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RISK FACTORS FOR HUMAN IMMUNODEFICIENCY VIRUS SEROPOSITIVITY AMONG PUERTO RICAN INJECTION DRUG USERS: IMPLICATIONS FOR SOCIAL WORK PRACTICE

BY

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A dissertation submitted to the Graduate Faculty in Social Welfare in partial fulfillment of the requirements for the degree of Doctor of Social Welfare, The City University of New York.

1995

This manuscript has been read and accepted for the Graduate Faculty in Social Welfare in satisfaction of the dissertation requirements for the degree of Doctor of Social Welfare.

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ABSTRACT

Risk Factors for HIV seropositivity among Puerto Rican Injection Drug Users: Implications for Social Work Practice

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While significant progress has been made in the identification of risk behaviors that contribute to Human Immunodeficiency virus (HIV) transmission among injection drug users (IDUs), much less progress has been made in identifying and clarifying risk factors for HIV transmission among not-in-treatment IDUs. Moreover, even less is known about the risk factors that fuel the HIV epidemic among Hispanic IDUs.

To address this need, from March 1990 to August 1992, a convenience sample of 310 Puerto Rican IDUs not-in-treatment in Paterson, New Jersey was recruited by outreach workers to storefront offices where they were interviewed about AIDS-risk behaviors and tested for antibodies to HIV. Information was gathered on: sociodemographic characteristics; general health status; current and past drug use patterns(including drug of choice, routes of administration, and frequency of use); needle sharing and cleaning practices, sexual practices; AIDS knowledge; and, past drug treatment history. Data from 288 IDUs (92.9%) were analyzed. 109 (38.5%) tested HIV antibody positive. Twelve variables were found to be significantly associated with HIV

seropositivity in the univariate analysis. These were: age of respondent; duration of drug injection; major source of income; no non-injected heroin use; injecting mixed heroin and cocaine; borrowing used needles; renting used needles; lending used needles to friends; always wearing a condom; reporting no sexual activity in the last six months; a history of syphilis; and, subjects rating of their own AIDS risk. In the multiple logistic regression model only three variables were significantly associated with HIV seropositivity. The single most important correlate of HIV infection was the reported length of injection drug use. A perceived "high" or "sure" chance of developing AIDS and borrowing used needles also emerged as a correlate to HIV infection, although the data indicated that these last two variables only had a small/partial contribution.

A model health education/risk reduction program addressing risk among this population is presented. Implications for social work practice are

ACKNOWLEDGMENTS

Many people, upon learning that I was a full time worker, full time student and a full time mother asked me how I was able to "do it all". Well, the truth is that I didn't "do it all", at least not by myself. While I have completed the doctoral program and this dissertation, it was not without the support, encouragement, and assistance of many people.

A special note of thanks and gratitude is due to my colleagues and supervisors at the New Jersey State Department of Health. John French, Don Weinbaum, Dr. Mammo, Dr. Abdelrahman, and Dr. Bob Freeman provided support and encouragement, and have shared, unselfishly, many hours of their knowledge and expertise with me. I am indebted to them.

To my friend and colleague, Joyce Jackson, thanks for 10 years of friendship, support and encouragement. Your insights, knowledge, caring and thoughtful ways have taught me more than you will ever know. I will always be grateful. In many ways your advocacy on behalf of people suffering from the dual disease of substance abuse and HIV/AIDS is present throughout this report.

To my friends Joyce, Rita, Eunice, Chris, Isa and Patsy, thanks for always being there, especially when I needed you most. Your words of encouragement, understanding and support will always be appreciated. To my "Hispanic Researchers Work Group" members, your collective knowledge and

experience have enriched me in many ways. I am fortunate to be a part of such a prestigious group. My appreciation always.

My family has been, among other things, superb providers of self-esteem. How can I ever thank my Mom and my sister Maggie for all of their assistance? I know that without them I would not have been able to "do it all". There is a lot to be said for "natural support systems".

To my children, Michael and Veronica, thanks for your patience and understanding when "Mom could not be there". My life has meaning because it includes both of you.

I did not start out to become a social worker. It was purely serendipitous. By necessity I took a course in social welfare in undergraduate school and ever since then, this is all I ever wanted to be. To my first teachers in social welfare, Dr. Wynetta Bryant, Dr. Phyllis Peterman and Ann Adams, who imparted their love of this remarkable profession to me until it became contagious, and who taught me so well, thank you.

Dr. Michael Smith's gentle prodding, wisdom and guidance enabled me to produce a coherent, thoughtful project. I am especially grateful for his insights and comments. The insight, support and encouragement of Dr. Andrea Savage-Abramovitz and Dr. Robert Salmon are duly appreciated.

The Humana Foundation provided me with a generous dissertation

fellowship that enabled me to complete this study sooner than anticipated. I will always be grateful for their support and especially to Dr. Harold Weissman for recommending me in the first place.

To Glenda Simmons, thanks for your wonderful word processing skills. Without your expertise, this report would probably still be "somewhere in the computer".

I also wish to express a special note of gratitude to the participants in this study and the hope that in some way their lives were improved through their involvement and participation.

Finally, I wish to dedicate this dissertation to my father, Jose Lopez. Although he will not be able to personally see me graduate, I am sure he will be looking down from heaven and applauding all the way. His words of wisdom, gentleness, guidance and love will sustain me all the days of my life. discussed.

Preface

Seldom, in the history of mankind, most certainly in modern times, has a single disease captured the imagination, interest, fear and apprehension of the public. And seldom, except for instances like plague and leprosy, has an illness provoked such profound social crisis. The public has blamed, repudiated, ostracized and stigmatized individuals suffering from it. Society, in general, has reacted by discriminating against those persons with the illness, while the battle between the rights of society versus the rights of individuals rages on.

In June 1981, the Centers for Disease Control (CDC) and Prevention published the first of many reports regarding an outbreak of rare opportunistic infections among previously healthy white males. Those first reports linked the emerging epidemic to homosexual white males, and the media started referring to the cluster of signs and symptoms associated with it as GRIDS (gay-related immunodeficiency syndrome). It was almost two years before it became clear that this new illness was being caused by a single agent, as yet unknown, and that it was transmitted through sexual contact and the exchange of blood. Acquired Immune Deficiency Syndrome (AIDS) was the new name given to this new disease when it became apparent that others, besides homosexual men, were being infected. Albeit how little understood this new disorder was, most public health officials at the time remained confident that the syndrome would be controlled by the conventional techniques for responding to epidemic

diseases. In fact, little did those working in the field of public health, including social workers, perceived the magnitude of the phenomenon about to unfold.

It is now more than a decade since those first reports surfaced in the medical literature. There are now more than one million Americans--or one in every 250 people--infected with the Human Immunodeficiency virus (HIV), the virus that causes AIDS (CDC, 1993). Those first infected by HIV--mostly homosexual white men--are now being joined by heterosexuals, injection drug users (IDUs), minorities (disproportionaly blacks and Hispanics), women and children.

The extent of the virus has expanded considerably beyond the initial "epicenters" of New York, Los Angeles and San Francisco. The rate of reported AIDS cases is growing faster in small metropolitan, suburban, and rural areas than in big cities (CDC, 1992). The majority of people infected now--and those likely to be infected in the future--are young adults between the ages of 25 and 44. In fact, HIV/AIDS now ranks as *the leading cause of death* among those 25 to 44 years old--both sexes and all races combined--and sixth among people 15 to 24 years old in the United States (CDC, 1994). According to the CDC, some 51,235 women and 344,776 men, and over 5,700 children in the United States have developed AIDS as of June 30, 1994. AIDS is now a world-wide pandemic. The World Health Organization (WHO) estimates there are some 18 million adults and 1.5 million children HIV-infected worldwide (ibid). And the numbers keep on multiplying.

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Introduction

While significant progress has been made in the identification of risk behaviors that contribute to HIV transmission among injection drug users--IDUs--(Vlahov et al., 1990; Schoenbaum et al., 1989; Chaisson et al., 1989; Des Jarlais & Friedman, 1987; Iguchi et al., 1992), much less progress has been made in identifying and clarifying risk factors for HIV transmission among *not-in-treatment* IDUs. Moreover, even less is known about the risk factors that fuel the HIV/AIDS epidemic among Hispanic[1] IDUs. In fact, since at any given time, only 15 to 20 percent of active IDUs are enrolled in any drug treatment program (National Institute on Drug Abuse, 1994), understanding the behavior of this little studied population is critical if social workers are to design and implement effective educational/intervention strategies to limit the spread of HIV.

Social workers have a pivotal role to play in this pandemic. As Dr. Juan Ramos stated in "Responding to AIDS/Psychosocial Initiatives" (1987),

> "Social workers can effectively address this devastating epidemic now and in the future. Until such time as there is a vaccine or cure, only education and prevention can reduce the numbers. Social workers must encourage changes in behavior, and maintenance of these changes over time, to reduce risk," p.1.

Ryan (1987), further explicates the need for involvement by stating,

> "The AIDS crisis is perhaps the greatest opportunity in this century to incorporate the values of our profession--respect for differences, self-determination for all individuals, the rights to confidentiality and privacy, the commitment to community service, ethical responsibility to society--within the institutions that govern us. Perhaps the greatest hidden struggle of the epidemic--the political and professional "ownership" of the AIDS crisis--is one in which social work must remain centrally involved..." (p.5)

Indeed, the National Association of Social Workers (NASW) policy statement on AIDS, issued in May 1982, was one of the first issued by any of the major health professional associations. It is unequivocal on the commitment of the profession to alleviating the AIDS crisis by pursuing action in nine basic areas: 1) access to professional social work services for people with AIDS (PWAs); 2) familiarity with effective methods of serving individuals afflicted with AIDS; 3) updated knowledge about AIDS transmission and the duty to educate others concerning risk reduction measures; 4) development of various agency guidelines on service to PWAs; 5) concern for the emotional and human rights issues surrounding HIV antibody testing; 6) attention to confidentiality and obligation to report breaches; 7) familiarity with the spectrum of complex service needs of PWAs; 8) job protection for social workers with AIDS who continue to be able to fulfill their responsibilities and; 9) awareness of signs of strain on social workers working with PWAs. A revised and strengthened policy statement was reissued in late 1987. In fact, the focus of the 1988 NASW conference was AIDS and Social Work.

Social work as a profession has much to offer in resolving the social, ethical and educational issues raised by the HIV/AIDS pandemic. The values of the profession and the spectrum of practice arenas are indeed unique among the health professions. Moreover, social workers can provide invaluable input in the development of social policies, in conducting research about its social consequences, in designing and providing social services, and in planning and delivering educational interventions to arrest the spread of HIV/AIDS.

Hence, the overall purpose of this dissertation is to provide social workers with empirically identified risk factors for HIV transmission among Puerto Rican injection drug users thereby assisting them in designing and delivering successful HIV/AIDS risk reduction interventions.

This dissertation is divided into five primary chapters:

I. Statement of the Problem

II. Literature Review

III. Study Methodology

IV. Study Findings/Summary

V. A Model HIV Prevention/Intervention Program for Puerto Rican Injection Drug Users at risk for HIV/AIDS

Included in chapter I. Statement of the Problem are a description of the epidemiology of HIV/AIDS among Hispanics in the United States, and in New

Jersey; the theoretical underpinnings of the proposed investigation; and the objectives to be achieved by the investigation.

Within chapter II. Literature Review, is a brief historical overview of Puerto Ricans in the United States. In addition, previous studies of HIV risk behaviors and drug use among Hispanic injection drug users are examined.

Chapter III. Study Methodology covers the history of the National AIDS demonstration Research Projects, specifically the Paterson Health Behavior Project; a description of the research setting (Paterson ,New Jersey); the study sample; data collection and analysis techniques, and the research questions to be answered by the investigation.

In chapter IV. Study Findings, an analysis and discussion of the data is presented, including data displays (tables), limitations of the study, data interpretation and implications for social work practice.

Chapter V. A Model Prevention/Intervention Strategy provides, based on the study's findings and the personal experience of the author, a description of key program components for an effective HIV/AIDS educational/intervention strategy to reduce the risk for HIV acquisition and transmission among Puerto Rican IDUs and their sexual partners.

Chapter I. Statement of the Problem

A. Introduction

The human immunodeficiency virus (HIV) which causes the acquired immune deficiency syndrome (AIDS) is transmitted perinatally and through body fluid-to-blood and blood-to-blood contact. Sexual transmission and the exchange of infected drug injection equipment among injection drug users (IDUs) are the chief means by which HIV transmission occurs. IDUs comprise the second largest risk group for HIV infection and AIDS in the United States (Centers for Disease Control, 1993). Approximately 30 percent of AIDS cases in the United States have been injecting drug users (IDUs) (CDC, 1993).

Among IDUs, a growing body of research has found that the presence of HIV antibody is associated with, among other variables, *injection frequency* (Page et al., 1989; Williams, 1990; Schoenbaum et al., 1989); *injection cocaine use by methadone clients* (Schoenbaum et al., 1989; Chaisson et al., 1989); *injection in "shooting galleries"* (Page et al., 1989; Williams, 1990; Schoenbaum et al., 1989); *injection of cocaine and heroin--speedball*--(Iguchi et al., 1992); *sharing of drug injection equipment* (Page et al., 1989; Schoenbaum et al., 1989; Chaisson et al., 1989; Chaisson et al., 1987); *the percentage of injections with used needles* (Schoenbaum et al., 1989); *a history of syphilis among males* (Williams, 1990); *not being in drug treatment*

(Watters and Cheng, 1987); *a more recent year of last injection, having sex partners who used injection drugs, and low income* (Schoenbaum et al., 1989).

In addition, it consistently has been found that drug injectors of Hispanic descent are at especially high risk for infection with HIV (Williams, 1990; Schoenbaum et al., 1989; Chaisson et al., 1989; Chaisson et al., 1987; Hopkins, 1987; Lange et al., 1988; Friedman et al., 1987; Centers for Disease Control, 1986; Schilling et al., 1989). In fact, by 1994, the Centers for Disease Control and Prevention reported that approximately 19,516 Hispanic adult and adolescent AIDS cases--had acquired the virus through injection drug use (38%)--compared to just 11 percent of the non-Hispanic Whites with AIDS.

B. Incidence of AIDS Among Hispanics/Puerto Ricans in the U.S.

It is unquestioned that the HIV/AIDS epidemic continues its unrelenting course through one of the most fragile and vulnerable population of the U.S.--Hispanic-Americans. According to Centers for Disease Control data (1992), Hispanics continue to be over-represented in AIDS statistics. Of persons with AIDS, 16.5 percent are Hispanics although they constitute 9 percent of the US population (Bureau of the Census, 1990). A study reported by Diaz et al., (1993) noted that from 1989 to 1990, Hispanics had a larger proportional increase (13.5%) in AIDS cases than any other racial or ethnic group in the U.S. Hence, by 1991, the incidence of AIDS among Hispanics in the U.S. had

increased to 31.6 per 100,000 population compared to 11.8 per 100,000 among non-Hispanic whites (CDC, 1992).

The link between HIV/AIDS and drug abuse is particularly strong for Hispanics. Nearly half (46%) of all Hispanic AIDS cases involved intravenous drug use as the primary risk factor, compared to just 15 percent of non-Hispanic white cases. More than five-sixths (87%) of Hispanic children with AIDS contracted HIV from an infected mother, compared to 62 percent of non-Hispanic white children. Hispanic pediatric cases were much more traceable to injection drug use: 71 percent of Hispanic pediatric AIDS cases were drug related (43%) due to the mother's injection drug use and 28 percent through the drug use of the mother's sexual partner), compared to 60 percent of African-American and 42 percent of non-Hispanic white cases (CDC, 1993).

Among all Hispanics with AIDS, Puerto Ricans comprise the Hispanic subgroup with the highest incidence of AIDS (CDC, 1992). Selik and his colleagues (1989) found that, in each region of the United States, the cumulative incidence of AIDS among Puerto Rican born persons is greater than persons born in Cuba, Mexico, or other Latin American countries. In the Nation as a whole, Puerto Ricans are the only Hispanic subgroup in which most AIDS cases (61%) are among heterosexual injection drug users (Selik et. al., 1989). By contrast, AIDS cases among Cuban-born Hispanics are predominantly found among the gay non-IDU population, whereas the epidemiology of AIDS among Mexican-born Hispanics corresponds to that of the white population.

C. AIDS in New Jersey

New Jersey has been one of the states hit hardest by the HIV/AIDS pandemic. Through September 30, 1994, New Jersey reported 24,015 adult/adolescent cases of AIDS, the fifth highest total in the nation (New Jersey State Department of Health, 1994). The number of reported AIDS cases has nearly doubled since April of 1989 (ibid.). It is estimated that 30 to 50 thousand New Jerseyans are infected with HIV, all of whom will eventually develop AIDS or AIDS related illnesses before the next decade.

The AIDS case profile in New Jersey is different from that seen nationally. As of September 30, 1994, heterosexual IDUs accounted for 54 percent of all the adult and adolescent cases of AIDS in the state, while the national figure is only 23 percent (NJDOH, 1994).

AIDS and AIDS related conditions caused by HIV infection have become the leading cause of death among large segments of the state's population. It is the single leading cause of death for all New Jerseyans from age 25 to 44. It is the leading cause of death among white and black males in this age group. For women in the same age group, HIV ranks among white females second, and among black females first, as a cause of death.

The HIV/AIDS epidemic has had a disproportionate impact on New Jersey's minority communities. AIDS cases among African-Americans and Hispanics account for 67 percent of the state's total, in contrast to 45 percent

nationally. In fact, while Hispanics account for 9 percent of the total New Jersey population (Bureau of the Census, 1990), they account for 16 percent (3,677) of New Jersey AIDS cases. Moreover, more than three in four (78%) of New Jersey women with AIDS are African-American or Hispanic. And more than four in five (81%) of pediatric cases are among African-American or Hispanic families.

D. The Public Health/Risk Reduction Model

Given the overwhelming statistics previously discussed, the need to reach injection drug users and their sexual partners with HIV/AIDS prevention, education, risk assessment, and behavioral change strategies is critical. Halting the spread of HIV among Puerto Rican injection drug users must be a primary interest of public health professionals since IDUs place themselves, their sex partners, and their unborn children at risk for HIV infection. Gaps in knowledge about specific behavioral determinants fuel the HIV/AIDS epidemic among Puerto-Rican IDUs. However, in order to achieve behavioral change in the Puerto Rican community and develop mechanisms that will sustain this change, an urgent attempt must be made to understand existing drug and sexual behaviors among this population. Overall, a more clear understanding of the antecedents of HIV seropositivity among Puerto Rican drug users can contribute greatly to the social work profession's progress in developing sound, effective educational programs for HIV risk reduction.

The goal of preventive intervention strategies is the reduction of the occurrence of new cases of a given illness. Typically, this is attempted through a risk reduction model, wherein the goal is the reduction of the risk factors that have been shown to be associated with the onset of the disorder. The risk reduction model for the prevention of illnesses is firmly anchored in the Public Health paradigm of agent, host, and the environment. In epidemiological research, a necessary first step in developing effective and targeted prevention interventions is the identification of factors that predict the problem we are trying to prevent. Risk factors are those characteristics, variables, or hazards that, if present for a given individual, make it more likely that this individual, rather than someone selected from the general population, will develop a disorder (Werner and Smith, 1992; Garmezy, 1983. Hence, if risk factors can be decreased or altered through interventions, then the likelihood that at-risk individuals would eventually develop the illness would decrease.

Thus, the objectives of this dissertation are to :

(1) Identify the behavioral risk factors most associated with the human immunodeficiency virus (HIV) among Puerto Rican injection drug users--not in treatment--in the city of Paterson, New Jersey; and,

(2) based on this analysis, describe what combined policies might constitute a reasonable prevention intervention strategy for social workers to undertake.

Identifying these factors will provide social workers with suggestions for the development of effective preventive interventions. Empirically identified

HIV infection risk factors, in this population, will also enhance the relevance of policy development among health care, drug treatment, and social service organizations (Robles et al., 1992).

Chapter II. Literature Review

A. Introduction

Because this dissertation pertain to mainland Puerto Ricans, it is, therefore, relevant to briefly discuss their history, current sociodemographic status and issues culture and acculturation. Knowledge about the contextual issues surrounding HIV risk behaviors among this population will assist in understanding the myriad factors that influence and determine risk taking behavior. In addition, a pertinent review of studies in the areas of drug use and HIV/AIDS risk behaviors among Hispanics and Puerto Ricans will be presented.

B. Brief Overview of Puerto Ricans in the Mainland United States

1. Demographic Overview

Hispanic Americans constitute the second largest and fastest growing minority group in the United States, with a mainland population of 22.35 million (Bureau of the Census, 1990). About one in 11 Americans is Hispanic (9%) (ibid). Approximately 2.7 million of these mainland Hispanics are Puerto Ricans or about 11.1 percent. By comparison, 62.6 percent of mainland Hispanics are Mexican-Americans, 13.8 percent are Central and South American, 4.9 percent are Cuban, and 7.6 percent other Hispanics (Spanish descent) (Bureau of the Census, 1991).

The vast majority of mainland Puerto Ricans are concentrated in the lower northeast states of New York, New Jersey, Pennsylvania, Massachusetts and Connecticut, although, you can also find large Puerto Rican communities in Illinois, Ohio and Florida.

New Jersey, with over 320,133 Puerto Rican residents, ranks second nationally following New York. Paterson (the study setting) has the third largest concentration of Puerto Ricans living in New Jersey, with a population of 27,580 Puerto Ricans.

2. Migration Patterns

Puerto Ricans[2], because of the unique, although not always satisfactory, relationship with the United States (Puerto Rico became a Commonwealth of the United States in 1952) have been United States citizens since 1917. As such, they have been free to move between the island and the mainland without legal and political restrictions (Fitzpatrick, 1971). However, Puerto Ricans do not enjoy all of the rights and privileges that come with citizenship. Puerto Ricans lack voting representation in the legislature and can not vote in Presidential elections. Nevertheless, in matters concerning the Island affairs, the federal government has no involvement in any local matters, granting full local executive, legislative, and judicial authority to the government of Puerto Rico (Harwood, 1981).

Although there existed a small Puerto Rican community in New York before the advent of the second World War, major immigration from the island did not begin until the 1940s, after which it accelerated through the 1970s. However, during the 1970s, economic factors on the mainland set a return migration in motion with a resulting steadied migration pattern. The concomitant result of this outmigration was that for the first time births, rather than immigration accounted for the increase in the Puerto Rican population on the mainland. However, during the last decade, more than 300,000 people moved from Puerto Rico to the mainland, reversing the former flow (Bureau of the Census, 1990).

Because of the low transportation costs, relative ease and shortness of the trip (between the eastern part of the U.S. and Puerto Rico) and the lack of legal or political restrictions, the migration pattern of this ethnic group has been marked by "a singular degree of bidirectionality" (Harwood, 1981). This has resulted in a tendency, by most Puerto Ricans, to reject the process of acculturation and favor a more bicultural manner of interaction.

The active two-way movement of thousands of individuals each year between Puerto Rico and the United States--across the "air bridge"--has also tragically become a link between the HIV epidemic on the island and the HIV epidemic in mainland Puerto Rican communities (National Commission on AIDS, 1992).

3. Sociodemographic Characteristics

The Puerto Rican population on the mainland constitutes one of the youngest ethnic groups in the country. Compared to a median age of 33.8 for non-Hispanic in 1990, the median age for mainland Puerto Ricans was only 26.7 (Bureau of the Census, 1990).

In addition to being youthful, the Puerto Rican population on the continent is poor. The poverty rate for Puerto Rican families in 1990 was 37.5 percent (the lowest of any Hispanic group) compared to just 9.5 percent for non-Hispanics (Bureau of the Census, 1991). Moreover, the percent of female-headed households among Puerto Ricans is 43.3, compared to just 16.4 percent among non-Hispanics (ibid).

Furthermore, in 1990, Puerto Ricans had the highest unemployment rates of any Hispanic group (12.2 percent). Consequently, 16 percent of Puerto Ricans had no health insurance, compared to 13 percent of non-Hispanic Whites thereby limiting their access to health care (Trevino et al, 1991).

Puerto Ricans, as compared to non-Hispanics, are more likely not to finish high school. Only 58 percent of Puerto Ricans 25 years and over were high school graduates, compared to 80.5 percent of non-Hispanics. Using the traditional measure of illiteracy--completion of less than five years of schooling--as of 1991, 8.4 percent of Puerto Ricans 25 years and over were illiterate, compared to just 1.6 percent of non-Hispanics (Bureau of the Census, 1991).

In fact, while high school dropout rates are not reported by Hispanic sub-group, the overall statistics are alarming. As of October 1989, about 37.7 percent of Hispanics aged 18-24 years were high school dropouts, compared to 14.1 of non-Hispanic whites (Bureau of the Census, 1991).

There are several implications for the socio-demographic characteristics previously mentioned. Education has immense importance in determining future life opportunities--making possible a more stable, satisfying and well paid employment, and the ability for full participation in American society. However, Puerto Ricans low educational attainment limits their prospects for social and economic advance. Previous research indicates that young adults--especially those with lower educational achievement and a higher rate of unemployment--are most susceptible to involvement in injection drug use (Hawkins et al., 1992; De La Rosa et al., 1993; Brook et al., 1990).

In addition, Singer et al., (1993) have posited that Puerto Ricans, confronted with discrimination and prejudice, suffer emotional discomfort and distress as conventional life career tracks are denied them, thus leading them into a path of substance abuse. Drug use provides them immediate relief from pain (physical and emotional), an alternative "life" style (drug-subculture), social acceptance from other drug using peers, and achievable goals (hustling), thereby making it more difficult to alter their behaviors unless options for relinquishing the "life" are offered. Thus, in addition to potentially propelling Puerto Ricans into a life of substance abuse, their poverty, low educational

attainment and related problems also makes it exceedingly difficult to provide effective health education/risk reduction educational interventions.

4. Cultural Values and Issues of Acculturation among Mainland Puerto Rican IDUs

Culture, as the integrating pattern of human behavior that includes thoughts, speech, action, and artifacts, is a vital force in shaping behavior (Orlandi, 1993). Understanding the normative cultural values of Puerto Ricans may provide researchers with a deeper understanding of behavioral patterns among this group. Furthermore, these cultural proscriptions may hold special significance for developing HIV/AIDS risk reduction intervention.

The mainland Puerto Rican family, as with other ethnicities in the U.S., is in a state of flux. The changing roles and expectations, within the culture, brought upon by varying social and political forces has created confusion and a sense of displacement among younger Puerto Ricans. Indeed, Ilan Stavans, in an article in The Washington Post, October 3, 1994 (p.B2), described the Puerto Ricans on the mainland not only as a minority group, but as a "self-generating diaspora in search of a unique collective identity". In addition, culture is mediated by socioeconomic and educational status, and degrees of acculturation. Thus, the following cultural attributes should not be assumed to apply to every single Puerto Rican living in the United States. However, they are useful in generally characterizing the Puerto Rican and his/her family.

Probably one of the most important cultural characteristic of the Puerto Rican family is the emphasis placed on the family as the primary social unit and source of support. This strong family orientation (*familism*), creates: 1) a strong need to consult other family members before making important decisions that may affect the family; 2) the obligation to help other members of the family in time of need; 3) a strong sense of love and nurturance toward children; 4) great respect for elders and place high value in their opinions; 5) an extended family configuration that includes godparents (compadres), neighbors seen as family (como familia); 6) a cadre of para-foster children raised by any member of the family who is most able; 7) a strong desire for procreation as motherhood brings high status within the family structure (Marin and Marin, 1991).

The cultural value of familism can potentially assist but may also hinder HIV/AIDS risk reduction efforts. For example, the impact of AIDS on the family and especially on children could be key motivating factors in prevention campaigns. Furthermore, Puerto Ricans with HIV/AIDS may experience less family abandonment or ostracism as the family's sense of obligation precludes forsaking the individual. However, this strong family orientation may also become an obstacle to safer sex recommendations. Any HIV/AIDS prevention that insists on condom usage will be seen as inappropriate.

Puerto Ricans are usually fatalistic about their future and feel that their future is in the hands of "God". They feel powerless to change their fate and

usually respond to crisis by deferring to some divinity and blaming their fate on forces beyond their control. This has definitive implications for HIV/AIDS education. Most health education theories are predicated on the ability of the individual to believe that they can alter their behavior (self-efficacy) and as a consequence, alter their risk for illness (Bandura, 1986; Fishbein and Middlestadt, 1989). Thus, this cultural belief may present a formidable barrier for HIV/AIDS educators to overcome.

Puerto Ricans place a high value on friendly interpersonal relations. The need to maintain harmony in interpersonal relationships and smooth social relations typifies the cultural concept of *personalism* (Marin, 1990). In order to accomplish this, most Puerto Ricans prefer to have relationships with others of their social group. This suggests that Puerto Ricans may be more likely to trust and cooperate with health care workers whom they know personally and have had previous pleasant conversations with.

There are several implications for HIV/AIDS risk reduction educational interventions. Given this cultural prescription, Puerto Rican IDUs may place greater attention and credibility to health educators who are recovering injection drug users themselves and are indigenous to the community. Furthermore, confrontations or exigencies made by outreach workers (eg., demanding vs suggesting that the IDU enter treatment, use a condom or confronting him/her with their HIV status vs assessing individual risk) need to be avoided.

Respeto or the need for respect is another important Puerto Rican cultural value. Respect requires that one's sense of personal integrity be maintained in interactions with others. Obtaining respect, both from the family and other members of the community, is seen by Puerto Ricans as a necessary component for being successful (Wurzman et al., 1982).

This cultural value may also present a potential problem for the health educator/outreach worker. For example, in their attempts to secure respect from health educators/outreach workers, whom Puerto Rican IDUs see as authority figures, an element of social desirability may inhibit the IDUs from acknowledging high risk behaviors. They may also not question authority or reveal their true feelings for fear of being disrespectful. Therefore, health educators/outreach workers will need to establish feelings of *confianza* (trust) and acceptance. This will require spending time developing a familial, personal, trusting relationship by engaging in conversation over a long period of time before engaging the IDUs in risk reduction interventions.

Machismo or the exaggerated importance of maleness or "male pride" is probably one of the more complex of the cultural values held by the majority of the Puerto Ricans (Wurzman et al., 1982). It is usually described either from a positive and from a negative perspective. From a positive perspective, to be "macho" entails: being the head of the family, the protector of the wife and children, the primary breadwinner. The negative description characterizes Hispanic men as sexual prowlers who must utilize every sexual opportunity

offered. To be "macho" or "act macho" the man must demonstrate virility by: having multiple sexual partners; promoting physical courage (fights, retaliation, etc.); dominating women in and outside of the family; not weeping when injured; and, committing violent or risky acts (Panitz, et al., 1983).

The HIV risk reduction implications are obvious. It will be necessary to appeal to the "positive" macho in Hispanic men by strongly promoting wellness in the family and their responsibility to safeguard the health and well-being of their wife and children.

5. Issues of Acculturation among mainland Puerto Rican IDUs

All Hispanic groups who migrate to the U.S. share the experience of the process of acculturation or culture change. As an ethnic group, Hispanics are exposed to the mainstream cultural patterns of the U.S. and alterations in their values, norms, attitudes and behaviors may be expected to occur because of this contact. However, among Puerto Ricans, this process may be mitigated by the constant free-flowing travel between the island and the mainland.

The potential for acculturation to create stressful and problematic social and personal conditions is considerable (Casas, 1992). Problems associated with difficulties in coping with the stresses of culture change can strongly influence drug user patterns. Therefore, since acculturation may involve

changes in attitudes, norms and practices regarding use of illicit drugs, it will be important for researchers and program planners/policy makers to understand the relation of acculturation to high risk behaviors fueling the HIV/AIDS epidemic among Puerto Rican IDUs.

There exists much controversy regarding the best way to define, operationalize, and measure acculturation among the various Hispanic subgroups, especially among mainland Puerto Ricans (Berry, 1989; Padilla, 1980; Torres-Matrullo, 1980; Szapocznik et al., 1978; Keefe, 1980; Marin et al., 1987; Marin and Marin, 1990).

Schinke and colleagues (1988), in their study of Hispanic youths and substance abuse prevention, briefly defined acculturation as the "three phases of contact, conflict, and adaptation through which both migrant and host cultures and individuals move, before functional assimilation" (p.815). Expanding upon this definition, Berry (1980) posits that acculturation is not only assimilation, but a complex interactional process involving both members of the cultural group undergoing change and members of the host culture. Padilla (1980) further elaborates on this concept by relating that acculturation is a "dynamic and vibrant process"; more than just the contact and resulting change that occurs when two cultures come into direct contact with each other. He further postulates that acculturation is much more complex than originally thought. Indeed, the old definition of acculturation as an inevitable process, unidimensional and unidirectional, resulting in the "melting pot"

metaphor has been consistently challenged by modern day scholars (Padilla, 1980; Berry, 1980; Marin et al., 1987).

Measurement of acculturation is important not only as a way of identifying individual or personality differences but also because it has been reported to be related to other important variables. However, how to accurately measure levels of acculturation among distinct Hispanic groups has been a source of much controversy (Cuellar, et al., 1980; Marin et al., 1987; Mainous, 1989). Most acculturation scales, created thus far, have been created for use with one specific Hispanic subgroup--mainly Mexican-Americans.

Most scales have measured English language proficiency as the primary guide in determining acculturation (Cuellar et al., 1980; Padilla, 1980). Although the majority of mainland Puerto Ricans have low educational attainments, they, however, speak English well. In fact, most can not speak Spanish at all. Indeed, the Puerto Ricans interviewed for this report overwhelmingly chose to complete the questionnaire in English.

One of the best examples of the endless bargaining, of the coming and going between languages and selves common among Puerto Ricans on the

mainland is found in a poem by the poet and Duke University Professor of Spanish literature, Gustavo Perez Firmat:

> The fact that I
> am writing to you
> in English already
> falsifies what I
> wanted to tell you.
> My subject:
> how to explain to you
> that I don't belong to English
> though I belong nowhere else,
> if not here in English.
>
> "Life on the Hyphen"
> Gustavo Perez Firmat

Thus, measuring English language proficiency among this population may provide misguided findings as to their true levels of acculturation. To date, there have not been any published scales measuring acculturation specifically among mainland Puerto Ricans or measuring other psychosocial domains.

Acculturation, among Hispanics in general, has been found to be associated with a person's mental health status; levels of social support; utilization of health care services; suicide; deviancy; and alcoholism and drug use/abuse. Most recently, acculturation has also been associated with levels of AIDS knowledge and high risk sexual and drug practices.

Numerous scholars have found significant correlations between levels of acculturation and increased use of alcohol and drugs. Smith and Peterson (1983), found that the more highly acculturated Hispanics, that is those who

had adopted mainstream values and lifestyles, more commonly used alcohol and drugs. Similar findings have been reported by Perez, et al., 1980; and Page, 1980.

In exploring gender differences among drug users and levels of acculturation, some researchers have suggested that acculturation may be more strongly associated with the use of some psychoactive substances, such as alcohol, among women than men (Alcocer, 1982; Caetano, 1987). Indeed, in a later study by Marks et al., 1990, these gender differences were again reported. Marks and colleagues found significant positive correlations between acculturation and alcohol consumption, especially for the women in the sample. However, Markides et al., 1990, utilizing data from the Hispanic Health and Nutrition Examination Survey (HHANES) found that acculturation was positively related to the alcohol consumption of younger Mexican-American women but not of Mexican-American men. Similarly Amaro et al., 1990 found that acculturation was more strongly associated with cocaine use among Puerto Rican men than among their female counterparts.

With respect to overall illicit drug use, Amaro and colleagues (1990), again utilizing data from the HHANES report, found that across all Hispanic groups, acculturation into U.S. society, as reflected in English language use, was associated with higher rates of illicit drug use even after sociodemographic variables such as gender, age, income and education were considered.

In the only study to date investigating the effect of acculturation levels on the perceived risk of AIDS and risky behavior among impoverished Hispanic women, Nyamathi and colleagues (1993) found that low-acculturated Hispanic women reported perceived low risk for HIV and were least likely to engage in illegal drug use and sexual activity with multiple partners. Intravenous drug use; non-intravenous drug use and sex with multiple partners, however, was significantly correlated with high levels of acculturation among Hispanic women.

Thus, it appears that levels of acculturation, as a predictor variable for high risk behavior, should be more thoroughly explored. Rather than investigate an ethnic group--such as mainland Puerto Ricans--as a homogeneous whole, using acculturation as a variable may elucidate important differences that may profoundly affect high risk drug and sexual behaviors.

C. Previous Studies of Drug Use among Hispanics/Puerto Ricans in the U.S.

Only within the past decade, has there been adequate data on Hispanic substance abuse. It was not until the mid-1980s, with the passage of the 1986 Anti-Drug Abuse Act, that studies began to provide specific data concerning Hispanics. However, studies with Hispanics have involved small populations and people in restricted regions. The majority of the studies published during that time were skewed by differences in socioeconomic

factors and riddled with methodological pitfalls (De la Rosa et. al., 1990). For example, there has been continual uncertainty over whom a "Hispanic" categorization really represents. Most studies utilized different definitions of who is "Hispanic" (e.g., surname, self-identified, non-whites, etc.). The definitions varied from year to year, thus, comparisons over time proved inaccurate or misleading (Booth et al., 1990). In other instances, when estimating the prevalence of drug abuse among Hispanics, many studies excluded from their samples high-risk groups, such as the homeless, the transient (eg., migrant workers, etc.) and other undocumented individuals. Nonetheless, within the past ten years, several major studies have provided information on the prevalence, risk factors, and developmental course of substance abuse among Hispanics.

During the past decade, drug researchers have noted that illicit drug use is a significant problem for the Hispanic population in the U.S. (Wurzman et al., 1983; Tucker, 1985; Maddahian et al., 1986; DeLaRosa et al., 1990; Booth et al., 1990). The most recent data from the 1990 National Household Survey on Drug Abuse conducted by National Institute on Drug Abuse (NIDA), indicates that over 5 million Hispanics had used illicit drugs in their lifetime; 2.3 million had used illicit drugs in the past year; and 1 million had used illicit drugs in the past month (NIDA, 1991). While the overall use of illicit drugs among Hispanics declined from 10.5 percent in 1985 to 6.6 percent in 1990, the reported use of cocaine increased from 7.3 percent in 1985 to 11.5 percent in

1990 (ibid.). Schoenbaum and colleagues (1989) reported that cocaine users inject more frequently than do those who use other drugs. In addition, Chitwood et al., 1990, found that the "binge-type" injecting pattern of cocaine users can lead to an uncontrollable amount of needle sharing. Both of these activities have been reported as risk factors for HIV infection (Page et al., 1989; Williams, 1990; Chaisson et al., 1989). Thus, the reported increase in cocaine use among Hispanics could have a devastating impact in the Hispanic community as IDUs augment their chances of becoming infected with HIV with each successive "binge-type" injection pattern.

In 1989, Hispanics accounted for 11 percent of drug abuse related emergency room mentions in 21 metropolitan areas. The most frequently mentioned drugs were: heroin--16.6%; inhalants--20.3%; and methadone--21.3%. Nearly 14 percent of drug abuse related deaths in 27 metropolitan areas occurred among Hispanics (DAWN, 1989). While Hispanics account for 9 percent of the U.S. population, they accounted for more than 17 percent of the 320,406 Americans who were in drug treatment in 1989 but only 15 percent of all such clients in 1992 (SAMHSA, unpublished). Relatively high proportions of Hispanic clients were reported in the New York metropolitan area, California, Texas, and Colorado. However, the data indicate that of Hispanics who use drugs ***intravenously***, about 45 percent ***have never been*** in drug abuse treatment (NIDA,1990). Ball et al., 1988 and Weinberg and Murray (1987) have called for increasing drug treatment as a fruitful way of arresting

the spread of HIV. These researchers contend that once in treatment, IDUs can receive HIV/AIDS information, counseling and supportive services that will assist in their attempts to practice safer behavior to reduce their risk for HIV. A later report by Des Jarlais et al., (1994) also recommended providing additional drug abuse treatment to IDUs, as a way of reducing active drug injection and HIV transmission. Hence, the high percentage of out-of-treatment Hispanic IDUs previously mentioned has important implications for containing the spread of HIV/AIDS. Greater efforts to recruit, enroll and retain Hispanic IDUs in drug abuse treatment will be necessary to stem the tide of HIV infection in this population.

Booth et al., (1990) in their thorough review of the literature on Hispanic substance abuse, report that it is still not known whether Hispanics underutilize treatment services. The findings seem divided. Several studies suggest that Hispanics are neither more nor less likely to seek treatment (Gilbert and Cervantes, 1987), while other studies report "disproportionate" rates of admission, especially for heroin abuse (Trimble et al., 1987). Furthermore, Booth and colleagues caution that these statistics can be misleading and may steer other researchers to gross generalizations and suggest that, when taken as a whole, the Hispanic population is not more likely to use and abuse drugs than any other group.

Some authors have reported ethnic differences in the prevalence of illegal drug use among Hispanics. De la Rosa et al., (1990) in their review of the literature on Hispanics and illicit drug use, report that Hispanics are most likely to have used any form of cocaine, and second most likely, after African-Americans, to have used crack, while whites had the highest lifetime use of hallucinogens, stimulants and PCP (angel dust) of any group. Whites and African-Americans are equally likely to have used marijuana, but Hispanics lag behind.

Other researchers have reported intra-ethnic differences among Hispanics. For example, among all Hispanics, Puerto Ricans between the ages of eighteen and thirty-four had the highest rates of lifetime drug use. Booth et al., (1990) report that Hispanic men use illicit drugs at higher rates than do Hispanic women. Indeed, national studies show that male-female differences in drug use behavior are more pronounced among Hispanics than for other ethnic or cultural groups (Anglin, Hser, Booth, 1987). However, among Hispanics, Puerto Ricans show the smallest differences between men and women.

Major national studies have elucidated factors associated with the initial experimentation and continued drug use among Hispanics. These factors include: *drug availability*--the amount and relative ease of obtaining drugs in their neighborhood-- (Smart, 1980; Cohen, 1987; Booth et al., 1990), *peer*

influence--the number of other drug using friends--(Castro et al., 1987; Moore, 1980), *unconventional behavior* --previous history of criminality or other anti-social activities--(Anglin et al., 1988) and, *acculturation*--the degree of culture change and/or clash with mainstream culture--(Booth et al, 1990; Anglin et al., 1987; Amaro et al., 1990; Markides et al., 1990).

D. Previous studies of HIV risk behaviors among Hispanic IDUs in the U.S.

To date, few studies have been published that describe the behavioral risk factors of HIV among Hispanic IDUs and their level of AIDS knowledge, attitudes and beliefs. Even fewer studies describe sub-groups of Hispanics such as Puerto Ricans. Moreover, the few that do, often present contradictory findings.

For example, in studies reported by Friedman et al., 1987; Kleinman et al., 1990; and Schoenbaum et al., 1988; Hispanic drug users in the continental U.S. had the highest drug injection frequencies compared to African-Americans and non-Hispanic whites, and were most likely to inject in high risk shooting locales such as shooting galleries, parks, rooftops and alleys. However, none of the researchers could account for the differences reported. Later studies by Schoenbaum (1989) and Chaisson (1989) found that African-Americans injected significantly more often than nonblacks, while Nemoto et al., (1990) in a study of risk behaviors for HIV infection in relation to drug and sexual

activities among IDUs in New York City, found no significant difference between ethnic groups on risky drug use behaviors.

In a study of Puerto Ricans IDUs conducted in New York City, Sufian and colleagues (1990) found their sample to be at substantial risk for HIV infection both through their drug use and their sexual behaviors, but could not determine the reasons for this high behavioral vulnerability. However, in a later study conducted by Robles et al., (1992), among Puerto Ricans, both on the mainland and on the island, and non-Hispanic whites, Puerto Ricans IDUs were more likely to report risky drug use behaviors, but less likely to report some type of sexual risk behavior.

Colon et al., (1992) in a study comparing HIV infection of IDUs in Puerto Rico to that of Puerto Ricans IDUs on the mainland and non-Hispanic whites found that Puerto Ricans both on the mainland and island were significantly more likely to be seropositive (HIV infected) than non-Hispanic white IDUs. These differences between the two Puerto Rican groups and non-Hispanic whites were sustained after controlling for most selected risk factors (drug injection frequency, injected vs noninjected drug use, duration of drug injection, risky drug injecting locales, needle cleaning/sharing, number of sexual partners, condom use, etc.). The authors conclude that other risk behaviors, not assessed or identified in their analysis, might account for some of the disparity. They suggest that detailed ethnographic descriptions of injection behaviors,

specifically detailing ethnic/racial differences, will be needed in order to identify other unaccounted behaviors.

Singer et al.,(1990) and Marin et al.,(1990), have reported that Hispanics are more likely than members of the other minority groups to hold erroneous beliefs about casual means of HIV transmission such as the belief that using public toilet facilities, sharing eating utensils, coughing and/or sneezing, or living with someone who has AIDS can transmit the HIV. Other researchers (Kleinman et al., 1990; Marin, 1989) have also noted Hispanics' general acceptance of ideas about HIV transmission via casual contact.

While many publications have found ethnic/racial differences and even intra-ethnic differences in risk behaviors that place IDUs at risk for HIV infection that vary by geographic setting, the specific role played by cultural background in the probability of being infected with HIV remains a matter of some speculation.

In the absence of a clear link between a group-specific component and genetic susceptibility to AIDS, sociological, psychological, economic and political explanations have been advanced over the last half-dozen years to explain the elevated incidence of AIDS/HIV among non-white IDUs, especially Hispanics. Peterson and Bakeman (1989) have suggested that the relative risk for AIDS associated with IV drug use may be much higher for Hispanics than whites because, among other things, the former are in overall poorer health. This poorer health status may be attributed to impoverished groups' limited

access to the formal health care system (Solis et al., 1990; Trevino et al., 1991). This may be ascribed to a lack of resources, as well as to a health orientation which may make such groups more likely to seek assistance from institutions and individuals outside that health care system (Hoppe et al., 1975; Nall et al., 1967; Suchman, 1965). Moreover, Krueger et al.,(1990), who found an effect of income independent of race on HIV status, suggests that the poor may be at greater risk for HIV infection because of such constraints as poor access to risk reduction information and less support for the implementation of risk reduction strategies. For example, Hispanics with low income will have greater difficulty accessing drug treatment and other forms of health care due to non-existent health care insurance and/or money to pay for it. Such disfranchisement from conventional health and social service agencies will prevent Hispanics from obtaining needed risk reduction information and the required support to implement same.

Other researchers have related the risky drug injection practices of minority group members, such as Hispanics, to frustrations stemming from their relatively disadvantaged social status. For example, Des Jarlais and Friedman (1989) propose that the alienation resulting from status as a double "outsider"--i.e., a minority group member and a drug injector--may foster the behaviors that make HIV transmission more likely. Similarly, Friedman and colleagues (1990) have theorized that the "social pressures of racism and poverty are conducive

to high degrees of risk behavior by Hispanic intravenous drug users (as they are for blacks)" (p.51).

The specific function played by cultural background in the likelihood of becoming infected with HIV remains a matter of some conjecture. However, it appears quite plausible that HIV seroprevalence in the Hispanic community may be largely determined by the extent to which this ethnic's group cultural constructs presents obstacles to the practice of risk reduction for HIV infection. For example, Friedman and colleagues (1990) suggest that culturally specific Hispanic constructs such as ***fatalism*** *(fatal outlook, or lack of control over destiny i.e., what ever will be, will be),* ***familism*** *(the importance, and support, of the (extended) family unit),* ***personalism*** *(friendly interpersonal relations/need to maintain harmony),* ***respect*** *(mutual respect, deference to authority figures), and* ***machismo*** *(exaggerated importance of maleness or "male pride"),* may impact directly on the extent to which Hispanics respond or fail to respond to the threat of AIDS and to risk reduction educational efforts. Furthermore, Friedman et al., (1990), have stressed the need to consider other community and normative factors--such as the role of churches (eg., preaching against condom use); health related beliefs; gender roles; community attitudes about drug use and drug users; and, traditional help-seeking behaviors of Hispanics--as possible contributing causes of the higher vulnerability to AIDS among Hispanics.

E. Summary

The Puerto Rican population on the mainland is young, rapidly growing, poor, and heavily concentrated in the most urbanized areas of the country. A major problem for this population is their poor health status and lack of access to regular, high quality health care. Due to their low educational attainment, they are poorly prepared for the job market of the 21st century.

Intergenerational conflicts arising through the process of acculturation and the learning of English of Puerto Rican youths is placing the Puerto Rican family in crisis. Furthermore, confronted with discrimination and racism, the Puerto Rican, after 30 years of significant migration, has not moved into the mainstream of American society. They are neither isolated nor assimilated. However, some Puerto Ricans do not view this negatively. Frank Bonilla in "Beyond Survival: Why we will continue being Puerto Ricans" (1980) states "I think we have to recognize, in this long standing rejection of a quiet transfer of identity, a profoundly political act that is decidedly life affirming and nonsuicidal."

Mainland Puerto Ricans have the highest lifetime rates of drug use among all Hispanic groups. Nonetheless, they are underepresented in the drug abuse treatment system. While Puerto Ricans on the mainland also have the highest reported rates of HIV/AIDS of all Hispanic groups, very little is known about the risk factors that are fueling the HIV epidemic among this population.

The research which follows in the balance of this dissertation represents a preliminary effort to explore these factors and to identify possible areas for intervention.

CHAPTER III. Methodology

A. Introduction

This study analyzes data gathered between March 1990 and August 1992 while the author was the project director of the Paterson Health Behavior Project, Paterson, N.J. Even though the author participated (as the director of the project) in the design, collection and analysis of the original data set (over 1,800 African-American, White and Hispanic subjects), this dissertation is, nevertheless, to be considered a study of secondary data.

Secondary data may be defined as "preexisting or prerecorded data which were not collected for the specific ends of a given social researcher" (Forcese and Richer, 1973; p.179). Rubin (1988) argues that secondary analysis does not refer only to the analysis of data collected by other researchers. In fact, when circumstances warrant additional analysis of data--not merely delving further into the implications of the data--and this additional analysis is conducted as a separate investigation, this can also be referred to as secondary data analysis (Rubin, 1988; Forcese and Richer, 1973).

There are many advantages in utilizing available data. The most obvious being the greater efficiency--the time, labor, and expense that can be saved by not having to devise and collect additional data. For example, in order to plan effective HIV/AIDS educational risk reduction programs, we need to know the behaviors that are placing individuals at risk. The magnitude of the HIV/AIDS

epidemic demands urgency and expediency. To recruit and interview a similar sample (as the one presented in this study) would require substantial amounts of time and significant additional resources, both of which are not necessary as the data is already available. The few drawbacks--mostly having to do with reliability and validity--are not as serious. The author has a major advantage over other researchers using secondary data sets. Having been part of the original research design and data collection team, the author fully understands the purposes of the data and the constraints of their use. (Rubin, 1988).

The following analysis was conducted as a separate and independent investigation from the original data analysis that evaluated the effectiveness of three separate intervention strategies for the reduction of HIV risk behaviors among out-of treatment injection drug users. For clarification purposes (ie., to give the reader a greater understanding of how data collection was undertaken), background description will be provided on the national program and more specifically, on the original Paterson Health Behavior Project.

B. The National AIDS Demonstration Research Project

The National AIDS Demonstration Research (NADR) Project was established in 1987 by the National Institute on Drug Abuse. The NADR Project was designed to access previously unreached populations about which little was known--out of treatment injection drug users and their sexual partners--. This project was unique when it was initiated in 1987 and remains

unique today. What made this research venture unique was not only the methodology used but the active involvement of community-based groups and drug treatment programs. The purpose of this community-based project was to test and evaluate different theoretical models and intervention methods for reducing high-risk drug use and sexual behaviors among injection drug users and their sexual partners. The Project began with six NADR grants and five AIDS Targeted Outreach Model (ATOM) contracts; by September of 1988 it had expanded to more than 40 grants and contracts operating in more than 60 sites around the country.

All NADR grants were designed to test multiple interventions within a single community. Each site also collected data using a standardized data collection instrument. Basic demographic data was collected on a Contact Screener form by indigenous outreach workers during their work in the community. Additional detailed information concerning demographic characteristics, sexual, drug and needle using practices, AIDS knowledge, present and past illnesses, and drug treatment history was collected through the AIDS Initial Assessment (AIA) questionnaire[3]. After completing the questionnaire, each participant was given the opportunity for the HIV blood test. The HIV data was linked to the AIA through a unique respondent identification number. Approximately six months after the administration of the AIA, an AIDS Follow-up Assessment (AFA) questionnaire was given. When linked to the AIA, the AFA identified self-reported changes in knowledge and

behavior related to needle-sharing, drug use, and sexual practices. These efforts cumulatively amassed data on a national population base of approximately 30,000 from a group that had proven particularly elusive to earlier outreach and intervention efforts (injection drug users and their sexual partners).

C. The Paterson Health Behavior Project

The Paterson Health Behavior Project (PHBP) was one of three grants awarded, between 1987 and 1989, to the New Jersey State Department of Health, Division of Alcoholism, Drug Abuse and Addiction Services by the National Institute on Drug Abuse. The other two project sites were Newark and Jersey City. The sites were originally chosen because of the high incidence and prevalence of IV drug use and HIV/AIDS. Aside from the AIA, HIV test and the AFA (core information set), the PHBP provided a variety of standard and enhanced interventions, on a randomly assigned basis, involving education, skills training, group activities and case management services.

The research goals for the PHBP included: to determine HIV infection rates among injection drug users and their sexual partners; offer assistance to these groups to decrease the likelihood of HIV infection via skills training (standard intervention), group education activities and case management services (enhanced interventions); and, evaluate the effectiveness of two levels

of enhanced interventions on reducing the HIV risk behaviors of IDU's and their sex partners.

D. Description of the research setting

1. Paterson, New Jersey

Substance use, particularly injection drug use, has devastated the city of Paterson, a city burdened with high HIV seroprevalence rates (48%) (N.J. State Dept. of Health, 1994), poor service utilization, a high crime rate, and an overburdened public health care system (City of Paterson Health Department, personal communication, 1992).

With a population of nearly 141,000, Paterson (Passaic County) is the third largest city in New Jersey. Located about 15 miles northwest of New York City and 13 miles north of Newark, Paterson is 41 percent Hispanic, 33 percent black, 25 percent white, and under 2 percent other groups (U.S. Census Bureau, 1990). By all measures, Paterson is a depressed city that displays most of the characteristics associated with a population at risk: high unemployment, overcrowded conditions, poverty, high incidence of crime and drug abuse. Citywide, 17 percent of Paterson households are reported to be principally supported by public assistance. It has an unemployment rate of nearly 11 percent, higher than both the state and the national averages, and a median household income of less than $12,000 (1990 Census). Only 54

percent of the population has a high school education; less than 9 percent have four or more years of college. Over one-quarter of Paterson families are living below the poverty line (ibid.).

At the project's inception, drugs--particularly heroin and crack--were freely available on the streets and in a number of other locations in Paterson, including housing projects and various parks. Violence was frequent in the drug scene and arrests were common, with over 2,300 drug related arrests in 1990, a slight increase from the 1989 statistics (Paterson Police Department unpublished report, 1990).

Paterson's rate of Index crimes--82.4 per 1,000 population in 1986--increased to 87.6 in 1987; violent crime went up by 15 percent at this time. The serious crime rate in 1985 was 7,724 per 100,000 population (FBI estimate), comparable to that of Jersey City (7,787) and well above the statewide figure (5,094) (Uniform Crime Reports, 1990).

There were 3,441 arrests for drug abuse violations in Passaic County in 1987, an increase of 8 percent over the previous year. This surge is mostly accounted for by an increase in arrests for the sale and manufacture of drugs, which rose by 14 percent; arrests for possession or use increased by just three percent. Paterson police made 2,049 narcotics arrests in 1989, confiscating 12 guns in the process and recovering slightly over $126,000 from the arrestees, as well as drugs with a street value estimated at $522,451 (Paterson Police Department unpublished report 1990).

2. AIDS in Paterson, N.J.

At the time the PHBP project began in 1989, two-thirds of the adult and adolescent AIDS cases in Paterson were found among IV drug users. As of January 1990, there were 408 reported cases of AIDS in the city, for an incidence rate of about 289 cases per 100,000 population (289.3/100,000); by the time the project ended in December 1992, there were 741 reported cases of AIDS in Paterson, of which 65 percent were among injection drug users.

According to the New Jersey State Department of Health, as of December 31, 1993, there were 1,203 diagnosed cases of AIDS in Paterson. Fully two-thirds (66%) of these cases were classified in the injection drug user category. Another four percent shot drugs as well as had sex with other men. Nearly three-quarters (74%) of the adult/adolescent AIDS cases in Paterson have been Black (non-Hispanic) persons, 16 percent have been Hispanic, and 10 percent white (non-Hispanic). Paterson has by far the most serious AIDS problem of any city in Passaic County. The city's 1,203 AIDS cases comprise 73.7 percent of the AIDS cases in the county (1,631). Whereas two-thirds of Paterson's adult and adolescent AIDS cases have been classified in the injection drug use risk category, this figure is somewhat lower (59%) for Passaic County as a whole, suggesting the relatively more serious drug problem in Paterson.

While sexually transmitted diseases (STD) are not direct risk factors for HIV/AIDS, a high prevalence of STDs may be associated with a population that

does not consistently or usually practice safe sex (condom usage). In Passaic County (where Paterson is situated), the STD case rates for syphilis is 82.1 per 100,000 and for gonorrhea, 267.1 per 100,000 population. These rates exceed the state average by 40 to 45 percent (NJDOH, 1990). Another potential marker for the seriousness of the HIV/AIDS problem in Paterson is active tuberculosis (TB) cases. Since cities with the highest reported incidence of HIV/AIDS also report high case rates for TB, it has been speculated that active TB may be a correlate to the increase in HIV/AIDS (CDC, 1994). In 1993, Paterson reported 85 cases of active TB for a case rate of 59.6 per 100,000 population. This rate is the highest reported in the state (NJDOH, 1993).

E. Research Questions

The study aims to answer the following research questions:

1) What are the risk factors associated with HIV seropositivity among out-of-treatment Puerto Rican injection drug users in Paterson, N.J.?

a) Does a relationship exist between unsafe drug injection practices and risk for HIV/AIDS ?

b) Does a relationship exist between unsafe needle practices and risk for HIV/AIDS?

c) Does a relationship exist between unsafe sexual practices and risk for HIV/AIDS?

d) Does a relationship exist between psycho-social risk factors (eg., socio-demographic variables, history of previous illnesses, drug treatment history) and risk for HIV/AIDS?

2) What program components would be necessary to implement an effective HIV/AIDS health education-risk reduction program for this population?

F. Study Sample

This report is based upon the responses of the Puerto Rican participants in the Paterson (NJ) Health Behavior Project (PHBP), one of three National AIDS Demonstration Research (NADR) project sites in New Jersey. These projects, which were funded by the National Institute on Drug Abuse, recruited active injection drug users, who were not in drug treatment, and their sex partners, interviewed them about their needle and sexual risk behaviors, offered pre- and post-test counseling and an HIV test, and assigned the participants to a host of intervention programs aimed at helping them alter those practices that put them at risk for acquiring and transmitting HIV.

A convenience sample was drawn from the racially mixed city of Paterson, N.J. This approach to the sampling design was necessary due to problems accessing "hidden populations" (eg., not every eligible injection drug user and sexual partner in Paterson could be contacted and invited to participate). Study participants were recruited by ex-addict indigenous outreach workers engaged in AIDS education in well known high drug trafficking areas such as, shooting galleries, parks, shelters, and other street

settings, from the 21 census tracts in the city of Paterson. While it cannot be assumed that the population surveyed is representative of all Puerto Rican injection drug users in Paterson, multiple recruitment sites were chosen to reduce this potential bias (McCusker et al., 1990; Koblin et al., 1990; Lange et al., 1988). However, four neighborhoods (Riverview, Wrigley Park, People's Park, Sandy Hill) were targeted for heaviest outreach due to high drug arrest records from those neighborhoods (Paterson Police Department, 1989). Data for this analysis was derived from all the male and female Hispanic IDUs and their sexual partners recruited into the project (N=322). The data was gathered between March 1990 and August 1992 while the author was the director of the Paterson Health Behavior Project. Because of the high correlation between homosexual activity and HIV seropositivity, subjects who reported homosexual activity in the previous six months (N=2) were dropped from further analysis. Also removed from the analysis were twelve subjects who self-reported other than Puerto Rican background and 20 subjects who reported sex with an injection drug user but no injection drug use in the last six months leaving a sample N of 288 Puerto Rican IDU subjects in all tables in this report, except where otherwise noted. Therefore, the final study sample comprises 242 males (84%) and 46 females (16%) injection drug users. Study participants were required to:

(1) be at least 18 years of age;

(2) not have been in drug treatment within the past 30 days;

(3) have injected an illegal drug at least once within the previous six months; and,

(4) had to show proof of residence in Paterson.

Arms were checked for confirmation of recent IV drug use. All subjects meeting study criteria were informed of the study, asked to sing consent forms, and were assured of complete confidentiality.

G. Data Collection

At the PHBP storefront office located in the downtown area of Paterson, N.J., subjects were interviewed, after obtaining informed consent, by trained interviewers. The interview was held in a private room at the storefront office. Interviews, which lasted approximately one hour, were conducted in either English or Spanish depending on the request of the subject. The standardized and structured AIDS risk assessment questionnaire AIDS Initial Assessment (AIA)--v.8.0 (see Appendix A) gathered detailed information on: sociodemographic characteristics; general health status; current and past drug use patterns (including drug of choice, routes of administration, and frequency of use); needle sharing and cleaning practices; sexual practices and condom use; AIDS knowledge; past drug treatment history; and locator information for follow-up studies. Subjects were also asked to provide a blood sample for HIV testing, and received appropriate pre-test and post-test counseling and referral

services. Subjects were paid $20.00 for their time during the administration of the questionnaire.

Blood samples were drawn by venipuncture or finger stick and sent to the NJ State Department of Health Immunology Laboratory Services in Trenton, N.J. HIV seropositivity was determined if they were reactive on repeat administration of the ELISA (Genetic Systems, LEV 960), and were confirmed using Western Blot analysis. A positive result was defined as testing positive (X2) to the ELISA test and confirming the presence of the following bands in the Western Blot kit: p24 or p31 and either gp41 or gp 120 or gp160. A blot with no bands was defined as negative; otherwise, any bands other than those in the criteria for positive were considered indeterminate. Indeterminate results or in sufficient blood in 5 cases (1.73 percent) lead to these cases being treated as missing data and excluded from the analysis. With the exception of HIV status, all variables used here, including Puerto Rican background, are based on self-report. Behaviors related to frequency of injected and non-injected drug use, sharing of injection equipment, shooting locales, and sexual acts were asked of respondents with respect to the six months prior to the interview.

H. Data Analysis

Data analyses were performed using the Statistical Package for the Social Sciences (SPSS/SPSSPC+, ver 4.01, Advanced Statistics Module). Chi-

square tests were used as statistical guides in determining relationships between categorical factors. HIV status was used as the dependent variable. Independent variables were selected based on previous AIDS risk studies (Iguchi et al., 1992; Barrett and Battjes, 1990; Caussy et al., 1990; Marmor et al., 1987; Nemoto et al., 1990; Schoenbaum et al., 1989).

Associations between various behaviors and demographic characteristics and HIV serostatus were analyzed using odds ratios and exact 95 percent confidence limits (EpiInfo. Version 5-Statcalc). Odds ratio, sometimes called relative odds, is a valid measure of strength of the association between two variables. It is defined as the ratio of a/b to c/d. The odds ratio is the ratio of two odds. Odds, in turn, are themselves ratios of the number of events to the number of nonevents. For example, since the variable of interest for this study is HIV seropositivity, the odds are calculated as the number of seropositive individuals to the number of seronegative individuals. An odds ratio of greater than 1.0 suggests an increased likelihood of the event occurring (more likely to be HIV seropositive), while an odds ratio of less than 1.0 indicates a decreased likelihood of the event occurring (less likely to be HIV positive), (Kuzma, 1984; Halli and Rao, 1992; Agresti, 1990). Thus, an odds ratio represents the change in the likelihood of a particular outcome (HIV seropositivity) when comparing one category of a variable to a "reference" category for that variable.

Variables found to be significantly related to HIV infection were entered into multiple logistic regression analysis (using forward-stepwise variable selection) to determine independent contribution to HIV seropositivity.

A sensible goal in any analysis is to find the best-fitting and the most parsimonious model that describes the relation between the dependent variable (in this case, HIV seropositivity coded as (1) and a set of predictor variables (independent variable). Multiple logistic regression was selected because the dependent variable is dichotomous (one is either HIV positive or negative) and because the usual assumptions underlying the use of discriminant analysis and multiple regression (eg., assuming that the explanatory variables have a normal distribution) were not met (Halli and Rao, 1992; Agresti, 1990).

The logistic function is a non-linear estimation technique that is appropriate when the dependent variable is dichotomous and the assumption of a normal distribution is not appropriate as is the case with this particular data set. In multiple linear regression, predictions may lie outside the [0,1] interval. However, the observed values in this data set are either 0 (HIV negative) or 1 (HIV positive). Thus, utilizing multiple regression could present serious problems. In multiple linear regression, the interpretation of the regression coefficient is straightforward. It tells you the amount of change in the dependent variable for a one-unit change in the independent variable.

However, multiple logistic regression gives you the odds of an event occurring. The odds of an event occurring are defined as the ratio of the

probability that it will occur to the probability that it will not. In multiple logistic regression, the regression coefficient (*B*) represents the increment to the log odds of the probability of testing HIV seropositive for every unit increase in the independent variable, holding other included independent variables constant. The statistic for *Exp(B)*--adjusted odds-ratio--represents the multiplicative factor by which the odds change for every unit increase in the independent variable, controlling for other included predictors.

Several models were examined in an attempt to find the most appropriate one based on interpretability of the results and parsimony. Separate multiple logistic regressions were run utilizing: 1) backward stepwise variable selection (all variables are included in the model, each one is independently analyzed for exclusion); 2) forward stepwise variable selection (no variables are included in the model, at each step, one variable is entered and independently analyzed to determine inclusion in the model); 3) only the variables significantly related to HIV seropositivity in the bivariate analysis; 4) any other variables that other researchers had found to be associated with HIV seropositivity. All runs produced very similar results. The final model presented in the "Findings" section was chosen based on the above-mentioned criteria.

Chapter IV. Findings

A. Sample Profile

1. Basic Characteristics

TABLE 1

HIV SEROPOSITIVITY AMONG PUERTO RICAN INJECTION DRUG USERS IN PATERSON, NJ BY SOCIODEMOGRAPHIC CHARACTERISTICS, MARCH 1990 - AUGUST 1992 (N=288)

Characteristic	% of Total (N)[a]	% HIV Positive[b]	%HIV Negative	p value
Age				
18 - 25	22.2 (64)	21.9	78.1	.006
26 - 35	49.0 (141)	40.4	59.6	
36 - 45	27.4 (79)	46.8	53.2	
46 - 50	1.4 (4)	75.0	25.0	
				$\chi 2 = 12.25$ $df = 3$
Duration of Drug Injection				
0 - 5 years	30.2 (85)	15.3	84.7	.0000
6 - 10 years	21.7 (61)	32.8	67.2	
11 - 16 years	17.8 (50)	54.0	46.0	
17 - 25 years	25.6 (72)	58.3	41.7	
26 - 32 years	4.6 (13)	53.8	46.2	
				$\chi 2 = 39.35$ $df = 5$
Major Source of Income				
Job	33.6 (96)	23.2	76.8	.0001
Govt. Assist.*	19.9 (57)	51.8	48.2	
Supported by Significant Other	18.2 (52)	34.6	65.4	
Illegal means	25.2 (72)	46.4	53.6	
Other	2.4 (7)	85.7	14.3	
				$\chi 2 = 22.37$ $df = 4$
Gender				
Male	84.0 (237)	39.7	60.3	ns
Female	16.0 (46)	32.6	67.4	

Characteristic	% of total (N)[a]	% HIV Positive[b]	% HIV Negative	p value
Residence				
Own house	24.7 (71)	35.2	64.8	ns
Someone's house	57.3 (165)	40.7	59.3	
Boarding house	6.3 (18)	33.3	66.7	
Shelter	1.7 (5)	40.0	60.0	
Streets	9.4 (27)	40.0	60.0	
Other	.7 (2)	-----	-----	
Current Work Situation				
Full Time	11.5 (33)	24.2	75.8	ns
Part Time/ Occasional	11.4 (33)	28.2	71.8	
Unemployed	68.4 (197)	41.1	58.9	
Other	8.7 (25)	44.0	56.0	
Highest Grade of Schooling				
Less than high school	76.7 (221)	39.8	60.2	ns
High School	16.0 (46)	37.0	63.0	
Some College	7.3 (21)	28.6	71.4	
Any Children Living w/				
No	69.0 (198)	39.7	60.3	ns
Yes	31.0 (89)	36.4	63.6	

[a] Seven cases missing duration data. Four cases missing income data. Percentages based on cases with complete data.

[b] Five subjects refused the HIV test or provided insufficient blood for testing, and are not included in this analysis.

* Government assistance includes welfare, disability and unemployment benefits.

The study sample is predominantly male (84%). The overall seropositivity rate is 38.5 percent.

The mean age of the sample is 32 years of age (SD = 7.0), with a range of 18 to 50 years. The median duration of injection drug use is 10.5 years, ranging from less than one year to 32 years with a mode of only three years.

Drug use, including alcohol, began early among these Puerto Ricans. One-fourth report being intoxicated from alcohol prior to the age of 13 and over half used some other drug before age 18, most often marijuana (data not shown).

Answers to other questions on the baseline interview reveal a rather indigent study population, as 11.1 percent reported living on the streets or in a shelter and another 63.3 percent living in someone's house or in a welfare boarding home. Almost 40 percent were supported by government entitlement programs--including welfare (13%), disability (3%) and unemployment benefits (4.2%)--or by a significant other including husband or wife (7%), family (9.1%) or friends (2.1%. Slightly over one-quarter (25.2%) claimed an illicit activity as their major source of income. As a further indication of their economic plight, almost 70 percent were unemployed, while only 11.5 percent were employed full-time. In addition, 76.7 percent had less than a high school diploma, indicating the low level of education among these IDUs.

2. Sociodemographic Characteristics and HIV seropositivity

There is no difference in seroprevalence rates by sex among the IDUs participants (males, 39.7% positive, females, 32.6% positive). However age is strongly associated with seropositivity ($p = .006$). Whereas 21.9 percent of IDUs in their twenties are seropositive, 40.4 percent in the 26-35 age bracket and 46.8 percent of those over 36 tested positive. More older IDUs may test

positive because they may have engaged in risky needle sharing practices for a longer period of time than younger IDUs and therefore have had greater exposure to the virus.

Similarly, infection rates also rise as the years of injection drug use escalates; with the highest infection rates occurring among those with 11 to 25 years of injection drug use (58.3 % positive), and the lowest among those with 5 years or less (15.3% positive, $p = .000$). In addition, infection rates are significantly higher among those subjects who reported government assistance (51.8%) and illegal activities (46.4%), compared with 23 percent who reported a job as their primary source of income ($p = .0001$).

3. AIDS Knowledge

Participants' knowledge of AIDS information can be an important indicator of their risk status, because ignorance of the means of AIDS transmission may lead them to engage in risky behaviors.

For the most part, knowledge about the means of HIV transmission (as measured on a simple sixteen-item true/false quiz designed to assess knowledge in this area) was very high in the Paterson study population. Nearly all subjects (98.2%) knew that HIV/AIDS could be acquired by sharing contaminated drug injection equipment with someone who had AIDS. As many (97.6%) knew that sharing with someone who had shared works (injection equipment) with others could also transmit HIV/AIDS. Nearly 98 percent knew

that HIV/AIDS could be transmitted by having unprotected sex with someone who had AIDS, while 86.0 percent knew that cleaning works with bleach could be effective in destroying HIV, and that cleaning works with water alone was insufficient to kill HIV (95.2%).

In contrast, subjects also demonstrated many important misconceptions about the disease. Slightly more than one-third of subjects (37%) thought that a person could get the HIV by shaking hands or touching someone with the virus while 22.2 percent believed that a person could avoid acquiring HIV by just having oral sex. Furthermore, 19.7 percent believed that HIV could be acquired by using public toilet facilities.

The Paterson findings of lower levels of AIDS knowledge concerning casual modes of transmission of HIV mirror those reported by Marin and Marin (1990) and Singer et al., (1990) who have noted Hispanics' general acceptance of ideas about HIV transmission via casual contact.

B. Drug Use

1. Non-Injected Drug Use

Table 2 shows the frequency of noninjected drug use in the six months prior to the interview by HIV serostatus.

TABLE 2

FREQUENCY OF DRUG USAGE OF PUERTO RICAN INJECTION DRUG USERS DURING THE PAST SIX MONTHS BY HIV SEROPOSITIVITY (N=288)

Noninjected Drugs	*% of total (N)*	*% HIV Positive*	*% HIV Negative*	*p value*
Alcohol				
never	18.4 (52)	32.7	67.3	ns
once a week or less	31.1 (88)	45.5	54.5	
2-6 times/week	18.0 (51)	37.3	62.7	
once a day or more	32.5 (92)	35.9	64.1	
Marijuana				
never	57.8 (163)	42.3	57.7	ns
once a week or less	30.9 (87)	29.9	70.1	
2-6 times/week	6.4 (18)	55.6	44.4	
once a day or more	5.0 (14)	21.4	78.6	
Crack/Freebase				
never	58.9 (166)	42.2	57.8	ns
once a week or less	23.8 (67)	31.3	68.7	
2-6 times/week	6.4 (18)	38.9	61.1	
once a day or more	11.0 (31)	32.3	67.7	
Cocaine				
never	59.1 (165)	42.4	57.6	ns
once a week or less	26.5 (74)	28.4	71.6	
2-6 times/week	8.2 (23)	39.1	60.9	
once a day or more	6.1 (17)	47.1	52.9	
Heroin				
never	65.7 (182)	41.8	58.2	.02
once a week or less	11.2 (31)	48.4	51.6	
2-6 times/week	6.9 (19)	26.3	73.7	
once a day or more	16.2 (45)	26.7	73.7	
				$\chi^2 = 5.40$
				$df = 1$

Reports of current usage indicate that most of the respondents drink alcohol (81.6%) with 32.5 percent using alcohol daily. About 42.3 percent smoke marijuana, 41.2 percent use crack/freebase and 40.8 percent use cocaine at least once a week or more.

A rather high percentage (16.2%) report ingesting heroin in noninjected forms on a daily basis. This may indicate a move among Puerto Rican drug users toward less risky forms of heroin ingestion (Des Jarlais and Friedman, 1988). In fact, the data indicates that the more likely they are to use noninjected heroin, the less likely they are to be seropositive. Those subjects who reported "never using non-injected heroin" were more likely to be seropositive than those who reported using "once a day or more" (41.8% to 26.7%, $p = .02$)

2. *Injected Drug Use*

Although noninjected polydrug use appears to be the norm among this sample of IDUs, the degree of daily intravenous drug use is disturbing.

TABLE 3

FREQUENCY OF DRUG USAGE OF PUERTO RICAN INJECTION DRUG USERS DURING THE PAST SIX MONTHS BY HIV SEROPOSITIVITY (N=288)

Injected Drugs				
Heroin	*% of Total (N)*	*% HIV Positive*	*% HIV Negative*	*p value*
Never	5.3 (15)	40.0	60.0	ns
Once a week or less	17.4 (49)	40.8	59.2	
2 - 6 times/week	17.4 (49)	36.7	63.3	
Once a day or more	59.8 (168)	38.1	61.9	
Cocaine				
Never	32.0 (88)	33.0	67.0	ns
Once a month or less	28.7 (79)	39.2	60.8	
2 - 6 times/week	13.8 (38)	47.4	52.6	
Once a day or more	25.5 (70)	40.0	60.0	
Heroin/Cocaine Mix				
Never	31.3 (88)	27.3	72.7	.002
Once a week or less	26.0 (73)	39.7	60.3	
2 - 6 times/week	13.5 (38)	63.2	36.8	
Once a day or more	29.2 (82)	39.0	61.0	
				$\chi^2=14.44$ $df=3$

TABLE 3.1

DRUG TREATMENT HISTORY OF PUERTO RICAN INJECTION DRUG USERS BY HIV SEROPOSITIVITY

Ever Enrolled in Treatment	*% of Total (N)*	*% HIV Positive*	*% HIV Negative*	*p value*
no	34.3 (97)	35.1	64.9	ns
yes	65.7 (186)	40.3	59.7	

Table 3 reveals that almost 60 percent of the respondents reported shooting heroin on a daily basis, while slightly over one-fourth (25.5%) shot cocaine daily and over 29 percent injected speedballs daily (heroin/cocaine mix). Indeed, those subjects who reported injecting speedballs two to six times a week or more, were significantly more likely to be seropositive than those subjects reporting less drug injection frequency (63.2% to 39.7%, $p = .002$).

The association between speedball use and HIV seropositivity found here also has been reported in nearby Newark and Jersey City (Iguchi et al., 1992). Other studies (Schoenbaum et al., 1989; Chaisson et al., 1989) have linked injection cocaine use to increased likelihood of HIV infection. Several other researchers have attributed the association between injection cocaine--either alone or in speedball form--and HIV infection to frequency of use (Schoembaum et al., 1989; Murphy, 1987), to a binge-type injection pattern and indiscriminate sharing of needles characteristic of those on a cocaine "run" (Chitwood et al., 1990a), and to cocaine users' greater use of "booting", a form of drug injection (Chitwood and Comerford, 1990). Booting is a practice whereby blood is drawn up into the syringe and mixed with the drug solution before it is injected back into the vein. Booting is a high risk practice for HIV transmission because blood is left in the syringe; subsequent users are at risk for infection if this blood is contaminated and the syringe is not thoroughly cleaned.

Based on the information presented here (the high levels of injection drug use), it is not too surprising that more than half of the respondents (65.7%) reported having ever been in a drug treatment program (Table 3.1). Methadone treatment detoxification was the most commonly utilized drug treatment program (48.2%) followed by methadone maintenance (32.0%) and residential (drug-free therapeutic community) 25.1 percent (data not shown). These findings parallel the results of other studies, suggesting that Puerto Ricans are "overrepresented in the less costly methadone programs, whereas Anglos are overrepresented in the more expensive and possibly more effective residential treatment programs" (Booth et al., 1990, p.37).

While not statistically significant, a troubling finding is that of those subjects reporting never having been in drug abuse treatment (34.3%), 35.1 percent are seropositive. Some researchers (Ball et al., 1988; Weinberg and Murray, 1987; Des Jarlais et al., 1994) have called for increased availability of drug treatment as an effective tool in the fight against HIV/AIDS. Thus, it appears that a considerable number of the sample never have had the chance to become exposed to HIV/AIDS education and counseling while in a relatively lucid state. This has serious implications for HIV/AIDS transmission as these individuals continue to re-infect themselves and expose others to the HIV virus.

C. Shooting Locales

Risky shooting locales for HIV transmission include those public settings--such as parks, abandoned buildings, alleys and rooftops--in which bleach and sterile injection equipment are usually not available or in short supply (Page, 1990). In the East Coast, especially, injectors utilize "shooting galleries" in large numbers (Page, 1990); Schrager et al., 1991; Celentano et al., 1991). Shooting galleries are places ranging from provisional facilities such as apartments serving a set of friends to formal commercial operations where users go to buy drug-related services. For example, gallery operators may rent space in which the user can inject drugs undisturbed. These locations are a source of HIV infection and spread due to the multiple users of one set of injection equipment. The owners provide several sets of "works" which are used by many customers throughout business hours. Usually, equipment is only given a perfunctory rinsing in water between users, consequently, disinfection does not occur (Chitwood et al., 1990; Page, 1990).

There are many reasons why Puerto Rican IUDs frequent shooting galleries. For example, since New Jersey law prohibit possession of drug paraphernalia (needles, syringes, etc.), IDUs make their purchase, use it, and leave the area free of any items which are illegal to possess or indicate drug use. In addition, since many Puerto Rican IDUs wish to protect their families from substance abuse, the use of shooting galleries provides a perfect environment to hide their drug use from families and significant others. Even

though they are dangerous places (IDUs fighting over drugs, police raids, etc.), shooting galleries also provide a central meeting place for users and a source of drug and drug information.

TABLE 4

DRUG INJECTING LOCALES OF PUERTO RICAN INJECTION DRUG USERS DURING THE PAST SIX MONTHS BY HIV SEROPOSITIVITY (N = 282)[a]

Locale	*% of total (N)*	*% HIV Positive*	*% HIV Negative*	*p value*
Friend's Place				
No	40.1 (113)	41.6	58.4	ns
Yes	59.9 (169)	36.7	63.3	
Party/Social Gathering				
No	86.5 (244)	37.7	62.3	ns
Yes	13.5 (38)	44.7	55.3	
Dealer's Place				
No	83.3 (235)	39.6	60.4	ns
Yes	16.7 (47)	34.0	66.0	
Shooting Gallery				
No	68.8 (194)	41.2	58.8	ns
Yes	31.2 (88)	33.0	67.0	
Abandoned Building				
No	47.0 (132)	36.9	63.1	ns
Yes	53.0 (149)	40.2	59.8	
Street, park, alley, rooftops				
No	43.4(122)	42.4	57.6	ns
Yes	56.6(160)	37.2	62.8	

[a] Five cases missing HIV data and are not included in the analysis. One case missing shooting locale data. Percentages based on cases with complete data.

The numbers in table 4 suggests that Puerto Rican IDUs in Paterson are utilizing risky shooting locales regularly. Indeed, more than half of the respondents reported injecting at a friend's place (59.9%), in abandoned buildings (53.0%) and in streets, parks, alleys and rooftops (56.6%) at least some of the time. These findings confirms earlier reports which noted that Hispanics, especially Puerto Rican injectors, were using shooting galleries and other risky locales in particularly large numbers in New York City (Sufian et al., 1990), Baltimore, Denver and El Paso (Booth et al., 1991). Similarly, Singer and Jia (1993) reporting from the multi-site NADR data set, remarked that Puerto Ricans, when compared to the national sample, are much less likely to inject drugs at home and much more likely to inject drugs in especially risky settings like shooting galleries or in precarious places like on the streets or in abandoned buildings where it is much more difficult to practice safer injection behaviors. This pattern may indicate an attempt by the Puerto Rican drug injector to separate his/her drug-using lifestyle from his/her home life. This, at face value, appears to be culturally congruent.

D. HIV-Risky Needle Practices

The sharing of needles, cookers, cotton and rinse water and the use of rented or borrowed needles are other practices that place needle users at significant risk for acquiring HIV (Page et al., 1989; Koester, 1990; Williams, 1990).

Elevated levels of needle risk practices continue among Paterson Puerto Rican drug injectors despite high levels of knowledge of the true means of HIV transmission among this group (Table 5).

TABLE 5

HIV-RISKY NEEDLE PRACTICES OF PUERTO RICAN INJECTION DRUG USERS IN THE LAST SIX MONTHS BY HIV SEROPOSITIVITY (N=282)[a]

Borrowed used needles/syringes	*% of total (N)*	*% HIV Positive*	*% HIV Negative*	*p value*
no	50.4 (142)	31.7	68.3	.01
yes	49.6 (140)	45.7	54.3	
				$\chi^2=5.847$ $df=1$
Rented used needles/syringes				
no	75.1 (211)	34.6	65.4	.04
yes	24.9 (71)	50.7	49.3	
				$\chi^2=6.341$ $df=2$
Shared cookers/cotton				
no	30.1 (85)	31.8	68.2	ns
yes	69.9 (197)	41.6	58.4	
Persons shared needles with[b]				
none	22.1 (61)	45.9	54.1	ns
one	19.9 (55)	34.5	65.5	
two or more	58.0 (160)	38.1	61.9	

[a] Five cases missing HIV data and are not included in the analysis. One case missing needle practices data. Percentages based on cases with complete data.

[b] Six cases missing needle sharing data and are not included in the analysis. Percentages based on cases with complete data.

In Paterson, over half of the respondents (58.0%) reported sharing needles with two or more persons in the six months prior to the interview and almost one-in-five (19.9%) shared with at least one person in the preceding six months. This high level of needle sharing corroborates the findings of other studies. For example, some 95 percent of the IDUs in San Francisco were sharing needles in late 1985 (Watters and Cheng, 1987) while, more recently, 79 percent of a sample of 212 methadone clients in Seattle were found to be sharing (Lishner and Look, 1990), as were over 80 percent of the street IDUs in studies in Miami (Page, 1990) and Houston (Williams, 1990).

This practice (needle sharing) is prevalent in the IDU drug culture. While many reasons have been put forth, among the most prominent one is a chronic shortage of needles stemming from public policies that limit access to needles and make possession of one a crime (such as in New Jersey). This has made many IDUs reluctant to carry their "outfits" (injection paraphernalia) with them on the streets (Murphy, 1987). It has also promoted the unforeseen practice of borrowing, renting and sharing of needles. However, some research (Magura et al., 1989) has linked needle sharing to peer group behavior, the holding of attitudes conducive to sharing, and fatalism about developing AIDS. In addition, the fact that needles are reusable promotes their continue use, particularly among persons with low income (Newmeyer et al., 1989).

The great majority (75.1%) of Paterson's Puerto Rican IDUs had not rented needles or syringes in the previous six months, and 50.4 percent had never borrowed used needles. While this may show some evidence, on the part of IDUs, to modify their behavior, the fact that almost 70 percent had shared a cooker or cotton at some point in the last six months is especially troubling since sharing cookers and cotton is a high risk practice for the acquisition of HIV. A cooker is a name given to any small receptacle--such as a bottle cap or spoon--in which water and a drug can be mixed. This instrument is heated to mix the heroin. IDUs typically use cotton as a filter when drawing the drug solution up into the syringe. Cookers and cotton often are shared by injectors, even if the needles are not shared. A contaminated needle that touches a cooker or cotton may transmit the virus to the drug solution, which other IDUs may then draw into their own syringe (Koester, 1990).

Again, contrary to expectations, only two out of four needle practices presented in table 5 are significantly related to HIV seropositivity. There were no significant differences between seropositivity and needle sharing behaviors (sharing cookers/cotton/needles) among this group of IDUs. However, IDUs who tested positive were significantly more likely to borrow used needles/syringes than those who did not (45.7% to 31.7% positive, $\underline{p} = .01$). In addition, the practice of renting used needles and syringes was also significantly related to seropositivity (50.7% to 34.6% positive, $\underline{p} = .04$).

E. Needle Cleaning Practices

Information from the AIA suggests that a significant majority of Puerto Rican IDUs not only obtained their "works" (drug injection equipment such as needles) in a manner that could potentially expose them to the HIV but also failed to consistently clean their "works" in the previous six months prior to the interview.

TABLE 6

USE OF NEW/BLEACH CLEANED NEEDLES AND NEEDLE CLEANING METHODS OF PUERTO RICAN INJECTION DRUG USERS IN THE LAST SIX MONTHS BY HIV SEROPOSITIVITY (N=282)

Used a new needle	% of total (N)	% HIV Positive[a]	% HIV Negative	p value
never	45.6 (128)	39.8	60.2	ns
some of the time	31.3 (88)	38.6	61.4	
always	23.1 (65)	36.9	63.1	
Cleaned before shooting*				
never	36.7 (103)	41.7	58.3	ns
some of the time	32.0 (90)	38.9	61.1	
always	8.2 (23)	30.4	69.6	
Needle Cleaning Methods				
always new needle	23.0 (65)	36.9	63.1	ns
always clean (bleach/boil/ alcohol	9.9 (28)	28.6	71.4	
unsafe**	67.0 (189)	40.7	59.3	

* asked only of those who did not always use a new needle (N=216).

** not always new needle/not always clean.

[a] Five cases missing HIV data and are not included in the analysis. One case reported not shooting and is not included in the analysis. Percentages based on cases with complete data.

As shown in table 6, only 23.1 percent of the Paterson sample reported that they "always" used a new needle prior to injecting drugs in the previous

six months. Even more discouraging, only 8.2 percent of those who *did not always* use a new needle (76.9%) reported that they "always" cleaned their needle before injecting. In fact, very few participants (9.9%) are consistently practicing the most effective cleaning techniques (boiling works in water or with a bleach /alcohol solution). Most surprisingly, there appears to be no association between these self-reported needle cleaning practices (the lack of same) and HIV serostatus.

In understanding how HIV is transmitted among IDUs, it is important to ascertain what happens to the needle after and IDU injects.

TABLE 7

WHAT RESPONDENTS DID WITH NEEDLE AFTER USE, LAST SIX MONTHS BY HIV SEROPOSITIVITY

Gave or lent to running partner	***% of Total (N)%***	***% HIV Positive***	***% HIV Negative***	***p value***
no	64.0 (181)	37.0	63.0	ns
yes	36.0 (102)	41.6	58.4	
Gave or lent to sex partner				
no	81.3 (230)	38.3	61.7	ns
yes	18.7 (53)	40.4	59.6	
Gave or lent to friends				
no	53.0 (150)	32.0	68.0	.03
yes	47.0 (133)	46.2	53.8	
				$\chi^2=6.617$ $df=2$

More than one-third (36.0%) of the respondents reported giving their used needle to a "running partner" (drug injecting partner), slightly less than

half (47.0%) gave or lent their needles to friends, while less than one-in-five (18.7%) gave or lent their needle to a sex partner. However, this low percentage could be attributed to the fact that more than two-thirds of the sample (67.0%) reported not having an IDU sex partner.

The most disturbing finding is that slightly less than half of all respondents who reported giving their needle to another person after use are HIV positive thus placing their running partner, sex partner and friends at significant risk for HIV transmission. In fact, those who reported giving their used needles to friends were significantly more likely to be seropositive than those who discarded their used needles after use (46.2% to 32.0%, $p = .03$).

F. Risky Sexual Practices

HIV can be acquired through sex with an infected partner (Harris et al., 1983; Padian et al., 1987). While the use of condoms is recommended as a way of reducing the risk of HIV transmission through sexual intercourse, IDUs generally have not been found to be particularly likely to use condoms (Page et al., 1989; Booth et al., 1991; Lewis et al., 1990; Magura et al., 1990). Moreover, having sex partners who also use IV drugs, trading sex for money or drugs, and having more than one sex partner also has been reported to increase the likelihood of being HIV infected (Feucht et al., 1990; Fullilove et al., 1990).

TABLE 8

RISKY SEXUAL PRACTICES OF PUERTO RICAN INJECTION DRUG USERS BY HIV SEROPOSITIVITY

Sex with anyone/ last six months	*% of Total (N)*	*% HIV Positive*	*% HIV Negative*	*p value*
no	17.3 (49)	55.1	44.9	.008
yes	82.7 (234)	35.0	65.0	
				$\chi^2=6.884$ $df=1$
Frequency of Condom Use				
never	66.1 (154)	30.5	69.5	.04
some of the time	20.2 (47)	38.3	61.7	
always	13.7 (32)	53.1	46.9	
				$\chi^2=6.185$ $df=2$
No. of sex partners last six months[a]				
one	62.8 (147)	31.3	68.7	ns
two or more	37.2 (87)	41.4	58.6	
No. of IDU sex partners				
none	67.8 (192)	37.0	63.0	ns
one	15.2 (43)	39.5	60.5	
two or more	17.0 (48)	43.8	56.2	
Traded Sex for money				
no	90.1 (255)	37.6	62.4	ns
yes	9.9 (28)	46.4	53.6	
Traded Sex for drugs				
no	91.9 (260)	37.6	62.4	ns
yes	8.1 (23)	39.1	60.9	

[a] Asked only of those who reported having any sex in the last six months (N=234).

The data presented in table 8 indicates that while a large majority (82.7%) report having sex with someone in the last six months, relatively few (13.7) of this sample of Puerto Rican IDUs are consistently (always) using condoms. More hopeful is that an overwhelming majority are not trading sex for money

(90.1%) or trading sex for drugs (91.9%), while more than two-thirds (67.8%) do not have an IDU as a sex partner.

Of all the risky sexual practices examined, only two are related to HIV seropositivity: not having any sex in the past six months and always wearing a condom.

Those who reported not having any sex in the last six months were significantly more likely to be HIV positive than those who reported sexual activity (55.1% to 35.0%, $p = .008$). While respondents who reported "always" using a condom were significantly more likely to be HIV positive than those who reported "never" using a condom (53.1% to 30.5%, $p = .04$). These associations are the reverse of what might have been expected. Since "always" wearing a condom presumably decreases a person's exposure to the HIV, one would expect seropositivity to be associated with "never" wearing a condom. Similarly, abstaining from sexual intercourse also significantly decreases the chances of becoming infected with the HIV, thus one would associate seropositivity with engaging in unprotected sexual activity.

One possible explanation for this inverse relationship is that subjects may already know that they are HIV positive and are thus engaging in risk reduction activities that may "protect" their sexual partner. Another plausible explanation for this counterintuitive finding may be that respondents, while not knowing their HIV serostatus, may be attempting risk reduction practices to protect themselves from HIV infection. This assumption may be very feasible given the high amount of knowledge regarding the true means of HIV transmission among

this group of IDUs. However, in discussing similar findings among Newark and Jersey City IDUs, Iguchi et al.,(1992) have suggested that this may be a result of social isolation and/or sexual undesirability, and consequent lack of access to sexual partners for individuals already showing signs of HIV-related illness.

Sexually transmitted diseases are also a concern among this group because of the association of STD's with increased risk of HIV infection (Padian et al., 1987). Table 9 presents the percentage of subjects who had been told by a physician that they had a sexually transmitted disease (ever/last six months) by HIV seropositivity.

TABLE 9

PERCENT OF RESPONDENTS WHO REPORTED HAVING BEEN TOLD BY A PHYSICIAN THAT THEY HAD A SEXUALLY TRANSMITTED DISEASE (STD) BY HIV SEROPOSITIVITY

Told of any STD last six months	***% of Total (N)***	***% HIV Positive***	***% HIV Negative***	***p value***
no	95.8 (271)	38.0	62.0	ns
yes	4.2 (12)	50.0	50.0	
Told Hepatitis - ever				
no	74.5 (21)	36.7	63.3	ns
yes	25.5 (72)	44.4	55.6	
Told Gonorrhea - ever				
no	81.9 (231)	36.4	63.6	ns
yes	18.1 (51)	49.0	51.0	
Told Syphilis - ever				
no	90.1 (254)	36.6	63.40	.03
yes	9.9 (28)	57.1	42.9	
				$\chi^2=4.482$ $df=1$

Health problems are relatively common among IDUs and this sample is no exception. Four percent of the sample report having a diagnosed STD in the past six months; slightly more than one-in-four (25.5%) report having been told they had hepatitis, while 18.1 percent report gonorrhea and 9.9 percent report having had syphilis.

As might be expected, those having been told "ever" that they had syphilis were significantly more likely to be seropositive than those who did not (57.1% to 36.6%, $\underline{p} = .03$). HIV can be acquired through unprotected sex (not wearing condoms) with an infected partner (Harris et al., 1983; Padian et al., 1987). Transmission of the virus has been found to be facilitated by breaks in the genital mucosa associated with Genital Ulcerative Diseases (GUDs) such as chancroid, genital herpes, and primary syphilis (Quinn et al., 1988).

Subjective ratings of overall health status among this sample is congruent with the reported high levels of drug and alcohol abuse. Table 10 focuses on the perception of health and the perceived chance of developing AIDS by HIV seropositivity among Puerto Rican injection drug users.

TABLE 10

PERCEPTION OF HEALTH IN LAST SIX MONTHS AND PERCEIVED CHANCE OF DEVELOPING AIDS BY HIV SEROPOSITIVITY

Perception	*$ of Total (N)*	*% HIV Positive*	*%HIV Negative*	*p value*
excellent	12.7 (36)	33.3	66.7	ns
good	33.2 (94)	42.6	57.4	
fair	41.7 (118)	37.4	62.6	
poor	11.7 (33)	48.5	51.5	
unsure	.7 (2)			
Perceived chance of AIDS				
no/some chance	64.3 (182)	31.9	68.1	.002
high/sure chance	35.7 (101)	50.5	49.5	
				$\chi^2=9.516$ $df=1$

More than half (53.4) of the Puerto Rican IDUs rate their overall health as only fair or poor, while only 12.7 percent rate their health as "excellent". More than one-third (35.7%) believe they have a "high/sure chance" of contracting the HIV. Those who reported they had a "high" chance of developing AIDS were significantly more likely to be HIV positive than those who reported "No/some" chance (50.5% to 31.9%, $p=.002$). This may be attributed to the subjects discerning their HIV status by the amount of risk they were taking. Again, since the level of knowledge of HIV/AIDS transmission in this sample is considerably high, subjects may, in fact, be taking an "educated guess" regarding their HIV status.

G. Predictors of HIV Seropositivity

Twelve variables were found to be significantly associated with HIV seropositivity in the univariate analysis. These were: age of respondent; duration of drug injection; major source of income; frequency of non-injected use of heroin; frequency of injecting speedballs; borrowing used needles; renting used needles; lending used needles to friends; always wearing a condom; reporting sexual activity in the last six months; a history of syphilis; and, perceived high/sure chance of developing AIDS.

These were further examined by computing odds ratio and 95 percent confidence intervals (CIs) to determine the relative strength of their correlations with HIV serostatus. Table 11 presents only those variables (10) found to be significantly related to HIV serostatus in the odds ratio analysis.

TABLE 11

VARIABLES SIGNIFICANTLY RELATED TO HIV SEROPOSITIVITY

Variable	*HIV No. Positive/N*	*%+*	*Odds Ratios*	*95% CI Lower*	*Upper*
Years of Injection use					
0-5†	13/85	(15.3)	1.00	------	------
6-10	20/61	(32.8)	2.70	1.14	6.54
11-16	27/50	(54.0)	6.50	2.69	15.95
17-23	42/72	(58.3)	7.75	3.45	17.88
26-32	7/13	(53.8)	6.46	1.54	26.87
Age					
18-25†	14/64	(21.9)	1.00	------	------
26-35	55/136	(40.4)	2.43	1.18	5.21
36≥	40/83	(48.2)	3.32	1.51	7.48

Variable	HIV Positive/N	No. %+	Odds Ratios	95% CI Lower	95% CI Upper
Injection Frequency					
Heroin/Cocaine (speedball)					
Never†	24.88	(27.3)	1.00	------	------
Once a week or less	29/73	(39.7)	1.76	0.86	3.60
2-6 times/week	24/38	(63.2)	4.57	1.89	11.16
Once a day or more	32/82	(39.0)	1.71	0.85	3.43
Non-Injection Frequency					
Marijuana					
Once a week or less	91/213	(42.7)	2.06	1.08	2.06
2-6 times a week† or more	17/64	(26.6)	1.0	------	------
Major Source of Income					
Job†	22/95	(23.2)	1.00	------	------
Govt. Assist	29/56	(51.8)	3.56	1.65	7.69
Sig. Other	18/52	(34.6)	1.76	0.78	3.93
Illegal	38/76	(50.0)	3.32	1.64	6.75
Perceived change of Developing AIDS					
No/some†	58/182	(31.9)	1.00	------	------
High/sure	51/101	(50.5)	2.18	1.28	3.70
Told Syphilis Ever					
No†	983/254	(36.6)	1.00	------	------
Yes	16/28	(57.1)	2.31	0.97	5.58
Frequency/Condom use					
Never†	47/154	(30.5)	1.00	------	------
Some of the time	18/47	(38.3)	1.41	0.67	2.93
Always	17/32	(53.1)	2.58	1.10	6.04
Rented Used Needles					
No†	73/211	(34.6)	1.00	------	------
Yes	35/69	(50.7)	1.89	1.05	3.39
Borrowed Used Needles					
No†	45/142	(31.7)	1.00	------	------
Yes	64/140	(45.7)	1.79	1.07	3.00

† Reference Category
CI = Confidence Interval

The odds ratios indicate substantial differences among each of the identified variables. For example, those subjects who reported injecting drugs for more than 17 years were 7.75 times more likely to have a positive HIV antibody test than those reporting 6 to 10 years (2.70 times more likely to be seropositive). Similarly, older subjects (36 years of age or more) were 3.32 times more likely to be seropositive when compared with subjects in the 18 to 25 age range.

Respondents who reported injecting speedballs (heroin/cocaine mix) 2 to 6 times a week were 4.57 times more likely to be seropositive than those shooting once a week or less.

In contrast to the injected drug use variable, non-injection use of marijuana *decreased* the relative odds of testing HIV seropositive. Subjects who reported using marijuana once a week or less were 2.06 times more likely to be seropositive than subjects who reported using marijuana two to six times per week or more.

Puerto Rican drug injectors who reported government assistance as their major source of income were 3.56 times more likely to be HIV positive than those who reported a job as their primary income. Furthermore, subjects who believed they had a high/sure chance of developing AIDS were 2.18 times more likely to have a positive HIV antibody test than those who reported no/some chance.

Subjects with a history of syphilis were 2.31 times more likely to test HIV positive than subjects who reported never having syphilis. Never wearing a condom *decreased* the relative odds of testing HIV seropositive. Subjects who reported always using a condom during sexual activity were 2.58 times more likely to be seropositive than subjects never using a condom.

Puerto Rican injectors who reported renting used needles were 1.89 times more likely to be HIV positive than those who did not rent used needles. Similarly, subjects who reported borrowing used needles were 1.79 times more likely to be seropositive than those who never borrowed used needles.

All ten variables found to be significantly associated with HIV serostatus were entered into a multiple logistic regression analysis to determine the best set of significant predictors of HIV seropositivity in this sample of Puerto Rican out-of-treatment drug injectors. This set was reduced to a much smaller set of three variables in the final logistic regression model.

Tables 12 and 12.1 present the coefficients, logistic function, and summary statistics for these variables, based on the forward stepwise logistic regression.

TABLE 12

RESULTS OF LOGISTIC REGRESSION

Variable	*Regression Coefficient*	*Standard Error*	*p value*	*Adjusted Odds Ratio*
Years of injection drug use (0 - 5 yrs. = 0, 6≥ = 1)	1.5802	.3387	.0000	4.8558
Self-rating: chance of developing AIDS (none or some = 0, high or sure = 1)	.5901	.2726	.0304	1.8042
Borrowed used needles (no = 0, yes = 1)	.5262	.2658	.0478	1.6925
Constant	-2.1173	.3441	.0000	

TABLE 12.1

SUMMARY STATISTICS FOR LOGISTIC REGRESSION ANALYSIS MAXIMUM LIKELIHOOD ANALYSIS

	Chi-Square	*df*	*Significance*
-2 Log likelihood	239.337	272	.0098
Model Chi-Square	40.132	3	.0000
Goodness of fit	278.979	272	.3725

The single most important correlate of HIV infection was the reported length of injection drug use. Puerto Rican injectors with 6 or more years of injection drug use were 4.85 times more likely to be seropositive than those with 5 years or less. In discussing a similar finding among Newark and Jersey City IDUs, Iguchi et al., (1992) have suggested that this strong correlation is consistent with the presumption that "years of use indexes the number of exchanges of potentially contaminated needles, syringes, or other drug paraphernalia". They also suggest that the findings indicate early entry of the virus into this population.

A perceived "high" or "sure" chance of developing AIDS and borrowing used needles also emerged as a correlate to HIV infection, although the data indicates that these last two variables only had a small/partial contribution.

Subjects who rated their risk for developing AIDS and HIV infection as high/sure were 1.8 times more likely to be seropositive than those who felt they had no/some chance.

There are several plausible explanations for this relationship. The process of surveying individuals may actually serve as an educating factor. For example, the questionnaire utilized for this study asked very detailed questions regarding high risk behaviors. In answering the questions, subjects were compelled to face behaviors probably not acknowledged before. Thus, at the end of the questionnaire--when the question is asked about their perceived chance of developing HIV/AIDS--those subjects who now realized probable risk status, accurately identified themselves as such. This suggests that based on accurate information, people are able to make reliable self-assessments of their level of risk. Indeed, some researchers have stipulated that personalizing risk for HIV is a prerequisite for initiating risk reduction activities (O'Leary, 1994; Bandura, 1992). However, this accurate self-assessment may also be a reflection of their knowledge of drug-using peers who have contracted AIDS and/or prior knowledge of their HIV status.

Puerto Rican drug injectors who reported borrowing used needles were 1.69 times more likely to be HIV positive than those who reported never

borrowing used needles. This high risk practice may represent impoverished drug injectors inability to purchase new needles or may be due to laws governing the sale of needles or a combination of other factors.

A number of additional variables that were associated with HIV infection in the univariate analysis were not found to independently correlate with subjects serostatus in the multivariate analysis. These included variables such as age, frequency of condom use, frequency of speedball injection, frequency of marijuana use, use of rented needles, history of any STDs, and major source of income.

H. Study Limitations

Several limitations should be considered with regard to these findings. The cross-sectional design of the study presents a potential limitation. In examining the relationship between serostatus and behaviors in the six months prior to HIV testing, it is important to acknowledge that some or all of the seropositive cases may have been infected prior to this time period. Thus, behaviors reported at the initial interview may, in fact, represent modified behaviors due to previous experience with and/or knowledge about HIV/AIDS.

An additional limitation is due to the difficulties in conducting research with "hidden populations" engaged in illegal activities. Hence, it was not possible to select a random sample of IDUs (Wiebel, 1990). The data are,

therefore, prone to the biases inherent in utilizing a nonprobability sample (Seaberg, 1988). For example, because outreach workers recruited potential participants from well known drug trafficking areas of the city of Paterson, N.J., only the "visible" IDUs may have been sampled versus the "not as visible", more highly functional IDUs (those employed and/or those marginal to the IDU community).

In addition, this study was conducted in only one city in New Jersey. It is not known whether study participants are representative of Puerto Rican IDUs in other cities in New Jersey or in other parts of the country.

However, there is some indication that the variability found between cities in other studies, may, in fact, be a function of real differences among the population being studied and not necessarily represent limitations of the data. For example, Singer and Jia (1993) conducted a study to analyze intragroup differences among Puerto Rican IDUs by geographic location using the national sample from the multisite NADR projects. Their findings reveal that among Puerto Rican out-of-treatment IDUs in Miami, alcohol consumption was quite heavy although a quarter of the Hartford sample abstained from drinking. Crack use was much more common among Miami and Harlem Puerto Rican participants; however, it was almost negligible in other cities (Hartford, Chicago, Brooklyn). Whereas ingestion of non-injected heroin (inhalation) was fairly common among Puerto Rican IDUs in Newark, it was rarely ingested in

Miami. Puerto Ricans were using shooting galleries in large numbers in Philadelphia but such galleries were rarely used by Hartford participants. Brooklyn Puerto Ricans IDUs avoided shooting drugs at home, however, among Harlem participants this practice was fairly common.

Singer and Jia conclude by stating that among Puerto Rican IDUs, HIV is best understood as multiple/localized epidemics, as their patterns of drug use differ substantially by locality. They further iterate that Puerto Rican IDUs in each city are affected by a number of factors external to the drug using individual such as: availability of needles (legal vs illegal sources); types of drugs marketed; drug distribution networks; ethnic diversity and relations (good or bad); police activity (active vs inactive) and, the locally developed drug sub-culture.

These factors can contribute significantly to the variations found in HIV infection rates and the diverse patterns of drug use among this population of IDUs. Policy makers need to know and understand these factors in order to formulate sound social policies to address HIV risk reduction strategies and drug treatment options for Puerto Rican IDUs.

I. Summary

The data presented here indicate that Puerto Rican IDUs within the study population are generally engaging in high risk drug, needle and sexual practices conducive to HIV transmission. The finding that more than half of the

participants are shooting in streets, parks, alleys and rooftops and in abandoned buildings confirms earlier reports that found that Hispanics used risky locales in particularly large numbers in New York City (Sufian et al., 1990), Baltimore, El Paso, and Denver (Booth et al., 1991), Chicago (Barrett and Battjes, 1990), and Worcester, Massachusetts (Koblin et al., 1990). In fact, it has been the experience of the author that Puerto Rican addicts often opt to inject drugs in HIV-risky settings like abandoned buildings and rooftops because of a strong desire and need to keep their drug involvement hidden from family members. They are able, as a result, to separate their drug-using lifestyle from their home life, which is regarded as sacrosanct by Puerto Ricans. In such a cultural context, efforts to involve the spouse or other family members in attempts to alter drug use and other high risk practices will be extremely difficult and challenging for program planners. Furthermore, the clandestine nature of the drug use impedes the efforts of the spouse or significant other from initiating their own risk reduction efforts due to their lack of awareness of their own risk.

The strong relationship between HIV infection and years of injection drug use reported here suggests that longer duration of such activity increases the number of exchanges of potentially contaminated "works", and also indicates the probability that HIV was introduced into this region relatively early in the epidemic's course. It is important to note that duration of injection drug use--and not age--was included in the final multivariate model. Thus, it will be very

important to encourage Puerto Rican IDUs to, not only enter treatment fairly early into their "drug using careers", but to remain in treatment and follow a course of aftercare. However, this may also prove to be a daunting task for program planners and interventionists as almost half (45%) of this sample had never been in drug treatment.

It appears that Puerto Ricans' high risk practices cannot be attributed to a lack of knowledge of the means of HIV/AIDS transmission, for the level of such knowledge in this sample was especially high. Additional AIDS education is still necessary at this stage of the epidemic. Puerto Rican IDUs in this study held erroneous beliefs about some casual means of viral transmission; other researchers (Marin and Marin, 1990; Singer et al., 1990) also have noted Hispanics' general acceptance of ideas about HIV transmission via casual contact, particularly among less acculturated subjects. It is likely that a better understanding of the true means of viral transmission would be helpful in preventing unnecessary panic and fear in the future in the Hispanic community.

The infrequent utilization of effective needle cleaning methods reported here suggest that this group's risk reduction efforts are not yet remotely close to risk elimination. In addition, it seems that the danger of sharing cookers and cotton has not been appreciated by the Paterson Puerto Rican IDU community as 70 percent of the sample reported sharing cookers and cotton in the last six months. Future educational efforts should clarify and stress the risk for HIV

infection attached to these items. Because it does not appear that this failing cannot be ascribed to a lack of knowledge about AIDS and HIV transmission, in New Jersey, other fronts in the fight against the spread of HIV should be thoroughly explored, including a review of policies and legislation regarding access to hypodermic equipment (eg., legalizing the over-the-counter purchase of needles and/or free needle distribution networks) (Des Jarlais and Friedman, 1988) and the implementation of "Harm Reduction" strategies such as: teaching safer drug use; proper injection techniques; alternative ways of taking drugs safely; and providing the means for behavior change by distributing free condoms to reduce sexual risk behaviors and distributing sterile injection equipment (syringes, needles, cookers, cotton, bleach and water) to reduce drug injection risk behaviors (Springer, 1991). However, implementing these recommendations may prove to be formidable for interventionists, especially in the state of New Jersey. In New Jersey, laws exists prohibiting the sale of hypodermic injection equipment without a medical prescription. Further compounding this problem is the 1989 federal legislation (still in effect) prohibiting the use of any federal funds to support syringe exchanges or other distribution of sterile injection equipment to persons who inject illicit drugs.

It is apparent that alcohol use is a significant--yet vastly under-recognized--feature of the lifestyle of Puerto Rican intravenous drug users; indeed, 81.6 percent of the sample drank alcohol at least once a week or more. The implications of this substantial additional substance use for IDUs' HIV

vulnerability have yet to be fully explored. However, initiating risk reduction activities (e.g., cleaning "works", not sharing needles, utilizing a condom properly, etc.) requires that the individual be relatively lucid, a state which may not be possible when such heavy alcohol use is involved. The disinhibiting effects of alcohol inebriation may, in fact, increase their risk for HIV infection as Puerto Rican drug injectors, while "knowing better" may undertake high risk sexual and drug risk practices.

The association between speedball use and HIV seropositivity found here also has been reported in nearby Newark and Jersey City (Iguchi et al., 1992), and other studies (Schoenbaum et al., 1989; Chaisson et al., 1989) have linked injection cocaine use to increased likelihood of HIV infection. Given the findings for Paterson, Puerto Rican speedball users should be especially targeted for AIDS outreach and education programs.

Paterson Puerto Rican IDUs appear to be heavily immersed in the drug subculture, as evidenced by the extensive use of IV drugs (almost 60 percent reported shooting heroin "once a day or more"). Moreover, the Paterson data confirm other work (Booth et al., 1991; Singer, 1991) that found that Hispanic IDUs were significantly more likely than were whites or African-Americans to lend and borrow needles, behaviors that may reflect economic considerations or, possibly, ethnic subcultural norms. The proclivity of these participants to lend their works to friends (47%) and running partners (36%) puts other Hispanic IDUs and their sex partners at elevated risk for HIV infection.

Moreover, 58 percent of the subjects reported sharing needles with "two or more" persons in the last six months prior to the interview. Participants should be disavowed of these practices as they place themselves and others at risk for HIV infection.

This group's relatively low (for Paterson) HIV seroprevalence (38.5%) suggests that Puerto Ricans IDUs probably are sharing injection equipment with other members of a somewhat less infected pool than are African-American not-in-treatment drug shooters whose HIV infection rate in the city of Paterson, N.J. is 58 percent (NJDOH, 1990). The findings for Paterson, then, appear to lend support to McCoy and Khoury's (1990) observation that it is "not only needle sharing that contributes to seropositivity but also the probability that those with whom one is sharing are infected with the AIDS virus" (p.429).

However, since drug-injecting networks are constantly changing--new injectors coming in/old ones leaving through death/incarceration or treatment--the prudent public health position must be to assume that, in the absence of significant intervention or other generator of widespread behavior change, it may only be a matter of time before HIV seroprevalence among Puerto Rican IDUs in this city attains the level observed in the African-American IDU community. Therefore, Puerto Rican addicts need to be recruited into substance abuse treatment programs before seroprevalence rates increase in this population and among their sexual partners. A substantial expansion of culturally specific drug abuse treatment could lead to large reductions in the

number of Puerto Ricans who are injecting illicit drugs. In addition, Des Jarlais and colleagues (1992) have called for programs to reduce initiation into drug injection hypothesizing that this could lead to a reduction over time in the numbers of injection drug users and consequently, HIV transmission.

There were several unanticipated findings. For example, participants who reported not having sex with anyone in the past six months, were significantly more likely to be seropositive than those reporting one or more sexual partners. Moreover, those subjects reporting "always "using a condom were significantly more likely to be HIV positive than those reporting "some of the time" or "never" wearing a condom possibly indicating that subjects were aware of their high risk status or knew they were HIV positive and were exercising prudent measures to avoid infecting others and/or re-infecting themselves. Another unanticipated finding was that noninjection use of marijuana and heroin among these participants decreased their likelihood of testing positive for HIV. This seems to suggest that needle users who substitute noninjected for injected drugs may lessen their risk for infection, although, as Iguchi and colleagues (1992) caution, further investigation into the apparent protective value of noninjected drug use would seem to be called for since these IDUs do not appear to completely be substituting injected drugs for noninjected drugs. In fact, Des Jarlais et al., (1994) advise that since IDUs appear to be injecting and sniffing within the same time period, it would be better "to think of the current situation as a blurring of the distinctions

between IDUs and sniffers rather than a replacement of one mode of administration by another" (p.126).

Addiction and the failure to reduce risk needs to be understood within the context of the full range of social problems faced by Hispanic groups in this country including: stresses of acculturation; language problems; legal difficulties; discrimination; family break-ups; low levels of educational attainment; and, high levels of unemployment. A holistic and community-focused approach to counter the spread of HIV through the Puerto Rican community must be considered. Ideally, such an approach will need to include culturally competent intervention programs to reduce Hispanics' risk. Among other things (Schinke et al., 1990), these programs will require interventionists who are cognizant of the multitude of ways in which culturally significant institutions (such as the family) may influence drug behaviors in Hispanic neighborhoods.

In addition, this author concurs with Singer and Jia (1993) in suggesting the following: (1) arresting the spread of HIV infection among Puerto Rican IDUs and their families will demand interventions to reduce substance abuse and the impact of complex social factors, from racism to unemployment, that heighten Puerto Rican's vulnerability to HIV/AIDS; and, (2) the development of such interventions will require systematic attention to issues of cultural sensitivity and specificity.

Substantially increasing the availability of drug treatment would reduce active drug injection and thus, ultimately reduce HIV transmission. However, this, in and of itself, may not be sufficient in assisting the Puerto Rican IDU. Many researchers have called for drug abuse treatment to be congruent with the cultural beliefs of Puerto Rican IDUs, if it is to be effective (Wurzman et al., 1982; Booth et al., 1990; Castro et al., 1991; Marin, 1990; Melus, 1980; Morales, 1991). However, this is usually not the case. Traditional models of treatment need to be adapted that draw upon the strong values and customs inherent in the Puerto Rican culture and that have the potential of making treatment for substance abusing Puerto Ricans both more accessible, more effective, and more meaningful.

Chapter V. An HIV Risk Reduction Educational Program for Puerto Rican IDUs: The SAFE Program (Service Access Facilitation Effort)

A. Introduction

Although little research has been done on HIV/AIDS risk reduction interventions for Hispanics in general--and even less about its long term effectiveness--(Amaro, 1988; Singer et al., 1990) it has become clear, from previous indication of other health related prevention programming (Orlandi, 1992) that in order to develop effective educational interventions for Hispanic Americans, including Puerto Ricans, HIV prevention programs must consider culturally specific values and norms, and must recruit staff who are bicultural as well as bilingual.

With specific reference to Puerto Ricans, Sufian et al., (1990) adds that "the experience of AIDS intervention programs, as well as of other health promotion efforts, in Puerto Rican communities suggests that such projects need to take full account of the specific Puerto Rican culture(s) present in the group being targeted" (p.131).

Furthermore, evidence is increasing as to the clear link between cultural competence and the success or failure of preventive intervention programming for minority populations (Orlandi, 1992).

However, despite these and similar statements in the expanding HIV/AIDS literature (Singer et al., 1992; Marin and Marin, 1990; Nemoto et al., 1990; Schilling et al., 1990; Singer, 1991; Schinke et al., 1990; Des Jarlais

and Friedman, 1989), the literature available provides limited information in how to go about designing such a program.

B. Absence of Successful Interventions

To date, most intervention programs aimed at IDUs at risk for HIV/AIDS have emphasized instruction into behavior modifications that will reduce risk of HIV transmission and acquisition--the use of condoms, needle cleaning techniques, etc. In general, however, the community-based NIDA-funded National AIDS Demonstration Research (NADR) projects have found that the level of knowledge as to the means of HIV transmission is already high at baseline assessment (McCoy and Khoury, 1990), even before the intervention program for behavioral change has commenced, with notable exception of Hispanic IDUs who have a high level of knowledge regarding true modes of transmission for HIV but hold erroneous beliefs in "casual" modes of transmission (Marin and Marin, 1990; this report).

Despite this high level of knowledge, however, participants in this sample continued to engage in behaviors that place them and their sexual partners at risk for HIV infection. It is entirely possible that the enormity of the other problems which Puerto Rican IDUs face--problems which may make it difficult to concentrate on HIV risk reduction--may partly account for this "gap" between knowledge and action. It is apparent that providing out-of-treatment Puerto Rican IDUs only with information about the modes of HIV transmission

will not be sufficient to stem the spread of this deadly epidemic among this population.

Attempts to reduce risky behaviors through self-help groups and organized programs of education and behavior modification in this population have been only somewhat effective (Des Jarlais et al., 1987). There are several possible explanations for this limited success. Both IDUs and their sexual partners tend to be isolated socially, even from their peers, due to the social and legal stigmatization of intravenous drug use. In addition to the fact that narcotic use is illegal, IDUs' search for money, drugs, and a secure place to inject tends to occupy so much of their time and energy that little is left for non-drug oriented social activity.

Even within the addict subculture, an interpersonal trust exists in "precarious balance with a generalized mistrust" (Des Jarlais et al., 1986) as addicts compete for scarce resources like drugs and money. The use of informants by law enforcement agencies, and the use of violence to decide disputes, further enhances suspicion within the group. Hence, while peer support groups initiated by male homosexuals have provided an invaluable source of both emotional support for their members and encouragement to others to behave responsibly to avoid risk of HIV transmission (Kelly et al., 1989; Kelly et al., 1990), neither IDUs nor their sexual partners have spontaneously formed such peer support groups (Des Jarlais and Friedman,

1989). Furthermore, AIDS intervention program attendance and consistent group involvement and cooperation are difficult to achieve, and health educators who have attempted to assist these populations in developing support systems have encountered resistance (Magura et al., 1989).

Evidence does exists, however, that IDUs can be motivated to change their behavior in response to information about the threat of AIDS, as seen in the increased demand for "sterile" needles (Des Jarlais et al., 1985, Sorensen et al., 1989; Watters and Cheng, 1987). However, sweeping and sustained change of risk-related behaviors among IDUs and their sexual partners will probably require bold, creative and culturally specific interventive efforts (Schilling et al., 1989).

In addition, such efforts must include an approach to treatment that is both culturally sensitive and culturally competent. A culturally competent model of treatment needs to acknowledge the individual's cultural experience while encouraging behavioral and attitudinal change. Cultural competence demands a commitment to a shared set of congruent beliefs, attitudes, behaviors, skills, and policies that can be communicated in words that are readily understood and acceptable to the individual (Isaacs and Benjamin, 1991; Cross et al., 1989; Orlandi, 1992).

C. Characteristics of the "Community" that might affect risk reduction intervention programs

Typically, the "community" is defined as the immediate environment (extended family, natural support systems) of the Puerto Rican IDU and his/her sex partner, family and associates. The larger community or society at large, however, also has a major impact in the design and implementation of intervention programs for IDUs and their sexual partners.

Although heroin addiction may be considered one of a number of compulsive craving disorders similar to alcoholism and nicotism, it is marked by the total illegality of the substance of abuse and the subsequent criminalization and stigmatization of its victims. When compounded by racism, discrimination and, in many instances, the inability of the Puerto Rican IDU or his/her family to communicate with members of the larger society due to language limitations, the result is the development of an "outlaw" underclass with very few points of contact with the rest of society other than the criminal justice system. Further compounding this isolation is the Puerto Rican's attitude toward systems of help. In times of need, most Puerto Ricans turn to their "natural support system" before attempting to access a more formal system of support.

Many researchers have identified and described the natural support systems of Puerto Ricans (Delgado, 1987; Mizio, 1974; Delgado and Humm Delgado; 1982 Valle and Bensussen, 1985; De la Rosa, 1988). The natural support network usually includes extended family members, friends, neighbors,

as well as individuals with formally designated "health and counseling roles" such as *Curanderos* (natural healers), *Espiritistas* (spiritualists), and *Yerberos* (herbalists) (De la Rosa, 1988; Valle and Bensussen, 1985). According to these researchers, Puerto Ricans receive a variety of extended services through their support network. These include emotional support, financial assistance, spiritual and practical guidance, health information and assistance with interpersonal problems.

Because of this natural support system, generally available to most Puerto Ricans, they will often make use of social agencies or other health care have agencies as a last resort (Badillo-Ghali, 1977). In addition, because contacts with the public health and social service agencies generally are inquisitorial or accusatory and are marked with antagonism on both sides, the Puerto Rican IDU will usually avoid such interface. Family and partners of the IDU will also often attempt to maintain their contacts with public and social service agencies at a very superficial level. The result is that those very agencies that would normally convey health information to IDUs and their families are viewed with suspicion and antipathy, and are avoided when possible.

It is extraordinarily difficult to provide health education and risk reduction interventions under these circumstances. When an agency does succeed in making positive contact, its effects are often limited by funding and a scarcity of resources, hampering consistent contact and long term efforts.

Furthermore, most Puerto Rican IDUs and their families entertain serious doubts regarding the benevolence of the general society toward them. Indeed, IDUs and their families have often expressed that AIDS has been deliberately inflicted on drug users/minorities to reduce their numbers (Mays and Cochran, 1988). Similar distrust is evidenced by the lack of confidence in public health agencies assurances regarding the means of transmission. For example, many members of the Hispanic community, including subjects in this report, continue to believe that casual contact may result in transmission of HIV.

Although researchers often discuss the "addict subculture" as a separate and distinct entity (Agar, 1973), it has been the experience of this author that, many Puerto Rican drug users and their sex partners generally share the values of the surrounding Hispanic community with respect to sex and sex roles. In general, women and men both regard sexual assertiveness as inappropriate for women. Men generally establish the terms of sexual activity. It is difficult for a women to insist on, or require use of barrier contraceptives without the active consent and cooperation of her partner. As women are regarded as having major responsibility for the emotional tone of the relationship, the implications for HIV infection may be avoided or denied to prevent anger, distrust and possible domestic violence. Both partners regard childbearing as essential to their masculinity or femininity and are supported in this by much of the Hispanic community.

In summary, there are serious obstacle to conveying HIV risk reduction information to Puerto Rican IDUs, to acceptance and belief when it is conveyed and to acting upon it when it is believed. It will be necessary to build a community of support among extended family members and others, trusted and respected by the Puerto Rican IDU, before we can expect to be able to sustain consistent behavior change among this population.

D. The SAFE Program

1. Introduction

Because Puerto Rican IDUs not-in-treatment are difficult to recruit and bring into a structure program of health education/risk reduction activities, it will be necessary to bring the program out to the community (street-level) where it will be accessible to them. Furthermore, because addicts in general, especially Puerto Rican addicts, view with suspicion mainstream health care and social workers, it will also be necessary to develop *confianza* (trust) by providing credible role models in the form of Puerto Rican recovering drug users (indigenous outreach workers) who will be familiar with the Puerto Rican community and have knowledge of out-of-treatment Puerto Rican IDUs, if health education messages of HIV risk reduction are to be heeded and acted upon.

The purpose of the proposed program, therefore, will be to create a corps of culturally competent, community outreach workers/case managers who will:

recruit, counsel, provide accurate risk reduction information, and facilitate service delivery to Puerto Rican injection drug users, crack users, and heroin snorters not currently in treatment. This program will fill a much-needed gap in Paterson by performing outreach on this population, but more importantly, will reduce HIV-related risk behaviors by assisting these individuals in obtaining drug treatment and other services that will increase their quality of life and their ability to consistently practice "safe behaviors".

2. Conceptual Framework: SAFE Program

The behavioral theory underlying this approach can be summarized as a "barriers to rational decision-making model". Simply stated, the program will be built around the assumption that low income Hispanic injection drug users and their partners are unable to engage in risk reduction activities as they are constantly preoccupied with the daily activity of surviving. The very fact that the Puerto Rican IDUs in this study were not in treatment suggests they may lack the motivation, time or resources to change behavior on their own. In addition, they may be too impaired by their addiction, and too busy "feeding" it, to have the capacity or time to participate in an organized health care program. Thus, this program will employ indigenous outreach workers not only as health educators/role models, but also as case managers who will provide essential services in this regard.

3. Goals and Objectives

The proposed model to be employed in this project is called SAFE (Service Access Facilitation Effort). The main goals of SAFE are:

1) to reduce HIV-related risk behaviors among active drug users by performing indigenous outreach, AIDS education, counseling and bleach/condom distribution within a culturally competent framework; (outreach function)

2) to establish the presence of SAFE workers in the community as resources for active drug users, and by this presence to create an atmosphere conducive to the reduction of HIV-related risk behaviors by providing an alternative support system (from that of drug using peers); (outreach function)

3) to establish strong linkages with community service agencies in order to facilitate access to services (case management function);

4) to facilitate access of active drug users to community services by escorting them directly to the services that they need most (case management function);

5) to facilitate access of active drug users to community services by making telephone referrals and following up on these referrals (case management function); and,

6) to facilitate access to medical care for HIV positive individuals, and for screening for TB and other STDs (case management function).

The SAFE program includes features from the Indigenous Leader Outreach Model[4] as developed by Wayne Wiebel, Ph.D. from the University of Illinois at Chicago (1993) for the National Institute on Drug Abuse. For example, it uses street outreach to take HIV intervention activities to those at risk within the natural settings of their respective communities. The SAFE program also utilizes trained indigenous field staff, who are recovering drug users and who have successfully achieved behavior change, as peer role models and health educators/case managers. However, the SAFE program differs somewhat from the Wiebel model by the utilization of the professional social worker as a complement to the outreach team.

Wiebel (1993) suggests there are many advantages to hiring individuals who are indigenous to the community and are recovering drug users as outreach workers. These advantages include:

1) Ensuring cultural sensitivity of intervention presentations;

2) Facilitating rapport with target group members;

3) Enhancing program legitimacy among target group members;

4) Translating technical information into readily understood concepts;

5) Increasing target group concern about the threat of AIDS by appealing to common frames of reference;

6) Achieving a better understanding of shared norms, values, and perspectives to identify viable risk reduction strategies;

7) Gaining access to the community "grapevine" to monitor the adoption and maintenance of risk reduction measures; and,

8) Acting as role models for the target population

While it may appear that the indigenous outreach worker can perform all functions and roles within the SAFE program, there is a need for the professional social worker to add balance and help complement the skills of the outreach team. Furthermore, there are several advantages to hiring professional social workers. For example, social workers can enhance the legitimacy of the SAFE program among the professional community. In addition, social workers' training enables them to draw upon theories of management, planning, organization, personnel administration, and budgeting thereby making them excellent managers and supervisors.

4. Role of the Professional Social Worker in the SAFE Program

While the presence of indigenous outreach workers may help facilitate acceptance and entree into the drug using community, the establishment of such a program within a community framework will not be an easy task. Program planners should anticipate a certain amount of opposition, suspicion and hostility not only from community groups, but from the police and the general citizenry. These institutions and agencies generally try to avoid controversy. They may be unwilling to sanction certain politically volatile risk reduction strategies such as the distribution of condoms and bleach, even if they are warranted from a public health standpoint. Furthermore, having recovering drug users, who may or may not be HIV positive themselves, "patrolling" the streets, looking for other addicts, could also become a problem. A good working relationship with law enforcement agencies and other mainstream community based agencies will be crucial for the successful establishment of the SAFE program. Therefore, the role of the professional social worker as a ***community organizer*** and ***social activist*** will be pivotal to the success of the project. This is not to imply that the social worker is limited to these two roles. The social worker can also assume the management of the SAFE program, and the training and supervision of the outreach team.

In order for the outreach team to function and perform their tasks, it will be necessary to gain acceptance and trust, not only from the "community of

addicts" but also from the community "at large". Racism, disinterest in the poor and society's general contempt for IDUs will make it difficult for outreach workers to engage community groups and organizations in supporting strategies for HIV risk reduction among Puerto Rican IDUs. However, the professional social worker, armed with the knowledge and skill of the "community organizer", can assist outreach workers in this endeavor. Through the building of coalitions, networks and task forces, the social worker can attempt to clarify the social responsibility of the community and government authorities, enlist their cooperation and collaboration to promote HIV prevention advocacy, explain and de-mystify drug use and abuse, dispel misconceptions about substance abusers and explain the nature and purpose of the SAFE project.

In addition, it will be necessary to promote social legislation that will support the expansion of risk reduction strategies such as the distribution of sterile injection equipment and the relaxing of laws prohibiting the use of federal funds to purchase and distribute bleach, condoms, and needles. Social workers, through social action activities, will need to influence public opinion to gain support for these initiatives and place pressure upon legislators to advance legislation backing an amendment to existing laws prohibiting same.

Friedlander (1968) describes social action as "an individual, group, or community effort, within the framework of social work philosophy and practice, that aims to achieve social progress, to modify social policies, and to improve

social legislation and health and welfare services (p.218)."

Social action is well within the scope of professional social work practice. Social workers' unique set of skills, value orientation, social responsibility and commitment to social change for the betterment of their clients and society eminently qualifies them to participate in social action activities. These activities may include, but are not limited to, information dissemination, educational publicity, testifying before congressional hearings, political mailings, endorsing political candidates that support their position, and advocating on behalf of drug users and their families, etc.

As Friedlander (1968) states, "social action is an essential part of professional social work and the responsibility of every social worker (p.220)."

Four out of the six proposed goals and objectives for the SAFE program are case management oriented. The professional social worker, in the role of supervisor and trainer of the outreach workers/case managers, will need to have a clear understanding of how case management is conceptualized in the SAFE program.

The following sections describes how case management is defined and operationalized within the SAFE program.

5. Theoretical Framework: Case Management

Although case management finds its roots in social work and nursing (O'Connor, 1988), it has lacked consensual definition in the social work and

medical literature (Grisham and White, 1983; Moore, 1990; O'Connor, 1988; Roberts-DeGenarro, 1987). In the 1970s, case management gained a degree of recognition in mental health service delivery with the advent of the deinstitutionalization movement (Sullivan, 1981), and in the health care industry as a result of intentions to lower or control escalating health care costs (Grisham and White, 1983). Since its broader acceptance, the case management model has been implemented in diverse disciplines and with different populations including the mental and developmentally retarded, mentally disturbed, dependent children, and the institutionalized elderly. More recently, the approach has been used with patients suffering from various forms of addiction, parolees and probationers, and delinquent and dependent children, (Sullivan, 1981). Possibly as a result of the diverse disciplines and practice settings in which case management is now being utilized, varying definitions of case management have arisen, often reflective of the practice methods in that discipline. From the social work perspective, Roberts-DeGenarro (1987) suggests that case management is what most social workers do most of the time.

From these practice-relative definitions of case management has emerged the delineation of three separate models: *primary service (medical) model* in which the case manager, usually a health care professional, assists participants

in accessing and coordinating medical services; the *social model* which involves a mental health or social service professional coordinating supportive services in the community; and the *medical-social model* which, as its name indicates, is a combination of the medical and social models, with a major focus on participants at risk (Walden et al., 1990; Merrill, 1985). In this instance and for the purposes of designing the SAFE program, case management will simply be defined as "an intervention designed to ensure the coordinated delivery of appropriate services to participants" (Korr and Cloninger, 1991).

Despite the lack of a universal definition of case management, the functions of case management are commonly defined as: (1) *assessing* participants' needs; (2) *planning* a service strategy to meet participants' needs; (3) *linking* participants to identified services; (4) *monitoring* the participants' participation in services and reassessing needs, and (5) *advocating* on the participants' behalf for needed services (Hargreaves et al., 1984). Case management, therefore, is a set of procedures that is intended to provide for a range of services that a participant may require in addition to the primary treatment that brings the person to the attention of the service agency (Levine and Fleming, 1984; Moxley, 1989). As a model of service delivery, case management provides a systematic and comprehensive approach to the provision of services (Roberts-DeGenarro, 1987).

6. Conceptual Framework: Case Management

Within the proposed SAFE program, case management proceeds from the notion that active substance abusers are affected by problems and problematic situations beyond their substance use. The social pressures of racism, discrimination and poverty (Friedman et al., 1990), and language and cultural factors (i.e., history; religion; health-related beliefs; gender roles; and attitudes about childbearing, contraception, standards of modesty and drug use, etc.) may directly impact the extent to which Puerto Rican IDUs respond--or fail to respond--to risk reduction messages. It is hypothesized that such problems as poor health, unemployment and lack of marketable skills, lack of positive, stable, social support networks, self-destructive life styles, and/or a wide range of psychosocial deficits impede Puerto Rican IDUs' ability to make decisions and to limit their drug use and/or reduce their risk for HIV infection. Thus, only by resolving such obstacles that inhibit prevention messages will the participant be able to make necessary behavioral changes. Consequently,
the primary goal of case management will be to "contribute to the achievement of a balance between the individual's capabilities and their resources" (Moore, 1990), facilitating the reduction of risk for HIV and including the reduction of drug use.

Underlying this goal are some of the central tenets of the social work profession: respect for the uniqueness of individual participants; the

participant's right to participate in decision making and treatment planning (self-determination); and the integration of the participants' social support systems, as well as each participant's relationship to his or her environment, into the treatment plan. As a social service intervention, then, case management involves the participant in the planning and implementation of his or her treatment plan to resolve identified needs, using resources and support systems available in the community. Case management intervention must concentrate on the strengths of each participant, as opposed to weaknesses. Hence, one of the objectives of the case management intervention will be to build upon the identified strengths of the participant in an effort to maximize his or her potential to meet environmental challenges.

Therefore, case management will be identified as the process by which needs are identified, service resource linkages are established, and service activities are coordinated and monitored. Underlying this approach is the principle that one worker--the outreach-worker/case manager--will be responsible for linking the participant to the service delivery system and be responsible for ensuring that the participant receives appropriate services in a timely fashion. The expectation will be that once basic needs are met, the IDU will be able to concentrate and act on new learned behaviors to reduce the risk of acquiring or transmitting HIV.

E. Conclusions

It is clear from the background information presented that substance abuse and HIV/AIDS are important issues within the mainland Puerto Rican community. Social workers need to be aware of how drug use is interrelated with HIV infection, if appropriate risk reduction programs are to be generated and implemented. In addition, social workers will need to expand upon their traditional roles and embrace community organizing and social action as a method in order to assist this population in their attempts to adopt risk reduction measures.

A "broad-brush" approach to risk reduction will not work with this population. Their level of knowledge as to the true means of HIV transmission is impressive yet, they continue to engage in high risk behaviors that place themselves and their sexual partners at elevated risk for acquiring HIV. Furthermore, drug users not-in-treatment are a disfranchised group, not easily reached through conventional means. The need for specialized interventions is obvious. The SAFE program, with its inclusion of indigenous outreach workers and street approach, is an alternative to the more formal, traditional health education programs currently available.

F. Future Research Needs

This study dealt with the complex issue of risk for HIV infection among not-in-treatment Puerto Rican injection drug users. While this study has

elucidated important risk factors associated with HIV infection, in general, HIV risk factors have not been adequately studied among this population.

HIV risk behaviors are multifarious and usually involve more than one person. Understanding individual risk factors, while important, may not be sufficient. We may need to move research from a focus on individual factors toward a contextual perspective in order to elucidate processes underlying the initiation and continuation of risk behaviors.

There is a need to understand the structural and community level factors that foster drug abuse and HIV in the Puerto Rican community. The relationship between social forces and structures such as those stemming from oppression (i.e., sexism and racism), economic and political disempowerment, and geographic dislocation must be evaluated for their interactive effect with other determinants of risk. However, such multifaceted studies will require sophisticated quantitative and qualitative methods that have yet to be devised.

ENDNOTES

1. Over the last 10 years, the Federal government has established the use of the term "Hispanic" to classify all persons of Mexican-American, Puerto Rican, Cuban, Central and South American, and Spanish descent. Researchers conducting Federally funded projects customarily use the term "Hispanic" to conform with the prevailing Federal classification. Thus, this report utilizes the term "Hispanic" throughout. Practitioners need to be cognizant that not all Hispanic communities identify with, nor want to be categorized as, Hispanic. The term "Latino" may be preferred by some. This preference is contingent on their geographic location or on deeply rooted emotions influenced by their history. Practitioners should inquire how a particular community or individual prefers to be categorized before doing so.

2. Interested readers can obtain a more detailed description of the history of Puerto Ricans on the mainland in: Adalberto Lopez (1978), The Puerto Ricans: Their History, Culture, and Society. Rochester, Vermont: Schenkman Books, Inc.

3. The AIDS Initial Assessment questionnaire (AIA), and a discussion of its development and validation, may be found in Myers, Max H., Frederick R. Snyder, E. Earl Bryant, and Paul Young. Report on Reliability of the AIDS Initial Assessment Questionnaire. Bethesda, Maryland, NOVA Research Co., April 1990. Interested readers may write or call for a copy of the report to : NOVA Research Co., 4720 Montgomery Lane, Bethesda, MD., 20814, (301) 986-1891.

4. Interested readers may obtain a copy of the National Institute on Drug Abuse "Indigenous Leader Outreach Model: Intervention Manual" by Wayne Weibel, Ph.D., NIH Publication No. 93-3581 by writing to: U.S. Government Printing Office, Superintendent of Documents, Mail Stop:SSOP, Washington, D.C. 20402-9328.

APPENDIX A

AIDS INITIAL ASSESSMENT QUESTIONNAIRE
AIA-8.0

National AIDS Demonstration Research Project

NATIONAL INSTITUTE ON DRUG ABUSE
Community Research Branch

December 1988

AIA 8.0 - PRELIMINARY DATA

FOR ATOM CONTRACTOR INTERVIEWEES ONLY

INTERVIEWER READ: ***As I said to you earlier, your answers in this interview will be anonymous. No one will be able to identify you with your interview responses.***

We will need to interview you again as part of measuring our program's impact and have developed a way to indicate that two or more interviews were completed by the same, though unidentified, person. This methodology involves a few questions that ask you to give initials and dates. These letters and numbers become a unique code without identifying or being tied to a person.

Please help us now to establish this code which I will ask you to recreate for any future interviews. As you will see, the information asked does not link you to the interview itself. Therefore, you cannot be identified or connected to your responses through the provision of this information.

Q1. What is the first letter of your first name?
(RECORD LETTER; "8" = REFUSED; "9" = DON'T KNOW) —

Q2. On what date of the Month were you born?
(RECORD NUMBERS; "XX" = REFUSED; "YY" = DON'T KNOW) D D

Q3a. What is the first letter of your mother's first name?
(RECORD LETTER; "8" = REFUSED; "9" = DON'T KNOW) —

Q3b. What is the first letter of your mother's maiden name?
(RECORD LETTER; "8" = REFUSED; "9" = DON'T KNOW —

Q3c. What is the month and day of your mother's birthday?
(RECORD NUMBERS; "XX XX" = REFUSED; "YY YY" = DON'T KNOW) M M D D

Q4a. What is the first letter of your father's first name?
(RECORD LETTER; "8" = REFUSED; "9" = DON'T KNOW) —

Q4b. What is the month and day of your father's birthday?
(RECORD NUMBERS; "XX XX" = REFUSED; "YY YY" = DON'T KNOW) M M D D

INTERVIEWER: IF YOU <u>DID NOT</u> OBTAIN FULL INFORMATION ON Q3a, Q3b, Q4a, and Q4b, ABOVE <u>THEN ASK Q5</u>. BELOW.

Q5. In what month were you born?
(RECORD NUMBERS; "XX" = REFUSED; "YY" = DON'T KNOW) M M

AIA 8.0 - PRELIMINARY DATA

RESPONDENT ID#:__ __ __ __ __ __ __ __ __ __
OR
CONTRACT CCNI#:__ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __

INTERVIEWEE FROM: (CHECK)

INDIGENOUS OUTREACH __
CRIMINAL JUSTICE SYSTEM __
EMERGENCY ROOM/CLINIC __
TREATMENT PROGRAM __
TYPE
Methadone maintenance __
Drug detoxification __
Residential (e.g., TC) __
Outpatient drug-free __
Other __
HOUSING PROJECT __
OTHER SETTING: __
(Specify: __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __)

SITE NUMBER: __ __
BATCH NUMBER: __ __ __ __ __
INTERVIEWER ID #:__ __
INTERVIEW LANGUAGE
English 1
Spanish 2
Other 3
(Specify: _____)

PROJECT PART: __ __ __—__ __ __—__ __ __ __

TARGET POPULATION GROUP:
IVDU 1
SEXUAL PARTNER 2
OTHER (Walk-in, etc.) 3

DATE: __-__-__ (M M D D Y Y) START TIME: __ __:__ __ AM PM

BLOOD TEST/PRE-COUNSELING STATUS

Blood Test/Counseling Done After Interview	1
Blood Test/Counseling Done Before Interview	2
Don't Know/Not Sure	7
Interviewee Refused	8
Not Applicable To This Program	9

AIA 8.0 - PRELIMINARY DATA

READ: ***Before we start, I'd like to ask you two questions about your involvement with our program. (RECORD RESPONSE)***

1. How did you hear about our program?

_____

_____

2. Why did you decide to come in for this interview?

_____

_____

RECORD ID# OF PARTICIPATING PARTNER IF APPLICABLE

CIRCLE APPROPRIATE NUMBER: *APPLICABLE* *1*

NOT APPLICABLE *9*

*PARTICIPATING PARTNER RESPONDENT ID#:*_ _ _ _ _ _ _ _ _ _

AIA 8.0 - SECTION A: DEMOGRAPHICS

4A. DEMOGRAPHICS

READ: ***First, I'd like to ask you some questions about yourself.***

Q1. When were you born?
(RECORD)

		DON'T KNOW(DK)/ UNSURE	REFUSED
MONTH	__ __	77	88
YEAR	19__ __	7777	8888

Q2. In what state or country were you born?
(RECORD)

		DK/UNSURE	REFUSED
_____ U.S. STATE/TERRITORY	(__ __ __)	777	888
_____ OTHER COUNTRY			

INTERVIEWER: IF BORN IN MAINLAND U.S., SKIP TO Q3; IF NOT, ASK Q2a

Q2a. In what year did you come to this country (to the Mainland)?

YEAR	19__ __
DK/UNSURE	7777
REFUSED	8888
NOT APPLICABLE (N/A)	9999

INTERVIEWER OBSERVATION:

Q3. WHAT IS THE SEX OF THE RESPONDENT?
(IF UNCLEAR, PROBE)

MALE	1
FEMALE	2
MALE TRANSSEXUAL	3
FEMALE TRANSSEXUAL	4
DK/UNSURE	7

AIA 8.0 - SECTION A: DEMOGRAPHICS

Q4. What racial group do you consider yourself?

SKIP TO Q4a	Black	1
SKIP TO Q4b	Hispanic	2
	White	3
	Native American or Alaskan Native	4
	Asian or Pacific Islander	5
	DK/UNSURE	7
	REFUSED	8
	N/A	9

INTERVIEWER: IF OTHER THAN BLACK or HISPANIC, SKIP TO Q5.

Q4a. IF BLACK, ASK: Are you ...

American black/Afro-American	1
African black (Specify: _____)	2
Caribbean black (Specify: _____)	3
Other (Specify: _____)	4
DK/UNSURE	7
REFUSED	8
N/A	9

INTERVIEWER: SKIP TO Q5.

Q4b. IF HISPANIC, ASK: Are you ...

Cuban	1
Chicano/Mexican	2
Dominican	3
Puerto Rican	4
Other (Specify: _____)	5
DK/UNSURE	7
REFUSED	8
N/A	9

AIA 8.0 - SECTION A: DEMOGRAPHICS

Q5. Which ***ONE*** of the following religious groups, if any, do you identify with?

(READ LIST; CIRCLE ONE)

Catholic	1
Protestant (EXAMPLES: METHODIST, BAPTIST, SEVENTH DAY ADVENTIST, AME)	2
Muslim	3
Jewish	4
Eastern (EX: BUDDHISM, HINDUISM)	5
Other (Specify: _____)	6
NONE	0
DK/UNSURE	7
REFUSED	8
N/A	9

SKIP TO Q6

Q5a. How strongly do the beliefs of your religious group influence your behavior or how you live...

Not at all?	0
Somewhat strongly?	1
Very strongly?	2
DK/UNSURE	7
REFUSED	8
N/A (NO RELIGION)	9

AIA 8.0 - SECTION A: DEMOGRAPHICS

Q6. What is the highest grade of school you've completed?

NO FORMAL SCHOOLING	0
EIGHTH GRADE OR LESS	1
LESS THAN HIGH SCHOOL GRADUATION	2
HIGH SCHOOL GRADUATION	3
SOME COLLEGE	4
COLLEGE GRADUATION	5
DK/UNSURE	7
REFUSED	8
N/A	9

SKIP TO Q7 ←

Q6a. Do you have...	NO	YES	DK/ UNSURE	REFUSED	N/A
A GED (high school equivalency)	0	1	7	8	9
Trade or technical training	0	1	7	8	9

Q7. In the past 6 months, did you receive income from . . .

		NO	YES	DK/UNSURE	REFUSED
A	A job you had or have	0	1	7	8
B	Unemployment benefits	0	1	7	8
C	VA, Disability, SSI	0	1	7	8
D	Welfare, food stamps, AFDC	0	1	7	8
E	Alimony, child support	0	1	7	8
F	A spouse or sexual partner(s)	0	1	7	8
G	Other family members	0	1	7	8
H	Friend(s)	0	1	7	8
I	Illegal or possibly illegal sources	0	1	7	8
J	Other	0	1	7	8

(Specify: _____)

INTERVIEWER: IF Q7 HAS NO "YES" RESPONSES, SKIP TO Q8.

Q7a. Which one of these activities was your major source of income? *(RECORD ONE LETTER FROM Q7)* ____

AIA 8.0 - SECTION A: DEMOGRAPHICS

Q10. Are you now living...

	NO	YES	DK/UNSURE	REFUSED	N/A
Alone?	0	1	7	8	9
With a spouse or sexual partner?	0	1	7	8	9
With your parents?	0	1	7	8	9
With other adult relatives?	0	1	7	8	9
With a friend or roommate?	0	1	7	8	9
With any other adults I haven't mentioned?	0	1	7	8	9

(Specify: _____)

Q11. Do you have any children living with you?

YES	1
NO	0
REFUSED	8
N/A	9

SKIP TO Q12

Q11a. If "YES", How many? (88=REFUSED; 99=N/A) __ __

Q11b. I'm now going to ask the age of (each) (the) child(ren) and some other information.

IF MORE THAN ONE CHILD IN Q11a, ALSO SAY:
Please start with the youngest one.
READ ACROSS FOR EACH CHILD.

No.	Age?	Is the child dependent on you for care or support?				
		NO	YES	DK/UNSURE	REFUSED	N/A
1.	__ __	0	1	7	8	9
2.	__ __	0	1	7	8	9
3.	__ __	0	1	7	8	9
4.	__ __	0	1	7	8	9
5.	__ __	0	1	7	8	9

AIA 8.0 - SECTION A: DEMOGRAPHICS

Q11c. Who, if anyone else, helps you care for or support the child(ren). . .
IF "NO ONE" ***CIRCLE ONLY*** **0**

	NO	YES	DK/UNSURE	REFUSED	N/A
The child's (mother) (father)?	0	1	7	8	9
Your spouse or partner?	0	1	7	8	9
The child(ren)'s grandparents?	0	1	7	8	9
Some other relative?	0	1	7	8	9
Friends?	0	1	7	8	9
Some other person?	0	1	7	8	9

Q12. How many children of your own under age 18, if any, do you have who are ***not*** living with you? (NONE=00)

NUMBER	__ __
DK/UNSURE	77
REFUSED	88
N/A	99

IF NONE (00), SKIP TO NEXT PAGE.

Q12a. Please tell me the age of (each) (the) child(ren).

IF MORE THAN ONE CHILD (Q12) ADD:
Please start with the youngest one.

No.	Age?	Do you provide financial support for the child?				
		NO	YES	DK/UNSURE	REFUSED	N/A
1.	__ __	0	1	7	8	9
2.	__ __	0	1	7	8	9
3.	__ __	0	1	7	8	9
4.	__ __	0	1	7	8	9
5.	__ __	0	1	7	8	9

AIA 8.0 - SECTION B: DRUG USE

B. DRUG USE

READ: Now I'm going to ask you some questions about your alcohol and drug use practices. Keep in mind that your answers will remain completely confidential.

			DK/UNSURE	REFUSED	N/A
Q13.	At what age were you first intoxicated?	__ __	77	88	99
Q13a.	At what age did you start drinking daily, or almost daily? *(99=DOES NOT DRINK DAILY)*	__ __	77	88	99
Q14.	At what age did you first use drugs, other than alcohol?	__ __	77	88	99
Q14a.	What was the drug you first used? *(USE LETTER FROM LIST BELOW)*	___	7	8	9

- B GLUE/PAINT THINNER/TOLUENE
- C MARIJUANA/HASHISH
- D "CRACK"/FREEBASE/HUBBA
- E COCAINE BY ITSELF
- F AMPHETAMINE/PRESCRIPTION STIMULANT BY ITSELF
- G HEROIN BY ITSELF
- H HEROIN AND COCAINE MIXED TOGETHER
- I NON-PRESCRIPTION METHADONE
- J OTHER OPIATES OR NARCOTICS
- K BARBITURATES
- L TRANQUILIZERS
- M PCP
- N HALLUCINOGENS/PSYCHEDELICS: MDA
- O NITRITES AND POPPERS
- P OTHER DRUG (SPECIFY:_____)
- Q OTHER DRUGS IN COMBINATION (SPECIFY: _____)

AIA 8.0 - SECTION B: DRUG USE

Q15. INTERVIEWER: READ ACROSS CHART FOR EACH DRUG
HAND CARD A
(RECORD IN 15c(1)=FREQUENCY BOX, 7 = DK/UNSURE, 8 = REFUSED, OR 9 = N/A)
RECORD LETTER FROM CARD A IN COLUMNS 15c(1) AND 15c(2).

INTERVIEWER: **15. Now I will read a list of different drugs and ask some questions about each one.** **15a. Have you ever used _____?** **15b(1). Have you used it without shooting?** **15c(1). How often have you used __ without shooting over the past 6 months?** **15b(2). Have you injected it into your veins or under your skin?** **15c(2). How often have you injected _____ over the past 6 months?** **15d. How old were you when you first injected _____?**	15a Ever used		15b(1) Non-injected		15c(1) SHOW CARD A FREQUENCY LAST 6 MONTHS	15b(2) Injected use		15c(2) SHOW CARD A FREQUENCY LAST 6 MONTHS	15d Age at first injection
	N	Y	N	Y		N	Y		
A Alcohol	0	1							
B Glue/paint thinner/toluene	0	1							
C Marijuana/hashish	0	1							
D "Crack"/ freebase/hubba	0	1							
E Cocaine by itself	0	1	0	1		0	1		
F Amphetamine/Prescription stimulant by itself	0	1	0	1		0	1		
G Heroin by itself	0	1	0	1		0	1		
H Heroin & cocaine mixed together	0	1	0	1		0	1		
I Non-prescription methadone	0	1	0	1		0	1		
J Other opiates or narcotics	0	1	0	1		0	1		
K Barbiturates	0	1	0	1		0	1		
L Tranquilizers	0	1	0	1		0	1		
M PCP	0	1	0	1		0	1		
N Hallucinogens/psychedelics:MDA	0	1	0	1		0	1		
O Nitrites and poppers	0	1	0	1		0	1		
P Other drugs (Specify: _____ _____)	0	1	0	1		0	1		
Q Other drugs in combination (Specify:_____)	0	1	0	1		0	1		

INTERVIEWER: IF RESPONDENT USES DRUGS WITHOUT A NEEDLE, ANY YES TO Q15b(1), BUT DOES NOT INJECT, ALL NO TO Q15b(2), CIRCLE 9 AT TOP OF SECTION C AND TAKE BACK CARD A, THEN SKIP TO SECTION D, PAGE 18.

AIA 8.0 - SECTION C: NEEDLE USE BEHAVIOR

C. NEEDLE USE BEHAVIOR

CIRCLE THIS 9 IF NO NEEDLE USE BEHAVIOR

INTERVIEWER: THIS SECTION APPLIES ONLY TO RESPONDENTS WHO HAVE INJECTED DRUGS IN THE LAST 6 MONTHS. FOR NON-INJECTING RESPONDENTS, SKIP TO SECTION D, PAGE 18

Q16. Using this card, please tell me how often you are shooting up now.

CODE	DK/ UNSURE	REFUSED	N/A
___	7	8	9

TAKE BACK CARD A

Q17. How old were you when you started shooting drugs?

	DK/ UNSURE	REFUSED	N/A
___	77	88	99

HAND CARD B

Q18. Thinking back over the past 6 months, please tell me how often you shot drugs...

ENTER CODE FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

A	At your own place?	___
B	At a friend's home or apartment?	___
C	At a party or social gathering?	___
D	At a dealer's house or apartment?	___
E	At a shooting gallery (place where you had to exchange money or drugs for a place to shoot drugs)?	___
F	In an abandoned building?	___
G	On the street, in a park, in an alley, or on rooftops?	___
H	Some other place (Specify:_____)?	___

AIA 8.0 - SECTION C: NEEDLE USE BEHAVIOR

Q19. Thinking back over the past 6 months, please tell me how often . . .

ENTER CODE FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

A Your spouse or sexual partner was the only one (shooting up)(sharing needles) with you? ___

B Your running partner was the only one (shooting up) (sharing needles) with you? ___

C Some friends or other people you know (shot up)(shared needles) with you? ___

D Strangers (shot up)(shared needles) with you? ___

E You (shot up alone)(didn't share needles)? ___

Q20. Please tell me how often in the past 6 months you have . . .

ENTER CODE FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

A Rented needles or syringes you think had been used? ___

B Had someone lend you or give you needles or syringes that had been used? ___

C Shared a cooker or cotton with someone else? ___

D Shared rinse water with someone else? ___

E Gotten a needle or syringe in a sterile wrapper? ___

F Gotten a needle or syringe in a sterile wrapper, used it once, and never used it again? ___

G Gotten needles or syringes legally? ___

AIA 8.0 - SECTION C: NEEDLE USE BEHAVIOR

Q21. In the past 6 months, how often have you done any of the following things with your needles (works, rigs) after you've used them . . .?

ENTER CODE FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

A	Given or lent them to a running partner?	___
B	Given or lent them to a sex partner?	___
C	Given or lent them to friends or others?	___
D	Thrown them away?	___
E	Sold them without cleaning?	___
F	Cleaned them and then sold or given them away?	___
G	Reused them yourself without cleaning?	___
H	Cleaned them and reused them yourself?	___
I	Other (Specify:_____)?	___

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

Q22. In the past 6 months, how often have you used a new needle? ___

ENTER CODE FROM BOX ABOVE

IF "ALWAYS," SKIP TO Q26, PAGE 17.

AIA 8.0 - SECTION C: NEEDLE USE BEHAVIOR

Q23. In the last 6 months, how often have you cleaned your needles (works, rigs) before you shot drugs? ___

ENTER CODE FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

IF "NEVER CLEANS" IN Q23, SKIP TO Q25, NEXT PAGE.

Q24. When you cleaned your needles (works, rigs) in the last 6 months, how often did you use any of the following methods?

ENTER CODE FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

A Used bleach or clorox and rinsed with water? ___

B Used alcohol and rinsed with water? ___

C Boiled in water? ___

D Rinsed in water only? ___

E Used some other method I have not mentioned? ___

(Specify:_____)

IF "ALWAYS CLEANS" IN Q23, THEN SKIP TO Q26, PAGE 17.

AIA 8.0 - SECTION C: NEEDLE USE BEHAVIOR

Q25. There are several things which people tell us make it hard for them to clean their needles and/or syringes. Tell me the things that make it hard for you to clean your needles (works, rigs).

USE NEUTRAL PROBES ONLY. CIRCLE EACH HEADING OR "QUESTION" MENTIONED WITH PROBE (MENTIONED - OPEN = 1). WHEN ONLY HEADING MENTIONED, THEN ASK "QUESTIONS" UNDER THAT HEADING, CIRCLE THEN AS (MENTIONED - READ = 2).

		NOT MENTIONED	MENTIONED OPEN	MENTIONED READ	DK/UNSURE	REFUSED	N/A
(1)	LACK WORKS OR CLEANING MATERIALS	0	1		7	8	9
	Is this because...						
	You don't have alcohol or bleach (clorox) available?	0	1	2	7	8	9
	You don't have clean or boiling water available?	0	1	2	7	8	9
	You don't have your own needle(works/rig)?	0	1	2	7	8	9
	Other reason? (Specify: ______________________)	0	1	2	7	8	9
(2)	PARTNER-RELATED	0	1		7	8	9
	Is this because...						
	Your shooting partner does not do it?	0	1	2	7	8	9
	You would insult the person whose works you are using?	0	1	2	7	8	9
	Other reason? (Specify: ______________________)	0	1	2	7	8	9
(3)	PLACE-RELATED	0	1		7	8	9
	Is this because...						
	You're not at your own place?	0	1	2	7	8	9
	You're not at your friend's place?	0	1	2	7	8	9
	Other reason? (Specify: ______________________)	0	1	2	7	8	9
(4)	SELF-RELATED	0	1		7	8	9
	Is this because...						
	You're more interested in the high than in cleaning?	0	1	2	7	8	9
	You have to hide your needles (works, rigs, etc.)?	0	1	2	7	8	9
	You're too sick to care about cleaning?	0	1	2	7	8	9
	It takes you too much time?	0	1	2	7	8	9
	Other reason? (Specify: ______________________)	0	1	2	7	8	9
(5)	OTHER REASON (SPECIFY) ______________________	0	1		7	8	9

AIA 8.0 - SECTION C: NEEDLE USE BEHAVIOR

Q26. I'm going to read you a list of the places where people get information.

Have you gotten information on cleaning needles (works, rigs) from . . .
(READ LIST)

		NO	YES	DK/ UNSURE	REFUSED	N/A
A	Television?	0	1	7	8	9
B	Radio?	0	1	7	8	9
C	Newspapers or magazines?	0	1	7	8	9
D	Brochures, fliers, or pamphlets?	0	1	7	8	9
E	Billboards, posters, and other outside displays?	0	1	7	8	9
F	A drug treatment program?	0	1	7	8	9
G	Other health care facilities?	0	1	7	8	9
H	This AIDS intervention program?	0	1	7	8	9
I	Jail or prison?	0	1	7	8	9
J	Places that provide AIDS counseling, testing, and information?	0	1	7	8	9
K	Outreach worker?	0	1	7	8	9
L	Relatives and friends?	0	1	7	8	9
M	On the streets or by word of mouth?	0	1	7	8	9
N	A church or temple?	0	1	7	8	9
O	Other ?	0	1	7	8	9

(Specify:_____)

IF ONLY ONE SOURCE ("ONLY ONE YES") IN Q26, SKIP TO Q27, NEXT PAGE.

INTERVIEWER: IF Q26a IS ASKED, READ CIRCLED ITEMS FROM Q26, IF NECESSARY (PROBE FOR ONLY ONE). USE APPROPRIATE LETTER FROM Q26.

Q26a. Of the sources you just told me, which one gives you the most useful and reliable information?

	DK/ UNSURE	REFUSED	N/A
___	7	8	9

D. TREATMENT AND MOBILITY

READ: ***Next, I want to ask you about your experience in treatment programs, jail or prison, and your travel.***

Q27. How many times, if any, have you been enrolled in formal drug treatment programs of the following types?

INTERVIEWER: OMIT SELF-HELP GROUPS (e.g., NA, AA, CA)

		NUMBER OF TIMES	DK/ UNSURE	REFUSED	N/A
A	Drug detoxification	__ __	77	88	99
B	Residential (e.g., Therapeutic Community)	__ __	77	88	99
C	Prison/jail treatment program	__ __	77	88	99
D	Methadone maintenance	__ __	77	88	99
E	Outpatient drug-free	__ __	77	88	99
F	Other (Specify: ____________________________)	__ __	77	88	99

IF NO TREATMENT, SKIP TO Q29, PAGE 20

Q27a. How many weeks were you in drug treatment during the past 6 months? (6 months = 26 weeks)

	DK/ UNSURE	REFUSED	N/A
NUMBER __ __	77	88	99

Q27b. How many weeks during the past 5 years? (5 years = 260 weeks)

	DK/ UNSURE	REFUSED	N/A
NUMBER __ __ __	777	888	999

IF NO WEEKS IN TREATMENT ("00 AND 000" TO Q27a AND Q27b), SKIP TO Q29, PAGE 20.

AIA 8.0 - SECTION D: TREATMENT AND MOBILITY

Q28. Are you ***now*** enrolled in a formal drug treatment program?

NO	0
YES	1
DK/UNSURE	7
REFUSED	8
N/A	9

IF NOT IN TREATMENT, SKIP TO Q29, NEXT PAGE.

Q28a. What type of program are you in **now**?

(USE LIST AS PROBES IF NECESSARY)

A	DRUG DETOXIFICATION	1
B	RESIDENTIAL (E.G., THERAPEUTIC COMMUNITY)	2
C	PRISON/JAIL TREATMENT PROGRAM	3
D	METHADONE MAINTENANCE	4
E	OUTPATIENT DRUG-FREE	5
F	OTHER	6

(Specify: _____)

DK/UNSURE	7
REFUSED	8
N/A	9

Q28b. When did you enter this program?

(RECORD MONTH AND YEAR)

		DK/ UNSURE	REFUSED	N/A
MONTH	__ __	77	88	99
YEAR 19	__ __	7777	8888	9999

AIA 8.0 - SECTION D: TREATMENT AND MOBILITY

Q29. Have you participated in any of the following self-help programs in the last 6 months. . .

		NO	YES	7=DK/UNSURE 8=REFUSED 9=N/A	29a NUMBER OF MEETINGS	
A	Alcoholics Anonymous?	0	1	___	___	(OR ENTER FOR
B	Narcotics Anonymous?	0	1	___	___	# OF MEETINGS
C	Cocaine Anonymous?	0	1	___	___	777=DK/UNSURE
D	Adult Children of Alcoholics?	0	1	___	___	888=REFUSED
E	Al-Anon?	0	1	___	___	999=N/A)
F	Nar(c)-Anon?	0	1	___	___	
G	Other?	0	1	___	___	
	(Specify _____)					

Q29a. FOR EACH YES, ASK: How many meetings did you attend in the last 6 months? (6 MONTHS = 26 WEEKS)

Q30. Please tell me the cities in which you have visited or stayed for a period of time --outside this area--during the past 2 years. Please don't include places where you ***ONLY*** spent time in prison or some other institution.

(RECORD EACH CITY/STATE; THEN ASK Q30a AND Q30b)

CITY/STATE	Q30a HAD SEX? 0=NO; 1=YES; 8=REFUSED; 9=N/A	Q30b SHOT UP? 0=NO; 1=YES; 8=REFUSED; 9=N/A	
A _____/_____	___	___	(___/___)
B _____/_____	___	___	(___/___)
C _____/_____	___	___	(___/___)
D _____/_____	___	___	(___/___)
E _____/_____	___	___	(___/___)
F _____/_____	___	___	(___/___)
G _____/_____	___	___	(___/___)
H _____/_____	___	___	(___/___)

INTERVIEWER: ASK Q30a AND Q30b FOR EACH CITY/STATE GIVEN IN Q30

Q30a. When you were in _____, did you have sex with anyone you were not traveling with?

Q30b. When you were in _____, did you shoot drugs with anyone you were not traveling with?

AIA 8.0 - SECTION D: TREATMENT AND MOBILITY

Q31. Have you ever been in jail or prison?

	YES	1
	NO	0
SKIP TO Q32 ←	DK/UNSURE	7
THEN ONLY ASK OTHER TYPE	REFUSED	8
OF INSTITUTION (NOT PRISON)	N/A	9

Q31a. How many weeks have you been in jail or prison during ...

		DK/ UNSURE	REFUSED	N/A
A the past 6 months? (6 months = 26 weeks)	__ __	77	88	99
B the past 5 years? (5 years = 260 weeks)	__ __ __	777	888	999

Q31b. Of the times you were in jail or prison in the last 6 months, how many involved a stay of 1 week or longer?

__ __	77	88	99

Q32. Now please tell me any cities where you've spent time in (prison or another) (some) type of institution during the past 2 years.

	CITY/STATE	
I	_____/_____	(__ __ __ __/__ __ __)
J	_____/_____	(__ __ __ __/__ __ __)
K	_____/_____	(__ __ __ __/__ __ __)
L	_____/_____	(__ __ __ __/__ __ __)

Q33. Are you currently ...

	NO	YES	DK/UNSURE	REFUSED	N/A
On probation?	0	1	7	8	9
On parole?	0	1	7	8	9
Facing criminal charges?	0	1	7	8	9

AIA 8.0 - SECTION E1: SINGLE PARTNER SEX

E. SEX

READ: Now I'm going to ask some questions about sexual behavior and practices.

Q34. Have you had sex with anyone in the last 6 months?

	YES	1
SKIP TO NEXT SECTION ON HEALTH, PAGE 36.	NO	0
	DK/UNSURE	7
	REFUSED	8
	N/A	9

Q35. How many people have you had sex with in the past 6 months?

		DK/ UNSURE	REFUSED	N/A
NUMBER	____	7777	8888	9999

IF MORE THAN ONE, DK, OR REFUSED, SKIP TO Q41, PAGE 29.

ASK IF ONLY ONE PARTNER

Q36. Is your sex partner ...

	Male?	1
or	Female?	2
	REFUSED	8
	N/A	9

Q37. Has (he) (she) used drugs intravenously in the past 6 months?

NO	0
YES	1
DK/UNSURE	7
REFUSED	8
N/A	9

INTERVIEWER: IF RESPONDENT AND PARTNER ARE SAME SEX, SKIP TO Q39 ON NEXT PAGE.

AIA 8.0 - SECTION E1: SINGLE PARTNER SEX

HAND CARD B OR READ CODES FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

Q38. During the past 6 months, how often did you or your sexual partner use birth control? ___

DK/UNSURE 7
REFUSED 8
N/A 9

IF "ALWAYS (A)", SKIP TO Q39 BELOW.

Q38a. Why don't you (always) use birth control?

USE LIST AS PROBES IF NECESSARY.

	NOT MENTIONED	MENTIONED OPEN	MENTIONED READ	DK/UNSURE	REFUSED	N/A
TOO COSTLY/CAN'T AFFORD	0	1	2	7	8	9
DON'T NEED IT (E.G., STERILE, VASECTOMY, PAST MENOPAUSE)	0	1	2	7	8	9
WANT A PREGNANCY	0	1	2	7	8	9
PARTNER DISLIKES, DOESN'T BELIEVE IN	0	1	2	7	8	9
RESPONDENT DISLIKES, DOESN'T BELIEVE IN	0	1	2	7	8	9
DON'T ALWAYS HAVE PROTECTION AT THE RIGHT TIME	0	1	2	7	8	9
OTHER	0	1	2	7	8	9

(Specify: _____)

Q39. When you had sex with your partner in the past 6 months, how often did you use a condom (latex protection)? ___

ENTER CODE FROM BOX AT TOP RIGHT OF PAGE.

IF "ALWAYS (A)", SKIP TO Q39b.

TAKE BACK CARD B

AIA 8.0 - SECTION E1: SINGLE PARTNER SEX

Q39a. Why didn't you (always) use condoms (latex protection)?

USE NEUTRAL PROBES ONLY. CIRCLE EACH HEADING OR "QUESTION" MENTIONED WITH PROBE (MENTIONED - OPEN = 1).
WHEN ONLY HEADING MENTIONED, THEN ASK "QUESTIONS" UNDER THAT HEADING, CIRCLE THEN AS (MENTIONED - READ = 2).

	NOT MENTIONED	MENTIONED OPEN	MENTIONED READ	DK/UNSURE	REFUSED	N/A
(1) **AIDS-RELATED** Is this because...	0	1		7	8	9
You feel you can't give AIDS to your partner?	0	1	2	7	8	9
You feel you can't get AIDS from your partner?	0	1	2	7	8	9
Your partner believes (he)(she) doesn't have AIDS?	0	1	2	7	8	9
Your partner may feel you are accusing (him)(her) of having AIDS?	0	1	2	7	8	9
Some other reason? (Specify: _____)	0	1	2	7	8	9
(2) **(OTHER) PARTNER-RELATED/FEAR** Is this because...	0	1		7	8	9
Your partner doesn't like it? (INCLUDES "DOESN'T BELIEVE IN IT")	0	1	2	7	8	9
You're afraid of getting hurt or beat up? (BY PARTNER)	0	1	2	7	8	9
Your partner wants to have a child?	0	1	2	7	8	9
Some other reason? (Specify: _____)	0	1	2	7	8	9
(3) **(OTHER) SELF-RELATED** Is this because...	0	1		7	8	9
You don't like to use it? (INCLUDES "DON'T BELIEVE IN IT")	0	1	2	7	8	9
You feel uncomfortable talking to your partner about sex and condoms (latex protection)?	0	1	2	7	8	9
You want to have a baby?	0	1	2	7	8	9
You don't think of it when you are high or stoned?	0	1	2	7	8	9
Some other reason? (Specify: _____)	0	1	2	7	8	9
(4) **OTHER REASONS (Specify)**	0	1		7	8	9
_____	0	1		7	8	9
_____	0	1		7	8	9

IF "NEVER" USES CONDOMS/PROTECTION (Q39), AND ANSWERS Q39a, THEN SKIP TO Q40, PAGE 26.

AIA 8.0 - SECTION E1: SINGLE PARTNER SEX

Q39b. Why have you used condoms (latex protection)?

USE NEUTRAL PROBES ONLY. CIRCLE EACH HEADING OR "QUESTION" MENTIONED WITH PROBE (MENTIONED - OPEN = 1).
WHEN ONLY HEADING MENTIONED, THEN ASK "QUESTIONS" UNDER THAT HEADING, CIRCLE THEN AS (MENTIONED - READ = 2).

		NOT MENTIONED	MENTIONED OPEN	MENTIONED READ	DK/UNSURE	REFUSED	N/A
(1)	**AIDS-RELATED** Is this because...	0	1		7	8	9
	You're afraid you will get AIDS from your partner?	0	1	2	7	8	9
	You're afraid you will give AIDS to your partner?	0	1	2	7	8	9
	You're afraid you or your partner may give AIDS to your baby?	0	1	2	7	8	9
	Your partner is afraid of getting AIDS?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(2)	**(OTHER) PARTNER-RELATED** Is this because...	0	1		7	8	9
	Your partner likes to use it?	0	1	2	7	8	9
	Your partner insists on using protection? (INCLUDES "WON'T HAVE SEX WITHOUT IT")	0	1	2	7	8	9
	Your partner doesn't want to have a child?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(3)	**(OTHER) SELF-RELATED** Is this because...	0	1		7	8	9
	You like to use protection? (INCLUDES "WON'T HAVE SEX WITHOUT IT")	0	1	2	7	8	9
	You don't want to have a baby?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(4)	**OTHER REASON (SPECIFY)**	0	1		7	8	9
_____		0	1		7	8	9
_____		0	1		7	8	9

AIA 8.0 - SECTION E2: SINGLE PARTNER SEX

I'm going to read a list of sex practices now. But first, I want to be sure you understand the language I'm going to use. I'm going to use the words "penis," "vagina," and "anus." People sometimes call a penis, the male sex organ, a "use local slang" or "use local slang". They sometimes call a vagina, the female sex organ, a "use local slang" or "use local slang". They sometimes call an anus a "use local slang" or "use local slang."

Q40. Now, please tell me how often you've done each kind of sex during the past 6 months?

INTERVIEWER:

IF NO CONDOM/PROTECTION USED IN Q39-RESPONSE=E, DO NOT READ COLUMN a! IF ALWAYS USES CONDOM/PROTECTION Q39-RESPONSE=A, DO NOT READ COLUMN b! CIRCLE 9 (N/A) FOR COLUMNS a OR b, OTHERWISE, DO READ FOR BOTH COLUMNS AND RECORD LETTER GIVEN IN PROPER COLUMN. (READ LIST ACROSS COLUMNS a AND b)

HAND CARD A OR READ CODES FROM BOX

CODES
A=Never/None
B=Less Than 4 Times Per Month
C=About 1 Time a Week
D=2-6 Times a Week
E=About 1 Time a Day
F=2-3 Times a Day, Almost Every Day
G=4 or More Times a Day, Almost Every Day
7=DK/UNSURE
8=REFUSED
9=N/A

Q40a *ASK ONLY MALE RESPONDENT WITH FEMALE PARTNER!*			With a Condom? a	Without a Condom? b
CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE			9	9
VAGINAL	(1)	Your penis in your partner's vagina	___	___
ORAL	(2)	Your penis in your partner's mouth	___	___
ANAL	(3)	Your penis in your partner's anus	___	___
VAGINAL	(4)	Your penis in your partner's vagina during her menstrual period	___	___
ORAL/ VAGINAL	(5)	Your mouth on your partner's vagina during her menstrual period	___	___
ORAL/ANAL	(6)	Your mouth on your partner's anus	___	___
ORAL/ANAL	(7)	Your partner's mouth on your anus.	___	___

TAKE BACK CARD A, SKIP TO HEALTH SECTION, PAGE 36.

AIA 8.0 - SECTION E2: SINGLE PARTNER SEX

HAND CARD A OR READ CODES FROM BOX

CODES
A=Never/None
B=Less Than 4 Times Per Month
C=About 1 Time a Week
D=2-6 Times a Week
E=About 1 Time a Day
F=2-3 Times a Day, Almost Every Day
G=4 or More Times a Day, Almost Every Day
7=DK/UNSURE
8=REFUSED
9=N/A

		Q40b. ASK ONLY MALE RESPONDENT WITH MALE PARTNER!	With a Condom? a	Without a Condom? b
CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE			9	9
ORAL	(1)	Your penis in your partner's mouth	___	___
ANAL	(2)	Your penis in your partner's anus	___	___
ORAL	(3)	Your partner's penis in your mouth	___	___
ANAL	(4)	Your partner's penis in your anus	___	___
ORAL/ANAL	(5)	Your mouth on your partner's anus	___	___
ORAL/ANAL	(6)	Your partner's mouth on your anus	___	___

TAKE BACK CARD A; SKIP TO HEALTH SECTION, PAGE 36.

		Q40c. ASK ONLY FEMALE RESPONDENT WITH MALE PARTNER!	With a Condom? a	Without a Condom? b
CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE			9	9
VAGINAL	(1)	Your partner's penis in your vagina	___	___
ORAL	(2)	Your partner's penis in your mouth	___	___
ANAL	(3)	Your partner's penis in your anus	___	___
VAGINAL	(4)	Your partner's penis in your vagina during your menstrual period	___	___
ORAL/ VAGINAL	(5)	Your partner's mouth on your vagina during your menstrual period	___	___
ORAL/ANAL	(6)	Your mouth on your partner's anus	___	___
ORAL/ANAL	(7)	Your partner's mouth on your anus	___	___

TAKE BACK CARD A, SKIP TO HEALTH SECTION, PAGE 36.

AIA 8.0 - SECTION E2: SINGLE PARTNER SEX

HAND CARD A OR READ CODES FROM BOX

CODES
A=Never/None
B=Less Than 4 Times Per Month
C=About 1 Time a Week
D=2-6 Times a Week
E=About 1 Time a Day
F=2-3 Times a Day, Almost Every Day
G=4 or More Times a Day, Almost Every Day
7=DK/UNSURE
8=REFUSED
9=N/A

			With Latex Protection? a	Without Latex Protection? b
	Q40d.	*ASK ONLY FEMALE RESPONDENT WITH FEMALE PARTNER!*		
		CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE	9	9
VAGINAL	(1)	Your mouth on your partner's vagina	___	___
VAGINAL	(2)	Your partner's mouth on your vagina	___	___
ANAL	(3)	Your mouth on your partner's anus	___	___
ANAL	(4)	Your partner's mouth on your anus	___	___
VAGINAL	(5)	Your partner 's mouth on your vagina, during your menstrual period	___	___
VAGINAL	(6)	Your mouth on your partner's vagina, during her menstrual period	___	___

TAKE BACK CARD A, SKIP TO HEALTH SECTION, PAGE 36.

AIA 8.0 - SECTION E1: MULTIPLE PARTNERS SEX

FOR MORE THAN ONE PARTNER ONLY

Q41. In the past 6 months ...

(RECORD: 0000=NONE)

	DK UNSURE	REFUSED	N/A
*Q41a.*How many of these partners were female?____	7777	8888	9999
*Q41b.*How many of these partners were male? ____	7777	8888	9999

Q41c. How many of these (females) (males) used drugs intravenously in the past 6 months?

(IF NO PARTNERS OF ONE SEX, CIRCLE 9999=N/A)

	DK UNSURE	REFUSED	N/A
FEMALES ____	7777	8888	9999
MALES ____	7777	8888	9999

Q42. In the past 6 months, have you ...

	NO	YES	DK UNSURE	REFUSED	N/A
(a) Had sex for money?	0	1	7	8	9
(b) Had sex for drugs?	0	1	7	8	9

HAND CARD B or READ CODES FROM BOX

CODES
A=Always
B=More Than Half the Time
C=About Half the Time
D=Less Than Half the Time
E=Never
7=DK/UNSURE
8=REFUSED
9=N/A

Q43. When you had sex with your partners in the past 6 months, how often did you use a condom (latex protection)? ____

DK/UNSURE	7
REFUSED	8
N/A	9

IF "ALWAYS (A)", SKIP TO Q43b.
TAKE BACK CARD B

AIA 8.0 - SECTION E1: MULTIPLE PARTNERS SEX

Q43a. Why didn't you (always) use condoms (latex protection)?
USE NEUTRAL PROBES ONLY. CIRCLE EACH HEADING OR "QUESTION" MENTIONED WITH PROBE (MENTIONED - OPEN = 1).
WHEN ONLY HEADING MENTIONED, THEN ASK "QUESTIONS" UNDER THAT HEADING, CIRCLE THEN AS (MENTIONED - READ = 2).

		NOT MENTIONED	MENTIONED OPEN	MENTIONED READ	DK/ UNSURE	REFUSED	N/A
(1)	**AIDS-RELATED**	0	1		7	8	9
	Is this because...						
	You feel you can't give AIDS to your partners?	0	1		7	8	9
	You feel you can't get AIDS from your partners?	0	1	2	7	8	9
	Your partners believe they don't have AIDS?	0	1	2	7	8	9
	Your partners may feel you are accusing them of having AIDS?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(2)	**(OTHER) PARTNER-RELATED/FEAR**	0	1		7	8	9
	Is this because...						
	Your partners don't like it? (INCLUDES "DOESN'T BELIEVE IN IT")	0	1	2	7	8	9
	You're afraid of getting hurt or beat up? (BY PARTNERS)	0	1	2	7	8	9
	Your partners want to have a child?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(3)	**(OTHER) SELF-RELATED**	0	1		7	8	9
	Is this because...						
	You don't like to use it? (INCLUDES "DON'T BELIEVE IN IT")	0	1	2	7	8	9
	You feel uncomfortable talking to partners about sex and condoms (latex protection)?	0	1	2	7	8	9
	You want to have a baby?	0	1	2	7	8	9
	You don't think of it when you are high or stoned?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(4)	**OTHER REASONS (Specify)**	0	1		7	8	9
	_____	0	1		7	8	9
	_____	0	1		7	8	9

IF "NEVER" USES CONDOMS/PROTECTION (Q43), AND ANSWERS Q43a, THEN SKIP TO Q44, PAGE 33.

AIA 8.0 - SECTION E1: MULTIPLE PARTNERS SEX

Q43b. Why have you used condoms (latex protection)?
USE NEUTRAL PROBES ONLY. CIRCLE EACH HEADING OR "QUESTION" MENTIONED WITH PROBE (MENTIONED - OPEN = 1).
WHEN ONLY HEADING MENTIONED, THEN ASK "QUESTIONS" UNDER THAT HEADING; CIRCLE THEN AS (MENTIONED - READ = 2).

		NOT MENTIONED	MENTIONED OPEN	MENTIONED READ	UNSURE	REFUSED	N/A
(1)	AIDS-RELATED	0	1		7	8	9
	Is this because...						
	You're afraid you will get AIDS from a partner?	0	1	2	7	8	9
	You're afraid you will give AIDS to a partner?	0	1	2	7	8	9
	You're afraid you or a partner may give AIDS to your baby?	0	1	2	7	8	9
	Your partners are afraid of getting AIDS?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(2)	(OTHER) PARTNER-RELATED	0	1		7	8	9
	Is this because...						
	Your partners like to use it?	0	1	2	7	8	9
	Your partners insist on using protection? (INCLUDES "WON'T HAVE SEX WITHOUT IT")	0	1	2	7	8	9
	Your partners don't want to have a child?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(3)	(OTHER) SELF-RELATED	0	1		7	8	9
	Is this because...						
	You like to use protection? (INCLUDES "WON'T HAVE SEX WITHOUT IT")	0	1	2	7	8	9
	You don't want to have a baby?	0	1	2	7	8	9
	Some other reason? (Specify: _____)	0	1	2	7	8	9
(4)	OTHER REASON (SPECIFY)	0	1		7	8	9
_____		0	1		7	8	9
_____		0	1		7	8	9

AIA 8.0 - SECTION E1: MULTIPLE PARTNERS SEX

Q43c. Are there any particular kinds of people you always use condoms (latex protection) with when having sex?

NO	YES	DK/UNSURE	REFUSED	N/A
0	1	7	8	9

IF "YES" ASK:

Q43d. What kinds of people?

RECORD:1) _____ (__ __)
2) _____ (__ __)
3) _____ (__ __)

Q43e. Are there any particular kinds of people you never or almost never use condoms (latex protection) with?

NO	YES	DK/UNSURE	REFUSED	N/A
0	1	7	8	9

IF "YES" ASK:

Q43f. What kinds of people?

RECORD:1) _____ (__ __)
2) _____ (__ __)
3) _____ (__ __)

Q43g. Are there any particular situations in which you always use condoms (latex protection)?

NO	YES	DK/UNSURE	REFUSED	N/A
0	1	7	8	9

IF "YES" ASK:

Q43h. What kinds of situations?

RECORD:1) _____ (__ __)
2) _____ (__ __)
3) _____ (__ __)

Q43i. Are there any particular situations in which you never or almost never use condoms (latex protection)?

NO	YES	DK/UNSURE	REFUSED	N/A
0	1	7	8	9

IF "YES" ASK:

Q43j. What kinds of situations?

RECORD:1) _____ (__ __)
2) _____ (__ __)
3) _____ (__ __)

AIA 8.0 - SECTION E2: MULTIPLE PARTNERS SEX

HAND CARD A OR READ CODES FROM BOX

CODES
A=Never/None
B=Less Than 4 Times Per Month
C=About 1 Time a Week
D=2-6 Times a Week
E=About 1 Time a Day
F=2-3 Times a Day, Almost Every Day
G=4 or More Times a Day, Almost Every Day
7=DK/UNSURE
8=REFUSED
9=N/A

		Q44b. ASK ONLY MALE RESPONDENT WITH MALE PARTNERS!	With a Condom? a	Without a Condom? b
		CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE	9	9
ORAL	(1)	Your penis in your partner's mouth	—	—
ANAL	(2)	Your penis in your partner's anus	—	—
ORAL	(3)	Your partner's penis in your mouth	—	—
ANAL	(4)	Your partner's penis in your anus	—	—
ORAL/ANAL	(5)	Your mouth on your partner's anus	—	—
ORAL/ANAL	(6)	Your partner's mouth on your anus	—	—

TAKE BACK CARD A; SKIP TO HEALTH SECTION, PAGE 36.

		Q44c. ASK ONLY FEMALE RESPONDENT WITH MALE PARTNERS!	With a Condom? a	Without a Condom? b
		CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE	9	9
VAGINAL	(1)	Your partner's penis in your vagina	—	—
ORAL	(2)	Your partner's penis in your mouth	—	—
ANAL	(3)	Your partner's penis in your anus	—	—
VAGINAL	(4)	Your partner's penis in your vagina during your menstrual period	—	—
ORAL/ VAGINAL	(5)	Your partner's mouth on your vagina during your menstrual period	—	—
ORAL/ANAL	(6)	Your mouth on your partner's anus	—	—
ORAL/ANAL	(7)	Your partner's mouth on your anus	—	—

IF BISEXUAL FEMALE RESPONDENT, ASK Q44d, ELSE TAKE BACK CARD A, AND SKIP TO HEALTH SECTION, PAGE 36.

AIA 8.0 - SECTION E2: MULTIPLE PARTNERS SEX

HAND CARD A OR READ CODES FROM BOX

CODES
A=Never/None
B=Less Than 4 Times Per Month
C=About 1 Time a Week
D=2-6 Times a Week
E=About 1 Time a Day
F=2-3 Times a Day, Almost Every Day
G=4 or More Times a Day, Almost Every Day
7=DK/UNSURE
8=REFUSED
9=N/A

			With Latex Protection? a	Without Latex Protection? b
	Q44d. ASK ONLY FEMALE RESPONDENT WITH FEMALE PARTNERS!			
	CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE		9	9
ORAL/VAGINAL	(1)	Your mouth on your partner's vagina	___	___
ORAL/VAGINAL	(2)	Your partner's mouth on your vagina	___	___
ORAL/ANAL	(3)	Your mouth on your partner's anus	___	___
ORAL/ANAL	(4)	Your partner's mouth on your anus	___	___
ORAL/VAGINAL	(5)	Your partner 's mouth on your vagina, during your menstrual period	___	___
ORAL/VAGINAL	(6)	Your mouth on your partner's vagina, during her menstrual period	___	___

TAKE BACK CARD A

AIA 8.0 - SECTION F: HEALTH

F. HEALTH

READ: Next I want to ask you a few questions about your health.

Q45. How would you describe your health for the past 6 months? Would you say. . .

Excellent	1
Good	2
Fair	3
Poor	4
DK/UNSURE	7
REFUSED	8
N/A	9

Q46. Have you ever had sores in the genital area?

YES	1
NO	0
DK/UNSURE	7
REFUSED	8
N/A	9

SKIP TO Q46b ←

Q46a. Was it in the last 6 months?

NO	0
YES	1
DK/UNSURE	7
REFUSED	8
N/A	9

ASK OF FEMALES ONLY.

Q46b. Do you have yeast infections you can't get rid of even with treatment?

NO	0
YES	1
DK/UNSURE	7
REFUSED	8
N/A	9

AIA 8.0 - SECTION F: HEALTH

INTERVIEWER: OBTAIN COMPLETE INFORMATION ON EACH DISEASE IN Q47 BEFORE MOVING ON TO THE NEXT DISEASE.

Q47. Have you ever been told by a doctor or nurse that you had . . .
(WHEN "YES", ASK Q47a)

Q47a. Was this in the last 6 months?

		Q47 EVER TOLD? (0=NO; 1=YES; 7=DK/UNSURE; 8=REFUSED; 9=N/A)	Q47a LAST 6 MONTHS? (0=NO; 1=YES; 7=DK/UNSURE; 8=REFUSED; 9=N/A)
A	Pneumonia?	___	___
B	Hepatitis?	___	___
C	Tuberculosis?	___	___
D	Endocarditis?	___	___
E	Genital Herpes?	___	___
F	Gonorrhea (Clap)?	___	___
G	Syphilis?	___	___
H	Chlamydia (NGU, Non-Gonococcal Urethritis)?	___	___
I	AIDS-Related Complex or ARC?	___	___
J	AIDS?	___	___

Q48. Have you donated or sold blood after 1979?

NO	0
YES	1
DK/UNSURE	7
REFUSED	8
N/A	9

AIA 8.0 - SECTION F: HEALTH

Q49. Have you ever had a blood transfusion?

YES	1
NO	0
DK/UNSURE	7
REFUSED	8
N/A	9

SKIP TO Q50 ←

Q49a. When?

Before 1980	1
In or since 1980	2
DK/UNSURE	7
REFUSED	8
N/A	9

ASK OF WOMEN ONLY.

Q50. Are you currently pregnant?

NO	0
YES	1
DK/UNSURE	7
REFUSED	8
N/A	9

AIA 8.0 - SECTION G: AIDS AND HIV TESTING

G. AIDS AND HIV TESTING

READ: Now I am going to ask you some questions about AIDS. Remember, your answers will remain completely confidential.

Q51. I am going to read you a list of the places where people get information. Have you gotten information about AIDS from ... *(READ LIST)*

		NO	YES	DK/ UNSURE	REFUSED	N/A
A	Television?	0	1	7	8	9
B	Radio?	0	1	7	8	9
C	Newspapers or magazines?	0	1	7	8	9
D	Brochures, fliers, or pamphlets?	0	1	7	8	9
E	Billboards, posters, and other outside displays?	0	1	7	8	9
F	A drug treatment program?	0	1	7	8	9
G	Other health care facilities?	0	1	7	8	9
H	This AIDS intervention program?	0	1	7	8	9
I	Jail or prison?	0	1	7	8	9
J	Places that provide AIDS counseling, testing, and information?	0	1	7	8	9
K	Outreach worker?	0	1	7	8	9
L	Relatives and friends?	0	1	7	8	9
M	On the streets or by word of mouth?	0	1	7	8	9
N	A church or temple?	0	1	7	8	9
O	Other ?	0	1	7	8	9

(Specify: _____)

IF ONLY ONE SOURCE ("YES") IN Q51, SKIP TO Q52, NEXT PAGE.

INTERVIEWER: IF Q51a IS ASKED, READ CIRCLED ITEMS FROM Q51, IF NECESSARY. (PROBE FOR ONLY ONE) USE APPROPRIATE LETTER FROM Q51.

Q51a. Of the places you just told me, which one gives you the most useful and reliable information?

	DK/ UNSURE	REFUSED	N/A
____	7	8	9

AIA 8.0 - SECTION G: AIDS AND HIV TESTING

Q52. What percentage of IV drug users in [your city/county] do you think is infected with the virus that causes AIDS?

		DK/ UNSURE	REFUSED	N/A
PERCENTAGE	___	777	888	999

Q53. How likely do you think you are to develop AIDS? Would you say you have . . .

No chance	0
Some chance	1
High chance	2
Sure chance	3
DK/UNSURE	7
REFUSED	8
N/A (HAS AIDS)	9

Q54. In the last 6 months, including today, have you had a blood test for the AIDS virus antibodies?

YES	1
NO	0
DK/UNSURE	7
REFUSED	8
N/A	9

SKIP TO Q54d ←

		DK/ UNSURE	REFUSED	N/A
Q54a. IF YES, How many times?	___	77	88	99

Q54b. When were you tested (last)? *(RECORD)*

		DK/ UNSURE	REFUSED	N/A
MONTH	___	77	88	99
YEAR	19___	7777	8888	9999

AIA 8.0 - SECTION G: AIDS AND HIV TESTING

Q54c. Did you get the results?

NO	0
YES	1
DK/UNSURE	7
REFUSED	8
N/A	9

SKIP TO NEXT PAGE.

Q54d. Would you tell me why you have not been tested?

USE NEUTRAL PROBES ONLY. CIRCLE EACH HEADING OR "QUESTION" MENTIONED WITH PROBE (MENTIONED - OPEN = 1).
WHEN ONLY HEADING MENTIONED, THEN ASK "QUESTIONS" UNDER THAT HEADING, CIRCLE THEN AS (MENTIONED - READ = 2).

		NOT MENTIONED	MENTIONED OPEN	MENTIONED READ	DK/UNSURE	REFUSED	N/A
(1)	**FEAR-RELATED** Is this because...	0	1		7	8	9
	You're afraid you'll get AIDS from the test?	0	1	2	7	8	9
	You're afraid you may learn you are infected?	0	1	2	7	8	9
	You're afraid others will learn you are infected?	0	1	2	7	8	9
	Some other reason you are afraid?	0	1	2	7	8	9
	(Specify: _____)						
(2)	**TEST TOO COSTLY**	0	1		7	8	9
(3)	**TESTING INCONVENIENT TO GET TO**	0	1		7	8	9
(4)	**TEST IS USELESS (CAN'T DO ANYTHING ABOUT AIDS)**	0	1		7	8	9
(5)	**PARTNER OPPOSES GETTING TESTED**	0	1		7	8	9
(6)	**NOT THOUGHT ABOUT IT**	0	1		7	8	9
(7)	**OTHER**	0	1		7	8	9
	(Specify: _____)						

AIA 8.0 - SECTION G: AIDS INFORMATION SHEET

INTERVIEWER READ: ***One important aim of this program is to help people learn more about AIDS. Since we need to find out what people know about AIDS, you can help by answering a few more questions. When we get through, I'll give you the right answers. For now, just say whether you think they are "TRUE, FALSE."***

		TRUE	FALSE	DK/ UNSURE	REFUSED
1.	If a person is positive on the blood test for the AIDS virus, that means the person has AIDS.	1	0	7	8
2.	Anyone having sex with only one other person cannot get the AIDS virus.	1	0	7	8
3.	Using a latex condom is thought to be an effective way to keep from getting the AIDS virus during sex.	1	0	7	8
4.	A person cannot get the AIDS virus from works/rigs bought on the street in a sealed wrapper.	1	0	7	8
5.	A person cannot get the AIDS virus by shaking hands or touching someone who has AIDS.	1	0	7	8
6.	A person can get the AIDS virus from donating blood or plasma.	1	0	7	8
7.	A woman with the AIDS virus can give her unborn child AIDS.	1	0	7	8
8.	Cleaning works/rig with just water is enough to kill the AIDS virus.	1	0	7	8
9.	A person can get the AIDS virus from eating in a restaurant where the cook has AIDS.	1	0	7	8
10.	Cleaning works/rigs with bleach is thought to be an effective way of killing the AIDS virus.	1	0	7	8
11.	A person can avoid getting the AIDS virus by just having oral sex.	1	0	7	8
12.	A person can get the AIDS virus by using public toilets.	1	0	7	8
13.	A person can get the AIDS virus from having sex with a man who has had sex with other men.	1	0	7	8
14.	A person can get the AIDS virus from having unprotected sex with someone who has AIDS.	1	0	7	8
15.	A person can get the AIDS virus from sharing dirty works/rigs with someone who has AIDS.	1	0	7	8
16.	A person can get the AIDS virus from sharing works/rigs with someone who has shared them with others.	1	0	7	8

AIA 8.0 - SECTION H: RESPONDENT'S COMMENTS

H. RESPONDENT'S COMMENTS

INTERVIEWER: GO BACK AND CHECK TO SEE THAT NO PAGE HAS BEEN SKIPPED. IF ANY QUESTIONS HAVE BEEN SKIPPED, APOLOGIZE AND ASK PERMISSION TO COMPLETE.

READ: Now that we have just completed the interview, do you have any questions that you would like to ask me, or any comments about this experience?

READ: Thank you for your assistance.
Your cooperation is greatly appreciated.

TIME INTERVIEW ENDED: __ __ : __ __ AM PM
(EXACT HOUR, MINUTES, PLEASE)

INTERVIEWER: NOW COMPLETE SECTION I, INTERVIEWER COMMENTS, NEXT PAGE.

AIA 8.0 - SECTION I: INTERVIEWER COMMENTS AND OBSERVATIONS

I. INTERVIEWER COMMENTS AND OBSERVATIONS

1. Is this questionnaire/interview unreliable? _____YES _____NO

   If "YES", CIRCLE THOSE SECTIONS YOU BELIEVE ARE UNRELIABLE.

   SECTIONS: A B C D E F G ALL

   Explain:_____

   _____

   _____

2. Interviewer impression of respondent (CHECK AS MANY AS APPLY);

___ Honest	___ Relaxed	___ Interested
___ Dishonest	___ Tense	___ Bored
___ High	___ Attentive	___ Good Rapport (Open)
___ Nodding	___ Distracted	___ Resistant

3. Mood of interview

   Comments: _____

   _____

   _____

4. Locator Information

   A. Were you able to collect follow-up locator information?**(Circle one)**

      0=No; 1=Yes; 8=Refused

   B. Interviewer assessment of quality of locator information.**(Circle one)**

      1=Complete 3=Marginal

      2=Sufficient 4=Inadequate

5. Interviewer characteristics: CIRCLE ONE IN EACH CATEGORY

   A. 1=Outreach worker 2=Interviewer only

      3=Intervention counselor 4=Other program staff

   B. Interviewer Sex 1=Male 2=Female

   C. Interviewer Race/Ethnicity: 1 = Black 2 = Hispanic 3 = White

      4 = Native American or Alaskan Native

      5 = Asian or Pacific Islander

   D. Interviewer Name: _____

AIA 8.0 - LOCATOR
Page 1

LOCATOR FORM

SITE NUMBER: __ __

PROJECT PART __ __ __/__ __ __/__ __ __ __

RESPONDENT ID#: __ __ __ __ __ __ __ __ __ __

INTERVIEWER ID#: __ __

INTERVIEW DATE: __ __/__ __/__ __
M M D D Y Y

INTERVIEWER READ: ***Within the next few months, we will be contacting you again as part of our effort to study the effectiveness of our program. You can help us now by giving me some information on how best to contact you for the next interview. None of the information you give me will be associated with your answers in our interview. Your name and other information will be linked to a unique number and kept confidential in a locked file, separate from the file in which the interview form is kept. It will not be given to anyone outside our key research staff and the information will be destroyed after our follow-up interviews. We will not tell any contact anything except that you have been asked to take part in a "health study."***

1. First, please tell me your full legal name.

   Name: _____
   First Middle Last (Maiden, if female)

2. Do you use any other names, nicknames, or aliases? _____ YES _____ NO

   IF "YES": Please tell me what these are.

   (1) _____ (2) _____

   (3) _____ (4) _____

   (USE BACK OF PAGE IF SPACE IS NEEDED FOR ADDITIONAL NAMES)

AIA 8.0 - LOCATOR
Page 2

3. What address would be best to use when we need to reach you again?

_____
Street Address Apt. # P.O. Box

_____ _____ _____
City State Zip Code

(_____) _____
Area Code Telephone No.

3a. Whose address is this?

Name: _____
First Last Maiden (if female)

Relationship: _____

3b. Is this address a shelter? _____ _____
YES NO

3c. Is this the best mailing address? _____ _____
YES NO

IF "NO": Could you give me the best mailing address please?

_____
Street Address Apt. # P.O. Box

_____ _____ _____
City State Zip Code

Whose address is this?

Name: _____
First Last Maiden (if female)

Relationship: _____

4. What phone number would be best to use to contact you?

(_____) _____
Area Code Telephone No.

Whose phone number is this? _____
First Last Name Relationship

AIA 8.0 - LOCATOR
Page 3

4a. If we were unable to reach you at that number, is there another good phone number to call? YES NO

IF "YES": What is that number please? (_____) _____
Area Code Telephone No.

Whose phone number is this? _____
First Last Name Relationship

5. Can you tell me your mother's full name?

Name: _____
FIRST MAIDEN LAST NAME

If she is still living, would you give me her:

Address: _____

Telephone No.: (_____) _____
Area Code Telephone No.

6. Are there any other relatives who usually know how to reach you if you should move? (PROBE FOR FEMALES OF MOTHER'S FAMILY) YES NO

IF "YES," ASK: Please give me their:

(1) Name: _____

Address: _____

Telephone No.: (_____) _____
Area Code Telephone No.

Relationship: _____

(2) Name: _____

Address: _____

Telephone No.: (_____) _____
Area Code Telephone No.

Relationship: _____

AIA 8.0 - LOCATOR
Page 4

7. Are there one or more friends who usually know how to reach you if you should move or leave our program? (SHARE WITH RESPONDENT WHAT CONTACT PERSON WOULD SAY TO FRIEND.)

_____ YES _____ NO

IF "YES," ASK: Please give their names, addresses, and telephone numbers.

(1) Name: _____

Address: _____

Telephone No.: (_____) _____
Area Code Telephone No.

Relationship: _____

(2) Name: _____

Address: _____

Telephone No.: (_____) _____
Area Code Telephone No.

Relationship: _____

(3) Name: _____

Address: _____

Telephone No.: (_____) _____
Area Code Telephone No.

Relationship: _____

Thank you so much for this information. We will be talking with you again in the near future.

AIA 8.0 - SECTION E2: MULTIPLE PARTNERS SEX

I'm going to read a list of sex practices now. But first, I want to be sure you understand the language I'm going to use. I'm going to use the words "penis," "vagina," and "anus." People sometimes call a penis, the male sex organ, a "use local slang" or "use local slang". They sometimes call a vagina, the female sex organ, a "use local slang" or "use local slang". They sometimes call an anus a "use local slang" or "use local slang."

Q44. Now, please tell me how often you've done each kind of sex during the past 6 months?

INTERVIEWER:

IF NO CONDOM/PROTECTION USED IN Q43-RESPONSE=E, DO NOT READ COLUMN a! IF ALWAYS USES CONDOM/PROTECTION Q43-RESPONSE=A, DO NOT READ COLUMN b! CIRCLE 9 (N/A) FOR COLUMNS a OR b, OTHERWISE, DO READ FOR BOTH COLUMNS AND RECORD LETTER GIVEN IN PROPER COLUMN. (READ LIST ACROSS COLUMNS a AND b)

HAND CARD A OR READ CODES FROM BOX

CODES
A=Never/None
B=Less Than 4 Times Per Month
C=About 1 Time a Week
D=2-6 Times a Week
E=About 1 Time a Day
F=2-3 Times a Day, Almost Every Day
G=4 or More Times a Day, Almost Every Day
7=DK/UNSURE
8=REFUSED
9=N/A

INTERVIEWER; IF BISEXUAL MALE, ASK Q44a AND Q44b. IF BISEXUAL FEMALE, ask Q44c and Q44d (WATCH SKIP PATTERNS CLOSELY)

		Q44a ASK ONLY MALE RESPONDENT WITH FEMALE PARTNERS!	With a Condom? a	Without a Condom? b
CIRCLE 9 IF COLUMN "a or b" IS NOT APPLICABLE			9	9
VAGINAL	(1)	Your penis in your partner's vagina	___	___
ORAL	(2)	Your penis in your partner's mouth	___	___
ANAL	(3)	Your penis in your partner's anus	___	___
VAGINAL	(4)	Your penis in your partner's vagina during her menstrual period	___	___
ORAL/ VAGINAL	(5)	Your mouth on your partner's vagina during her menstrual period	___	___
ORAL/ANAL	(6)	Your mouth on your partner's anus	___	___
ORAL/ANAL	(7)	Your partner's mouth on your anus.	___	___

IF BISEXUAL MALE RESPONDENT, ASK Q44b, ELSE TAKE BACK CARD A, AND SKIP TO HEALTH SECTION, PAGE 36.

References

Agar, M. (1973). Ripping and Running. New York: Academic Press.

Agresti, Alan (1990). Categorical Data Analysis. New York, N.Y.: Wiley Publications.

Alcocer, A.M. (1982). Alcohol use and abuse among the Hispanic American population. In: National Institute of Alcohol Abuse and Alcoholism. Special Population Issues. Alcohol and Health Monograph No. 4. DHHS Pub. No. (ADM) 82-1193. Washington, DC: U.S. Government Printing Office.

Amaro, Hortensia (1988). Considerations for prevention of HIV Infection among Hispanic Women. Psychology of Women Quarterly. 12, pp. 429-443.

Amaro, H.; Whitaker, R.; Coffman, G.; Heeren, T. (1990). Acculturation and Marijuana and Cocaine Use: Findings from HHANES 1982-1984.I American Journal of Public Health, Vol. 80 - Supplement.

Anglin, M.D.; Hser, Y.; Booth, M.W. (1987). Sex differences in addict careers: Treatment. American Journal of Drug Alcohol Abuse, Vol. 13:253-280.

Badillo-Ghali, S. (1977). Culture Sensitivity and the Puerto Rican client. Social Casework. Vol. 58, October:459-468.

Bandura, A. (1986). Social Foundations of Thought and Action. Englewood Cliffs, New Jersey: Prentice Hall.

Bandura, A. (1992). A Social cognitive approach to the exercise of control over AIDS infection. In: Di Clemente, R., (Ed.). Adolescents and AIDS: A Generation in Jeopardy. Beverly Hills, CA: Sage Publications.

Barrett M.E., and Battjes, R.J. (1990). Factors associated with elevated risk of HIV among Hispanic IVDAs. In Problems of Drug Dependence 1990: Proceedings of the 52nd Annual Scientific Meeting. NIDA Research Monograph 105.(pp. 348-350). Rockville, MD: National Institute on Drug Abuse.

Berry, J. (1980). Acculturation as Varieties of Adaptation. In A. Padilla (Ed.), Acculturation: Theory, Models and Some New Findings. Colorado: Westview Press.

Booth, M.W.; Castro, F.G.; and Anglin, M.D. (1990). What do we know about Hispanic substance abuse? A review of the literature. In R. Glick and J. Moore (Eds.), Drugs in Hispanic Communities. New Brunswick, N.J.: Rutgers University Press.

Booth R.; Koester, S.; Brewster, J.T.; Weibel, W.W., and Fritz, R.B. (1991). Intravenous drug users and AIDS: risk behaviors. American Journal of Drug and Alcohol Abuse, 17: 337-53.

Brook, J.S.; Brook, D.W.; Gordon, A.S.; Whiteman, M.; and Cohen, P. (1990). The Psychosocial etiology of Adolescent drug use: A family interactional approach. Genet Soc Gen Psychology Monograph, 116 (2): 11-267.

Bureau of the Census, School Enrollment - Social and Economic Characteristics of Students: October, 1989, Current Population Reports, Series pp. 20, No. 452. Washington, D.C.: U.S. Government Printing Office, 1991.

Bureau of the Census, Current Population Reports, pp. 20, No. 447. Washington, D.C.: U.S. Government Printing Office, 1991.

Bureau of the Census, The Hispanic Population in the United States: March 1991, Current Population Reports, Series pp. 20, No. 455. Washington, D.C.: U.S. Government Printing Office, 1991.

Bureau of the Census, Race and Hispanic Origin, 1990 Census. Profile No. 2, Washington, D.C.: U.S. Department of Commerce, June, 1991.

Bureau of Census, Projections of the Hispanic Population: 1983 to 2080, Current Population Reports, Series pp. 25, No. 995. Washington, D.C.: U.S. Government Printing Office, November, 1986.

Caetano, R. (1987). Patterns and Problems of drinking among U.S. Hispanics. In: Report to the Secretary's Task Force on Black and Minority Health. Washington, DC: U.S. Department of Health and Human Services, 142-186.

Casas, M.A. (1992). A Culturally sensitive model for evaluating alcohol and other drug abuse prevention programs: A Hispanic perspective. In: Orlandi, M.; Weston, R.; Epstein, L. (Eds.). Cultural Competence for Evaluators. DHHS Publication No. (ADM) 92-1884: Washington, DC: U.S. Government Printing Office.

Caussy, D.; Weiss, W.A.; Blattner, J.; French, K.P.; Cantor, H.; Gingburg, R.; Altman, R.; Goedert, J. (1990). Exposure factors for HIV-1 infection among heterosexual drug abusers in New Jersey treatment programs. AIDS Research and Human Retroviruses, Vol. 6(12):1459-1467.

Celentano, D.D.; Vlahov, D.; Cohn, S.; Anthony, J.C.; Solomon, L.; and Nelson K.E. (1991). Risk factors for shooting gallery use and cessation among intravenous drug users. American Journal of Public Health, 81, 1291-1295.

Centers for Disease Control. (1994). Update: impact of the expanded AIDS surveillance case definition for adolescents and adults on case reporting--United States, 1993. Morbidity and Mortality Weekly Report, 43, 160-170.

_____. (1993). Update: acquired immunodeficiency syndrome--United States, 1992, Morbidity and Mortality Weekly Report, 42, 547-557.

_____. (1992). HIV/AIDS Surveillance. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Infectious Diseases, Division of HIV/AIDS, March 1992.

_____. (1990). HIV/AIDS surveillance: U.S. AIDS cases reported through July, 1990. Atlanta: Centers for Disease Control.

_____. (1990). Acquired immunodeficiency syndrome (AIDS) among blacks and Hispanics--United States. Morbidity and Mortality Weekly Report (MMWR), 35, 655.

_____. (1990). "Risk Behaviors for HIV Transmission Among Intravenous Drug Users Not in Drug Treatment--US, 1987-1989)." Morbidity and Mortality Weekly Report, 39(6).

_____. (1986). Acquired immune deficiency syndrome (AIDS) among blacks and Hispanics--United States. Morbidity and Mortality Weekly Report, 35, 655-666.

Chaisson, R.E.; Bacchetti, P.; Osmond D.; Brodie, B.; Sande, M.A.; and Moss, A.R. (1989). Cocaine use and HIV infection in intravenous drug users in San Francisco. Journal of the American Medical Association, Vol. 261, 561-565.

Chaisson, R.E.; Moss, A.; Onishi, R. (1987). "Human Immunodeficiency Virus Infection in Heterosexual Intravenous Drug Users in San Francisco." American Journal of Public Health, 77: 169-72.

Chirgwin, K.; DeHovitz, J.A.; Dillon, S.; and McCormack, W.M. (1991). HIV infection, genital ulcer disease, and crack cocaine use among patients attending a clinic for sexually transmitted diseases. American Journal of Public Health, Vol. 81, 1576-1579.

Chitwood, D.D.; McCoy, C.B.; and Comerford, M. (1990a). Risk behavior of intravenous cocaine users: implications for intervention. In AIDS and Intravenous Drug Use: Future Directions for Community-Based Prevention Research. NIDA Research Monograph No. 93. (pp. 120-133). Rockville, MD: National Institute on Drug Abuse.

Chitwood, D.D.; McCoy, C.B.; Inciardi, J.A.; McBride, D.C.; Comerford, M.; Trapido, E.; McCoy, H.V.; Page, J.B.; Griffin, J.; Fletcher, M.A.; Ashman, M.A. (1990b). HIV seropositivity of needles from shooting galleries in South Florida. American Journal of Public Health, Vol. 80, 150-152.

Chitwood D.D. and Comerford M. (1990). Drugs, sex, and AIDS risk. American Behavioral Scientist, Vol. 33, 465-477.

Colon, H.; Robles, R.; Sahai, H.; Reyes, J.; Mates, T. (1993). HIV Seroprevalence Among Injection Drug Users in Puerto Rico: A Comparative Perspective. In B. Brown and G. Beschner (Eds.). Handbook on Risk of AIDS, Connecticut:Greenwood Press.

Cross, T.L.; Bagron, B.J.; Dennis, K.W.; Isaacs, M.R. (1989). Toward a Culturally Competent System of Care: Vol. 1. Washington, DC: Georgetown University Child Development Center.

Cuellar, I.; Harris, L.C.; Jasso, R. (1980). An acculturation scale for Mexican American normal and clinical populations. Hispanic Journal of Behavioral Sciences, Vol. 2.

De La Rosa, Mario (1988). Natural Support Systems of Puerto Ricans: A Key Dimension for Well-Being. Health and Social Work, Summer: 181-190.

De La Rosa, M.; Khalsa, J.; Rouse, B. (1990). Hispanics and Illicit Drug Use: A Review of Recent Findings. The International Journal of the Addictions, 25(6): 665-691.

Delgado, M. (1987). Puerto Ricans. In Encyclopedia of Social Work (18th ed., Vol. 2:426-434). Silver Springs, M.D.: National Association of Social Workers.

Delgado, M.; Humm-Delgado, D. (1982). Natural Support systems: A source of strength in Hispanic Communities. Social Work, Vol. 27:83-89.

Des Jarlais D.C. and Friedman S.R. (1990). Shooting galleries and AIDS: Infection probabilities and 'tough' policies. American Journal of Public Health, Vol. 80, 142-143.

_____. (1989). Ethnic differences in HIV seroprevalence rates among intravenous drug users. In AIDS and Intravenous Drug Abuse Among Minorities. (pp. 24-33). Rockville, MD: National Institute on Drug Abuse.

_____. (1988). The psychology of preventing AIDS among intravenous drug users. American Psychologist, Vol.43, 865-870.

Des Jarlais, D.C., et al. (1986). "AIDS and Needle Sharing Within the IV Drug Use Subculture." In DA Feldman and TM Johnson (eds.) The Social Dimension of AIDS: Method and Theory. New York: Praeger.

Des Jarlais, D; Friedman, S. (1987). "HIV Infection Among Intravenous Drug Users: Epidemiology and Risk Reduction." AIDS, 1(2): 57-76.

Des Jarlais, D; Friedman, S. (1989). "AIDS and I.V. Drug Use." Science, 245: 578-579.

Des Jarlais, D.C. and Friedman, SR. (1989). "Ethnic Differences in HIV Seroprevalence Rates Among Intravenous Drug Users." In AIDS and Intravenous Drug Abuse Among Minorities. Rockville, MD: National Institute on Drug Abuse.

Des Jarlais, D.C.; Friedman, S.R.; Hopkins, W. (1985). "Risk Reduction for the Acquired Immunodeficiency Syndrome Among Intravenous Drug Users." Annals of Internal Medicine, 103:755 - 759.

Des Jarlais, Don; Friedman, S.; Sotheram, M.A.; Wenston, M.A.; Marmor, M; Yancovitg, S.; Frank, Blanche; Beatrice, S.; Mildvan, D. (1994). Continuity and Change within an HIV Epidemic: Injecting Drug Users in NYC, 1984 through 1992. Journal of the American Medical Association, Vol. 271,(2): 121-127.

Diaz, T.; Buehler, J.; Castro, K.; Ward, J. (1993). AIDS Trends among Hispanics in the United States. American Journal of Public Health, April, Vol. 83, No. 4, pp. 504-509.

DiClemente R.J.; Boyer, C.B.; and Morales E.S. (1988). Minorities and AIDS: Knowledge, attitudes, and misconceptions among Black and Latino adolescents. American Journal of Public Health, Vol.78, 55-57.

Dolan, M.P.; Black, J.L.; Deford, H.A.; Skinner, J.R.; Robinowitz R. (1987). Characteristics of drug abusers that discriminate needle-sharers. Public Health Reports, Vol. 102, 395-398.

Feucht, T.E.; Stephens, R.C.; and Roman S.W. (1990). The sexual behavior of intravenous drug users: assessing the risk of sexual transmission of HIV. Journal of Drug Issues, Vol. 20, 195-213.

Fishbein, M.; Middlestadt, S. (1989). Using the theory of reasoned action as a framework for understanding and changing AIDS-related behaviors. In: Mays, V.; Albee, G.; and Schernedu, S.; (Eds.). Primary Prevention of AIDS: Psychological Approaches. Newbury Park, CA: Sage Publications.

Fitzpatrick, J.P. (1971). Puerto Rican Americans, the Meaning of Migration to the mainland. Englewood Cliffs, NJ: Prentice-Hall.

Forcese, Dennis; S. Richer (1973). Social Research Methods. New Jersey: Prentice-Hall, Inc.

Friedlander, Walter (1968). Introduction to Social Welfare. Englewood Cliffs, N.J.: Prentice-Hall, Inc.

Friedman, S.R.; Quimby, E.; Sufian, M.; Abdul-Quader, A.; and Des Jarlais, D.C. (1988). Racial aspects of the AIDS epidemic. California Sociologist, Winter-Summer, 55-68.

Friedman, S.R.; Sotheran, J.L. Abdul-Quader, A.; Primm, B.J.; DesJarlais, D.C.; Kleinman, P.; Mauge, C.; Goldsmith, D.S.; El-Sadr, W. and Maslansky, R. (1987). The AIDS epidemic among Blacks and Hispanics. Milbank Quarterly, 65 (Suppl. 2), 455-499.

Friedman, S.R.; Sufian, M.; and DesJarlais, D.C. (1990). The AIDS epidemic among Latino intravenous drug users. In R. Glick and J. Moore (Eds.), Drugs in Hispanic Communities. New Brunswick, NJ: Rutgers University Press.

Fullilove, R.E.; Fullilove, M.T.; Bowser, B.P.; and Gross, S.A. (1990). Risk of sexually transmitted disease among black adolescent crack users in Oakland and San Francisco, Calif. Journal of the American Medical Association, Vol. 263:851-855.

Garmezy, N. (1983). Stressor of Childhood. In: Garmezy, N.; Rutter, M. (Eds.). Stress, Coping and Development in Children. New York, NY: McGraw-Hill.

Grinnell, Richard (Eds.). (1988). Social Work Research and Evaluation. Illinois: F.E. Peacock Publishers, Inc.

Grisham, M, White, M. (1983). "Case Management As a Problem-Solving Strategy." Pride Institute Journal of Long Term Health Care, 2(4):21-28.

Halli, S,; V. Rao (1992). Advanced Techniques of Population Analysis. New York, N.Y.: Plenum Press.

Hargreaves, W.A.; Shaw, R.E.; Shadoan, R.; Walker, E.; Surber, R.; Gaynor, J. (1984). "Measuring Case Management Activity.: The Journal of Nervous and Mental Disease, 172 (6): 296 - 300.

Harris, C.; Small, C.B.; Klein, R.S.; Friedland, G.H.; Moll, B.; Emeson, E.E.; Spigland I., and Steigbigel, N.H. (1983). Immunodeficiency in female sexual partners of men with the acquired immunodeficiency syndrome. New England Journal of Medicine, Vol. 308: 1181-1184.

Harwood, Alan (1981). Mainland Puerto Ricans. In A. Harwood (Ed,), Ethnicity and Medical Care. Cambridge, MA: Harvard University Press.

Hawkins, J.D.; Catalano, R.F.; and Miller, J.L. (1992). Risk and Protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. Psychological Bulletin, No. 112 (1): 64-105.

Hopkins, D.R. (1987). AIDS in minority populations in the United States. Public Health Reports, Vol. 102, 677-681.

Hoppe, S.K.; and Heller, P.L. (1975). Alienation, familism and the utilization of health services by Mexican Americans. Journal of Health and Social Behavior, 16: 304-314.

Iguchi, M.Y.; Platt, J.J.; French, J.; Baxter, R.C.; Kushner, H.; Lidz, V.M.; Bux, D.A.; Rosen, M.; and Musikoff, H. (1992). Correlates of HIV seropositivity among injection drug users not in treatment. Journal of Drug Issues, 22, 849-866.

Issacs, M.R.; Benjamin, M.P. (1991). Toward a Culturally Competent System of Care: Vol. II. Washington, D.C.: Georgetown University Child Development Center.

Kelly, J.; St. Lawrence, J.; Betts, R.; Brasfield, T.; and Hood H.(1990). "A Skills--Training Group Intervention Model to Assist Persons in Reducing Risk Behaviors for HIV Infection." AIDS Education and Prevention, 2(1): 24-35.

Kelly, J.; St. Lawrence, J.; Hood, H.; Brasfield, T. (1989). "Behavioral Intervention to Reduce AIDS Risk Activities." Journal of Consulting and Clinical Psychology, 57(1):60-67.

Kuzma, Jan W. (1984). Basic Statistics for the Health Sciences. California, Mayfield Publishing.

Koblin, B.A.; McCusker, J.; Lewis, B.F.; Sullivan, J.L. (1990), "Racial/Ethnic Differences in HIV-1 Seroprevalence and Risky Behaviors Among Intravenous Drug Users in a Multisite Study." American Journal of Epidemiology, 132(5), pp. 837 - 846.

Kleinman, P.H.; Goldsmith, D.S.; Friedman, S.R.; Hopkins, W.; and DesJarlais, D.C. (1990). Knowledge about and behaviors affecting the spread of AIDS: A street survey of intravenous drug users and their associates in New York City. International Journal of the Addictions, Vol. 25, 345-361.

Koester, S. (1990). Don't share: Extending the message beyond syringes. The Newsletter of the International Working Group on AIDS and Drug Use (5): 22-24.

Korr, W.S.; Cloninger, L. (1991). "Assessing Models of Case Management: An Empirical Approach." Journal of Social Service Research, 14(1/2): 129-146.

Krueger, L.E.; Wood, R.W.; Diehr, P.H. and Maxwell C.L. (1990). Poverty and HIV seropositivity: the poor are more likely to be infected. AIDS, Vol. 4, 811-814.

Lampinen, T.M. (1991). HIV seropositivity not associated with IDU ethnicity in Chicago: the importance of neighborhood area. In Research In Progress, (October). (pp. 17-20). Rockville, MD: National Institute on Drug Abuse and NOVA Research Company.

Lange, R.; Snyder, F.; Lozovsky, D.; Kaistha, V.; Kaczaniuk, M.; Jaffe, J.; and the ARC Epidemiology Collaborating Group (1988). Geographic distribution of human immunodeficiency virus markers in parenteral drug abusers. American Journal of Public Health, Vol. 78, 443-446.

Levine, I.S.; Flemming, M. (1984). Human Resources Development: Issues in Case Management. State of Maryland, Mental Hygiene Administration, 7-8.

Lewis, D.K.; Watters, J.K.; and Case, P. (1990). The prevalence of high-risk sexual behavior in male intravenous drug users with steady female partners. American Journal of Public Health, Vol. 80, 465-466.

Lewis, D.K. and Watters, J.K. (1989). Human immunodeficiency virus seroprevalence in female intravenous drug users: the puzzle of black women's risk. Social Science and Medicine, Vol. 29, 1071-1076.

Liebman, J.; Mulia, N., and McIlvaine, D. (1992). Risk behavior for HIV infection of intravenous drug users and their sexual partners recruited from street settings in Philadelphia. Journal of Drug Issues, Vol. 22, 867-884.

Lishner, D.M. and Look M.S. (1990). Needle-sharing practices and risk for AIDS transmission among intravenous drug users in Seattle. International Journal of the Addictions, Vol. 25: 1475-1483.

Maddahian, E.,; Newcomb, M.; Bentler, P. (1986). Adolescents' Substance Use: Impact of ethnicity, income and availability. Advances in Alcohol and Substance Abuse, Vol. 5(3):63-78.

Magura, S.; Grossman, J.I.; Lipton, D.S.; Siddiqi, Q.; Shapiro, J.; Marion, I.; and Amann, K.R. (1989). Determinants of needle sharing among intravenous drug users. American Journal of Public Health, Vol. 79, 459-462.

Magura, S.; Shapiro, J.; Grossman, J.; and Lipton, D. (1989). "Education/Support Groups for AIDS Prevention with At-Risk Clients." Social Casework, January: 10-20.

Mainous, A. (1989). Self-Concept as an indicator of acculturation in Mexican-Americans. Hispanic Journal of Behavioral Sciences, Vol. II (2), May: 178-189.

Marin, G.; Marin, B. (1991). Research with Hispanic Populations. Breverly Hills, CA: Sage Publications.

Marin, B.V.; and Marin, G. (1990). Effects of acculturation on knowledge of AIDS and HIV among Hispanics. Hispanic Journal of Behavioral Sciences, 12:110-21.

Marin, B.; Gomez, C.; Tschann, J. (1993). Condom Use Among Hispanic Men with Secondary Female Sexual Partners. Public Health Reports, Vol. 108,(6): 742-750.

Marin, B. (1990). Hispanic Drug Abuse. In R. Watson (Ed.), Drug and Alcohol Abuse Prevention. Clifton, N.J.: The Human Press, Inc.

Marin, B.; Marin, G.; Juarez, B.; Sorensen, J. (1992). Intervention from Family Members as a Strategy for Preventing HIV Transmission Among Intravenous Drug Users. Journal of Behavioral Sciences, 12(2), pp. 110-121.

Marin, B.; Martin, G. (1990). Effects of acculturation on knowledge of AIDS and HIV among Hispanics. Hispanic Journal of Behavioral Sciences, 12(2): 110-121.

Marin, G. (1989). AIDS Prevention Among Hispanics: Needs, Risk Behaviors, and Cultural Values. Public Health Reports, 104(5): 411-415.

Marin, G.; Sabogal, F.; Marin, B.; Otero-Sabogal, R.; Perez-Stable, E. (1987). Development of a short Acculturation scale of Hispanics. Hispanic Journal of Behavioral Sciences, 9, pp. 183-205.

Markides, K.; Ray, L.; Benhan, C.; Trenino, F. (1990). Acculturation and Alcohol Consumption in the Mexican-American Population of the Southwestern United States: Findings from HHANES 1982-1984. American Journal of Public Health, Vol. 80:42-26.

Marks, G.; Garcia, M.; Solis, J.M. (1990). Health Risk Behaviors of Hispanics in the United States: Findings from HHANES, 1982-1984. American Journal of Public Health, Vol. 80:20-25.

Mays, V.; Cochran, S.D. (1988). Issues in the Perception of AIDS risk and risk reduction activities by Black and Hispanic/Latino women. American Psychologist, Vol. 43:949-957.

McCoy, C.; Khoury, E. (1990). "Drug Use and the Risk of AIDS." American Behavioral Scientist, 33: 419-431.

McClusker, J.; Koblin, B.; Lewis, B. (1990). Demographic characteristics, risk behaviors, and HIV seroprevalence among intravenous drug users by site of contact: Results from a community-wide HIV surveillance project. American Journal of Public Health, Vol. 80:1062-1067.

Medina, C. (1987). "Latino Culture and Sex Education." Sex Information and Education Council of the United States Report. 15:3, 1-4.

Melus, A. (1980). Culture and language in the Treatment of Alcoholism: The Hispanic Perspective. Alcohol Health and Research World, Summer.

Merrill, J.C. (1985). "Defining Case Management." Business and Health, 2: 5-9.

Mizio, E. (1974). Impact of external systems on the Puerto Rican family. Social Casework, Vol. 55:7-15.

Moore, Stephen T., (1990). "A Social Work Practice Model of Case Management." Social Casework, 35(5).

Morales, A. (1991). Treatment research findings: Practical Implications for the Hispanic Community. Presented at the National Conference on Substance Abuse Prevention, Treatment, and HIV/AIDS, Los Angeles, CA.

Moxley, David. (1989). The Practice of Case Management. Newbury Park, California: Sage Publications.

Murphy, S. (1987). Intravenous drug use and AIDS: Notes on the social economy of needle sharing. Contemporary Drug Problems, Fall, 373-395.

National Institute on Drug Abuse (NIDA) (1991). National Household Survey on Drug Abuse: Population Estimates, 1991. DHHS Pub. No. (ADM) 91-1732. Washington, D.C.: U.S. Government Printing Office.

Nall, F.C., II, and Spielberg, J.(1967). Social and cultural factors in the responses of Mexican-Americans to medical treatment. Journal of Health and Social Behavior, 8: 299-308.

Nemoto, T., Brown, L.S., Jr., Foster, K., and Chu, A. (1990). Behavioral risk factors of human immunodeficiency virus infection among intravenous drug users and implications for preventive interventions. AIDS Education and Prevention, 2, 116-126.

New Jersey State Department of Health, Division of AIDS Prevention and Control (1993). HIV/AIDS Update: New Jersey AIDS cases reported as of December 31, 1992. January--February 1993.

New Jersey State Department of Health. (1994). AIDS Cases State of New Jersey, NJSDOH, as of December 31, 1993.

New Jersey State Department of Health. (1992). AIDS Cases State of New Jersey, NJSDOH, February 1992.

Newmeyer, J.A.; Feldman, H.W.; Biernacki, P.; and Watters J.K. (1989). Preventing AIDS contagion among intravenous drug users. Medical Anthropology, Vol. 10, 167-175.

Nyamathi, A.; Bennett, C.; Leahe, B.; Lewis, C.; Flaskernd, J. (1993). AIDS-Related Knowledge, perceptions, and behaviors among impoverished minority women. American Journal of Public Health, Vol. 83(1):65-74.

O'Connor, G. (1988). "Case Management: System and Practice." Social Casework, 62(2):97 106.

O'Leary, Ann (1994). Factors associated with sexual risk of AIDS in women. In: Battjes, R.; Sloboda, Z.; Grace, W. (Eds.). The Context of HIV risk among Drug Users and their sexual partners. National Institute on Drug Abuse Research Monograph Series No. 143. NIH Publication No. 94-3750:64-81. Washington, DC: U.S. Government Printing Office.

Orlandi, M. (1992). The Challenge of Evaluation Community-Based Prevention Programs: A Cross-Cultural Perspective. In Orlandi, M.; Weston, R. and L. Epstein (Eds.). Cultural Competence for Evaluators. Office for Substance Abuse Prevention. DHHS Publication Nos. (ADM) 92-1884: 1-23.

Padian, N.; Marquis, L.; Francis, D.P.; Anderson, R.E.; Rutherford, G.W.; O'Malley, P.M.; and Winkelstein, W. Jr. (1987). Male-to-female transmission of human immunodeficiency virus. Journal of the American Medical Association, Vol. 258:788-790.

Padilla, A. (1980). The Role of Cultural Awareness and Ethnic Loyalty in Acculturation. In A. Padilla (Ed.), Acculturation: Theory, Models and Some New Findings. Colorado: Westview Press.

Page, J.B. (1990). Shooting scenarios and risk of HIV-1 infection. American Behavioral Scientist, Vol. 33:478-490.

Page, J.B.; Chitwood, D.D.; Smith, P.C.; Kane, N.; and McBride, D.C. (1989). Intravenous drug use and HIV infection in Miami. Medical Anthropology Quarterly, (Dec.): 56-71.

Panitz, D.; McConchie, R.; Sauber, R.; Fonseca, J. (1983). The role of machismo and Hispanic family in the etiology and Treatment of Alcoholism in Hispanic American males. The American Journal of Family Therapy, Vol. 11(1):31-43.

Perez, R.; Padilla, A.M.; Ramirez, A.; Rodriguez, M. (1980). Correlates and changes over time in drug and alcohol use within a barrio population. American Journal of Community Psychology, Vol. 3:621-636.

Peterson, J.L.; and Bakeman, R.(1989). AIDS and IV drug use among ethnic minorities. Journal of Drug Issues , 19: 27-37.

Preble, E.; and Casey, J.J., Jr. (1969). "Taking Care of Business-- The Heroin User's Life on the Street." International Journal of the Addictions, 4(1): 1-24.

Quinn, T.C.; Cunnon, R.O.; Glasser, D.; Gooseclose, S.L.; Braithwaite, W.S.; Fauci, A.S.; Hook, E.W. (1990). The Association of syphillis with risk of human immunodeficiency virus infection in patients attending a sexually transmitted disease clinic. Archives of Internal Medicine, 150:1297-1302.

Quinn, T.C.; Glaser, D.; Cannon, R.O.; Matusjak, D.L.; Dunning, R.W.; Kline, R.L.; Campbell, Ch.H.; Israel, E.; Fauci, A.S.; Hook, E.w. (1988). Human immunodeficiency virus infection among patients attending clinics for sexually transmitted diseases. New England Journal of Medicine, Vol. 318:197-203.

Rapkin, A.J. and Erickson P.I. (1990). Differences in knowledge of and risk factors for AIDS between Hispanic and non-Hispanic women attending an urban family planning clinic. AIDS, Vol. 4, 889-899.

Roberts-De Gennaro, M. (1987). "Developing Case Management as a Practice Model." Social Casework, 68(8): 466-70.

Robles, R.; Colon, H.; Matis, T.; Reyes, J.; Marrero, C.; Lopez, C. (1993). Risk factors and HIV Infection Among Three Different Cultural groups of injection Drug Users. In B. Brown and G. Beshner (Eds.). Handbook on Risk of AIDS. Connecticut: Greenwood Press.

Robles, R.; Colon, H.; Sahai, H.; Matos, T.; Marrero, C.; Reyes, J. (1992). Behavioral Risk Factors and Human Immunodeficiency Virus (HIV) Prevalence among Intravenous Drug Users in Puerto Rico. American Journal of Epidemiology, Vol. 135(5):531-540.

Rogler, L.; Cortes, D.; Malgody, R. (1991). Acculturation and Mental Health states among Hispanics. American Psychologist, Vol. 46:585-97.

Rosenstock, I.; Stretcher, V.; Becker, M. (1988). Social Learning Theory and the Health Belief Model. Health Education Quarterly, Vol. 15 (2) 175-183; Summer.

Rubin, A. (1988). Secondary Analyses. In: Richard Grinnell (Ed.) Social Work Research and Evaluation. Illinois: F. E. Peacock Publishers, Inc.

Ryan, Caitlin. (1987). Statement of the Challenge In C. Leukefeld and M. Fimbres (Eds.), Responding to AIDS: Psychosocial Initiatives. NASW, Inc.

Sabogal, F.; Marin, G.; Otero-Sabogal, R.; Marin, B.; and Perez-Stable, E. (1987). Hispanic familism and acculturation: What changes and what doesn't. Hispanic Journal of Behavioral Sciences, Vol. 9(4):397-412.

Schilling, R.; Schinke, S.; Nichols, S.; Zayas, L.; Miller, S.; Orlandi, M.; and Botvin, G. (1989). Developing strategies for AIDS prevention research with black and Hispanic drug users. Public Health Reports , 104: 2-11.

Schinke, S.P.; Botvin, G.J.; Orlandi, M.A.; Schilling, R.F.; and Gordon, A.N. (1990). African-American and Hispanic-American adolescents, HIV infection, and preventive intervention. AIDS Education and Prevention, Vol. 2:305-312.

Schoenbaum, E.; Hartel, D.; Selwyn, P.; Klein, R.S.; Davenny, K.; Rogers, M.; Feiner, E.; and Friedland, G. (1989). Risk Factors for Human Immunodeficiency Virus Infection in Intravenous Drug Users. New England Journal of Medicine, 321:874-9.

Schrager, L.; Friedland, G.; Feiner, C.; and Kahl, P. (1991). Demographic characteristics, drug use, and sexual behavior of IV drug users with AIDS in Bronx, New York. Public Health Reports, Vol. 106, 78-84.

Selik, R.M.; Castro, K.G.; Papionnou, M.; Ruehler, J.W. (1989). Birthplace and the risk of AIDS among Hispanics in the United States. American Journal of Public Health, Vol. 79(7): 836-839.

Singer, M.; Jia, Z. (1993). AIDS and Puerto Rican Injection Drug Users in the United States. In B. Brown and G. Beshner (Eds.). Handbook on Risk of AIDS. Connecticut: Greenwood Press.

Singer, M. (1991). Confronting the AIDS epidemic among IV drug users: Does ethnic culture matter? AIDS Education and Prevention, Vol. 3, 258-283.

Singer, M.; Flores, C.; Davison, L.; Burke, G.; Castillo, Z.; Scanlon, K.; and Rivera, M. (1990). SIDA: the economic, social, and cultural context of AIDS among Latinos. Medical Anthropology Quarterly, Vol. 4, 72-113.

Solis, J.M.; Marks, G.; Garcia, M.; and Shelton, D. (1990). Acculturation, access to care, and use of preventive services by Hispanics: Findings from HHANES 1982-84. American Journal of Public Health, Vol. 80 (Suppl), 11-19.

Sorensen, J.; Guydisk, J.; Constantini, M.; Btaki, S. (1989). "Changes in Needle Sharing and Syringe Cleaning Among San Francisco Drug Abusers." (letter) New England Journal of Medicine, 320: 807.

Springer, Edith (1991). Effective AIDS Prevention with Active Drug Users: The Harm Reduction Model. Journal of Chemical Dependency Treatment, Vol. 4(4): 141-157.

Suchman, E.(1965). Social patterns of illness and medical care. Journal of Health and Human Behavior, 6: 2-16.

Sufian, M.; Friedman, S.R.; Neaigus, A.; Stepherson, B.; Rivera-Beckman, J.;and Des Jarlais, D. (1990). Impact of AIDS on Puerto Rican intravenous drug users. Hispanic Journal of Behavioral Science , 12:22-34.

Sullivan, J.P. (1981). "Case Management." In Talbott, JA. (Ed). The Chronic Mentally Ill: Treatment, Programs, Systems. New York, Human Sciences Press, 119-131.

Szapocznik, J.; Scopetta, M.A.; Kurtines, W.M.; Aranalde, M.A. (1978). Theory and Measurement of acculturation. Interamerican Journal of Psychology, Vol. 12:113-130.

Torres-Matrullo, C. (1980). Acculturation, sex-role values and mental health among mainland Puerto Ricans. In A. Padilla (Ed.), Acculturation: Theory, Models and some New Findings. Colorado: Westview Press.

Trevino, F.M.; Moyer, M.E.; Valdez, R.B.; and Stroup-Benham, C.A. (1991). Health insurance coverage and utilization of health services by Mexican Americans, mainland Puerto Ricans, and Cuban Americans. Journal of the American Medical Association, Vol. 265: 233-237.

Trimble, J.; Padilla, A.; Bell, C. (1987). Drug Abuse among ethnic minorities. DHHS Publication No. (ADM) 87-1474. Washington, DC: U.S. Government Printing Office.

Tucker, M.B. (1985). U.S. ethnic minorities and drug abuse: An assessment of the science and practice. International Journal of the Addictions, 20:1021-1047.

Valle, R.; Bensussen, G. (1985). Hispanic social networks, social support and mental health. In W. Vega and M. Miranda (Eds.), Stress and Hispanic mental health: Relating research to service delivery, (DHHS Publication No. ADM 85-1410):147-173. Washington, DC: U.S. Government Printing Office.

Vlahov, D.; Munoz, A.; Anthony, S., Cohn, D.D.; Cilentano, D.; Nelson, K.E. (1990). Association of drug injection patterns with antibody to human immunodeficiency versus type 1 among intravenous drug users in Baltimore, Maryland. American Journal of Epidemiology, Vol. 132(5):847-856.

Walden, T, Hammer, K, Kurland, C (1990). "Case Management: Planning and Coordinating Strategies." Administration in Social Work, 14(4): 61 - 72.

Watters J.K. and Lewis D.K. (1990). HIV infection, race, and drug-treatment history. AIDS, Vol. 4, 697.

Watters, J, Cheng, Y. (1987). "HIV-1 Infection and Risk Among Intravenous Drug Users in San Francisco: Preliminary Results and Implications." Contemporary Drug Problems, Fall: 397-410.

Werner, E.E.; Smith, R.S. (1992). Overcoming the Odds: High Risk Children from Birth to Adulthood. New York, NY: Cornell University Press.

Wiebel, W. (1990). Identifying and gaining access to hidden populations. In: Lambert E. (Ed.). The Collection and Interpretation of Data from Hidden Populations. National Institute on Drug Abuse Research Monograph Series No. 98. DHHS Publication No. (ADM) 90-1678:4-11. Washington, DC: U.S. Government Printing Office.

Williams M.L. (1990). HIV seroprevalence among male IVDUs in Houston, Texas. American Journal of Public Health, Vol. 80, 1507-1509.

Wurzman, I.; Rounsaville, B.J.; Kleber, H.D. (1982). Cultural Values of Puerto Rican Opiate Addicts: An exploratory study. American Journal of Drug and Alcohol abuse, Vol. 9:141-153.112