

The Treatment Advocacy Program-Sinai: A Peer-Based HIV Prevention Intervention for Working with African American HIV-Infected Persons

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Abstract As HIV/AIDS continues to disproportionately affect African American communities, there is a growing need for empirically based, culturally appropriate, tailored interventions for this clientele. As part of a Health Resources and Services Administration (HRSA)/Special Projects of National Significance (SPNS) initiative to increase prevention amongst those living with HIV, we implemented the Treatment Advocacy Program Intervention at Mount Sinai Hospital in Chicago, IL, USA. The main goal of the intervention was to help patients increase their medication adherence and sexual safety skills. This paper describes the rationale for implementing this peer-based HIV-prevention intervention, discusses how the intervention was tailored to work within our low socioeconomic status, urban patient population, and reviews the training and quality assurance activities needed to integrate the intervention into our primary care clinic. We review the intervention content in detail, including the structure of the multiple, one-on-one education sessions, and the core topics covered (medication adherence and sexual safety). Finally, we discuss the challenges in implementing this program, many of which arise from the chaotic social situations that our patients experience.

Keywords Treatment Advocacy Program · HIV Prevention with Positives · HIV Prevention with African Americans · Peer-Based HIV Prevention

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Description of Clinic Setting/Population

As HIV/AIDS continues to disproportionately affect African American communities, there is a growing need for empirically based, culturally appropriate, tailored interventions to better serve this clientele (Dean, Steele, Satcher, & Nakashima, 2005). As part of a Health Resources and Services Administration (HRSA)/Special Projects of National Significance (SPNS) initiative to increase prevention amongst those living with HIV we implemented a prevention with positives program using the Treatment Advocacy Program Intervention at Mount Sinai Hospital in Chicago.

The six community areas in Chicago that comprise the hospital's catchment area have a population of over 330,000 residents (making it equivalent in population to the 45th largest city in the US). In these community areas, 34% of residents are African American and 41% are Hispanic. The hospital patient base is almost exclusively people of color, namely African-Americans (50%) and Mexicans and/or Mexican-Americans (50%). Over 48% of the people living in these community areas live beneath the poverty level and most did not graduate from high school. These areas are among the poorest community areas in Chicago, as defined by an annual household income falling below the federally defined poverty level. Three of the six community areas are among the ten poorest areas in the city (Boskay, Thomas, Gibbs, Harper, & Reina, 2005). The specific community areas represent the epicenter of the HIV/AIDS epidemic in Chicago, coincident with gang violence, high-unemployment rates, as well as alcohol and drug abuse (Boskay et al., 2005).

HIV is increasing in Mount Sinai's catchment area. The Chicago Department of Public Health (CDPH) reports that the AIDS prevalence rate of the community area is 409.4

cases per 100,000 persons compared to a rate of 329.8 for the city and 144.2 for the US (Chicago Department of Public Health, 2005). Similarly, the gonorrhea and chlamydia rates in the community area are twice as high as the overall city rate and five to eight times as high as the national rate (CDPH, 2005). For the past 6 years, averages of 211 HIV and 160 AIDS cases have been diagnosed annually in Mount Sinai's service area. Between 2002 and 2004, 88% of the HIV cases reported by Mount Sinai Hospital were African American, 8% were Hispanic, 53% were women, and 50% could not identify their HIV risk factor(s) (CDPH, 2005). Recent surveillance data from the Centers for Disease Control and Prevention (CDC) also demonstrate the prevalence of late testers, defined as those who convert from HIV to AIDS within 1 year of detection of HIV (CDC, 2003). Between 1999 and 2005, 48% of women diagnosed at Mount Sinai were late testers, compared to 29% of women in Chicago. In the same time period, 39% of African Americans diagnosed at Mount Sinai converted to AIDS within 1 year of diagnosis compared to 35% in Chicago. The prevalence of late testing in this population may be due to several factors, including a lack of education about the early signs of HIV, inadequate education about risk behaviors, and challenges accessing health care services (CDPH, 2005).

The infectious disease clinic at Mount Sinai serves about 400 HIV-infected patients, the majority being uninsured or covered with public insurance such as Medicaid or Ryan White CARE act coverage. Similar to many clinics across the country, prior to this initiative, our clinic provided mental health and case management services but did not provide targeted prevention services for HIV-infected patients. The intervention we created was the Treatment Advocacy Program-Sinai (TAP-Sinai) that was specifically tailored for Mount Sinai's clinic population, largely composed of indigent, African American patients. Our HIV clinic programs are currently 80% African American and 20% Hispanic. African Americans are the fastest growing segment of our clinic population. Table 1 provides a demographic breakdown of participants who agreed to participate in our TAP-Sinai program. After discussing the rationale for clinic-based peer interventions, this article will provide an overview of the structure of the TAP-Sinai sessions and will detail the infrastructure needed to implement the TAP-Sinai (e.g., training, quality assurance).

Intervention Choice and Rationale

In order to focus on prevention among HIV-infected individuals, we considered interventions that were delivered by: (1) physicians, (2) specialists (e.g., social workers, case

Table 1 Demographic breakdown of participants

Participant characteristic	Women (N = 58)	Men (N = 64)
Age (average)	41 years	42 years
Years living with HIV (average)	7 years	7 years
Race/ethnicity: African American	91%	89%
Income: ≤ \$10,000 per year	67%	73%
Education: ≤ high-school education	43%	34%
Self-reported sexual orientation: heterosexual	90%	52%
Relationship status: single	52%	48%
Self-reported HIV transmission mode		
Heterosexual sex	89%	33%
Men: sex with men	NA	39%
Injection drug use	3%	20%

managers), or (3) peers/consumers (Mayer, 2004; Morin et al., 2004). In HIV prevention, peers are defined as individuals who are HIV-infected and from the community being served (HRSA, 2005; McKirnan et al., 2001). We chose to deliver a peer-based intervention based on three factors: (1) the literature suggesting that peers can provide a wide variety of HIV prevention and treatment services, including counseling and testing, helping patients identify risk behaviors, and acting as patient advocates (Anderson, 1996; HRSA, 2005), (2) the characteristics of our stigmatized, ethnic minority clinic population, and (3) the goals and structure of the Treatment Advocacy program intervention itself. We will discuss all of these factors in detail.

First, there is evidence that para-professionals (e.g., peers) can deliver behavioral interventions as effectively as professionals (e.g., mental health counselors; Bright, Baker, & Neimeyer, 1999; Neilson, 1995). Peers have delivered safer sex and safer injection messages in programs proven effective at decreasing the HIV risk behavior of a wide range of populations. Peers have delivered these messages in individual, group, and community level programs. For example, peers have successfully recruited at-risk women for HIV-testing and counseling (Vargo, Agronick, O'Donnell, & Stueve, 2004) and counseled HIV-positive women to enhance their motivation to decrease their substance use (Boyd et al., 2005). Cabral et al. (1996) found that peers delivered a state of the art counseling intervention that was both structured and individually tailored to the client depending on stage of change. Similarly, in group interventions, peers have contributed to increased condom use and safer sex skills among HIV-positive women (Wingood et al., 2004), HIV-positive men and women (Kalichman et al., 2001), and low-income African American women (DiClemente & Wingood, 1995). On a community level, peers have provided education and helped

decrease the sexual risk behaviors of men who have sex with men (CDC, 1999; Kegeles, Hays, & Coates, 1996; Kelly et al., 1997), injection drug users and their partners, sex workers, at-risk youth (CDC, 1999), and at-risk urban women (CDC, 1999; Lauby, Smith, Stark, Person, & Adams, 2000). In youth HIV prevention, peers have provided key insights and perspectives, enhanced client retention, and established a close connection with clients (HRSA, 1997).

Second, the characteristics of our clinic population led us to believe our patients would be very receptive to a peer-based intervention. The role of an HIV prevention peer educator can be seen broadly as an HIV-infected individual who is culturally familiar with community norms and attitudes and able to relate to the struggles of the clients being served (HRSA, 2005; McKirnan et al., 2001). The peer must also be knowledgeable about HIV transmission and HIV care (McKirnan et al., 2001). Many of our patients report community-stigma and social isolation associated with their HIV status. An HIV-infected peer may better understand the obstacles faced by patients from the same community, and thus be effective in relating prevention messages and culturally relevant risk reduction suggestions. For example, a peer may be in a better position to evaluate the feasibility of a given strategy (e.g., a plan for consistent condom use) given his or her knowledge of other community stressors and challenges faced by the patient (e.g., stigma associated with HIV status). A peer will have fewer time constraints and therefore more opportunity to provide an extensive prevention message than those who are involved in the medical management of the patient. Professionals working in the clinic may have time constraints that limit their ability to create a detailed prevention plan. After examining the characteristics of our urban clinic setting, we felt that a peer-based intervention, performed on-site, would be ideal for enrolling patients who may otherwise not have the resources to return multiple times to the clinic or lack the motivation to participate in an off-site HIV prevention intervention.

Third, the goals and structure of the peer-based intervention we chose were also closely aligned with the needs of our clinic population. Within the context of the TAP-Sinai intervention, successful coping included engaging in health-promoting behaviors that encourage physical and psychological well-being and self-care, such as adhering to medication regimens and attending medical appointments regularly. Likewise, the TAP-Sinai also aimed to help clients reduce or avoid unhealthy behavior such as high-risk sex and alcohol/drug use, which may lead to poor health outcomes including sexually transmitted infections, opportunistic infections, and HIV drug resistance. From a public health perspective, another goal of the TAP-Sinai was to reduce the overall transmission of STDs and HIV in

the community. The specific goals of the TAP-Sinai included: (1) improving medication adherence by learning pill box techniques and ways to associate doses with ongoing daily routines, (2) encouraging open communication with medical providers, (3) improving sexual safety skills by examining prior high-risk episodes and planning for future condom use, and (4) identifying techniques for managing negative moods, decreasing substance use, and improving communication to help decrease sexual risk and improve medication adherence.

The structure of the intervention was also appropriate for our patients. Within our clinic, patient issues range from moderately complex to extremely difficult. For example, many of our clinic patients are coping with community-related HIV stigma, poverty, drug/alcohol use, domestic and street violence, and housing instability; some patients reported living in environments where trading sex for money/drugs was widespread. The intervention was delivered individually and tailored to the needs of the patients. The TAP-Sinai has the breadth and flexibility to address each HIV-infected patient's unique needs. The TAP-Sinai intervention also gave the peer interventionist a great deal of flexibility and preparedness because the intervention contained in-depth content addressing the diverse, challenging, and intense issues that patients often present (e.g., alcohol/drug use, depression).

Intervention Design

The TAP-Sinai included multiple one-on-one education sessions with an HIV-infected peer from the local community and was based on a structure of mandatory and optional modules (see Fig. 1). The mandatory modules were medication adherence and sexual safety (and, when appropriate, alcohol/drug use which can influence either adherence or sex risk). The specific emphasis on these two topics was designed to address behavioral issues that were both important and often under-explored in patients' routine primary care visits. Because of the improved health and longer lifespan made possible by highly active anti-retroviral treatment (HAART), patients are coping with HIV as a chronic illness, rather than a terminal one (CDC, 2005). Patients must develop behavioral skills to maintain medication adherence to HAART, which is necessary throughout the lifespan. Because adherence to complex therapies requires more than simply instructing patients to take their medications, behavioral counseling may help some patients who are having difficulty with adherence (Treisman & Angelino, 2004). Regimens may be complicated and patients may need to manage side effects and dietary/lifestyle restrictions. Adherence to HAART has also been shown to decrease infectivity in HIV-infected

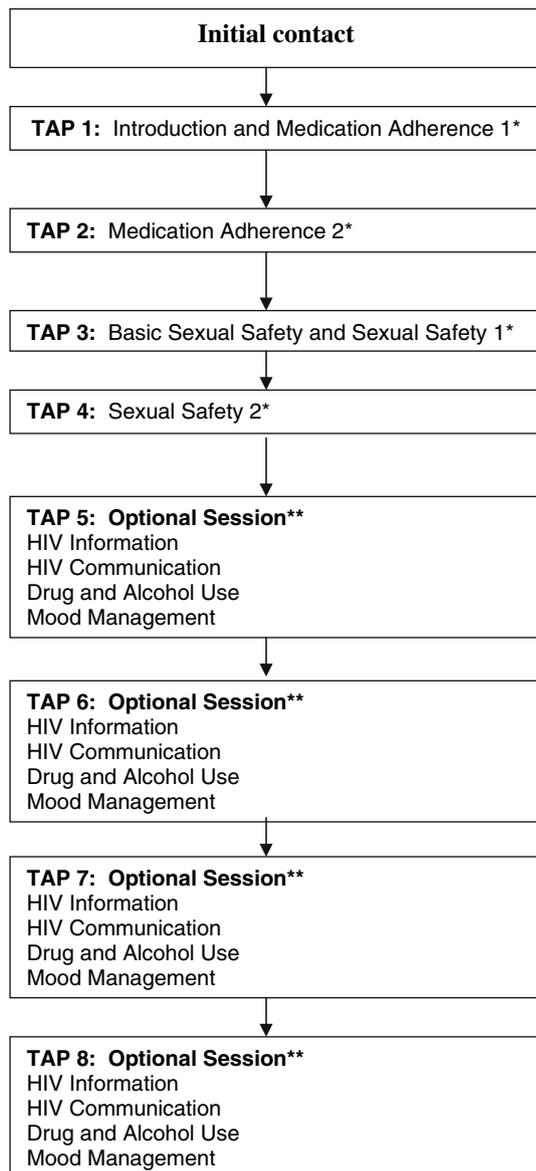


Fig. 1 Suggested intervention timeline. *We suggest that TAP 1 and TAP 2 take place within a 1-month window and that TAP 3 and TAP 4 take place within a 1-month window. **The optional modules can be completed during sessions 1–4, as time allows. They can also be scheduled as free-standing sessions

patients because it decreases an individual's HIV viral load (Porco et al., 2004).

Living longer and feeling healthier may also contribute to patients' desire to maintain, establish or re-establish intimate relationships. For this reason, understanding the risk of transmission and gaining skills to reduce this risk is important for maintaining the health of patients and their sexual partners. Patients need skills to identify and plan for high-risk sexual situations in advance, and to build skills to be able to reduce risk in light of past high-risk behavior. Finally, to the extent that alcohol and drug use interferes

with medication adherence and impairs sexual decision making, it was also a focus of the TAP-Sinai intervention. Outside treatment referrals for severe alcohol/drug use and mental health issues were a part of the TAP-Sinai protocol.

The TAP-Sinai was delivered via computer-assisted technology and aside from the mandatory modules delivered to everyone, the content was individualized to the needs of the patient through the use of skip patterns and prompts for discussion. The intervention contained educational material presented in an ordered format, as well as many individualized prompts found in the computerized session modules. Each TAP-Sinai module was in the form of a standardized Power Point slide presentation on each intervention topic (e.g., introduction to medication adherence, basic sexual safety). The peer led the discussion of each module using the slides and the patient sat along side answering questions and discussing the content. The slides provided a frame for discussion, ensuring that certain basic definitions and information were consistently presented. However, the slides also provided ample opportunity for informal discussion between peer and patient. The built in skip-patterns allowed the peer educator to skip over slides that were not relevant. Each module ended with a Behavioral Goals Worksheet that was filled out jointly by the peer educator and patient. The intervention was structured so that all sessions took place in a private office, immediately before or after the patient's usual primary care visits (approximately every 3 months), or at the patient's convenience.

Intervention Tailoring

After choosing the peer-based Treatment Advocacy Program, we tailored it for use with poor, urban, African American patients. This intervention was originally developed for use with gay and bisexual HIV-infected men at Howard Brown Health Center in Chicago (Treatment Advocacy Program-Howard Brown; TAP-H). In order to use it in our largely African American, urban clinic, we used a systematic tailoring process (S. Raja, D. McKirnan, K. Allgood, & N. Glick, 2006, unpublished data) to create the TAP-Sinai.

The first step in modifying the TAP-H intervention for use at Mount Sinai was establishing collaboration among research and clinical staff from Mount Sinai, University of Illinois at Chicago, and Howard Brown Health Center. This Collaborative met regularly to review the literature on HIV prevention in minority communities of low socio-economic status and generate initial modifications. The second step was to meet with key leaders in the city who had expertise in working with inner city, HIV-infected African American patients. The project director, a licensed clinical psychologist, met with approximately eight researchers, psychologists, physicians, executive directors of HIV agencies, and

case managers. Leaders were given an overview of the intervention and shown sample intervention slides. Based on their training and expertise, leaders emphasized different issues, but overall, they suggested including: (1) more basic information about HIV transmission, for example, the fluids and types of contact by which HIV was transmitted, and the locations, definitions, and common vernacular of anatomical terms (e.g., definitions of “vaginal sex;”) (2) more information on the basics of injection drug use and needle cleaning; (3) discussions about the impact of care-giving and family responsibility on HIV care; (4) discussions about the role of church and other spiritual support in patients’ lives; (5) information on the impact of practical issues (e.g., care-giving burden, lack of refrigeration for medications, lack of money) on HIV care. Several leaders also suggested that the intervention should focus on short-term goals, particularly for homeless and severely disenfranchised patients.

After meeting with key community leaders, a series of two focus groups of ~15 participants each was conducted to get consumer input in the modification process. The focus groups were demographically similar to our target population. The focus groups discussed topics such as medication adherence techniques, types of high-risk sex behavior, and their personal stories of disclosure and support (or lack of support). The groups were shown several slides from each intervention module. They provided feedback on content, as well as the actual wording of the slides (e.g., commonly used vernacular for anal sex, oral sex). Overall, the focus groups recommended that tailoring should include:

- (1) Information on the specific prevalence of HIV on women and ethnic minorities.
- (2) Common myths about HIV transmission found in minority communities (e.g., “HIV cannot be spread through non-vaginal sex” “There is a cure of HIV”).
- (3) Ways to communicate with your medical providers (with an emphasis on discrimination and justified mistrust of the medical system).
- (4) Encouragement to use social support (particularly family and church support) to decrease social isolation related to HIV-status.
- (5) Techniques to deal with HIV-related stigma in one’s family and community.
- (6) Ways to approach HIV-infected men who have sex with men who may not label themselves as gay or bisexual.
- (7) A focus on behavioral mood management techniques (e.g., alternate ways to cope with stress).
- (8) Suggestions for managing practical life issues that influence HIV care (e.g., difficulty with steady housing, steady phone, transport, cost of drugs).
- (9) Inclusion of referrals for other traumatic issues (e.g., street violence, domestic violence).

Upon completion of the focus groups, the project director refined the HIV prevention intervention to include the feedback from the Collaborative, the key community leaders, and the focus groups. After these changes were made, individuals in the focus groups examined all the modules and provided minor feedback on wording and presentation style. For example, they suggested avoiding the terms “HIV disclosure” and use “HIV communication” instead because they felt “disclosure” was a negative term for many participants. They also suggested we eliminate the term “barebacking,” which may not be understood by all participants, particularly women, and use terms such as “wetting the back” and “wetting the front” for unprotected oral sex.

At this point, the peer educators pilot tested the TAP-Sinai on approximately five volunteer HIV patients. They took notes during the process and recorded common patient questions and reactions to the intervention materials. The project director provided supervision to the peers and made minor wording changes to the intervention based on this feedback.

As a final step in intervention tailoring, we used evaluation data collected and feedback from patients and peers after initial intervention implementation to make minor modifications. For example, based on patient reports of homelessness, we added referrals for housing assistance and reflected housing-related content in the TAP-Sinai modules (e.g., how unstable housing affects medication adherence). Similarly, based on initial data on highest level of completed education (75% of our sample had a high-school diploma or less) and the clinical reports of the peers, we significantly simplified the TAP-Sinai Behavioral Goals Worksheet. The modified worksheet gave specific prompts and examples to help patients generate concrete, behavioral goals related to medication adherence and safer sex (e.g., “remember to take my medications, even on days when my daughter is home sick from school”). Also based on peer feedback, we clarified several technical terms used in the intervention (e.g., “superinfection, viral load”) and provided examples that were more relevant to participants (e.g., “missing a medication dose due to homelessness,” “engaging in risky sex while in a domestically violent relationship”).

Selection and Training of Staff

Once we tailored the TAP-Sinai, we began the process of selecting and training staff. Based on our commitment to hiring peer educators who were both HIV-infected and culturally similar and able to relate to the struggles of the

clients (McKirnan et al., 2001), we selected peer educators who closely matched patients in our target population (e.g., in terms of ethnicity, age, educational/financial background). Job interviews were conducted by a multidisciplinary team and focused on experience as well as personal characteristics that would influence job performance. Because of the intense and demanding nature of the position, the team preferred that peer applicants had been living with HIV for at least 18 months, had a self-reported history of adherence with their medical treatment and care, and understood the importance of safer sex practices in their own health management. The TAP-Sinai is based on the premise that *peer support* can be beneficial, therefore we screened for peers who were willing to disclose their HIV status to clients, either during recruitment of the patient in the clinic setting (which was not always conducive to disclosure), or at the first private session, at their discretion. Finally, we wanted peers who possessed the ability to discuss their own challenges while remaining focused on patients' goals and issues and this was assessed in the job interview. Peers who were in recovery from alcohol/substance abuse were considered as long as they demonstrated the ability to maintain their own health while fulfilling the job responsibilities.

We hired two peer advocates to deliver the TAP-Sinai intervention. Both peers were African American and had experience in living in the surrounding communities. Because we wanted to match our patient demographics as closely as possible, one educator was male and one was female. The female peer educator hired initially is still working on the project. We experienced some turn-over in the second position. One peer was terminated because he suffered a drug relapse during his probationary period and hospital policy mandated his dismissal; one peer educator did not demonstrate an adequate grasp of the intervention material despite considerable training and practice sessions. The second peer educator position was permanently filled many months into the project; the individual hired has an extensive background in HIV peer-based outreach.

To implement this intervention peers were required to collaborate closely with physicians to determine if patients had acute or long-term issues that interfered with their ability to participate in the intervention. Peers were required to conduct TAP-Sinai interviews with patients, maintain regular contact through follow-up activities with patients, attend regular meetings with project staff, provide referrals and linkages to other services if needed, and engage in ongoing trainings. Because of the varied and challenging duties, the peers completed an extensive course of training. This training took place in the form of readings, role play, and community trainings. The reading and discussion of key concepts in HIV virology, counseling, harm reduction, motivational interviewing, and ethics took

5 days of training time. In regard to the scientific articles (e.g. journal articles, technical reports) the peers read the articles and the project director subsequently summarized the main points during training. The peers then asked questions and made comments on the articles. Overall, this approach worked well in teaching the peers the key information needed for intervention implementation. Next, peers role played and practiced each TAP-Sinai module numerous times: with their clinical supervisor, with each other, with other staff (e.g., case managers), and with volunteer clients. Supervisors observed these practice sessions and offered feedback to improve performance. This phase of training took ~10 days to complete. Last, the peers attended several trainings sponsored by the Mid-west AIDS Training and Education Center (MATEC). The peers completed a 16-h HIV Multicore training, which provides an overview of medical and psychosocial issues and an 8-h Prevention with Positives training.

TAP-Sinai Modules and Structure

After intervention tailoring and peer training, the TAP-Sinai was ready to be implemented in our clinic. The intervention was structured so that virtually all of the intervention related activities took place around the patient's usual primary care visits over the course of 1 year (see Fig. 1 for a suggested intervention timeline). Approximately 90% of patients we approached in clinic chose to participate in the project. Each TAP-Sinai session lasted between 1 and 2 h depending upon the level of patient participation and the individual relevance of each topic. Throughout the intervention, peers worked closely with clinic case managers and mental health staff to make appropriate linkages and referrals as needed.

Overall, each TAP-Sinai module was based on an *IMB* perspective (Fisher & Fisher, 1992) namely providing clients with *Information*, followed by engaging in *Motivational Interviewing* to help the client prepare of any changes they wanted to make. The Peer then helped the patient to plan for and practice *Behavioral Change*. Each TAP-Sinai module followed this basic IMB structure. The peer presented information on a topic, engaged in motivational interviewing with the patient around that issue, and finally, the patient and peer discussed behavior change strategies. At the end of each module, peers and patients jointly completed the Behavioral Goals Worksheet identifying patients' short-term goals and generated small behavioral steps to help them work toward the goals. For example, a patient decided he wanted to use condoms when he met new partners at a local bar. Using the TAP-Sinai worksheets, the peer helped him develop small steps to attain this goal (e.g., keep condoms available, practice putting a condom on without hesitation). In subsequent

sessions, the peer followed up on behavior change strategies (i.e., asking the patient if they have practiced the small behavioral steps discussed in the previous session). The peer then took an IMB approach to the next set of modules (for example, Medication Adherence is followed by the Sexual Safety sessions).

A key aspect of the IMB perspective is establishing and maintaining a strong therapeutic alliance (Fisher & Fisher, 1992). In terms of a peer-based intervention, this translated into establishing mutual respect and rapport with patients and allowing clients to set their own pace of change. For example, although peers suggested behavior change strategies, they allowed patients to decide how, if at all, these strategies would be incorporated into their daily lives. Peers were instructed to tell patients that they were there to listen and offer ideas, not to criticize them for engaging in risk behaviors. In addition, to establish a strong rapport with patients, peers encouraged participants to call them as needed to check in about their progress and call clients in-between sessions if clinically indicated (e.g., if a client is in distress or facing a life transition). Peers were also available for extra visits and other forms of contact (e.g., email, telephone calls) as staffing and clinic demands allowed. Finally, during the study year, peers engaged in ongoing contact (e.g., sending birthday cards, holiday cards) with patients to encourage their continued participation in the intervention.

As discussed, the main goal of the TAP-Sinai was to help patients improve their medication adherence and sexual safety skills. Four mandatory sessions focused on these two topics. If participants were not taking HIV medications or would not be starting medications in the near future, peers would skip the Medication Skills sessions and began with the Sexual Safety Skills sessions. After completing the mandatory TAP-Sinai sessions, the goal was that a patient would better understand the importance of medication adherence and open communication with clinic providers. Patients would better understand the basics of using a pill box and peers demonstrated how to fill the pill box in session and assisted the client in doing so for several weeks, as needed. Patients were also able to discuss and identify ways that they would increase their sexual safety (and alcohol/drug safety, if relevant) to better protect themselves and others. For example, after completing the TAP-Sinai, patients might better understand the basics of condom use (male and female condoms), their own risk profile (e.g., they tend to have unprotected sex with HIV-infected partners), ways to plan for those risks (e.g., go to a bar with friends, keep condoms available), and potential consequences of risky behavior (e.g., STDs). In relation to alcohol/drugs, patients would show a better understanding of how substance abuse may lead to risky sex practices and lower medication adherence (e.g., getting

drunk may lead to having sex without a condom and forgetting to take a regular medication dose).

The issues of medication adherence and sexual safety were also strongly emphasized in Optional TAP-Sinai sessions focused on Mood Management, HIV Communication, HIV Information, and Alcohol/Drug Use. The mandatory modules contained many prompts for the patient and peer to identify optional modules that would be useful for review. The need for optional modules was identified in the first four sessions (when the Medication Adherence and Sexual Safety Modules were covered). The Optional modules were administered on an as needed basis, based on patient interest and peer/supervisor judgment. For example:

- (1). We recommended that patients having difficulty with alcohol and drug use (i.e., their substance abuse was interfering with their daily functioning, particularly their HIV care regimen or having difficulty practicing safer sex due to substance use) complete the Alcohol and Drug Use Module.
- (2). We recommended that patients who had not disclosed their HIV status to anyone, those who lacked a strong social support network, and those who had not disclosed their status to sexual partners complete the HIV Communication Module.
- (3). We recommended that participants who had a current or past psychiatric diagnosis (e.g., depression, bipolar disorder) completed the Mood Management Module. Participants whose moods appeared to negatively influence their medication adherence and ability to practice safer sex may have considered completing the Mood Management Module.
- (4). Finally, we recommended the module on HIV Information should be completed by newly diagnosed participants and any participants who appeared to have questions about basic HIV terminology and treatment.

Supervisors and peers subsequently discussed the need for appropriate optional modules at each supervision session, but it was up to the patient to make the final decision. For instance, if a substance-abusing patient did not feel s/he had a problem, we advised the peer to use motivational interviewing techniques to encourage completion of the Alcohol and Drug Use Module. If the patient still did not want to complete the module, we advised the peer to preserve the therapeutic alliance while the module was left uncompleted.

Through our experience, we have defined several Core Elements that were critical to implementation of this intervention:

Process-related Core Elements

1. The TAP-Sinai was by definition, a peer-implemented HIV prevention intervention.
2. Peer Advocates were HIV-infected individuals who were familiar with the cultural norms of the surrounding community and were able to relate to the struggles of the patients being served.
3. The peers established a strong therapeutic alliance with patients that was based on respect and patient participation in generating change strategies.

Content-related Core Elements

1. The TAP-Sinai taught medication adherence skills, particularly encouraging the use of open communication with providers, pill boxes, and other medication reminder techniques.
2. The intervention encouraged sexual safety by teaching specific condom use skills and also helped participants identify their own high-risk situations.
3. The behavioral plans (on written goals worksheets) for the medication adherence and sexual safety modules were developed by the patient and peer and reviewed at each session.
4. The TAP-Sinai encouraged participants to use behavioral techniques to improve communication, decrease alcohol and drug use, and manage negative moods. The behavioral plans for these modules focused on how these issues influenced medication adherence and sexual safety.
5. The Mandatory TAP-Sinai modules included the Medication Skills and Sexual Safety Modules. The Optional TAP-Sinai modules included: HIV Information, HIV Communication, Mood Management, and Alcohol/Drug Use. The mandatory modules contained many prompts for the patient and peer advocate to identify optional modules that were useful for review.
6. Peers were trained to work closely with the clinic case managers when issues such as homelessness, chronic alcohol/drug use, and depression, domestic violence were reported. The modules contained many prompts for peers to make referrals to case management and mental health services.

Replication in Other Clinics

In terms of replication in other clinics, there are important factors that need to be considered in TAP-Sinai initial implementation and afterward. First, we recommend that the target population be demographically similar to the one

served at Mount Sinai and patients must be able to actively participate in a behavioral intervention, which was determined when the patient is first approached during a clinic visit. Second, we suggest that quality assurance activities take place to ensure continued adherence to the Core Elements.

Target Population

As discussed above, Mount Sinai serves a minority clientele in an economically and socially disadvantaged area of Chicago. As such, the TAP-Sinai is ideally suited for use with African American patients in poor, urban settings. The TAP-Sinai is appropriate for use with clients who have been infected with HIV via any of the following transmission routes: heterosexual contact, homosexual contact, bisexual contact, and injection drug use. In terms of specific inclusion criteria, we suggest that patients have been diagnosed for at least 3 months prior to enrolling in the TAP-Sinai. Emotional reactions may be particularly intense during the first months after diagnosis and patients may not be as receptive to meeting with a peer educator or receiving information on medication adherence and sexual safety skills during their initial period of adjustment (see Treisman & Angelino, 2004). In order to maximize continuity of care and encourage patients to practice intervention skills such as open communication with medical providers, we also recommend the patient have attended a clinic or HIV medical visit at least once in the last year. Finally, patients must be cognitively competent to participate in a behavioral intervention. Patients who are actively intoxicated on drugs and alcohol, who have psychological diagnoses that impair their ability to think and communicate clearly (e.g., psychosis or bipolar disorder which is not being medically managed), or medical diagnoses that impair cognitive functioning (e.g., brain damage, encephalitis, dementia) are not eligible for participation. Clinic physicians can help intervention staff to make decisions about patient competence. Patients must also speak English well enough to understand TAP-Sinai module content (the intervention has not been translated into Spanish at this time).

Quality Assurance

As a part of quality assurance for the TAP-Sinai, supervision and ongoing training were a routine part of intervention delivery. Peers attended weekly group supervision meetings with the project director, a licensed clinical psychologist. These sessions helped peers plan for future TAP-Sinai sessions and provided an opportunity to discuss interesting and demanding cases. The use of role-play was very useful in these sessions; the supervisor role modeled

appropriate responses to challenging patients. Group supervision was also used to help peers complete paperwork correctly and to track patients who needed to be scheduled for their next TAP-Sinai session. Overall, supervision sessions emphasized ways that peers could share their own experiences while staying focused on their clients' issues. On occasion the supervisor also met with the peers on an individual basis to process personal reactions to cases and offer individual feedback. In addition, TAP-Sinai sessions were occasionally observed by the clinical supervisor (with patient consent) to ensure intervention fidelity. Sessions were also audio taped (with patient consent) and approximately one-tenth of the audiotapes were reviewed by the supervisor to ensure intervention fidelity and to provide peers feedback on their clinical performance.

Lessons Learned

Based on positive feedback from peers, patients, and clinic staff, we believe we successfully integrated the TAP-Sinai, a one-on-one, peer based intervention, into our HIV primary care at Mount Sinai Hospital. During project implementation and afterward, our goals were to learn what our specific population needed from a prevention intervention and how reach out to our population so that they felt safe being involved in an intervention.

The main lessons we learned in intervention implementation in this population were: (1) to pay special attention to the way information on confidentiality and privacy was presented, particularly in relation to HIV-related stigma and trust of the medical system, (2) to include basic information on condom skills and HIV transmission, even for participants who have been HIV positive for several years, (3) to ensure that intervention materials were easily understood by peers and patients, and incorporate peer feedback to change materials as needed, (4) to focus on helping the peers maintain the therapeutic alliance and encourage clients to discuss difficult life circumstance, and (5) to collect relevant outcome measures for further refinement of the intervention.

First, when we first approached clinic patients, privacy, and confidentiality were among their main concerns. Although we were prepared to address these issues, the specificity of patient inquiries was somewhat surprising. Some patients requested information about the privacy training and safeguards involved in the project (e.g., locked file cabinets, ethics training of the peers, and staff) and wanted to understand the screening procedure used to approach them during clinic appointments. Related to confidentiality, patients wanted assurance that the intervention was individually based, as many reported they would never

discuss their HIV status in front of others. In addition to trust of the personnel involved in the project, working in a setting where there has been minimal exposure to research, we needed to assure patients that this intervention did not require blood samples and laboratory testing. Some patients reported a healthy mistrust of research based on prior knowledge, and some mentioned the Tuskegee syphilis study by name. Others felt a general mistrust, and believed medical interventions might actually make them sicker. Similarly, patients needed reassurance that in participating, their HIV status was not going to be exposed to community members or non-HIV clinic staff working in the hospital. Indeed, the main reason reported by patients for not being participating in the project was the fear of revealing ones HIV status to the community.

Conversely, those who were part of the TAP-Sinai intervention seemed to relish the opportunity to work with a peer and were able to confide and learn a great deal. The TAP-Sinai core emphasis was extremely relevant to our patient population. The peers reported that the basic education on condom use and medication skills was well received by most patients, even those who had been living with HIV for many years. For example, many of our female participants did not know how to put a condom on a male, and many more had no knowledge whatsoever regarding the female condom. Similarly, several patients stated they had trouble filling a pill box, and benefited from the peer helping them obtain and fill the pill box the first several times.

We also found that revising intervention materials as needed and paying special attention to the feedback of peers was essential for successful intervention delivery. The skills-based Behavioral Goals Worksheet were a key source of information and crucial for session planning, for both patients and peers. At first, supervisors found that these sheets were being under-utilized in session. We were able to address this by simplifying them significantly, based on the guidance and feedback of the peers. We rewrote the worksheets to specific give prompts and examples (e.g., "goal: don't miss my medications when I have to take care of my elderly mother at her house") and this helped patients and peers to regularly use them. Overall, soliciting and incorporating the feedback of our peer staff was very important in refining intervention content.

In terms of the establishing and maintaining a strong therapeutic alliance with patients, the flexibility of the intervention helped us to successfully engage many patients who were not yet ready to change anything in their lives. Consistent with motivational interviewing principles, one of the key goals of the TAP-Sinai was to preserve the therapeutic alliance. For example, when patients had difficulty identifying areas that they wanted to change, peers were trained to spend the session developing motivation,

but waiting to suggest concrete goals until the patient was ready. Waiting until the patient was ready before discussing specific behaviors for change made the patient less likely to drop out of treatment and more likely to talk with the peer when they were indeed ready to change. Overall, the flexible structure and content of the TAP-Sinai modules helped clients and peers balance encouraging change with respecting a patient's individual goals and priorities.

Closely related to the therapeutic alliance formed between the peers and patients are the relationship-related aspects of the TAP-Sinai that resonated with our population. During tailoring and initial implementation, we successfully assessed other salient topics in the community that may influence HIV care (e.g., housing issues, domestic violence, depression, etc.) and included intervention material and referrals for these issues. Overall, it appears that our patients may have felt more comfortable talking with peers about these sensitive topics. In supervision, peers often reported that patients disclosed violence and mental health issues in direct response to the intervention prompts, but did not relay this information spontaneously. Interestingly, the use of peers as interventionists may have been particularly useful in this context. Some of the peers had experienced these types of stressors directly (e.g., domestic violence, poverty), while others could empathize because friends and relatives in the community had dealt with similar issues. For example, one patient called her peer advocate while she was being physically abused by her boyfriend. She had only met the peer advocate for one session prior to the call. Clearly, she felt a very strong alliance to choose to call the peer in a time of crisis. Similarly, sometimes months after physicians and case managers have suggested similar treatment plans, peers have helped many TAP-Sinai participants enter and complete substance abuse rehabilitation programs and join support groups. Indeed, preliminary exit interview data suggest that many patients view the shared experiences of the peers as a source of credibility and motivation for behavior change in their own lives. One patient stated,

“This woman is living with this stuff; she's healthier than any normal person. And I'm saying I want to be just like her...I want to be healthy just like this lady is,...she's doing so well and you can live happy...[she said] ‘Hey, life isn't over, you know. You can still have fun and live just like a normal person does...’ I stopped having this negative attitude about living with this.”

Also indicative of the strong relationships formed during the TAP-Sinai, the passing away of patients has been deeply moving for peers. For example, a patient who passed away requested that his relative deliver his personal Bible to the peer advocate after his death. He wanted to

honor their work together with a special token that she would always treasure.

Finally, including pre- and post-outcome measures will help us to evaluate and refine the TAP-Sinai intervention in the future. We included self-reported measures of sexual risk (e.g., number of unprotected sexual acts in the last month) and well as clinical indicators of medication adherence collected by chart review (e.g., the presence of sexually transmitted infections, adherence to medical appointments). We also included self-report measures of social support, HIV-related stigma, substance abuse, community and domestic violence, depression, and anxiety. We have also employed qualitative exit interviews to examine the interrelationship between some of these variables, and discover how these factors may relate to difficulty in coping with HIV. We plan to use these qualitative and quantitative data to continue to tailor this intervention and implement others programs in our clinic setting.

Overall, the TAP-Sinai intervention was a well-accepted, important addition to our clinic services. The high level of structure, combined with a high level of flexibility has made it particularly useful in our clinic setting. Many of the challenges in implementing the intervention arose from the chaotic social situations that our clients experience, however in addressing these every day struggles within the context of the intervention the TAP-Sinai was made relevant to the community we serve.

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