

# AIDS/HIV AMONG HISPANICS IN THE NORTHEAST AND PUERTO RICO

## REPORT OF FINDINGS AND RECOMMENDATIONS<sup>1</sup>

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The Northeast Hispanic AIDS Consortium (NeHAC) was organized to create a regional response to the high rate of HIV infection among Hispanics/Latinos. In May 1988, representatives of Hispanic organizations met to formalize the consortium's mission and agenda. This meeting was attended by representatives of five states (Pennsylvania, Massachusetts, New York, New Jersey and Connecticut) and Puerto Rico.<sup>3</sup> The founding organizations are also varied in type and history; ranging from long-standing groups of 10-20 years, such as PROCEED, or emerging nonprofit groups such as Hispanos Unidos Contra SIDA/AIDS. The training and skills of consortium members are also diverse and include health professionals, educators, human service professionals, community educators, administrators and researchers. All consortium agencies are administered and staffed by local Hispanic community members.

As a group, the NeHAC represents agencies and individuals who have demonstrated commitment, leadership and the capacity to work effectively in AIDS prevention within their respective Hispanic communities. By working regionally, as a consortium, NeHAC's efforts have greater application and depth, as well as being more efficient in delivering effective local programming.

PROCEED currently serves as the lead agency for this distinguished group. In addition, it is the fiscal and administrative agent for a Centers for Disease Control National AIDS Minority Information and Education Project. This project is the initial endeavor of

NeHAC. While PROCEED serves as the lead agency for this group, it strongly emphasizes the collaborative nature of the consortium mode.

### INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) is one of the most urgent and challenging health problems facing the United States and Puerto Rico. Accounting for a significant percent (over 15%) of the total AIDS cases diagnosed in the United States, Hispanics (8% of the U.S. population) are disproportionately affected by this devastating and fatal epidemic. AIDS has hit the Northeast and Puerto Rico harder than any other area of the country. Over 38 percent of all AIDS cases reported to Centers for Disease Control (CDC) are from this region. The metropolitan areas of New York, Newark, Philadelphia, Boston and San Juan, alone, have contributed over 27 percent of the total AIDS cases in the United States (Centers for Disease Control, August, 1990).

All too often it is assumed that the same outreach or education programs which are appropriate for African-American, or Anglo-American populations will be successful with Hispanics. AIDS outreach efforts with partners of intravenous drug users find that methods successful with African-American, or Anglo-American partners may not be successful in involving Hispanics (Worth, 1988). Therefore, it is crucial to reach the Hispanic community through targeted information-gathering efforts to find out which resources are needed, which are being used and

which factors play a role in their utilization. The failure to develop Latino-specific strategies may explain why Hispanics hold a great number of misconceptions about AIDS and how HIV is transmitted (Amaro, 1988).

Considering that a vaccine and/or cure are not expected in the near future, prevention and education are the only and most effective tools for containing the spread of the HIV epidemic. Therefore, the findings of this needs assessment are key to the development of successful HIV prevention and intervention strategies for Hispanics living in the Northeast and Puerto Rico.

### GOALS OF THE PROJECT

The primary goal of this project was to determine the needs of the Hispanic community in the U.S. Northeast and Puerto Rico for information, education, risk reduction and services related to AIDS/HIV. In this report, we describe the findings from six target population groups: adolescents, intravenous drug users, gay men, persons with AIDS or HIV, family members of persons with AIDS or HIV, and women of childbearing age. The needs assessment was designed to yield information on the following:

- Level of familiarity with HIV transmission modes and degree of misconceptions about HIV transmission in Hispanic communities.

- Demographic characteristics associated with knowledge and misconceptions about HIV transmission in Hispanic communities.

—Knowledge and familiarity with current prevention efforts in Hispanic communities.

—Barriers to effective AIDS related information dissemination and behavior change in Hispanic communities.

—Attitudes toward prevention and direct services for those infected and toward needed public health measures.

Part of any assessment of need is an assessment of attitudes toward and level of knowledge about the subject. In this project, we assess the level of information in the target population about AIDS, HIV infection and its transmission. The level of understanding and/or attitudes about the disease and its transmission may be directly linked to both the risk behavior of the population and utilization of appropriate resources in dealing with it. For example, an elevated degree of fear and misinformation may keep individuals from seeking help, and introduction of adequate information or training may provide an important catalyst to use. Information about risk behaviors for HIV transmission was also obtained from participants, in order to determine the types of risk behaviors which might need to be especially targeted in prevention measures and prevention programs.

## METHODOLOGY

### Subjects

A total of 2,541 individuals participated in the needs assessment. Fourteen participants were excluded from the analysis due to incomplete data. The final sample size used in the data analysis was 2,527. The final sample consisted of six target population groups: adolescents (N=553), intravenous drug users (N=588), gay men (N=284), persons with HIV or AIDS (N=326), family members of persons with HIV or AIDS (N=272), and women of childbearing age (N=504).

### Sampling and Recruitment

Participants were recruited in two sites in each of five states (Connecticut, Massachusetts, New York, Pennsylva-

nia, New Jersey) and Puerto Rico. The sample was not randomly selected from Hispanic populations in these research sites. Rather, participants were recruited through the lead community agencies in each research site. Each community agency tailored the recruitment strategies to best fit their local community. For example, recruitment was conducted through a variety of sources and methods including flyers, schools, youth programs, agencies, organizations, churches, clinics, hospitals, drug treatment centers, support groups, bars, family and friendship networks, and street outreach. The method of recruitment varied depending on the target population and the locally available resources.

### Procedures

Participants were invited to engage in a group discussion with approximately eight to fifteen other individuals in the same target group. Groups were scheduled at sites where participants were recruited (e.g., a school or clinic) or at a nearby community agency or facility. Upon arrival at the group meeting, participants were asked to complete a self-administered questionnaire, which is described in the next section. In cases where participants could not read, staff administered the questionnaire to individuals.

After all participants completed the self-administered questionnaire, a trained project staff member facilitated a discussion among group members. The discussion centered on each of the following questions:

- What is AIDS?
- How do you think AIDS started?
- How does someone get infected with the AIDS virus?
- What happens to your body when you get AIDS?
- What could people do to avoid getting AIDS?
- Is there anything that stops you or your Latino friends from protecting yourself against getting the AIDS virus?
- What can you do to help each other avoid getting AIDS?

—What can be done in this community to prevent people from getting infected with the AIDS virus?

—What special problems are there for Latinos with AIDS or Latinos who are infected with the AIDS virus?

—In this community, where can you get information about AIDS and how to avoid getting infected?

—What could be done in the community to help people who are already infected with the AIDS virus?

### Research Protocols

*Self-administered Questionnaire.* Data were obtained from respondents through two sources. The first was a self-administered questionnaire that all participants completed upon arrival at the focus group meeting. The questionnaire asked participants to respond to questions regarding transmission of HIV, perceived risk of HIV infection, risk behaviors, attitudes toward various public health measures to prevent HIV infection, and demographic characteristics. The instrument was available in English and Spanish and staff were available to assist participants in completing the questionnaire. The questionnaires were coded by trained coders at Boston University School of Public Health employing a coding scheme developed for the study.

Data from the questionnaire allowed us to analyze responses to items on knowledge of HIV transmission and AIDS, perceived risk of HIV infection and risk behaviors, and to relate these to participants' characteristics (e.g., age, sex, birthplace, language use).

*Focus Group Discussion.* Data were also obtained from the focus group discussions. During the discussion in each group, a trained coder noted participants' responses employing a coding format developed for the study. In most groups, the sessions were tape recorded with participants' consent. This enabled the coder to review his/her coding of the discussion for accuracy and completeness. Coded items from the discussions which did not fit

into the coding format were later recoded by trained coders at Boston University of Public Health into expanded categories based upon participants' responses.

Data from the focus group discussions corroborated findings from the questionnaire responses and provided information about how participants think about HIV/AIDS transmission, the barriers to prevention and the services needed.

### Data Analyses

Data analyses were conducted at Boston University of Public Health and proceeded in three stages. First, a descriptive data analysis was conducted using frequencies which reported participants' responses to individual items on the self-administered questionnaire. Also at this stage, the focus group responses were analyzed to provide descriptive data on the responses provided by group participants to each of the questions cited above.

Second, summary index measures were developed for knowledge of HIV transmission, misconceptions of HIV transmission, and high risk sexual and drug use behaviors. The purpose of this step was to facilitate analyses by creating summary measures for use in the final step of the analyses. At this stage, comparisons between the Puerto Rico and the U.S. mainland samples were conducted on the major participant demographic characteristics and variables of most interest. The purpose of the comparison across sites was to identify whether the Puerto Rico sample was systematically different from all other sites and to identify the major differences in the participants across sites.

Third, multivariate analyses were conducted to investigate the interrelationships between certain participant characteristics (e.g., age, sex, language, birthplace) and the following major outcomes of interest:

- knowledge
- misconceptions
- perceived risk
- risk behaviors

Because of the numerous analyses conducted on each of the six groups,

observed relationships might have occurred by chance alone. To prevent a multiple comparison problem, a more stringent criteria for determining statistical significance was used. That is instead of the conventional  $p < .05$ , statistical significance was determined using  $p < .01$ .

### Focus of the Data to be Presented

The data presented focuses on participants' responses to the self-administered questionnaire. Unlike the data from the focus group discussion, these data lend themselves to multivariate analyses which can explore relationships between variables. Data from the focus group discussions will be cited only as examples of participants' attitudes, beliefs, knowledge, and barriers to high risk reduction.

### Limitations of the Needs Assessment

The study has limitations which need to be considered in the interpretation of findings. The most important limitation is the nonrandomness of the sample resulting in the inter-site variability in participant recruitment procedures. Because the sample was not randomly drawn from the larger Hispanic target populations in each research site, participants may differ from community members who did not participate in the study. For this reason, findings may not be generalizable to all the entire Hispanic communities which participated in the study. The study should not be viewed as definitive but rather as exploratory and suggestive. Findings should be employed to inform further research and program development.

However, findings from the study are important and useful for several reasons. There are few sources of data on the knowledge, perceived risk and risk behaviors among Hispanics in the Northeast of the United States and Puerto Rico. For this reason, there has been little information available to guide education, prevention and intervention programs targeted at the most at risk Hispanic population in the United States. Second, the study employed two sources of data—questionnaire and focus group discussion—which provide a check on the validity

of the data. Third, trends in the data across target groups indicate that some factors systematically predict the outcomes under study and, therefore, provide reason for having confidence in the findings. Finally, the study is unique in that it represents a research effort stemming from community agencies in the Hispanic community. The study presents a model for research in the Hispanic community based on collaboration between community-based organizations represented by NeHAC and an academic institution represented by Boston University School of Public Health.

## SUMMARY OF KEY FINDINGS

### Finding #1

*Lack of Knowledge about HIV Transmission among Hispanics.* The study identified that the lack of knowledge and misconceptions about the major modes of HIV transmission and AIDS is a critical problem among most of the Hispanic target groups studied.

The most striking of these were adolescents, among whom 60 percent did not know the major routes of transmission. Lack of knowledge among Hispanic adolescents was also accompanied by high levels of erroneous beliefs or misconceptions regarding how the virus is transmitted. Ninety percent of adolescents in the study had one or more misconceptions about HIV transmission and AIDS.

In addition, a large number of intravenous drug users (45%), women of childbearing age (43%) and gay men (40%) did not know the major routes of HIV transmission. At the same time, misconceptions about how HIV is transmitted and AIDS were widespread among intravenous drug users (90%), women of childbearing age (93%) and gay men (80%). Only one of ten intravenous drug users and women of childbearing age and two in ten gay men had no erroneous beliefs about HIV or AIDS.

The most informed of all Hispanic groups in the study were persons living with AIDS/HIV+ and family members of persons with AIDS/HIV+. Nearly 70 percent of PWA/HIV+ participants and 67 percent of family members correctly identified the major

routes of transmission. However, misconceptions about transmission and AIDS remained common in both groups. The majority of PWA/HIV+ (83%) and nearly half of family members had one or more incorrect beliefs regarding transmission of AIDS.

### Significance

These findings have important implications for the prevention of HIV infection and the spread of HIV among the Hispanic population in the Northeast of the United States and Puerto Rico. While knowledge about the routes of transmission does not in and of itself guarantee that individuals will reduce risk behaviors or take steps to protect themselves, knowledge is a necessary first step for risk reduction. Thus, the findings indicating that Hispanics in this study lack accurate information about how HIV is transmitted should yield great public health concern and generate new initiatives for targeted prevention among Hispanics.

The finding which indicates that misconceptions about HIV transmission are commonplace among the Hispanics sampled also have important public health implications. Individuals who believe that HIV is transmitted through casual contact may hold undue fears of becoming infected and this may promote destructive fear and hostility toward persons who are infected with AIDS. This finding suggests that prevention efforts with Hispanics must go beyond information regarding major routes of transmission and address false beliefs and fears regarding transmission of HIV and fear and hostility toward persons with AIDS/HIV+.

### Finding #2

*Lack of Knowledge and More Misconceptions Regarding HIV and AIDS was Highest among Those Who Were Younger, Spanish-speaking, Males and Who Had Lower Education.* While the factors associated with knowledge and misconceptions differed somewhat across target groups studied, trends over the groups indicated some common factors. The analysis showed that even when demographic characteristics were controlled, younger adolescents had significantly lower knowledge

scores than older adolescents, younger gay men and younger intravenous drug users had higher misconceptions regarding HIV transmission and AIDS compared to those who were older.

Participants who were primarily Spanish speakers were significantly less knowledgeable about HIV infection and AIDS compared to English speakers or those who spoke both languages. This relationship held true for adolescents and gay men, and women of childbearing age. Erroneous beliefs regarding HIV and AIDS were highest among those whose primary language was Spanish.

Males in the adolescent and intravenous drug user groups were significantly more likely to have lower knowledge and more misconceptions about HIV and AIDS, respectively. The relationship between sex, knowledge and misconceptions held even when demographic characteristics and language were taken into account.

Lower formal education (e.g., not having completed a high school education) was associated with lower knowledge among women. Lower education was also associated with higher misconceptions among women, gay men, persons living with AIDS/HIV+, family members of PWA/HIV+ and intravenous drug users. The relationship between education and knowledge and misconceptions persisted even when other demographic characteristics and language use were considered.

### Significance

These findings suggest that previous education efforts have not adequately reached some subgroups in the Hispanic population. New educational efforts are needed to reach younger adolescents perhaps as early as elementary school and middle school.

Targeted prevention efforts are also needed to reach Hispanics who do not speak English. Such programs are needed in order to provide information in Spanish as well as to structure education messages in ways that are seen as appropriate by a group which may be less exposed to U.S. norms regarding sexuality and drug use.

While many programs have attempted to educate women in the general population regarding HIV and the

need to "negotiate" condom use with their partners, this approach has at times overlooked the critical role of educating men. Among Hispanics, our findings suggest a need for aggressive educational campaigns especially targeted to male intravenous drug users who engage in high risk behaviors and at adolescent males who may be at high risk of infection due to sexual and drug use behaviors.

Finally, in every target group, participants who had not graduated from high school were less well informed regarding HIV and AIDS. This finding suggests that school-based prevention programs are needed to reach Hispanics before they drop out of school and that out of school prevention efforts also need to be developed in order to reach Hispanics with lower educational attainment who are not attending school.

### Finding #3

*The Common Beliefs That One Can Identify a Person Who Is Infected or Has AIDS by Simply Looking at Them and That There Is a Known Cure for AIDS Present Important Barriers to Risk Reduction among Hispanics.* The belief among adolescents (32%), gay men (20%), intravenous drug users (34%), women of childbearing age (27%) and family members of persons living with AIDS/HIV (25%) that one can recognize a person who has AIDS by how they look may act as a barrier to behavior change. For example, it would be dangerous to think that you can identify who is infected by how they look and thereby make decisions about sexual and drug use behaviors. The large portion of participants in these groups who stated this belief indicates that they are at risk of engaging in sexual or drug-using behaviors with individuals who are infected but who do not "look sick." Education messages are needed to dispel these myths among all of these groups.

The belief that there is a cure for AIDS was held by a substantial number of adolescents (35%), women of childbearing age (35%), gay men (21%), intravenous drug users (43%), persons living with AIDS/HIV+ (26%), and family members of PWA/HIV+ (43%). Individuals who were more likely to

hold this belief were those who had not received information regarding AIDS/HIV in the six months previous to the study. Since believing that there is a known cure for AIDS may increase risk-taking and reduce risk reduction behaviors, this finding has important implications for prevention efforts. For example, an adolescent who believes that there is a cure for AIDS may not feel as compelled to abstain from sex or drug use, to adhere to safer sex practices or to avoid sharing of needles.

The findings also indicate that persons living with AIDS/HIV+ are misinformed about the severity of their condition and may, therefore, not take appropriate steps to obtain early treatment, which could prolong and improve the quality of their life. These findings suggest that serious misinformation regarding the treatments available for AIDS exists among many participants. Informational campaigns and educational efforts are urgently needed to correct this potentially harmful belief regarding the availability of a cure for AIDS.

#### Finding #4

*Higher Risk Sexual and Drug-Related Behaviors Were Highest among Males, Those with Low Education and Attainment and Those with Misconceptions Regarding HIV Infection and AIDS.* When asked to report if in the previous year they had engaged in one or more of a series of drug use-related behaviors, a large proportion of intravenous drug users (50%), persons living with AIDS/HIV+ (50%) and family members of persons living with AIDS/HIV+ (25%) responded affirmatively. Further, many male participants reported engaging in unprotected sex with a woman: adolescents (35%), gay men (28%), persons living with AIDS/HIV+ (67%), family members (65%), and intravenous drug users (68%). Among gay men, 66 percent reported unprotected sex with a man. Among women of childbearing age, 64 percent engaged in unprotected sex with a heterosexual man and 9 percent had sex with a bisexual man. The high rates of high risk drug and sexual behaviors reported by participants may be due to the way in which the question was asked ("In the last year have you . . ."). Thus, the ques-

tion did not ask for a frequency of high risk behaviors. Rather, the responses simply identify the proportion of participants who engaged in a high risk behavior at least once in the past year.

Findings indicate that men were more likely than women to engage in high risk behaviors even when other demographic characteristics, language use, knowledge and misconceptions about HIV infection and AIDS were controlled. In three of the four groups in which both women and men were represented, men were significantly more likely to report high risk sexual behaviors (adolescents) and high risk drug use behaviors (persons living with AIDS/HIV+ and family members).

Misconceptions about HIV and AIDS were also significantly associated with high risk behaviors even when other factors (e.g., demographic characteristics, language use and knowledge) were controlled. For example, adolescents who held more misconceptions were significantly more likely to report one or more high risk behaviors and one or more high risk drug-related behaviors. Among adolescent males and males living with AIDS or HIV+, a high misconception score was significantly associated with having sex with a woman without a condom.

Low educational attainment (i.e., not completing high school) was significantly associated with high risk behaviors among three groups with high rates of HIV infection: gay men, intravenous drug users and persons living with AIDS and HIV+. Unprotected sex with a woman was associated with low educational attainment (i.e., not being a high school graduate) among gay men and intravenous drug users. This relationship was found even when controlling for other factors (i.e., demographic characteristics, language use, knowledge and misconceptions regarding HIV transmission and AIDS).

#### Significance

The findings suggest that the prevalence of high risk behaviors is high among the Hispanic groups in the study. However, the incidence and fre-

quency of high risk behaviors and the factors which impact upon the frequency of high risk behaviors among Hispanics need to be better understood. Further research is needed to closely investigate these and other questions related to sexual and drug use behaviors among Hispanics in the U.S. Northeast and Puerto Rico. Such studies would improve prevention programs by identifying factors associated with HIV-related, risk-taking behaviors and the adoption of risk reduction behaviors among Hispanics.

Factors found to be associated with risk behaviors are similar to those which were reported to be related to knowledge and misconceptions, thereby supporting the need for prevention programs which target some Hispanic groups. For example, the findings emphasize the need for risk reduction programs which target men, those who do not have a high school education and those with erroneous beliefs about HIV and AIDS (e.g., that one can identify a person who is infected or has AIDS by looking at them). Since these are the individuals most likely to engage in high risk behaviors they are the ones most likely both to become infected and perhaps to infect others.

#### Finding #5

*Heterosexual Involvement Was Reported by a Large Minority of Hispanic Gay Men, Indicating that Bisexuality May Be More Common than Previously Acknowledged in the Hispanic Community.* Over one fourth (28%) of the participants who identified themselves as gay men reported having unprotected sex with a woman in the previous year. Further evidence of bisexual behavior among participants was found among women of reproductive age, among whom 9 percent reported to have had unprotected sex with a bisexual man. It is important to note that many more participants may have engaged in bisexual behavior but have done so using condoms and, therefore, would not have reported it in the questionnaire since it only asked about unprotected sex.

The gay men most likely to report unprotected heterosexual sex were those who had not completed high school. This relationship was signifi-

cant even when other factors (i.e., demographic characteristics, language use, knowledge and misconceptions) were taken into account.

### Significance

There is dearth of information regarding bisexual and homosexual behavior and relationships among Hispanics. This study suggests that many Hispanic men who self-identify as gay also engage in sexual relations with women. In such situations, women may or may not know of their partners' bisexual behavior or high risk behaviors with other men. This is especially important in view of the finding that over one fourth of gay men engage in unprotected sex with women. Research is needed to further investigate the suggested findings regarding bisexual behavior reported in this study. Such research should also explore bisexual behavior among men who self-identify as heterosexual.

### Finding #6

*The Sharing of Needles for Non-drug Use Purposes Such as Tattooing and Ear Piercing is Common among Some Hispanics and May Pose a Threat for HIV Infection.* The study revealed that a large minority of intravenous drug users (25%) and persons living with AIDS/HIV+ (19%) share needles for tattooing, ear piercing and injecting medications. Among other groups, this practice was less common (e.g., women, 8%; adolescents, 3%; gay men, 7%; family members, 11%).

### Significance

These findings suggest that needle sharing for non-drug use purposes may be a source of infection among intravenous drug users who are sharing needles with infected drug users. Similarly, noninfected persons who share needles for non-drug use purposes with infected persons may be at high risk for becoming infected. While more information is needed on this type of needle use among Hispanics, the results clearly suggest the need to expand current prevention messages regarding drug-related needle sharing to needle sharing for other purposes.

Also suggested by these findings is the need for more research on the use

## Study Finds Many Hispanic-Americans Are Ignorant About Aids

A new study of Hispanic-Americans has found that many of them lack even basic information about AIDS, and experts say that ignorance is hindering prevention efforts in a group that is seriously threatened by the disease.

The study, conducted by the Boston University School of Public Health and financed by the Federal Centers for Disease Control, found that 60 percent of the Hispanic adolescents who were interviewed did not know how AIDS is usually transmitted and 90 percent had one or more misconceptions about AIDS.

One of the most common misconceptions was that there was a cure. Another was that one can identify people infected with the AIDS virus by simply looking at them.

Of the people interviewed, those at the highest risk of infection were often the least informed. The study showed that 45 percent of the intravenous drug users surveyed and 40 percent of the gay men did not know how AIDS is transmitted. Misconceptions about the disease were

found among 90 percent of the drug users and 80 percent of the gay men.

The interviewers spoke with 2,541 people in Connecticut, Massachusetts, New York, Pennsylvania, New Jersey and Puerto Rico.

### Regional Response Sought

The study was not a scientific poll. But it does show trends within the Hispanic population. The study's findings were released on 10/2/90 by the Northeast Hispanic AIDS consortium, a group of seven organizations in five states and Puerto Rico that came together to plan a regional response to the high rates of HIV infection among Hispanic people.

About 8 percent of the nation's population is Hispanic; about 15 percent of the AIDS patients in the nation are Hispanic.

The study was prepared by Hortensia Amaro, an associate professor of public health at Boston University's School of Medicine. She said previous research had suggested that Hispanic respon-

of needles by Hispanics for other than illicit drug use purposes. There are no accurate data on the nature or extent of this practice and its potential impact on the risk for HIV infection among Hispanics. Research is needed to better document the prevalence and context of this type of needle sharing and the characteristics of individuals who should be targeted most aggressively for educational messages on this topic.

### COMPARISONS OF PARTICIPANTS IN PUERTO RICO AND MAINLAND RESEARCH SITES

In order to investigate whether participants in the Puerto Rico sample differed from those in the U.S. mainland sample on major background characteristics, AIDS, HIV knowledge and misconceptions, perceived risk and risk behaviors, statistical comparisons between sites were conducted. Comparisons involving categorical variables were conducted with Chi square analysis and those involving continuous variables were conducted employ-

ing t-tests and analysis of variance. It is important to note that since a large number of comparisons were conducted on each of the six target groups, there is the danger that a number of significant findings could have emerged by chance alone. In order to prevent this problem associated with multiple comparisons, a more stringent criteria for determining statistical significance was used. That is, instead of the conventional  $p < .05$ , statistical significance was determined by using  $p < .01$ .

### Findings

*Adolescents.* The following results are presented for each of the six groups. As expected, within all groups, participants from the Puerto Rico sample compared to those from the mainland sample, were significantly more likely to have been born on the island and more likely to be predominantly Spanish speaking.

Significant differences between adolescent participants were found with respect to sex and age. That is, compared to those on the U.S. mainland,

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dents to surveys usually knew less about AIDS than whites and blacks did. This study, she said, was aimed at specific groups—adolescents, intravenous drug users, gay men, women of child-bearing age—and cannot be used to generalize about the entire Hispanic population.

The survey showed that those who knew least about AIDS were generally male, under 25 years old, primarily Spanish-speaking and with less than a high school education. To agencies that means they can be most effective by directing their message to places like English-as-a-Second-Language classes.

The study found other disturbing trends: a quarter of the gay men interviewed said they had had unprotected sex with a woman in the previous year. Many of those who said they were infected with AIDS and injected drugs said they had also shared needles for other purposes, like tattooing, ear piercing and injecting medication.

\*The New York Times, October 3, 1990.

participants from Puerto Rico were significantly more likely to be female (61% vs. 45%) and older. However, the sex difference was due largely to a very small proportion of female participants in the New Jersey (28%) sample, which lowered the percent of female participants for the entire mainland sample.

With respect to the outcome variables under study, compared to adolescents from the U.S. mainland sample, adolescents from the Puerto Rico sample were significantly less likely to say that they are "likely to get infected" (28% vs. 54%) and significantly less likely to report being "worried" about getting infected (2% vs. 22%).

No other significant differences were found.

**Gay Men.** Significant differences between gay male participants in Puerto Rico and the U.S. mainland were found with respect to age, and employment status. Compared to gay male participants on the U.S. mainland, gay men in the Puerto Rico sample were significantly younger and more likely to be attending school (8% vs. 29%), and less likely to be unemployed (20% vs. 12%).

The difference between mainland and island participants in the proportion of participants who were unemployed was due to a large proportion of unemployed participants in the New York sample (58%), which inflated the proportion of employed participants for the entire mainland group.

No significant differences between the two groups were found in any of the outcome measures under study.

**Intravenous Drug Users.** Compared to IVUDs in the U.S. mainland sample, those in the Puerto Rico sample were significantly more likely to be female (12% vs. 43%), and significantly less likely to be employed (30% vs. 11%). However, the sex difference between IVUDs in these two groups was in part due to the small number of female participants in some sites (e.g., Philadelphia, 1% females), which lowered the proportion of females in the U.S. mainland sample.

The two groups were comparable on all outcome measures in the study, no significant differences were found.

**Women.** Significant differences in the background characteristics among women of reproductive age in the U.S. mainland sample and the Puerto Rico sample emerged with respect to education. Compared to those in the U.S. mainland sample, women in the Puerto Rico sample were significantly more likely to be high school graduates (60% vs. 86%).

Significant differences also emerged with respect to the number of misconceptions about HIV transmission, and the number of high risk behaviors. Compared to women in the mainland sample, those in Puerto Rico were significantly more likely to have fewer misconceptions (Mean = 2.3 vs. 1.7) and significantly fewer risk behaviors (Mean = 1.2 vs. .82).

No other significant differences between the two groups were found.

**Persons Living with AIDS/HIV+.** With the exception of language and birthplace, no other significant differences in demographic characteristics of PWA/HIV+ were found between the U.S. mainland sample and the Puerto Rico sample.

With respect to the outcome variables under study, only one significant difference emerged between the two groups. Compared to the U.S. mainland group, PWA/HIV+ participants from the Puerto Rico sample were less likely to know that there is no known cure for AIDS and that there is no vaccine for AIDS/HIV (66% vs. 40%). However, this difference between the mainland and island sample was due to the high proportion of PWA/HIV+ participants in New Jersey (93%) and Connecticut (75%) who correctly answered both of these questions. Actually, other sites in the mainland were more similar to Puerto Rico in this respect.

No other significant differences were found between PWA/HIV+ participants on the U.S. mainland and Puerto Rico.

**Family Members of Persons Living with AIDS/HIV.** Compared to family members in the U.S. mainland sample, those in the Puerto Rico sample were significantly less likely to be female (62% vs. 31%).

With respect to the outcome variables measured in this study, the only significant difference between the two groups pertains to perceived risk of HIV infection and AIDS. Compared to the U.S. mainland sample, family members from the Puerto Rico sample were significantly less likely to state that it was "likely" that they would become infected (45% vs. 10%) and significantly less likely to state that they "worry" about getting infected (31% vs. 10%).

#### Notes:

1 Summary report of findings and recommendations of a study conducted by the Northeast Hispanic AIDS Consortium (NeHAC).

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3 Northeast Hispanic AIDS Consortium member organizations: PROCEED, Inc., Elizabeth, NJ; Hispanic Health Council, Inc., Hartford, CT; Hispanos Unidos Contra el SIDA/AIDS, Inc., New Haven, CT; Congresso de Latinos Unidos, Inc., Philadelphia, PA; Fundación SIDA, Inc., Rio Piedras, PR; Hispanic AIDS Forum, Inc., New York, NY; and Latino Health Network, Inc., Boston, MA.