



# PROJECT NEIGHBORHOODS IN ACTION: AN HIV-RELATED INTERVENTION PROJECT TARGETING DRUG ABUSERS IN WASHINGTON, DC

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**ABSTRACT** Project Neighborhoods in Action was a human immunodeficiency virus (HIV) outreach and intervention program that was conducted with injection drug users and crack users in several inner-city neighborhoods in the District of Columbia. Study participants were placed randomly in either a standard intervention or an enhanced intervention condition, with more than 800 persons being assigned to each group. Drug use frequency dropped from 15.2 days to 12.4 for alcohol ( $P < .0001$ ), 2.1 days to 1.6 for marijuana ( $P < .003$ ), 13.0 days to 8.8 days for crack ( $P < .0001$ ), 2.4 days to 1.5 days for cocaine ( $P < .0001$ ), 19.7 days to 15.6 for heroin ( $P < .0001$ ), and 5.2 days to 3.4 for speedball ( $P < .0001$ ). Drug injecting decreased from an average of 90.8 times to 66.9 ( $P < .0001$ ), with both direct sharing and indirect sharing rates decreasing significantly as well (from 2.4 to 1.1 times for the former [ $P < .002$ ] and from 12.0 to 8.1 times for the latter [ $P < .0004$ ]). The number of sexual partners dropped from a mean of 1.6 to 1.1 ( $P < .0001$ ). The number of drug-injecting sexual partners went from 0.3 to 0.2 ( $P < .01$ ). Having sex while high decreased from 11.2 times to 7.9 ( $P < .0001$ ). Trading sex for drugs and/or money declined from 1.9 times to 1.3 ( $P < .001$ ). Protected sex increased from 29.5% to 63.7% ( $P < .0001$ ), and the number of unprotected sexual acts dropped from 9.6 to 7.2 ( $P < .0001$ ). Only a few differences were observed for standard versus enhanced intervention respondents, with no particular pattern formed. We were left with the impression that the standard intervention and enhanced intervention used in this program were about equally effective at reducing the involvement of drug abusers in HIV-related risky behaviors.

**KEY WORDS** AIDS, Crack Use, Drug Abuse, Education, Efficacy Study, HIV, Injection Drug Users, Intervention.

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Creative methods to reach substance users with human immunodeficiency virus (HIV) risk reduction messages, materials, and programs have been employed ever since the recognition of high HIV rates in this population. One strategy that has been particularly successful when working with this population has been street outreach.<sup>1-3</sup> Typically, street outreach uses indigenous workers, who often are former substance users, to work in neighborhoods identified as being at risk and in need of services. Given the "hidden" nature of substance users, street outreach can provide access to individuals who are in great need of drug- and HIV-related information and services to which they might otherwise have little or no access. Thus, street outreach serves as a gateway to a relatively disenfranchised population.<sup>4</sup> Research suggests that drug users can be suspicious of medical professionals and institutionalized services particularly.<sup>5</sup> Therefore, outreach-based projects may have more success at establishing trust and comfort on the part of community members because outreach staff can be perceived as peers. Indeed, as our own experiences in the field showed, the outreach workers were highly effective in reaching and influencing the risk behaviors practiced by the out-of-treatment drug users targeted. In addition, because a large percentage of outreach workers are former substance users, they frequently can serve as realistic, credible, and positive role models to active drug users.

#### **PROJECT NEIGHBORHOODS IN ACTION OVERVIEW**

Project Neighborhoods in Action (NIA) was the Washington, D.C., site of the Cooperative Agreement for the AIDS Community-Based Outreach/Intervention Research Program of the National Institute of Drug Abuse (NIDA). Project NIA had two specific objectives:

- establish a system to monitor, using a mobile outreach unit, HIV risk behavior involvement among out-of-treatment injection drug users (IDUs) and crack users who live in selected neighborhoods in the District of Columbia; and
- evaluate an intervention model to prevent the spread of HIV among IDUs and/or crack users by comparing the differential efficacy of a standard, individual intervention to that of an enhanced, videotape-based group intervention.

Project NIA operated between March 1994 and May 1998. During that time, 1,631 users of crack cocaine and/or injected drugs (typically heroin or speedball) were recruited into the study, with females comprising 42.2% of the study participants, and 97.3% being African-American. The mean age was 39.6 years, with 5.6% of the respondents below the age of 30, 43.1% aged 30-39, 46.2% aged

40–49, and 5.2% aged 50 or older; 38.1% had not completed high school, and an additional 38.2% had completed high school with no additional schooling. More than half of the people in this project were single (52.9%) or separated/divorced (22.4%); only 22.1% were cohabiting or married when they began taking part in the project. Of the Project NIA clients, 76.1% were unemployed at the time of recruitment into the study; only 6.6% held full-time jobs. The overwhelming majority (98.6%) were not homeless. Nearly one person in seven (13.7%) recruited into the study was HIV positive.

Like all of the local sites of the NIDA cooperative agreement, Project NIA utilized a study design that compared the efficacy of implementing a “standard” intervention to the efficacy of implementing an “enhanced” intervention to its clients. At any time, Project NIA operated two separate sites in the District of Columbia. The sites were assigned randomly to use either the standard or enhanced intervention condition and were separated geographically by the Anacostia River (a natural boundary that separates people not only geographically but also communitywise, since drug users living on one side of the Anacostia River tend not to interact very much with those on the other side of the river). Every 6 months, operations at these sites were shut down, and two new sites were chosen for project operations. Site selection was based on a number of factors, including the staff members’ knowledge of the area as being heavily drug infested, police reports of drug arrests, documented high rates of sexually transmitted diseases (STDs) in the area, and ability to gain access to the community and its drug-using gatekeepers. This community randomization procedure was chosen in lieu of a more traditional individual randomization procedure to reduce difficulties that might have been caused by conferring different interventions and incentives to different persons within the same site. *Post hoc* analysis of the data obtained from the various standard and enhanced intervention sites showed that this study’s community randomization procedure produced no significant differences in terms of the gender, racial, age, or educational attainment compositions of the communities or in terms of the rates of drug use in them.

Like most of the 22 sites in this cooperative agreement program, Project NIA employed indigenous outreach workers to perform all of the project’s participant recruitment, interviewing, and intervention functions. Outreach workers were very familiar with the communities selected for study, with the residents in these communities, and with the issues facing these individuals. Each day, based on the designated schedule, a mobile outreach vehicle was brought to and parked at either the standard intervention or the enhanced intervention site. These sites

were centrally located in the chosen communities, and the outreach vehicle was highly visible. Staff members conducted extensive street outreach in the neighborhoods near the site by walking through the neighborhoods, visiting the housing projects, and speaking with people who were just "hanging out" on the street. They handed out condoms, brochures, and bleach, and talked with people about the purpose and goals of the project.

### PROCEDURES

Potentially eligible study participants were invited to come to the project's mobile outreach vehicle for formal screening and intake, which included eligibility confirmation through urine screen and observation of fresh "track marks," informed consent, and the collection of detailed locator information. All study participants then received NIDA's approved two-session standard intervention, which included an interview using the Risk Behavior Assessment (RBA), HIV-related pre- and post-test counseling and education, voluntary HIV testing, and referral information for drug treatment and medical services.\* The Risk Behavior Assessment collects detailed information in 10 domains: demographics, current drug use, injection practices, drug use during the past 48 hours, drug treatment history, sexual behaviors, high-risk sexual behaviors, health-related information, criminal history, and employment status. Incentives of \$15 and \$10 were paid to participants for the completion of assessment interviews following the first and second sessions.

Individuals who were placed randomly in the enhanced intervention condition received every aspect of the standard intervention just described, plus an additional session (i.e., the intervention enhancement) that took place 4–5 days after receiving their HIV test results and post-test counseling. This session was conducted in a group format and involved a group of up to 13 clients and 1 or 2 facilitators. This was a culturally relevant videotape-based intervention featuring African-American actors. It focused on four primary areas: (1) awareness of HIV/AIDS (acquired immunodeficiency syndrome); (2) the risks of transmission of HIV through needles and other injection paraphernalia (i.e., indirect sharing); (3) sexual transmission of HIV; and (4) the benefits of drug treatment. An interactive format was used: showing short video segments, practicing risk reduction behavior through role playing and demonstrations, and discussing the video and role

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\*Readers who wish to receive additional information about the standard intervention protocol should contact Dr. Hugh Klein.

plays.\* Participants completed an additional questionnaire and received \$15 incentive money after the group session.

All participants were recruited for follow-up interviews approximately 3 months later. At this time, the Risk Behavior Follow-up Assessment instrument was administered to measure overall change in behaviors from baseline to follow-up and to determine whether the enhanced intervention produced greater change(s) in any area(s) over the standard intervention alone. At the completion of the 3-month follow-up interview, participants were paid \$20.

#### **EVALUATION OF THE EFFECTIVENESS OF PROJECT NEIGHBORHOODS IN ACTION'S INTERVENTIONS**

In the analyses that follow, six drug use measures were used; they correspond to the number of days on which use of alcohol, marijuana, crack, cocaine, heroin, or speedball occurred during the previous month. Change measures were computed by subtracting respondents' frequency of use prior to follow-up by their frequency of use prior to baseline. Therefore, change scores could range from -30 (indicating a change from daily use of a drug to cessation of use from that drug) to +30 (indicating a change from nonuse of a drug to daily use of that drug).†

In addition, three injection risk behavior measures were used, all relying on a time frame of the previous 30 days: number of times injecting drugs, number of times knowingly reusing a previously used needle, and number of times knowingly reusing a previously used cooker, cotton, and/or rinse water. Again, change scores were computed by subtracting baseline values from follow-up values on these measures.

Finally, six sexual risk behavior measures were used (all using a time frame of the previous 30 days): number of sexual partners, number of drug-injecting sexual partners, number of times having sexual relations while high on alcohol and/or other drugs, number of times trading sex for drugs and/or money,

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\*Readers who would like additional information about the enhanced intervention protocol used in this project should contact Dr. Hugh Klein.

†Change scores were chosen as the major outcome measures for this study rather than cessation figures because we felt that, in the aggregate, the former reflect more accurately the study participants' behavioral changes than the latter. Whereas a relatively small proportion of the people who participated in Project NIA stopped practicing certain risky behaviors altogether, a much greater proportion reduced their involvement from a higher level of riskiness to a lower level of riskiness. If cessation had been used as the primary measure of behavioral change, the true rates of success obtained by this project would have been obscured in the presentation of the study's main findings.

proportion of all sexual acts involving the use of protection, and number of unprotected sexual acts. Again, change scores were computed by subtracting people's baseline values on these measures from their follow-up values.

The statistical significance of the rates of behavioral change reported between baseline and follow-up was assessed by conducting *t* tests to determine whether the observed magnitude of change differed significantly from zero. Since numerous tests have been conducted in conjunction with this research evaluation, Bonferroni statistical correction procedures were warranted to guard against the possibility of accepting as statistically significant any findings that might have occurred merely by chance due to the large number of tests performed. Accordingly, the requisite levels of probability necessary for a finding of statistical significance was reduced to  $P < .0083$  for drug use (i.e., the standard alpha level of .05 divided by 6, which is the number of drugs being assessed in these outcome analyses),  $P < .0166$  for injection risk behaviors, and  $P < .0083$  for sexual risk behaviors.

### FINDINGS

In terms of drug use and injection-related risk behaviors, participants in Project NIA, regardless of whether they were assigned to the standard or the enhanced intervention condition, demonstrated significant reductions in every measure between their baseline and 3-month follow-up interviews. The mean frequency of alcohol use declined from 15.2 days to 12.4 days ( $t = 8.52, P < .0001$ ) (see Fig. 1). Marijuana use decreased from 2.1 days to 1.6 days ( $t = 3.04, p < .003$ ). Crack use dropped from 13.0 days to 8.8 days ( $t = 13.09, P < .0001$ ). Respondents reported an average of 2.4 days of cocaine use during the month prior to baseline and 1.5 days of use during the month prior to follow-up—a significant decline ( $t = 4.27, P < .0001$ ). Heroin use dropped from 19.7 days to 15.6 days ( $t = 11.24, P < .0001$ ), and speedball use decreased from 5.2 days to 3.4 days ( $t = 6.47, P < .0001$ ). Drug injectors' average number of drug injections changed from 90.8 during the month before their baseline interviews to 66.9 during the month before their follow-up interviews ( $t = 9.11, P < .0001$ ) (see Fig. 2). At baseline, study participants reported more than twice the syringe sharing than they reported at follow-up (2.4 times vs. 1.1 times;  $t = 3.16, P < .002$ ), and between baseline and follow-up, they reduced their indirect sharing practices by about one-third (12.0 times vs. 8.1 times;  $t = 3.56, P < .0004$ ).

Similarly, on every sexual risk behavior dimension examined, Project NIA respondents reported engaging in lower rates of risky behavior at the time of their follow-up interview than they did at the time of their baseline interview

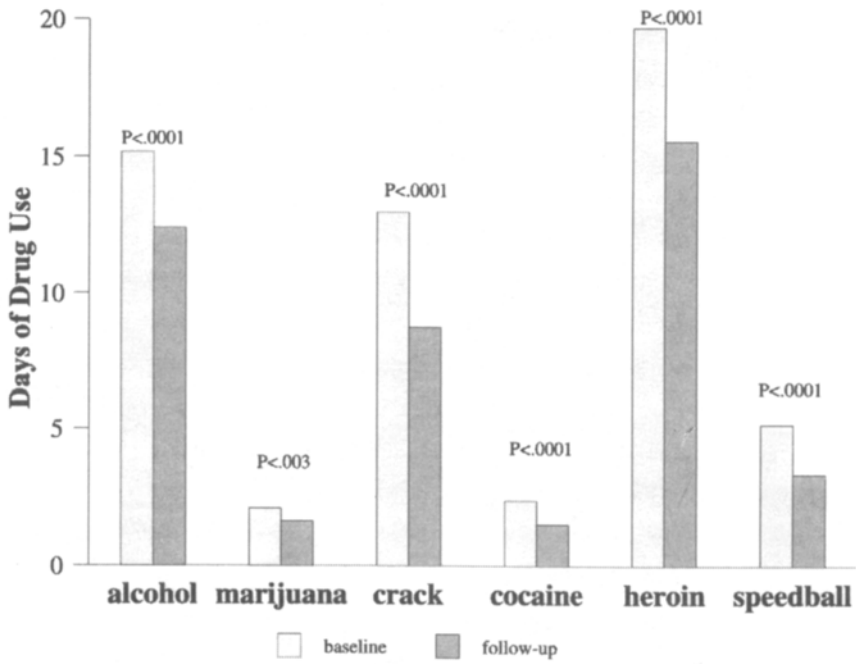


FIGURE 1 Changes in drug use.

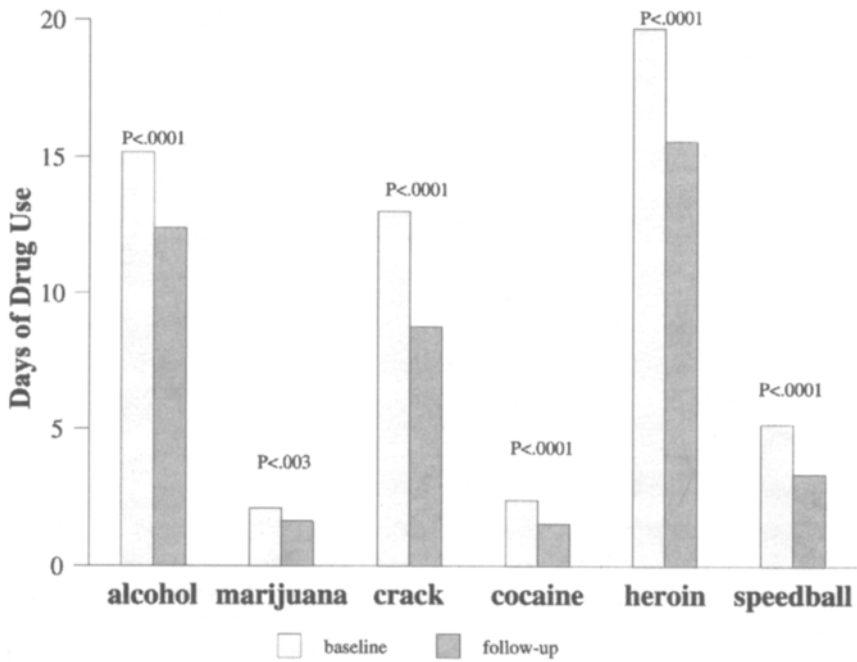
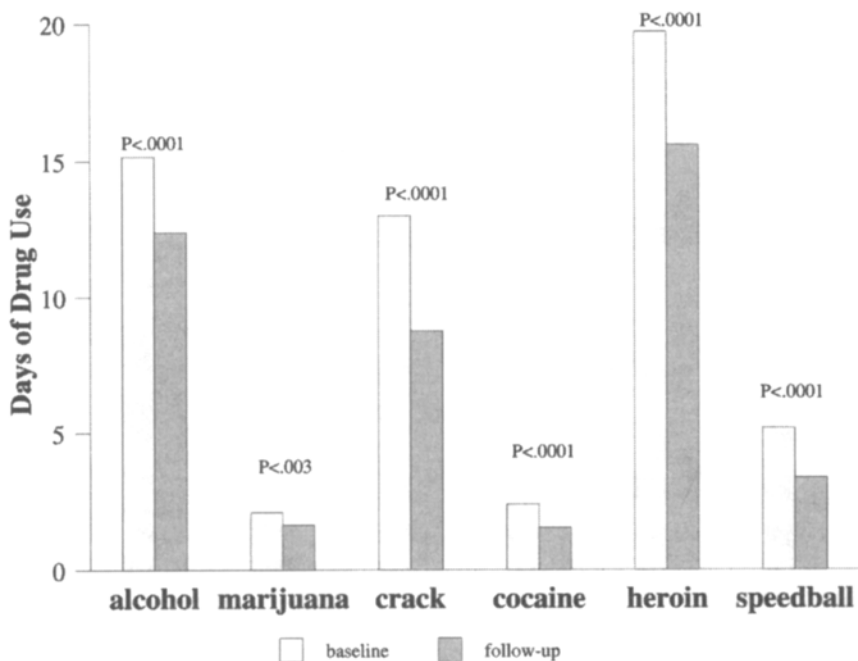


FIGURE 2 Changes in injection behaviors.

(see Fig. 3). Study participants had one-third fewer sexual partners during the month prior to follow-up than they had during the month prior to baseline (1.1 partners vs. 1.6 partners;  $t = 5.16$ ,  $P < .0001$ ) and fewer drug-injecting sexual partners at follow-up than at baseline (0.2 IDU partners vs. 0.3 IDU partners;  $t = 2.58$ ,  $P < .01$ ). Reductions on the order of one-third were noted between baseline and follow-up for number of times having sex while high on alcohol and/or other drugs (11.2 times vs. 7.9 times;  $t = 5.22$ ,  $P < .0001$ ) and number of times trading sex for drugs and/or money (1.9 times vs. 1.3 times;  $t = 3.29$ ,  $P < .001$ ). The proportion of all sex acts involving the use of protection more than doubled between baseline and follow-up, from 29.5% to 63.7% ( $t = 17.18$ ,  $P < .0001$ ), and people's average number of unprotected sex acts dropped from 9.6 to 7.2 ( $t = 4.72$ ,  $P < .0001$ ).

The preceding findings for changes in drug use, injection risk behavior involvement, and sexual risk practices were obtained for men and women alike, with no patterning of differences—indeed, with very few differences—based on respondents' gender. Likewise, the aforementioned risk behavior changes generally applied equally to people assigned to the standard intervention condition and to those placed randomly in the enhanced intervention condition. In addition, roughly comparable risk behavior changes were noted among people of different drug use classifications (i.e., noninjecting crack users, injectors who did not use



**FIGURE 3** Changes in sexual risk behaviors.



crack, and drug injectors who also reported crack use). Overwhelmingly, the evidence revealed by this study's data suggests that Project NIA was effective, and it appears to have been about equally effective for all "types" of respondents (based on gender, etc.).

#### **ACCOMPLISHMENTS AND MAIN FINDINGS**

In a variety of ways, Project NIA was a success. Over the life course of the project, more than 1,600 substance abusers engaging in high rates of behaviors that placed them at great risk for contracting and/or transmitting HIV were located, interviewed, provided with HIV-related educational information, given free HIV counseling and testing, and shown practical ways to reduce their risk for acquiring and/or transmitting HIV. Considering the high HIV seroprevalence rates observed in the communities targeted, this alone was a major accomplishment of the project and a major service to the communities that Project NIA served. Two other major accomplishments seem particularly noteworthy and are discussed at length, in turn, below: the high participation and follow-up rates obtained and the high rates of HIV-related risk reduction that study participants reported following exposure to the project's intervention sessions.

Regarding the former, the participation rate in Project NIA was approximately 95%, and the follow-up rate was 87%—both of which are quite high for studies of this kind. These high rates of participation and follow-up are due, in very great part, to the specific outreach team members who worked on Project NIA. First, without exception, all of our staff members had excellent relationships and "solid" reputations in the communities targeted in this study. Undoubtedly, these characteristics enabled them to gain access to persons who otherwise would not have been willing to participate in a project such as ours. Furthermore, these characteristics enabled them to gain the trust necessary from the target population to make a project such as ours work.

In addition, Project NIA's outreach staff members were truly indigenous: all were African-American (as were nearly all of the clients they served), and the entire outreach staff was native to Washington, D.C. Furthermore, several years prior to working on Project NIA, all outreach staff members had been active drug users in at least one of the neighborhoods selected for study. The credibility and trust facilitated by staff nativity to the specific areas in which the project operated undoubtedly contributed greatly to the project's success. Clients *knew* Project NIA's outreach workers. Thus, they were not excessively wary about having our outreach workers in their midst, and they learned that the project's ultimate goal was to help them. This, too, contributed to Project NIA's successes.

Finally, Project NIA's outreach workers could serve as particularly strong role models as they were truly peers of the study participants: they had lived through similar situations in the past.

The study's high follow-up rates also can be attributed to the extensive efforts of the staff members to carry out recruitment and follow-up procedures. If necessary, attempts to reach participants were made with a series of up to three phone calls, a letter, and then, depending on the time available, calls and visits to prisons and hospitals. Occasionally, outreach workers would knock on people's doors to locate them to collect follow-up information. It is important to note that on no occasion did any participant ever express anger or resentment when this action was taken, reflecting the respectful and unobtrusive manner with which the outreach workers in this project conducted their work.

High rates of participation and, particularly, high rates of follow-up also were attributable to the cash incentives that were provided to participants. While many programs use no incentives, and others provide noncash incentives such as vouchers and coupons, we found cash payments to be a particularly effective way to ensure high follow-up rates with this population. The incentives offered were sufficient enough to ensure participation, yet low enough not to be considered coercive. In this respect, our findings mirror those of other researchers in the field.<sup>6-7</sup>

Another important contributor to the success of Project NIA were the project's two female outreach workers. These women were particularly skilled at recruiting participants and at developing a rapport that was serious, yet warm and compassionate. In all likelihood, these traits accounted both for the high proportion of female clients who took part in our project (42%) and, in part, for the high follow-up rates obtained. Moreover, we would like to point out that the female outreach workers were especially adept at diffusing potentially uncomfortable situations with humor and, when necessary, were able to push clients a little further than the male outreach workers could. This is consistent with cultural gender norms, which generally allow women to be more confrontational with less physical risk than their male counterparts. On the other hand, the male outreach workers helped to create a safe environment for conducting the interviews. For our project, employing both male and female outreach workers seemed to be both appropriate and highly effective.

Also contributing to Project NIA's high participation and follow-up rates is the fact that we took a mobile unit into the community, making this project particularly accommodating to participants. Unlike other outreach programs, which utilize storefronts or offices for data collection, our project met participants

in the neighborhoods where they lived, “hung out,” and “copped” drugs. This increased the comfort of and convenience to study participants. Other study methods that were beneficial to this project were the use of oral HIV testing (which reduced both discomfort to participants and health risks to staff) and the utilization of the same staff members to conduct outreach, HIV testing, intervention, and follow-up recruitment (which provided the opportunity for staff and participants to become quite familiar with each other).

The other major accomplishment of Project NIA is its success in helping clients reduce their involvement in HIV-related risk behaviors. In the aggregate, study participants reduced their involvement in all three risk domains by approximately one-third. This is quite an accomplishment, especially when one considers that the “average” drug injector who participated in Project NIA had been injecting drugs for 20 years, and the “average” crack user had been using crack for 9 years. The fact that such long-established, deeply entrenched patterns of drug use could be reduced by one-third with such relatively simple, short interventions as those provided by Project NIA is encouraging.

Somewhat obscured by reporting the behavior change figures as average reductions is the fact that fairly sizable proportions of the people who participated in Project NIA stopped using certain drugs altogether between their baseline and follow-up interviews. For example, 18% of those who had been drinking during the month prior to baseline had not used alcohol during the month prior to follow-up. The comparable figures for the cessation of other drug use are as follows: marijuana = 50%, crack = 28%, cocaine = 60%, heroin = 17%, and speedball = 45%. All of these figures are anywhere from two to six times higher than the comparable numbers of people who were not using these drugs at baseline, but who reported using them at follow-up. Furthermore, 18% of the people who were injecting when they began participation in the project were not injecting at the time of their 3-month follow-up interview; 60% of those who reported engaging in indirect sharing at baseline did not report this behavior at follow-up.

The fact that such positive findings of these magnitudes were obtained is very promising. It is also encouraging to note that these findings were obtained for male and female study participants alike and for injectors and noninjectors alike. Contrary to our expectations, however, the enhanced intervention curriculum did not yield even more favorable results than the basic standard intervention. Since the enhanced intervention approach was designed specifically with our target population’s needs and risk behaviors in mind, and since it was designed to be highly engaging, multifaceted, and reasonably comprehensive, we had anticipated that larger reductions (compared to those demonstrated by the stan-

dard intervention respondents) would be noted for such behaviors as indirect sharing, sexual protection, and the like. Ultimately, this was not the case; both groups reduced their involvement in these behaviors about equally. In this respect, our findings are like those of numerous other researchers in the HIV field, who have reported no significant differences in outcomes obtained for their clients who received a standard intervention or an enhanced intervention.<sup>8-12</sup>

It is our impression that the standard intervention, including the extensive assessment of HIV risk behaviors, is itself a fairly powerful intervention. When outreach workers engaged clients in the study, gained their trust, and encouraged them to reduce their practice of risky behaviors, these factors combined to have a major positive impact on HIV risk behavior involvement. The additional 1 or 2 hours spent in an educational intervention—even one as dynamic and subculturally specific as the one presented in our enhanced intervention—apparently was not enough to make a significantly greater impact on risk behaviors.

A great deal of research has been conducted to determine the effectiveness of standard, one-session interventions versus more comprehensive, enhanced intervention programs, including numerous studies sponsored by NIDA.<sup>1-3</sup> Although findings from these studies have been mixed, a substantial majority of them found no appreciable difference in the results obtained by standard and enhanced interventions.<sup>8,11,13,14</sup>

In these studies, many of the less effective enhanced intervention designs consisted of only one to three additional sessions. Several researchers have posited that an additional one to three sessions may be an insufficient amount of intervention to result in substantially greater behavioral change in some individuals.<sup>14,15</sup> There have been several research studies, however, examining standard versus enhanced interventions that have found that enhanced programs can make a significant impact above and beyond that of the standard program alone. For example, in their review of several NIDA studies, Rhodes and Malotte<sup>1</sup> found a significant correlation between the amount of intervention an individual received and the reduction in both sexual and injection risk behavior. While unable to show a significant difference between most NIDA enhanced and standard interventions, preliminary analysis did indicate a trend "toward greater risk reduction associated with more repetitions of the intervention component."<sup>3(p545)</sup> Likewise, Bartholemew and colleagues<sup>16</sup> compared the results of participants in a methadone treatment program who took part in one to three intervention sessions with results for those who attended four to six sessions; Bartholemew and coworkers found the latter group did significantly better in terms of increases in self-esteem

and AIDS-related knowledge. In a study of Project RESPECT, a randomized controlled trial conducted at various sites across the nation that was designed to examine the reduction of high-risk sexual behaviors and new infections of STDs among STD clinic patients, participants in the enhanced interventions showed significantly more positive change than those in the standard intervention.<sup>17</sup> Similarly, the Long Beach, California, site of the NIDA National AIDS Demonstration Project also found their enhanced intervention to be significantly more effective in reducing risk behaviors among active drug users.<sup>1</sup> It should be noted that, in addition to being longer, the more effective enhanced interventions also employed different strategies of delivery, including individualized counseling, ongoing case management, and a basis in theory. Studies have also suggested that skills-building activities (e.g., role playing and problem solving) give individuals the opportunity to internalize and practice new, low-risk behaviors such as sexual negotiation and assertiveness. Interventions utilizing such activities therefore appear to be more likely to result in positive behavior changes.<sup>3,18-20</sup>

Thus, we are left with the impression that, to achieve even greater risk behavior reductions than those obtained by Project NIA's standard intervention, many additional hours (perhaps spread over the course of several days or several weeks) of intervention exposure, particularly with a multifaceted, interactive, dynamic intervention, would have been necessary. We believe that this would be a valuable area for researchers to investigate further.

#### **STUDY LIMITATIONS**

There are two potential limitations to this study that we wish to discuss. First, the data reported here are based on uncorroborated self-reports. Therefore, the extent to which Project NIA respondents under-reported or over-reported their involvement in risky behaviors is unknown and unassessable. In all likelihood, though, the self-reported data can be trusted, as numerous authors have noted that substance abusers in their research studies have provided accurate information about their drug-using behaviors.<sup>21-24</sup>

Second, although the communities where Project NIA was conducted were assigned to the standard or enhanced intervention condition on a random basis, the individuals participating in the study at these locales were not. Thus, the randomization procedure used in this study was practical, considering the study's logistical needs, but not ideal scientifically. Had individuals, rather than communities, been assigned to the intervention conditions randomly, it is entirely possible that standard-versus-enhanced intervention-related differences may have

been found. Whether or not this would have occurred, and the extent to which this particular type of randomization procedure affected the results obtained, cannot be assessed.

#### **CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH**

The results of our study confirm that outreach projects can be highly successful at reaching urban substance users, provided that these individuals are treated not as research subjects or drug treatment failures, but rather as human beings. Our experience suggested that compassionately delivered, culturally appropriate services could be delivered to this population and that active drug users tended to respond quite favorably to the information they received. Based on the results of our findings, we recommend (1) operating from a well-placed mobile outreach vehicle, which was key to reaching the project's participation and follow-up goals; and (2) the use of outreach workers whenever possible, given their capacity to establish excellent community relations and to understand fully the behaviors, social structures, social norms, and overall lifestyle of the targeted populations.

We also found it helpful to collect detailed locator information (including more than one contact, address, and phone number), provide reasonable cash incentives on completion of each session, and dedicate significant staff time to locating participants for follow-up interviews.\* To increase representation of women in the participant population, we found women outreach workers to be essential. Furthermore, for projects using indigenous outreach workers (as ours did), we recommend requiring a substantial amount of elapsed time since the outreach worker's most recent drug use before consideration for employment. Project NIA required 2 years of recovery time (staff members had anywhere from 2 to 15 years of continued sobriety at the time they began working on this study) and enjoyed a zero relapse rate among its staff members over the course of the entire 5-year study and a very low rate of staff turnover.

Further studies designed to determine whether more intensive enhanced interventions (e.g., four to five [or more] extra sessions rather than one extra session) can be successful at changing risk behavior involvement significantly more than the type of standard intervention used in this study would be helpful to guide the direction of future intervention activities. What is clear, based on this study's findings, is that a well-designed intervention that carefully takes into account

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\*Reference 25 is an excellent source of information regarding the attainment of successful follow-up rates.

the particular needs and characteristics of its target population can reduce the HIV risk behaviors of urban drug users quite substantially.

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