the patients in community facilities may cause important problems. O'Dowd *et al.* (1991)



showed that roughly half of HIV-seropositive patients with a dual psychiatric diagnosis (mental illness and i.v. drug abuse) did not keep appointments in an out-patient AIDS-related psychiatric programme. Furthermore, 45% of the patients dropped out after the first visit. Being on a methadone programme and receiving AZT and psychopharmacological prescriptions at the first visit were associated with remaining enrolled in the programme.

The potential dangerousness of the patient, discrimination against him/her and lack of suitable placement are areas of major concern in such cases (Cournos *et al.*, 1989). In fact, because of fear of contamination or need for constant medical attention, families and psychiatric residential facilities may both refuse the patient. This can in turn increase the isolation, impotence and anger of the patient with negative consequences for compliance and risk-taking behaviour.

Serious problems, from the management of psychiatric symptoms to the ethical dilemma about confidentiality, also arise when the patient is non-compliant with risk-reduction behaviour (Carlson *et al.*, 1989). In such cases, a development of co-ordinated programmes between psychiatric facilities and other community services (e.g. social, self-help, drug treatment services) is indicated and support from public health officials and legal services should be provided. In any case, admission to in-patient psychiatric units should be limited to patients with identifiable psychiatric illness, avoiding the use of psychiatric facilities for quarantine or non-clinical purposes. Also the patient's medical care represents a challenge for psychiatric staff, often not accustomed to dealing with physical problems. The onset of multiple infections, malignancies or recurrent fevers determines the need for a liaison between psychiatric and medical staff to engage in day-to-day consultation and management of the patient's physical situation. The patient's refusal of treatment and care may in some circumstances cause important ethical and legal problems, such as compulsory treatment, which should be managed through a close interaction between different professional figures (e.g. internal medicine, psychiatry, forensic medicine), avoiding at the same time the abuse of psychiatric confinement as preventive detention (Carlson *et al.*, 1989).

Pain is a specific and serious complication of AIDS which is reported by 85% of the patients (O'Neil & Sherrard, 1993). It has been shown that severe pain is undertreated in 60% of the cases and in 28% is not treated at all (McCormack *et al.*, 1993). Prescribing opioid drugs to HIV-seropositive i.v. drug abusers in order to manage untreatable pain is a clinically significant problem which sometimes cannot be overcome (Breitbart, 1994). It should be expected that it is an even more serious problem in patients with either dual or triple psychiatric diagnosis (dual diagnosis complicated by onset of neuropsychiatric disorders secondary to HIV infection and related syndromes) (Newsham & Wainapel, 1993).

### **Open problems and future aims of research**

On the basis of the data presented, the problem of HIV infection in patients suffering from psychiatric disorders represents an important area which needs attention. A number of issues and open problems need to be urgently addressed in future research.

First of all, *evaluation of high-risk behaviour* is mandatory in the psychiatric population at the same level as general or other at-risk populations. Sexuality and sexual behaviour (e.g. condom use, having multiple partners, homosexuality), substance abuse and its influence on sexual behaviour need to be investigated through specific structured interviews. Patients' knowledge about HIV infection and at-risk behaviour should also be assessed in order to identify misconceptions or distorted information, so as to better mould education and counselling programmes. Therefore, psychiatric staff should be specifically taught to extrapolate information concerning these points during psychiatric examination and also trained to

confront resistance to countertransference regarding these issues (Hellerstein & Prager, 1992).

A second problem concerns the *detection of HIV-sero-status* in psychiatric patients. Because of HIV infection characteristics, along with the visible pandemic of clinically diagnosed cases, there is an insidious and invisible pandemic of people who do not know they have been contaminated and may thus transmit HIV to others (Sinks, 1994). Following CDC recommendations, the identification of at-risk and HIV-infected patients allows one to initiate preventive measures, early intervention, counselling and treatment which reduces the likelihood of developing AIDS. For this reason, HIV testing should be offered routinely for in-patient medical populations with HIV-seroprevalence rates of 1% or more (Janssen *et al.*, 1992). Therefore, antibody testing and screening should be mandatory for psychiatric patients at high risk of HIV infection (Ostrow, 1992). Nevertheless, ethical and clinical dilemmas emerge when dealing with this issue. Binder (1987) considers it inappropriate and clinically dangerous to order routine blood tests since the possible diagnosis of HIV-infection might not be manageable by patients in a psychologically disabling condition and because of the high risk of increasing discrimination against the patients. In the author's opinion, two main arguments exist, however, for ordering blood testing of psychiatrically ill in-patients: clinical situations characterized by out-of-control behaviour in psychotic patients belonging to high-risk groups, and the impelling necessity to reach a correct diagnosis in the case of high-risk patients who show psychiatric symptoms which seem likely to represent the initial presentation of HIV infection (e.g. when encephalopathy or organic HIV-related disorders mimic severe psychiatric illnesses). The American Psychiatric Association Commission on AIDS states that HIV testing should not be performed solely for the purpose of routine screening or staff awareness, but on a case-by-case basis when medically indicated after having obtained informed consent by the patient (American Psychiatric Association, 1992; 1993a; 1993b).

A third and related aspect deals with *confidentiality* about the HIV-seropositivity of a psychiatric patient. Again, legal and ethical problems arise in these circumstances, as described in detail by several authors (Dilley *et al.*, 1986; Binder, 1987; Searight & Pound, 1994; Daniolos & Holmes, 1995). It is highly recommendable and desirable that patients with AIDS inform their partners and significant others of their HIV-positive status. Should the psychiatrist warn a foreseeable victim when the patient refuses to disclose his/her status and/or engages in high-risk transmission behaviour? How may the psychologist prevent harm to others if a psychiatric HIV-positive patient exhibits diminished impulse control because of concomitant substance abuse, onset of psychotic disorders or AIDS-dementia? Should results be disclosed to the staff? Or to other patients? Or even to medical facilities? These questions are of paramount importance, since physicians may be induced to infringe upon confidentiality because of a number of non-clinical factors (e.g. fear of the patient and of possible legal consequences, countertransference mechanisms). With regard to this, Schwartzbaum *et al.* (1990) have shown that the physician's decision to protect a third party by breaching the patient's confidentiality may be influenced by race, sex and sexual preference of the patient. In recent years, important institutions have given indications in order to assess and deal with the aforesaid problems, agreeing that disclosure of a patient's serological status is admissible if appropriate for diagnosis, management and treatment, but it should be limited to the staff directly involved in the patient's care. Furthermore, disclosure to identifiable persons who are in danger of contracting the virus is considered ethical when, after having obtained the patient's agreement either about the necessity to cease such behaviour as places other people at risk or to notify about his/her HIV-status individuals who are at continuing risk, the patient refuses or is unable to comply with this agreement.

Conflicting opinions are however presented about confidentiality and the reasons for infringing upon it (Perry, 1989; Zonana, 1989). That most of these questions are difficult, if not impossible, to answer has been pointed out by Krajewski (1990) who states that it is doubtful that any set of guidelines will cover all situations, particularly when the underlying ethical principles, such as the need to respect the individual versus the need to care for others, are in conflict.

Fourth, the development and application of *preventive strategies* characterized by examination of the underlying psychological motives which may lead patients to at-risk behaviour, education about HIV transmission and modalities to reduce the spread of infection must be specifically developed for the psychiatric population, taking into account their emotional and cognitive disorders. In fact, encouraging preliminary results indicate that educational programmes specifically developed for psychiatric patients improve their knowledge of HIV infection and reduce HIV-risk behaviour. Nevertheless, education alone might be incomplete in reaching the goal if programmes do not provide psychological interventions which analyse and treat underlying causes, strictly connected with pre-existing psychopathology, of HIV-risk-taking behaviour in psychiatric patients.

Lastly, *health staff* need to be educated and trained about the numerous aspects related to HIV infection in general and in mentally ill patients in particular. In fact, the overlap of social (e.g. discrimination, stigmatization, ostracism) and psychiatric (e.g. depression, risk of suicide, cognitive deterioration, psychotic symptoms) consequences of HIV infection and related syndromes with pre-existing psychopathology determines the necessity to provide mental health personnel with more specific instruments in order to improve their knowledge of medical (e.g. universal precautions, pain treatment), ethical-legal (e.g. antibody testing, confidentiality, duty to protect) as well as psychiatric aspects (e.g. management of acute psychotic HIV-positive patient) of HIV infection in psychiatric patients.

All these aspects need to be examined more in detail in European countries for a number of reasons. The first is that the review presented here is concerned with studies which were carried out in a different socio-cultural context, such as the USA, whilst data are lacking about the situation in Europe, thus not allowing the generalization of what American research has demonstrated in the last few years. A second reason is that, similar to the USA, in numerous European metropolitan areas the homeless phenomenon is increasing both as a social and as a community psychiatry problem. It should not be forgotten that a large part of this population is formed psychiatrically ill patients at risk of HIV-infection (Susser *et al.*, 1989; Allen *et al.*, 1994). A third reason concerns the important changes in social environment of many European countries (e.g. massive immigration from Africa, where HIV-infection is rather diffuse). The impact and the consequences of this on patients with mental disorders deserve closer investigation.

## Conclusions

The findings of several studies indicate that the mentally ill population shows high-risk behaviour which exposes its members to the risk of HIV infection and that proper attention to this risk has seemingly not been accorded, as suggested by the results presented here, which may be summarized as follows:

- a large percentage of psychiatric patients, especially schizophrenics, have low or inadequate knowledge of HIV infection and routes of transmission;
- a current history of definite high-risk behaviour (especially IVD abuse and non-

protected at-risk sexual intercourse) is reported by 20–50% of mentally ill people and it is higher than that in the general population;

- bipolar disorders and schizophrenia, among psychiatric diagnoses, are at a higher HIV-risk;
- the prevalence of HIV infection in psychiatric patients is higher (5%–40%) than that in the general population, with differences according to the cultural context (0% in Chinese psychiatric patients);
- 30–50% of HIV-positive psychiatric patients know their serological status, whilst the rest do not know they have been infected.

For these reasons, the problem of HIV-risk behaviour and HIV infection and related syndromes in individuals affected by mental illness should not be underestimated any longer, as it may become a further factor in the discrimination, marginalization, suffering and death of this vulnerable segment of the population. The movement towards deinstitutionalization and development of community mental health services, providing a total care for the patients as an alternative to hospital admission, needs to take into account all aspects of community life, including physical health prevention and treatment. Assuming real responsibility for the care of psychiatrically ill patients as far as HIV-risk is concerned and ensuring liaison with other medical and social services represent novel yet challenging aims for psychiatry in the immediate future.

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