

NIH Public Access

Author Manuscript

J Nerv Ment Dis. Author manuscript; available in PMC 2008 September 22.

Published in final edited form as: J Nerv Ment Dis. 1999 April; 187(4): 208–216.

Understanding HIV-Related Risk Among Persons with a Severe and Persistent Mental Illness: Insights from Qualitative Inquiry

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Abstract

We conducted focus groups with 36 men and women who were receiving treatment for a severe and persistent mental illness (SPMI) to learn more about the social context of their intimate relationships and the psychological antecedents of their sexual decision-making. Qualitative analysis of focus group transcripts indicated that (a) sexual activity tended to be unplanned and occurred in social networks where HIV risk may be elevated, (b) HIV-related knowledge was superficial and insufficient to guide safer sexual behavior, (c) participants' HIV risk perception was often based upon factors unrelated to their sexual behaviors, and (d) communication skills for HIV risk reduction were poor. We discuss how qualitative methods yielded insights not readily available through quantitative approaches, and offer recommendations for HIV risk assessment and prevention among persons with a SPMI.

Keywords

HIV; severe and persistent mental illness (SPMI); focus groups

The term "severe and persistent mental illness" (SPMI) typically refers to schizophrenia, bipolar disorder, major depression, or schizoaffective disorders that affect approximately 2.8 million individuals in the United States. Ten published studies conducted between 1990 - 1995 indicate that persons with a SPMI are at high risk of HIV infection; these studies yielded seroprevalence rates of 4 - 23% (Carey, Weinhardt, & Carey, 1995). Infection with HIV leads to AIDS, a condition associated with significant psychosocial and physical morbidity, premature mortality, and staggering cost; regarding the latter, the lifetime cost of treating a person with AIDS has been calculated to be at least \$102,000 (Hellinger, 1992). Thus, if only 10% of the 2.8 million adults with a SPMI acquire HIV, the medical cost will approach \$28.6 billion. This estimated cost does not include the costs associated with protease inhibitors or additional psychiatric care, nor does it address the profound human tragedy and suffering of infected and affected persons.

Many reasons have been proffered to explain the elevated seroprevalence among persons with a SPMI (Carey, Carey, & Kalichman, 1997). First, their life circumstances may be associated with increased risk for HIV infection. Although medication therapy often stabilizes psychiatric symptoms, many individuals with a SPMI experience exacerbations that require ongoing care and short-term hospitalizations (Wohlford, Myers, & Callan, 1993). As a consequence of persistent psychiatric difficulties, persons with a SPMI are likely to be unemployed, economically and socially disadvantaged, and reside in transitory housing -- circumstances associated with an increased vulnerability to many health threats (Adler et al., 1994), including HIV infection.

Second, persons with a SPMI are poorly informed about HIV and AIDS; several survey studies have documented inadequate HIV-related knowledge (Carey, Carey, Weinhardt, & Gordon, 1997; Cournos et al., 1994; Kalichman, Kelly, Johnson, & Bulto, 1994). Relative to the general population (Peruga & Celentano, 1993), persons with a SPMI lack key information about disease transmission and prevention.

Third, adults with a SPMI may be at increased risk for HIV because they lack motivation to alter existing behavioral repertoires. Adults with a SPMI commonly experience generalized avolition and anergia as function of disease processes and medication side effects. In addition to these barriers to behavior change, adults with a SPMI perceive themselves at low risk for HIV (Carey, Carey, Weinhardt, & Gordon, 1997). Moreover, sexual behavior often serves short-term needs that might go unmet due to inadequate interpersonal, social, and financial resources. Persons with a SPMI may be less motivated, for example, to insist upon condom use because this might jeopardize relationships that provide valued social and economic support, and they may not be connected to social networks that can help to exert a positive normative influence toward healthier behavior.

Fourth, persons with a SPMI may lack the interpersonal and social skills, including sexual assertiveness, needed to negotiate safer sexual relationships. Numerous studies have documented that persons with schizophrenia, bipolar disorder, major depression, and schizoaffective disorders may be limited in their ability to navigate complex social transactions, including sexual intimacy (e.g., Becker, Heimberg, & Bellack, 1987; Bellack, Turner, Hersen, & Luber, 1984; Liberman, DeRisi, & Mueser, 1989).

To reduce the prevalence of HIV infection among adults with a SPMI, interventionists need more information regarding (a) the context of intimate relationships and sexual behavior, (b) knowledge deficits regarding HIV transmission and prevention, (c) motivation to engage in safer behaviors, and (d) social and interpersonal skills to navigate risky situations. This information can be used to develop HIV risk reduction interventions that are appropriate and effective.

Both quantitative and qualitative data can help to meet these aims. Focus groups and other qualitative methods have provided valuable information regarding the social and interpersonal contexts of sexual behavior among other groups. Elicitation research with gay and bisexual men (e.g., O'Brien, 1993) has helped to inform seminal theoretically-based HIV prevention interventions. Inciardi (1995) used ethnographic techniques to analyze interviews with crack smokers about HIV risk behavior, and reported informants' rationale for trading sex for crack. Qualitative inquiry into the context of sexual risk behavior among minority men and women (Carey, Gordon, Morrison-Beedy, & McLean, 1997) leads to enhanced risk reduction programs (Carey, Maisto, et al., 1997).

Despite these advantages, qualitative methods remain an underutilized tool in HIV research. The Office on AIDS at the National Institute of Mental Health produced a report that called for rapid attention to the context of sexual risk among traditionally underserved populations (Pequegnat et al., 1993). However, we are unaware of qualitative research to examine the context of sexual risk among persons with a SPMI. To meet this need, and to prepare for an HIV risk reduction intervention among persons with a SPMI, we conducted focus groups and elicitation interviews with outpatients receiving care at a state psychiatric hospital.

Following conventional qualitative research methods (e.g., Basch, 1987), we developed an outline for group and individual discussion that was informed by psychological theory, namely, the information-motivation-behavioral skills (IMB) model for HIV risk reduction (Fisher & Fisher, 1992). Fisher and Fisher propose that there are three primary requisites for risk reduction: <u>information</u> (i.e., knowledge) regarding HIV transmission and prevention,

<u>motivation</u> for disease avoidance, and <u>behavioral skills</u> to enact risk reduction. Although a qualitative approach typically does not emphasize a priori hypotheses, the IMB model provided a heuristic framework to guide our inquiry.

Methods

Participants

Thirty-six adults (19 men, 17 women) who were receiving outpatient treatment at a public psychiatric facility participated in focus groups. Their ages ranged from 23 to 54 years ($\underline{M} = 36.8$), and they tended to have less than a high school education (\underline{M} yrs of education = 11.5). The sample included European-American (72%), African-American (22%), and Hispanic and Native-American (6%) adults; the majority were not married (78%). All but 2 participants were unemployed and/or disabled due to their mental illness. Primary diagnoses, obtained from hospital chart data, were Schizophrenia or Schizoaffective Disorder (53%), Bipolar Disorder or Major Depression (19%), and other Axis I disorders (e.g., Generalized Anxiety Disorder; 28%). Fifteen percent also had an additional substance abuse or dependence diagnosis.

Although the participants were not recruited due to high risk behavior, as they were only screened for sexual activity in previous year, 92% (n = 33) subsequently participated in a hospital-wide screening study for HIV and substance use that suggests that this was an at-risk sample. Nineteen percent could be classified as high-risk (3 or more sexual partners in previous year, or injection drug use, or trading sex for money, drugs, or a place to stay); 29% reported street drug use in the previous year, and 20% reported 6 or more drinks on one occasion. *Drug use and binge drinking were two of the strongest predictors of high risk behavior in the hospital-wide screening study*.

Procedure

Potential participants ($\underline{N} = 120$) were recruited in a psychosocial club, a consumer support services site, and clinic common areas (e.g., waiting rooms). The first two locations provide daily activities and assistance as an adjunct to treatment for outpatients with social and economic limitations; the latter locations were 4 outpatient clinics. Using this approach, we intended to recruit participants at all possible facility sites. Interested persons ($\underline{n} = 108$) participated in brief screens to determine eligibility. Patients were invited to participate ($\underline{n} =$ 36) in "Health Improvement Project (HIP) Discussion Groups" if they: (a) had a <u>DSM - IV</u> chart diagnosis other than solely substance abuse/dependence; and (b) were sexually active in the last year.

Informed written consent was obtained at the start of each focus group. The consent form was reviewed by the group co-facilitators to overcome cognitive and literacy limitations. Patients understood that groups would be audiotaped and used to inform health promotion programs at the psychiatric center. Moreover, they were reminded that responses would not be shared with treatment teams and would not affect their treatment.

Sixteen same-gender focus groups were conducted at outpatient clinics and psychosocial clubs; most groups had 2 - 4 participants. Refreshments were served, and participants received a \$5 incentive payment. Groups were co-facilitated by a same-gender MA or PhD-level psychologist with prior experience in sexual health and focus group facilitation, and lasted between 60 to 90 minutes.

Facilitators followed a semi-structured outline to prompt group discussion, but also allowed for participant responses to guide the flow of topics. Each session covered the following: (a) contextual and environmental issues (e.g., where do patients live, whom do they associate with, and how long have they been in treatment); (b) romantic or sexual relationships (e.g., whom

do participants trust, where do they meet friends and/or sexual partners); (c) eliciting syntax and terminology about sex, HIV, and risk reduction (e.g., what do participants call "sex," what do they mean by "safer sex"); (d) information about HIV, including transmission, antibody-testing, risk reduction, and condom availability; (e) HIV risk perception (e.g., do you think you may get HIV someday? why or why not?); (f) motivation for safer sex and condom use (e.g., reasons for unprotected sexual activity, condom attitudes, feelings about talking to partners about HIV risk); (g) HIV as a problem relative to other important needs and problems (e.g., money, housing, crime); (h) sexual communication, condom use, and assertiveness skills (e.g., what makes it easier versus more difficult to talk to a partner about safer sexual choices).

Data Management and Qualitative Analysis

Focus group audiotapes were transcribed verbatim, using numbers to identify speakers (facilitators and participants). Two raters independently coded the transcriptions for major content domains using the conceptual bases that guided our elicitation goals (i.e., Fisher & Fisher, 1992). However, raters were also instructed to allow the content of the responses to guide the formulation of their categories. The raters organized the responses into major themes, and identified representative excerpts. Statements were used to describe the pattern of findings only if a theme was elicited in more than one group (O'Brien, 1993).

Findings

We use qualitative data from group transcriptions to describe the primary themes of participant responses. Themes revealed in more than one group are accompanied by illustrative quotes from focus group participants, and gender differences are reported when indicated. We also highlight issues that emerged that may have been missed with quantitative research methods.

Participant discussion in the focus groups revealed five primary themes. The first two themes involve the context of sexual risk taking, whereas the last three address the antecedents that may underlie participants' HIV-risky sexual behavior. First, the of sexual activity was described as inconsistent and unpredictable; many participants reported being highly motivated for sexual opportunities, which infrequently arose. Second, participants' sexual partner selection indicated enhanced risk for HIV-transmission. They tended to meet sexual partners, who were often other psychiatric patients or commercial sex workers, in bars or other highrisk settings. Men and women recounted common experiences with sexually transmitted diseases (STDs). Third, although participants demonstrated superficial knowledge about HIVtransmission routes, the elaborations that they offered about their sexual contacts contained misinformation that often put them at enhanced risk for HIV-infection. Fourth, motivation for sexual risk reduction was low. Participants' HIV risk-perception did not reflect the degree of risk that was apparent from their sexual behavior, and they were unmotivated to discuss safer sex prior to sexual activity. Fifth, interpersonal and communication skills to reduce risk for HIV seemed to be poor. Table 1 summarizes how the qualitative data informed the IMB model and can be used to guide interventions for persons with a SPMI. Primary findings are organized according to the IMB constructs. For comparative purposes, we also indicate how common a content area was by the number of groups where it was mentioned.

The Context of Sexual Activity Tends to be Opportunistic and Unplanned

Focus group participants reported an eagerness to take advantage of sexual opportunities when a potential partner expressed interest (P = Participant; F = Facilitator; M = Male; F = Female).

P:: It depends on the situation, you know. Sometimes you are just so hung up that all you can think about is the lust. You know what I'm saying. You wind up taking a chance. (M)

Most participants were not in a monogamous relationship, and sexual activity occurred irregularly. Participants often described unplanned sexual encounters.

P:: I spent a week with her and we had intercourse, but it was not safe.

F:: How did that happen - that it wasn't safe?

P:: I don't know. We just kind of, all of the sudden it happened. I don't know how it happened, but I haven't seen her since that week, so I don't know if she's pregnant or what. (M)

When sex was unplanned, participants usually had intercourse without a condom:

F:: What made you decide not to use a condom?

P:: Because I didn't have one with me. (F)

Poor planning for sexual activity may stem from several reasons, including difficulty finding available partners, or illness-related factors (e.g., disorganized behavior). Difficulty initiating and maintaining relationships may also be attributed to anergia or poor social skills. Male participants also reported frustration with social stigma regarding their mental illness; when some participants attempted to socialize and form relationships, they encountered attitudinal barriers that were discouraging:

P:: Sometimes I'll meet a person who will go to the group home with me. I can't "date" any others (persons without a SPMI) because they say that I am a "sick psycho." There is nothing that you can do about it. I'll meet a friend here (at the psychiatric center) and we'll maybe go out for maybe a couple weeks.

F:: You said something about "psycho," and I'm not sure what you mean.

P:: I mean most girls won't date psychos, at least I don't think they will. That's what I've found. (M)

Self-Reported Sexual Behavior Reveals Risky Practices

When participants did form sexual partnerships, they were typically in social networks that may confer enhanced risk for HIV-transmission. The following excerpts indicate how men met sexual partners:

F:: What do you do in the evening?

P1:: I go home and get something to drink for the night. Then, next thing I know, I'm looking for a friend, someone, a companion. I'm not married, but I'm bisexual, so I'm not looking for love, I'm looking for companionship.

P2:: Once in a great while, I'll go to a bar and try to meet somebody. Once every two weeks. One night stands are good for me. That's why I make bar trips once in a while.

P1:: Bars, I like to go into bars. That's the best place at this point.(M)

P:: Once in a while, I will go see a lady. I just go and have intercourse and then I'm gone. Usually three times a week.

F:: This is someone that you've known for a while?

P:: Yeah. I met her in the hospital. And then I met her at (psychosocial club). But I haven't seen her in a while now because she turned real hard and stuff. She's just telling different guys, "don't come back." (M)

P:: She's sort of my girlfriend now, but I'm about to break up with her, she goes behind my back and has sex with other people.

F:: Have you said something to her about it? That you're concerned?

P:: I told her not to do it, and she told me she's doing it for the money. That's prostitution, that'll get her arrested. She's going to get a disease, and she's going to end up in jail. I'm worried about her. (M)

In general, women exercised more caution in partner selection, but reported a similar degree of HIV-risky sexual behavior. Women in more stable intimate relationships were very unlikely to use condoms, despite uncertainty about their partner's monogamy. They reported feeling "safe" in long-term relationships, often despite intermittent problems with STDs.

P:: You can get a chancre sore in your mouth from that. I used to have chancre on my mouth, and I didn't have oral sex. And it wasn't from kissing, it just appeared there.

F:: Where do you think it was from?

P:: I think it was from him having sex with somebody else. And we talked about it, and he said "no," so I figured he doesn't want to talk about it, so forget it. He explained to me that he didn't want to discuss it, so I didn't say nothing to him. (F)

P:: Up until last month I was involved intimately with both of my male friends. Now I'm involved with only one of them.

F:: Were you seeing both of them at the same time?

P:: Yes. It was one male friend, and then it went a step further with the other male friend. My values have changed a little bit and I don't like having sex with both. I like to have monogamous relationships in case I get something, so he won't get it. (F)

Knowledge Regarding HIV Tends to be Inaccurate and Superficial

Participants were usually able to identify the primary routes of HIV-transmission. However, there were notable exceptions that indicated a superficial knowledge base:

P:: I used to do some, do sex in the front, but I don't do it that way now.

F:: In the front? What does that mean?

P:: Intercourse in the vagina. Because I was afraid I'd catch a disease. I'm afraid so I don't do it that way anymore.

F:: How do you do it now?

P:: In the butt. I guess you can't catch nothing in the butt, can you? (F)

F:: When do you think it's safe to have sex without a condom?

P:: During my menstruation. If anything should arise, it will show up in my blood tests. (F)

P:: Condoms. I don't know much about females and what they do. I suppose contraceptive devices too, I guess that could help. I don't know, maybe it doesn't, I'm just taking a guess. (M)

F:: What do you know about HIV?

P1:: It's syphilis. HIV is syphilis with herpes genital warts.

P2:: Herpes genital warts?

P1:: Yes. Herpes is complications of pneumonia. You know, all those things. (F)

All participants had adequate knowledge about the potential for HIV-transmission during sex, but when asked to explain how a woman could give HIV to a man during sex, a participant responded as follows:

P:: If they both "get off" at the same time, because there are microscopic blood particles that come out. That's all I know about it. (M)

Participants were also markedly misinformed about HIV-antibody testing. In many groups, men and women stated beliefs that HIV-testing occurred routinely in their medical or psychiatric care. Over 50% of the women "thought" that they had been tested for HIV, but were unsure. The context of their responses suggested that these misinformed beliefs provided them with a false sense of security regarding their HIV serostatus. Each of the following exchanges occurred in different focus groups:

P:: I'm not sure if it (an HIV-antibody test) has been done on me or not. I remember when I was in (psychiatric hospital) and the nurse come in and said that they were going to do a blood test. I said "You mean HIV don't you?" I figured they did it then for whatever reasons, but from what I hear, they're suppose to have your consent. What with all the things that doctors do, I'm not sure. (F)

F:: Do you know how people can get tested for HIV?

P:: No, well, I pretty much know that doctors and hospital and clinics can, and I think (state psychiatric center) does it to all their patients. (F)

F:: How long ago was your test?

P:: I don't know if I had a test or not. They took a whole bunch of blood samples. (M)

When participants were aware of their HIV serostatus, at times this knowledge undermined behaviors that could reduce risk. For example, some participants would not talk about HIV risk with sexual partners because they had negative HIV-antibody tests.

F:: When do you think you should talk about safer sex or HIV?

P2:: I probably wouldn't say anything. I had a check-up.

F:: So you got checked for HIV?

P2:: Yes, so I wouldn't say anything to him. (F)

F:: How do you decide what to do - whether to use condoms or not?

P:: I have my blood tests, right? I'll stick to that. I'm careful enough. (F)

Motivation for Risk Reduction is Modest Due to Low HIV Risk Perception

When participants were asked to talk about their own risk for HIV-transmission, inaccurate perceptions about risk were apparent. Many men believed that partners who were without obvious disease and clean were "safe":

F:: How can you tell if someone has HIV?

P1:: Maybe their skin is all clammy -- that might sound weird. And, how you select your partner, determining cleanliness and certain behaviors that would come with.

P2:: The only thing I've heard is that it's like a real bad case of the flu, except you never get well. That's all I've heard. (M)

F:: Do you think that you have been at any risk with this partner?

P:: No. Because she is a real heavy-set woman and I haven't seen her losing a lot of weight or anything. That's one of the symptoms that shows someone that someone has it, losing a lot of weight. (M)

P1:: If I know somebody real well, I think I wouldn't ask (about HIV). If it's a one-night stand, I'd ask.

P2:: Yeah. If you know somebody real good, you know they keep themselves clean and all that stuff. Wash ...and all that stuff. (M)

Women also used superficial characteristics to determine whether a partner was safe from HIV (or other STDs).

F:: If someone were infected with HIV, how could you tell?

P1:: I couldn't be positive. I wouldn't know.

P2:: If they don't take baths -- Can they get anything if they don't take baths?

F:: What do you think?

P2:: My boyfriend takes baths. He washes. He takes a bath once a week. (F)

F:: If you meet a man, how would you know that he might be somebody that you might get HIV from?

P:: If he's dirty. If somebody is dirty you might get HIV from them. (F)

It was also rare for a participant to cite AIDS as being more important than other difficult life circumstances; thus, HIV risk was not salient in participants' daily lives.

F:: Do you think that patients here think that HIV is a problem or not?

P2:: I don't think it's a big deal or a big problem. People blow it up to be more than what it really is, I believe. They blew it up so big like they did with syphilis. And it just doesn't seem right.

F:: Who "blew it up"?

P2:: The people that, on television, and the media. No, it is a serious venereal disease, but it can be treated if caught in time and can be cured. I think they got it under control now. (F)

Participants Acknowledged Poor Sexual Communication Skills

When participants were informed about the potential for HIV risk, and motivated to bring up a discussion of safer sexual behaviors, significant deficits in communication skills were still evident. Some men were concerned that such discussion might jeopardize sexual opportunities:

P:: It's (safer sex) kind of a sore subject, so they would probably get mad.

F:: Why?

P:: It's just a personal issue. It might kind of irritate them.

F:: When do you think you would bring it up?

P:: I don't know. I would certainly try to bring it up sooner or later. (M)

P:: We never discussed it (HIV).

F:: Why?

P:: Maybe I thought she would think less of me.

F:: What would she think?

P:: Maybe she would think that I had HIV. (M)

P:: P: A lot of them, in the past, I have just asked them, "are they clean?". And when it gets to the point where they are ready to have intercourse, then they are going to tell you the truth because they would want you to tell them the truth. (M)

Consistent with these concerns about jeopardizing sexual opportunities, participants who met resistance to condom use were unlikely to insist upon condom use or refuse sexual activity:

F:: What do you say when someone doesn't want to use condoms?

P:: I usually let them just take it off. That's when you feel like you're in love with someone, you know. Everything will be all natural, not man-made, you know. (F)

Even poorer understanding of sexual communication skills was indicated by participants who preferred to talk about these topics <u>after</u> sex had already occurred:

P:: I'd bring up condoms after I had sex. I'd bring out everything, even HIV, try to figure out the problem and have sex, safe sex with the condom.

F:: Why would you wait until after you had sex?

P:: Because I figure maybe this girl love me so much to have a baby. And she just wants to have a baby, and I'd say I could love that person. I could learn to love her. (M)

F:: You had sex and then talked about safer sex?

P:: Yes. The second time.

F:: How did you do that?

P:: I asked him, I said "Are you very clean? Do you take good care of your body?" And then I asked the person if they ever contracted a venereal disease, and if they considered condoms or AIDS. (F)

Discussion

The purpose of the focus groups was to enhance our understanding of HIV-related risk behavior among persons with a SPMI in order to develop improved risk reduction programs and to inform mental health providers about the risk faced by their clients. Although survey research suggests that persons with a SPMI have HIV-related knowledge and motivation deficits, little is known about how these factors contribute to unhealthy sexual choices. This initial qualitative study provided insights regarding participants' sexual partnerships and settings, as well as the ways that misinformation, risk perception, low motivation for changing sexual practices, and interpersonal skill deficits influence HIV-risky sexual behavior.

Consistent with conclusions from survey research (Carey, Carey, & Kalichman, 1997), our participants with a SPMI reported significant HIV-related risk. Participants described the social context in ways that enhance risk. Sexual partnerships were often transient, with other psychiatric patients or commercial sex workers. Sex often occurred after substance use and visits to bars. Thus, sexual partners and settings included those recognized as "high risk." The focus group approach gave participants the opportunity to explain how these relationships developed and how sexual risk behavior occurred. Participants shared how much they valued sexual intimacy, and expressed frustration with social and economic factors that interfered with the formation of stable relationships (e.g., stigmatization of mental illness, limited socializing opportunities). Therefore, when potential sexual partnerships arose, concern about HIV risk reduction was not a high priority. If a longer-term relationship did develop, most participants were reluctant to jeopardize trust by discussing STDs or sexual behavior changes. Moreover, stable partnerships were perceived as "safe" despite recurrent problems with STDs and uncertainty about partner monogamy. Therefore, negotiation about HIV or condoms was often not considered.

Several psychological factors were reported to be antecedents of risk behavior, spanning the informational, motivational, and behavioral skill constructs of the Fisher and Fisher (1992) IMB model. With regard to HIV-related information, mental health professionals should be aware that persons with a SPMI may demonstrate superficial knowledge (e.g., that HIV can be transmitted sexually), but have limited understanding of the process of HIV-transmission and how to reduce risk for HIV-infection. Participants were unable to identify bodily fluids that carry sufficient HIV for transmission, and had many misconceptions about HIV-antibody testing. Moreover, participants in our groups tended to overestimate the accuracy of their knowledge, resulting in an underestimation of their risk for HIV-infection. Many participants, for example, believed that they had been tested for HIV-antibodies during routine medical or psychiatric evaluations.

This pattern of knowledge deficits highlights the importance of an educational component in risk reduction intervention for persons with a SPMI. Although most of our participants knew that "you can get AIDS from sex," some did not know the difference between vaginal and anal sex. When asked to solve a problem about sexual choices in a hypothetical scenario, few patients could present solutions to reduce risk. For example, most focus group participants knew that HIV-antibody testing opportunities were available, but could not articulate how to integrate testing into an understanding of their current HIV-serostatus, or how to incorporate testing information into a plan for future HIV risk reduction. To assess knowledge, we recommend the use of concrete examples that require patients to use their knowledge in practical situations. To help patients reduce their risk, we recommend reviewing key facts using

a variety of modalities that help to overcome any cognitive or literacy limitations (e.g., pictures, oral problem-solving).

As anticipated, we found that participants were not highly motivated to adopt HIV-preventive behavior. Participants did not perceive personal risk for HIV, perhaps because they relied on superficial cues: if sexual partners appeared to be healthy and clean, these sexual partners were perceived as "safe." Therefore, we recommend that interventions be tailored so that persons with a SPMI assess their personal risk for HIV more objectively, based on their behavior, and not on the appearance of a partner. We recommend exercises that address misconceptions about the appearance of persons with HIV, and discussion of specific sexual behaviors that are known to confer increased risk for HIV-infection (Kelly, 1995). Individuals can learn that any person is susceptible to HIV-infection, and to estimate their risk based upon their behavior instead of partners' superficial characteristics. Identification of safer behavioral choices may enhance motivation by reducing the barrier of a limited behavioral repertoire.

Participants showed few practical or communication skill requisites necessary for HIV risk reduction. For example, participants did not carry condoms and rarely used them. They described being susceptible to situational influences for high-risk behavior, including substance use and unplanned sexual opportunities. When women reported attempts to communicate with partners about condom use, they were typically unsuccessful in negotiating for safer sexual behavior. We recommend that skills-training be a central component of HIV risk reduction interventions with persons living with a SPMI. Interventions will need to improve basic self-management skills to avoid high-risk sexual situations or partners, and to be prepared with condoms to use during sexual activity. Interpersonal and communication skills-training needs to enhance participants' ability to negotiate for safer sex, and should emphasize assertiveness training. Initial efforts to reduce HIV risk among persons with a SPMI indicate that intensive skills-training, including behavioral role-plays for rehearsal and corrective feedback, is essential for effective intervention (Kalichman, Sikkema, Kelly, & Bulto, 1994; Kelly et al., 1997; Weinhardt, Carey, & Carey, 1997; Weinhardt, Carey, Carey, & Verdecias, in press).

This qualitative study elicited sometimes unexpected information about the sexual experiences of persons with a SPMI, and facilitated the design and implementation of an HIV risk reduction intervention. Specifically, information from focus group participants yielded detailed accounts about how social context (i.e., partners and settings) and psychological antecedents (i.e., misinformation, low risk perception and motivation, and poor communication skills) influenced HIV-risky sexual choices. Because persons with a SPMI are a demographically and clinically heterogeneous group, we recommend that more qualitative research be conducted to clarify the needs of persons with SPMI at different treatment sites. For example, most of the participants in this study were European-Americans with schizophrenia. However, because increasing evidence across a variety of treatment sites indicates behavioral risk among persons with a SPMI, the assessment and intervention recommendations presented here provide useful general guidelines to incorporate HIV-related attention into their care.

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This study was supported by a grant from the National Institute of Mental Health to Michael P. Carey (R01-MH54929). We thank Joseph Himmelsbach, Thomas Cheney, David Peppel, Jeanette Mattson, Christopher Correia, and Laura Braaten for their assistance, and the participants for their important contributions.

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