

# Missed Opportunities: Prevention With HIV-Infected Patients in Clinical Care Settings

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**Objective:** To assess current practices related to prevention with HIV-positive patients in Ryan White–funded primary care settings and the barriers to providing such services.

**Method:** Exit surveys about HIV prevention services were conducted with 618 HIV-infected patients at 16 primary HIV care clinics receiving Ryan White CARE Act funding. To place the exit survey findings in context, qualitative in-depth interviews were conducted with 16 clinic administrators, 32 primary care providers, 32 support service providers, and 64 patients.

**Results:** One quarter of patients reported having had a general discussion of “safer sex and ways to prevent transmission to others” during that day’s primary care visit. However, only 6% reported discussing specific sexual activities. HIV prevention counseling was less common than counseling for adherence to antiretroviral therapy, emotional issues, and diet and nutrition ( $P < 0.001$ ). Patients in clinics with established procedures for HIV prevention counseling were significantly more likely to report receiving such services (odds ratio = 2.17). Qualitative interviews identified barriers to providing prevention services as lack of time, training, funding for staffing, and providers’ understanding of their roles and responsibility.

**Conclusions:** HIV prevention counseling is not routine in most clinics, and the low frequency of such services represents missed opportunities for HIV prevention.

**Key Words:** prevention with positives, prevention in primary care settings

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Until recently, prevention planning has shied away from interventions directed toward people living with HIV because of a justifiable concern about further stigmatizing them.<sup>1</sup> However, considering that every new infection starts with someone who is already infected, failing to include HIV-infected people in prevention efforts is a missed opportunity to avert new infections.

A report from the Institute of Medicine recommended that HIV prevention interventions (prevention with positives) become a standard of care in clinical care settings that serve HIV-infected patients.<sup>2</sup> The US National HIV Prevention Plan, developed by the Centers for Disease Control and Prevention (CDC), lists prevention with HIV-infected individuals as the top priority,<sup>3</sup> and the agency has developed HIV prevention case management guidelines to accomplish this goal.<sup>4</sup> Most recently, the CDC announced a new initiative that focuses on prevention with positives.<sup>5</sup> Among its recommendations is the implementation of biannual risk screening and prevention counseling with HIV-infected patients in clinical care settings.<sup>6</sup> In part, this new emphasis is needed because people with HIV are living longer and more sexually active lives. In addition, unprotected sex among some populations is increasing,<sup>7–17</sup> and high-risk sexual behavior is common among HIV-infected people followed in primary medical care.<sup>18</sup>

An estimated 350,000–528,000 individuals with HIV receive regular primary care.<sup>19</sup> Thus clinical care settings are in a strategic position to improve ties between prevention and medical care.<sup>20</sup> A recent study in six California clinics found that 29% of HIV-infected patients reported that no clinic provider had ever talked with them about safer sex.<sup>21</sup> Qualitative research with primary care providers reported that some conduct risk assessment and counseling only during initial visits, when concerns about HIV risk are cued by changing circumstances in a patient’s life (eg, new relationship) or by a medical condition (eg, sexually transmitted disease), or in response to a patient’s question.<sup>22</sup> Other providers conduct prevention assessment and counseling regularly and view themselves as actively helping patients to reduce their risk of transmission. Research with HIV-infected patients indicates that a collabora-

tive provider-patient relationship, in which the patient and provider make joint decisions regarding health care, was associated with lower levels of sexual risk and shared needle use.<sup>23</sup>

The Ryan White CARE Act, administered by the Health Resources and Services Administration (HRSA), provides funds to state and local governments as well as other public, nonprofit health care organizations to improve the quality of HIV primary care. Although HIV prevention with positives has not previously been an expectation in these Ryan White clinics, such settings provide an excellent opportunity to reach HIV-infected people in primary care. Our goal in this study was to better understand how prevention with positives fits into current standards of care in these primary care clinics.

We conducted this study to assess the current practices of providers regarding prevention with HIV-positive patients in Ryan White-funded primary care settings; the incentives and barriers to providing prevention services with HIV-positive patients in these clinical settings; and the perceptions of patients regarding their needs for services to help them reduce the risk of transmitting HIV.

## METHODS

Exit surveys and in-depth qualitative interviews were conducted at 16 Ryan White-funded clinics in nine states between January 2001 and March 2002. The cities and medical settings were selected to include a geographic range of high, medium, and low AIDS incidence areas,<sup>24</sup> a mix of Ryan White CARE Act program types (Titles I-IV), and diversity in patient volume and demographics. We contacted 24 clinics. Eight could not participate: four cited inadequate staffing or other administrative problems, and four were unable to obtain local human subjects approval in the period allocated for data collection. This left a final sample of 16 clinics. Chicago, Columbia (South Carolina), Fort Lauderdale, New York City, and San Diego each had two participating clinics; Houston, Mobile, and Montgomery (Alabama), Santa Fe, San Francisco, and Seattle each had one. Seven clinics required local human subjects approval in addition to the approval obtained from the University of California, San Francisco.

### Exit Surveys

HIV-infected patients ( $n = 618$ ) completed face-to-face exit interviews after leaving a routine clinic visit with their primary care providers. Inclusion criteria were HIV-infected status, receipt of primary HIV care at the clinic, and an ability to provide informed consent. A 15-minute standardized survey instrument was developed to assess the frequency and variation of prevention services offered to patients. Due to the number of clinics involved and the complexities in arranging data collection at 16 different locations, a convenience sample of patients was collected. Two field staff visited each clinic for five days. During our time at a clinic, we collected as many exit

surveys as logistically possible from all eligible patients. The number of participants per clinic ranged from 9-69 (mean = 39) and depended on the patient volume during a one-week field visit. Participants were either recruited directly by the interviewers in the waiting room or referred by a member of the clinic staff (usually a nurse located at a clinic's front desk), depending on the nature of the setting and the confidentiality procedures at each clinic. Surveys were conducted in private or semiprivate areas arranged by the participating clinics. Fifty-six of the exit interviews were conducted in Spanish and the remainder in English. Patients were reimbursed \$10 for their participation. Exit surveys were anonymous and precoded with identification codes. Demographic information about the participants is presented in Table 1.

The exit survey assessed the kinds of HIV prevention and counseling services people had received at the clinic. For each question, participants first were asked if they had received a service at that day's visit and at any other visit in the previous six months. Those failing to respond in the affirmative were then asked about visits at any other point in the past, allowing us to determine the percentage of participants who had never received a specific service.

Participants were asked whether they had had discussions with any staff at the clinic about medication adherence, nutrition and diet, emotional issues (such as stress, anxiety, or depression), cigarette smoking, alcohol use, drug use, and needle sharing. Participants were then asked if they had had discussions about "safer sex and ways to prevent HIV transmission." This was followed by questions assessing discussions about specific sexual acts, disclosing one's serostatus to a partner, and the correct use of condoms, as well as questions about receiving testing for sexually transmitted disease and HIV prevention-related reading materials.

Because the main outcome variables (presence or absence of services) were dichotomous,  $\chi^2$  and logistic regression techniques were used to determine whether patient and clinic differences were associated with differences in care. Pearson  $\chi^2$  tests were used to determine significant differences in the proportion of participants receiving different services.

### Qualitative Data Collection

To develop a qualitative understanding of each clinic, we used a rapid assessment model of data collection.<sup>25</sup> Consistent with this approach, field teams of two interviewers visited each clinic for five consecutive days to characterize the clinic during that period. First, we reviewed descriptions of each clinic's primary mission, structure, and population served, available to us in documents provided by clinic staff or on the Internet. Second, we conducted ethnographic observations in the clinic waiting rooms and completed field notes to describe clinic environment, eg, the presence of prevention materials, and interactions between patients and staff. Finally, we conducted 144 in-depth qualitative interviews with clinic

**TABLE 1.** Characteristics of Exit Survey Participants, n (%)

|   |            |
|---|------------|
| Race                                    |            |
| African American                        | 313 (50.6) |
| White                                   | 155 (25.1) |
| Hispanic/Latino                         | 116 (18.8) |
| Other                                   | 30 (4.9)   |
| No response                             | 4 (0.6)    |
| Gender                                  |            |
| Female                                  | 167 (27)   |
| Male                                    | 451 (73)   |
| Sexual orientation                      |            |
| Heterosexual                            | 302 (48.9) |
| Gay/lesbian                             | 278 (45)   |
| Other                                   | 30 (4.9)   |
| No response                             | 8 (1.3)    |
| Age                                     |            |
| 18–24                                   | 17 (2.8)   |
| 25–34                                   | 121 (19.6) |
| 35–44                                   | 294 (47.6) |
| 45+                                     | 186 (30.1) |
| Education                               |            |
| 12th grade or less                      | 336 (54.4) |
| Some college or more                    | 279 (45.1) |
| No response                             | 3 (0.5)    |
| Sexual partners in the last 6 months    |            |
| None                                    | 202 (32.7) |
| 1 partner                               | 297 (48.1) |
| >1 partner                              | 116 (18.8) |
| No response                             | 3 (0.5)    |
| First diagnosed with HIV                |            |
| ≤5 years ago                            | 257 (41.6) |
| >5 years ago                            | 361 (58.4) |
| CD4 cell count                          |            |
| ≤500                                    | 364 (58.9) |
| >500                                    | 135 (21.8) |
| No response                             | 119 (19.3) |
| Viral Load                              |            |
| ≤10,000 copies                          | 298 (48.2) |
| ≥10,001 copies                          | 177 (28.6) |
| No response                             | 143 (23.1) |
| Currently on antiretroviral therapy     |            |
| Yes                                     | 472 (76.4) |
| No                                      | 146 (23.6) |
| First became patient at clinic          |            |
| ≤1 year ago                             | 179 (29.0) |
| >1 year ago                             | 439 (71.0) |
| Previous visit with doctor for HIV care |            |
| <3 months ago                           | 489 (79.1) |
| ≥3 months ago                           | 123 (19.9) |
| None                                    | 6 (1.0)    |

administrators (n = 16), medical providers (n = 32), providers of support services (n = 32), and patients (n = 64). Interviews were conducted in a private space at each clinic and were tape recorded. Patients were reimbursed \$25 for their time. Administrators and providers were not reimbursed, but each clinic received \$200 for agreeing to participate in the study.

### Qualitative Data Analysis

Data analysis procedures followed an open-coding process developed by Strauss and Corbin.<sup>26</sup> During the initial phase of analysis, five analysts established a preliminary codebook of emerging concepts and categories after reading a cross-section of the interviews. Analysts then applied this preliminary codebook to 21 interviews across the three groups interviewed and modified codes to reflect further nuances in conceptual categories. This version of the codebook was then applied to all 144 interviews. Codes were applied to blocks of relevant text using Ethnograph (Qualis Research Associates, Denver, CO), a software program used to organize qualitative data and to facilitate analysis. A second independent qualitative analyst verified coded data. Discrepancies in coding were discussed among analysts and resolved. Coded data were summarized within each of the 16 clinics. Convergent and divergent perspectives were then examined within and across clinics. Secondary data and site observation reports were used to provide context for the findings from the interview data.

## RESULTS

### Exit Survey

#### Frequency of Prevention Interventions

We examined the frequency of prevention interventions in two ways. We first looked at the percentage of people reporting services among the entire exit survey sample (n = 618). Second, because previous research suggested that some providers target their counseling to people with identifiable risk,<sup>22</sup> we looked at the percentage of people reporting receipt of services among only participants who reported sexual activity in the last 6 months (n = 413). Nineteen percent of the total sample and 17% of the sexually active sample reported never having had a discussion with a clinic provider about “safer sex and ways to prevent transmission to others.” The percentages of participants reporting receipt of HIV prevention interventions at that day’s visit and in the last six months are shown in Table 2. The pattern of results was similar in both the total sample and the sexually active sample. Participants were more likely to report a general discussion of safer sex and HIV prevention than to report specific HIV prevention interventions. For example, 25% of all participants reported a general discussion that day about safer sex. However, at that day’s visit, only 6% discussed specific sexual acts and only 7% discussed disclosing their HIV serostatus to partners. In addition, receipt of specific prevention-related clinic services was low. At that

**TABLE 2.** Participants Reporting HIV Prevention Services on Exit Survey

|   | Among All Patients<br>(n = 618), % |                  | Among Sexually Active<br>Patients Only (n = 413), % |                  |
|---|------------------------------------|------------------|---|------------------|
|   | Today                              | Last<br>6 Months | Today   | Last<br>6 Months |
| Discussed safer sex and preventing HIV transmission | 25.0                               | 53.0             | 27.1  | 55.7             |
| Discussed specific sexual activities                | 5.8                                | 23.7             | 6.8   | 26.6             |
| Discussed HIV serostatus disclosure                 | 7.0                                | 23.8             | 7.3   | 26.2             |
| Discussed proper use of condoms                     | 1.5                                | 7.5              | 1.7   | 6.8              |
| Tested for an STD                                   | 6.5                                | 31.4             | 6.1   | 34.4             |
| Provided reading materials                          | 9.1                                | 27.3             | 9.0   | 27.1             |

“Today” reflects services received in the clinic on the day the participant was interviewed. “Last 6 months” reflects services received in the clinic within the last 6 months, excluding services received that day.

day’s visit, 6% of the participants reported being tested for a sexually transmitted disease.

HIV prevention counseling was reported significantly less frequently than a number of other health-related prevention discussions, as outlined in Table 3. These included adherence to antiretroviral therapy, emotional issues, and diet and nutrition. It also was less common than drug counseling. Of 229 people who had used drugs, 32% were counseled at that day’s visit about drug use. However, among the drug users at highest risk of HIV infection—the 41 participants who reported injecting drugs recently—only 5 were counseled that day about sharing needles.

**Differences Across Clinics**

The 16 clinics differed significantly in the frequency with which patients reported receiving HIV prevention services that day ( $\chi^2 = 42.7, P < 0.001$ ) and at other visits in the previous 6 months ( $\chi^2 = 54.9, P < 0.001$ ). We used logistic regression analyses to examine the effect of region or clinic size on either HIV prevention or adherence counseling within the last 6 months. Regression models held constant a patient’s race, gender, sexual orientation, age, and education. No re-

gional differences were identified when clinics were organized as Northeast (n = 4), South (n = 7), or West (n = 5). When compared with 6 large clinics (>1000 clients), patients seen in 7 medium-sized clinics (300–1000 clients) were significantly more likely to receive HIV prevention counseling (odds ratio [OR] = 1.74; 95% CI: 1.04–2.90;  $P < 0.05$ ). No significant differences were found between 3 small (<300 clients) clinics and those characterized as large or medium-sized.

Specific clinic practices were important in determining the frequency of services. In particular, patients were more likely to receive prevention counseling at that day’s visit if their appointment lasted longer than a half hour than if it was  $\leq 30$  minutes (OR = 1.55; 95% CI: 1.04–2.33;  $P < 0.05$ ). This difference remained significant even when regression models were expanded to control for clinic and for patients’ race, gender, sexual orientation, age, and education.

**Predictors of Receipt of HIV Prevention Counseling**

A variety of patient characteristics influenced the likelihood that individuals received HIV prevention counseling in the last 6 months, excluding that day’s visit. People seen at a clinic for <1 year were significantly more likely than those

**TABLE 3.** Exit Survey Participants Reporting HIV Prevention Counseling Compared to Other Health-Related Discussions

| Question Discussed | Today           | $\chi^2*$ | P     | Last 6 Months   | $\chi^2*$ | P     |
|--------------------|-----------------|-----------|-------|-----------------|-----------|-------|
| HIV prevention     | 24.6% (n = 618) | Reference |       | 50.6% (n = 618) | Reference |       |
| Adherence to ARTs  | 41.5% (n = 472) | 26.4      | 0.001 | 68.4% (n = 472) | 14.3      | 0.001 |
| Emotional issues   | 36.6% (n = 618) | 10.1      | 0.001 | 58.6% (n = 618) | 53.2      | 0.001 |
| Diet and nutrition | 33.0% (n = 618) | 7.5       | 0.006 | 58.1% (n = 618) | 45.1      | 0.001 |

“Today” reflects services received in the clinic on the day the participant was interviewed. “Last 6 months” reflects services received in the clinic within the last 6 months, excluding services received that day.

\*Pearson  $\chi^2$  test is used to determine whether the percentage of individuals receiving a service differs from the percentage receiving HIV prevention counseling that day or in the last 6 months.

seen for >1 year to report prevention services (OR = 2.35; 95% CI: 1.60–3.44;  $P < 0.001$ ). The 413 sexually active patients were more likely to report prevention counseling than those who had not had sex recently (OR = 1.75; 95% CI: 1.24–2.49;  $P < 0.005$ ). Twenty percent of the sexually active individuals ( $n = 83$ ) said they were worried they “might have given HIV to someone else” in the last 6 months. Such patients reported more frequent HIV prevention counseling than those not reporting this concern (OR = 2.04; 95% CI: 1.21–3.42;  $P < 0.01$ ).

### Qualitative Results

Qualitative analyses found that clinics grouped into three types. In the three type I clinics, HIV prevention was an integral part of the clinic’s mission statement and procedures. These procedures included a formalized risk assessment conducted on a regular basis. In the 11 type II clinics, prevention was widely endorsed by providers and administrators but was not necessarily part of the clinic’s mission statement. In these clinics, some providers developed their own strategies for assessing risk and encouraging behavior change. In the two type III clinics, no procedures for risk assessment were in place and the providers we interviewed did not identify such activities as being part of their role.

### Linking Qualitative Data to the Exit Survey

The importance of establishing procedures was confirmed by findings from the exit survey. At the three type I clinics—those with written procedures—participants were significantly more likely to report receiving HIV prevention counseling both at that day’s visit (OR = 2.17; 95% CI: 1.41–3.32;  $P < 0.001$ ) and in the last 6 months (OR = 1.89; 95% CI: 1.24–2.89;  $P < 0.01$ ) than at the other 13 clinics. Conversely, at the two type III clinics, participants were significantly less likely to report receiving HIV prevention counseling both at that day’s visit (OR = 0.56; 95% CI: 0.32–0.99;  $P < 0.05$ ) or in the last 6 months (OR = 0.59; 95% CI: 0.38–0.92;  $P < 0.05$ ) than at the other 14 clinics.

### Clinic Approaches

We identified three models of HIV prevention with positives in these clinics. First, a “physician-based” approach involved risk assessment and prevention counseling as part of the primary care office visit because patients would respond best to prevention messages from their doctors. Second, a “specialist” approach involved designating a nonphysician staff member at the clinic to be responsible for risk assessment and HIV prevention counseling as a routine part of the clinic visits. Case managers, peer educators, health educators, or nurses served as specialists; primary care providers referred patients to the specialist. The advantage cited in clinics using this approach was that specialists had more time to spend with patients and were more expert than primary care providers in relevant skills (health education, motivational counseling, or

case management). Third, a “multidisciplinary” model perceived risk assessment and HIV prevention goals as the shared responsibility of the clinic team. Those involved in this team style believed that prevention was more effective if distributed widely and that hearing the message repeated from different staff was helpful to patients.

### Provider Barriers

Qualitative interviews identified barriers to providing HIV prevention services in clinical settings, including lack of time, lack of specialized training, dedicated funding for staffing, and some providers’ understanding of their role. In general, the concept of “prevention with positives” was not clearly understood or defined. Interviews with some providers also reflected conflict over their role and responsibility. Many providers described themselves as advocates for their patients’ health, rather than as guardians of the public health. Thus, these providers tended to put the needs of their patients first, over any public health concern about their patients transmitting HIV. Other providers clearly identified prevention activities as part of their role and viewed such counseling as in the best interests of the patient and public health. However, even when there was agreement about the appropriateness of HIV prevention services, there was no consensus among providers in different clinics about who should be responsible for it.

### Prevention Messages

Promoting condom use was the only consistent message found in provider interviews. Some providers focused their HIV prevention activities narrowly on basic education: modes of transmission, condom use, and clean needles. On the other end of the spectrum, some providers had a broader or more holistic perspective on HIV prevention and, in addition to basic prevention education, addressed issues related to mental health, housing, employment, drug use, relationship counseling, community stigma, and social support. Messages or activities included inquiring about safe sex practices, framing the issue in moral terms (“Are you being good?”), supplying condoms, discussing adherence to medication, discussing reinfection and prevention of other sexually transmitted diseases, strategizing disclosure, developing self-esteem and coping skills, mental health or relationship counseling, accessing clean syringes and drug treatment, and assisting with basic needs: housing, food, transportation, and access to medications. For providers focused primarily on patient care, the message was centered on protecting the patient and was often neutral in tone. For those more concerned about public health, the message often involved confronting patients with the reality that they could infect other people.

### Patients’ Perspectives

Rapport with an individual provider was a key element in patients’ willingness to discuss sexual behaviors. Patients who initiated discussions with their providers did so when they

faced situations with specific HIV concerns, such as a new relationship, a pregnancy, or a partner's response to a new diagnosis. Patients who did not want to discuss HIV prevention with providers included those who felt they already knew about HIV prevention; those socialized into norms surrounding sexual privacy; those who did not understand how HIV prevention applied to individuals already infected; and those who had other personal or professional resources for discussing HIV prevention.

## DISCUSSION

In this large multisite sample of people in Ryan White–funded primary care clinics, counseling designed to prevent further transmission of HIV was significantly less frequent than other health-related counseling. When HIV prevention services were reported, they were unlikely to involve routine risk assessment and evidence-based behavioral interventions. Given that 67% of patients were sexually active and a significant number of such patients reported a concern about recently having transmitted HIV, these findings suggest missed opportunities to reduce the number of new HIV infections.

Providers expressed a conflict between their responsibility to attend to the patient's health and their concern about the public health consequences of not preventing further HIV transmission. Providers who viewed themselves as advocates for patients were likely to frame prevention discussions around risks to the patient, such as reinfection and sexually transmitted diseases. Providers with a public health attitude were more likely to frame messages in terms of reducing the risk of infecting other people and risk to communities. There were also important differences in how providers viewed the scope of prevention. For some, the task was to define in technical terms how the virus moved from one person to another. For others, who stressed risk assessment and management over time, the task was defined as motivational counseling or techniques to promote behavior change.

### Implications for Field

The results of this study suggest that the successful implementation of prevention counseling in a clinic setting requires two key elements: commitment and resources. In general, the concept of “prevention with positives” was not well defined in many clinics, which may have contributed to the overall lack of HIV prevention services. Established procedures for risk assessment and counseling can rectify this problem. Patients were more likely to report receipt of HIV prevention counseling in clinics where it was acknowledged and valued by both administrators and providers and was codified in a mission statement. In addition, prevention counseling will be successful only if providers are given necessary resources, such as longer appointment times. Even the brief assessment and counseling strategies recommended by the CDC<sup>6</sup> require a commitment of time. The need for resources was evidenced

not only in interviews but also in the findings from the exit survey, where patients who reported longer appointments were more likely to report prevention counseling.

Successful implementation of HIV prevention interventions also requires all parties involved to agree that such services are needed and appropriate as part of the clinic's mission. Prevention initiatives in clinical care settings need to change the behavior not only of patients but also of providers. Interventions need to consider the size and structure of the clinic, in combination with the perceived needs of the patient population. Future research will need to examine how the different approaches (particularly provider-based vs. specialist models) compare in terms of necessary time investment, cost, client satisfaction, and effectiveness.

Behavioral intervention offers a promising option for clinics wishing to implement HIV prevention counseling because the service can be offered quickly and without outside referrals. Using clinic-based interventions would allow HIV prevention to become a part of regular primary care visits, as opposed to a service offered primarily to new patients. Research in other domains has already demonstrated the potential impact of behavioral interventions. They have been effective in the treatment of depression,<sup>27</sup> smoking cessation,<sup>28–31</sup> reducing alcohol abuse,<sup>32–34</sup> weight loss and other dietary changes,<sup>32,35</sup> and increasing physical activity.<sup>36</sup> However, future studies will need to demonstrate specifically that clinic-based counseling can effectively reduce HIV risk behaviors.

This study has a number of limitations. To have data from a real-world setting, we sampled at a clinic level. Although purposeful sampling allowed us to understand more about Ryan White CARE Act–funded clinics, it limits our ability to generalize to other sites. Administrative difficulties in obtaining agreements to collect data within the timeframe of the study further posed limitations on generalizability of the data collected. Although the exit survey sample reflects the demographic characteristics of Ryan White clients, many of our participating clinics were more comfortable making initial patient contact, resulting in the unavailability of subject-level participation rates. With regard to the qualitative interviews, the limited numbers of participants identified by local key informants also impose limitations on generalizability.

Nonetheless, these findings should be of assistance, particularly at a clinic level. Clinics could use existing models for brief, structured risk assessment and interventions during routine clinical care visits to reinforce the need to avoid further transmission. HIV risk assessment could be linked with referrals for more intensive prevention case management or other services, depending on the needs of the patient.

Finally, our interviews with patients reconfirmed the importance of involving people with HIV in the development and oversight of clinic-based programs for preventions with positives. One of the major burdens of HIV disease is fear of infecting others. People with HIV are in a position to recognize

the negative consequences of becoming infected and have historically provided much of the leadership in advocating for HIV prevention programs. Involving people with HIV in the early stages of clinic-based prevention programs can improve the acceptability of interventions and allow all parties involved to respond to the issues of HIV-related stigma.

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