The AIDS Epidemic among Blacks and Hispanics

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A DISPROPORTIONATE NUMBER OF PERSONS WITH AIDS have been blacks and Hispanics. Members of minority groups survive for a shorter period after having been diagnosed as having AIDS than do whites with the disease (Centers for Disease Control 1986b; Weston 1986). In spite of these facts, studies of race and AIDS have been few, although this is beginning to change (Bakeman et al. 1988; Bakeman, Lumb, and Smith 1986; Centers for Disease Control 1986b; Rogers and Williams 1987). The dominant image of the disease has been that it primarily affects (white) gays (Rogers and Williams 1987); secondary images have been of transmission among individuals of unspecified race by sharing drug-injection equipment or by heterosexual intercourse. One consequence of the neglect of the differential racial impact of AIDS has been a lack of programs to allocate extra resources to AIDS-related efforts of medical institutions,

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health education, or community groups in minority communities (Nickens 1986). In addition, there has been little mobilization by minority communities or organizations to come to grips with AIDS (Nickens 1986). This lack of minority mobilization has undoubtedly been furthered by the fact that black and Hispanic gays were more stigmatized and less organized than white gays before the advent of the epidemic (Craig Harris, National Coalition of Black Lesbians and Gays, as quoted in Weston 1986), and by the hostility of many minority institutions and leaders to intravenous (IV) drug users.

In order to understand the individual, community, and group reactions to AIDS among members of different races, it is helpful to develop a model of race and its dynamics. In spite of the useful argument by Wilkinson and King (1986) in these volumes, neither our data nor the extent of our understanding of race and AIDS allows us to present a precise definition of what we mean by "race." On the other hand, as we develop our description and analysis, a partial model of what race means as a process *does* emerge. This model goes beyond the common view of minorities as deprived and subordinated, and, thus, as less able than whites to protect themselves against the epidemic, while recognizing that blacks and Hispanics are indeed subjected to relations of dominance and inequality that leave them with lower levels of material resources and of formal education than whites. It also goes beyond the "social pathology" model that holds that, in reaction to deprivation and subordination (and perhaps for other reasons as well), many minority race members take up behaviors or lifestyles (such as IV drug use) that are ultimately harmful both to these individuals and to their communities. In addition to deprivation, subordination, and pathology, however, minorities are constantly developing resources and dynamics of their own that aid their individual and collective struggles for survival, dignity, and happiness. These involve developing grapevines to carry information, networks to help each other out, and even formal organizations to formulate and achieve specific goals. In the context of AIDS, these contradictory aspects of racial relationships lead to contradictory and somewhat confusing findings. For example, rather than simply finding that black and Hispanic IV drug users are more likely than white ones to engage in behaviors that transmit the virus that causes AIDS, or that they are less likely to know enough to protect themselves (see Rogers and Williams 1987), we find that minorities know more about issues that depend

upon knowledge carried by street grapevines, but are less likely to know about subjects recently promulgated in professional channels. Likewise, although blacks or Hispanics are more likely to engage in some risky behaviors, they are less likely to engage in others.

In sum, then, this article has three themes and one additional goal: (1) AIDS has disproportionately affected minorities; (2) There is a great need for minority community mobilization to deal with the epidemic and its effects, and for financial and other assistance of these mobilizing efforts by national institutions; (3) Blacks and Hispanics are not just dominated and subordinated, but have developed resources and relationships that offer many benefits in fighting AIDS. As an additional goal, this article presents considerable data about different aspects of AIDS and race. These data are by no means complete. The inadequacy of the general research effort on this topic cannot be compensated for in one article, and the fact that the authors have worked primarily in the field of IV drug users and AIDS means that there are undoubted weaknesses in what we cover about race and AIDS among gay men. What we do attempt to accomplish, however, is to demonstrate the existence of important racial dimensions to AIDS and to provoke appropriate research, debate, and action.

AIDS: A Brief Overview of the Disease

AIDS, the acquired immunodeficiency syndrome, is an infectious disease caused by the human immunodeficiency virus (HIV). This virus disables the immune system and enables infections that normally are controllable to overcome control and, ultimately, kill the patient. HIV can also infect cells in the brain and cause a severe dementia. As of this writing (in February 1987) approximately 30,000 AIDS cases have been diagnosed in the United States. More than half of these persons have died from the disease.

Many thousands of people are believed to have AIDS related complex (ARC), in which serious immunosuppression caused by HIV leads to other medical conditions or diseases, such as lymphadenopathy, which are not per se diagnostic of AIDS. ARC itself is sometimes fatal. In addition, there is growing evidence that the rapid increases in tuberculosis, pneumonia, and endocarditis cases among IV drug users may be due to HIV infection (Stoneburner, Guigli, and Kristal 1986;

Des Jarlais, Friedman, and Hopkins 1985). Although there are, as yet, no conclusive studies of the prevalence of HIV in the population, estimates of the number of Americans infected by HIV range up to 2 million.

No one knows what proportion of those infected will ultimately develop AIDS. Estimates range from 25 to 50 percent within 10 years, and the mean latency period between infection and development of AIDS is estimated as approximately 5 years (Institute of Medicine 1986). So far, in the United States over 90 percent of adults with diagnosed AIDS have been gay men, intravenous (IV) drug users, or the sex partners of IV drug users (Centers for Disease Control 1986a), and 61 percent of pediatric cases have been children of bisexual men or IV drug users. In central Africa, where statistics are limited but where HIV infection and AIDS have probably claimed many thousands of lives, there is strong evidence that the major mechanism of spread has been heterosexual activity.

In discussing the issue of AIDS among minorities, it is important to stress that, so far, there is no evidence that race per se is a biological risk factor for vulnerability to AIDS. That is, in spite of the fact that greatly disproportionate numbers of blacks and Hispanics have developed AIDS, we have no reason to believe that there is any genetic reason why HIV is more likely to survive in, thrive in, or lead to disease in blacks or Hispanics rather than non-Hispanic whites. Thus, in trying to understand racial differences in HIV seroprevalence, in AIDS diagnoses, or in the time from diagnosis to death, we have to look at the social meanings of race and their implications for the probability and mechanisms of exposure to the virus, for exposure to other infectious agents such as tuberculosis (TB), for the preexisting vulnerability of the body to these diseases, for the patterns of seeking medical care, and for the medical care and personal assistance a person receives when ill. The social dynamics of race have also affected the way in which AIDS is perceived—as a disease of gay white men—and the response of the public and of major institutions to the epidemic.

Additional Notes on the Relative Lack of Research on Race and AIDS

Social researchers and epidemiologists have been slow to address racial aspects of the AIDS epidemic. In part, this may be due to the "medical

model" of most AIDS research. A medical approach has much to recommend it as a way to determine the nature of the disease and how it is transmitted. Standard scientific practice has enabled us to determine that AIDS is caused by a virus transmitted in blood and semen, and has let us discover that HIV is particularly likely to be transmitted by behaviors such as receptive anal intercourse or going to shooting galleries to inject one's drugs. The medical model can limit insights, however, about how to mobilize, whether for behavior change, support services for the sick, or political pressure to increase AIDS funding. Here, the medical model tends to focus attention on individually motivated risk reduction (as in educational models that assume that filling minds with knowledge about risks suffices to produce protective behavioral change) rather than on changing the values, world views, or interests of threatened groups. It also tends to focus attention on activity by members of risk groups rather than political or outreach activity by broader groups (such as minority communities), which include many of the individuals (and subcultures) at risk. In the case of IV drug use, the medical model has been valuable as an alternative to theories that "blame the victim," but even here it might be useful to consider the deep structures of society that underlie some IV drug use in trying to develop long-term strategies against AIDS.

Finally, in dealing with a subject like AIDS and race, it is important to heed the central message of the sociology of knowledge, i.e., that the social position of the observer affects what is observed and how it is interpreted. The first author of this article is a white American. He was asked to write this paper because he has a degree of experience in the study of AIDS among IV drug users—and most IV drug users with AIDS have been black or Hispanic—and some experience in writing about other aspects of AIDS. He agreed, in spite of his previous inexperience with research specifically about race and AIDS, for several reasons. Very little other research on this topic has been published, in spite of its importance. The image that many minority (and other) persons have, that AIDS is a white gay-related disease, may retard community efforts at educating and organizing for self-protection. Also, more attention to AIDS and race may encourage more government and foundation resources to be devoted to this issue. Friedman also had a strong belief that he should do whatever he could to bring the issue forward in a helpful way. In writing this article, he has had it brought strongly to his attention that he is reliving a

common pattern of social and medical research—where whites are brought in to study the problems of minorities. In no instance has anyone who made this point urged that he not write the article. The relatively small number of black and Hispanic researchers in this field undoubtedly restricts the kinds of insights that are brought to bear on these issues, as does the relative lack of AIDS researchers with serious social ties to the lower reaches of the working class, where so many drug-user AIDS cases originate.

The Impact of AIDS on Different Races

Epidemiology

National Surveillance Data. In trying to understand race and AIDS in the United States, a good starting point is the racial distribution of AIDS cases and of HIV infection. Tables 1 through 3 record national data for risk behavior categories by race.

As table 3 shows, blacks and Hispanics are overrepresented among persons with AIDS. Three-fifths have been white, one-quarter non-Hispanic black, 14 percent Hispanic, and 1 percent have been either in other racial categories or did not have their race determined. The racial disproportion is even more striking among children. Among the 422 AIDS cases in children under the age of 13 at the time of diagnosis, 80 percent have been nonwhite (57 percent have been black, 23 percent Hispanic, and only 20 percent white (Centers for Disease Control, personal communication, January 19, 1987).

Table 2 records the percentage in each transmission category within the racial categories the Centers for Disease Control (CDC) uses; in table 3 the same data is presented, but as percentages of each race within transmission categories. The fact that 88 percent of white cases have been homosexual/bisexual males (including those who are also IV drug users), and that 74 percent of the homosexual/bisexual male category has been white—together with the initial discovery of AIDS as a disease afflicting gays—is probably one reason for the common public impression of AIDS as a white gay-related disease. The fact that 14,995 (52 percent of the total cases) (table 1) do not fall into the category of white men with no risk factor other than homosexual activity often gets lost to view.

TABLE 1

Adult and Adolescent AIDS Cases, United States: Transmission Categories by Racial/Ethnic Group, January 19, 1987

Transmission category	White, not Hispanic	Black, not Hispanic	Hispanic	Other/ Unknown	Total
Homosexual/bisexual male	14,119	2,785	1,993	182	19,079
IV drug user	907	2,525	1,486	33	4,951
Homosexual male & IV drug user	1,456	502	287	15	2,260
Hemophilia/coagulation disorder	215	14	17	6	252
Heterosexual cases*	133	832	140	5	1,110
Transfusion, blood/components**	419	84	30	11	544
Undetermined***	321	393	186	18	918
TOTAL	17,570	7,135	4,139	270	29,114

* This category is composed of 521 persons (91 men, 430 women) who have had heterosexual contact with a person with AIDS or at risk for AIDS and 589 persons (474 men, 115 women) without other identified risks who were born in countries in which heterosexual transmission is believed to play a major role although precise means of transmission have not yet been fully defined. The latter set of persons is overwhelmingly Haitian.

** Owing to the long latency period between infection and the development of AIDS, the number of cases based on blood transfusions continues to increase as a result of infections that occurred prior to the use of antibody testing to screen donated blood.

*** Many of the cases listed in the "undetermined" transmission category died before they could be interviewed about risk behaviors.

Source: Centers for Disease Control, personal communication, 1987.

TABLE 2
Adult and Adolescent AIDS Cases, United States: Percentage in Each Transmission Category by Racial/Ethnic Group, January 19, 1987

Transmission category	White, not Hispanic	Black, not Hispanic	Hispanic	Other/ Unknown	Total
Homosexual/bisexual male	80%	39%	48%	67%	66%
IV drug user	5	35	36	12	17
Homosexual male & IV drug user	8	7	7	6	8
Hemophilia/coagulation disorder	1	0	0	2	1
Heterosexual cases	1	12	3	2	4
Transfusion, blood/components	2	1	1	4	2
Undetermined	2	6	4	7	3
TOTAL	99	100	99	100	101

TABLE 3
Adult and Adolescent AIDS Cases, United States: Percentage in Each Racial/Ethnic Group by Transmission Category, January 19, 1987

Transmission category	White, not Hispanic	Black, not Hispanic	Hispanic	Other/ Unknown
Homosexual/bisexual male	74%	15%	10%	1%
IV drug user	18	51	30	1
Homosexual male & IV drug user	64	22	13	1
Hemophilia/coagulation disorder	85	6	7	2
Heterosexual cases	12	75	13	0
Transfusion, blood/components	77	15	6	2
Undetermined	35	43	20	2
TOTAL	60	25	14	1
For reference: U.S. population ≥ 15 years old*	81	11	6	2

* From Centers for Disease Control 1986b, table 2.

Table 2 also records that different racial groups vary in the way in which they have been exposed to the virus. Among blacks and Hispanics, heterosexual IV drug users comprise over one-third of the cases. Among blacks, an additional 12 percent of the cases were exposed to the virus by heterosexual activity with someone in another transmission category; among non-Haitian blacks, these heterosexual partners were primarily IV drug users.

Table 3 records that over 50 percent of the IV drug user cases have been black, and 30 percent have been Hispanic. Men who have engaged in both homosexual sex and IV drug use are more likely than non-IV drug using gay AIDS cases to be black. The heterosexual transmission category as reported is overwhelmingly black, which is partially a result of the somewhat controversial inclusion of a large number of Haitian blacks in this category and partially due to the relatively large proportion of IV drug users who are black. (In addition, there may be a tendency for black and Hispanic women to be more vulnerable than white women to heterosexual transmission through sex with bisexual men. A larger proportion of black and Hispanic gay males with AIDS report having sex with both men and women than do whites; the proportions are 30 percent for blacks, 20 percent for Hispanics, and 13 percent for whites [Rogers and Williams 1987]. It has been argued that minority gay men are more likely than white ones to put women at risk due to being "closet gays" who maintain sexual relations with women [S. Ports, Minority AIDS Task Force, National Council of Churches, personal communication, February 1987].)

Another way to look at the racial distribution of AIDS cases is to look at statistics for cumulative incidence (CI)—the number of cases in a subgroup per million population of that subgroup. This was done by Bakeman et al. (1988). They report CIs as of October 6, 1986, as being 593 for black men, 560 for Hispanic men, 224 for white men, 79 for black women, 58 for Hispanic women, and 6 for white women. The greater CIs for minorities are evident. Black and Hispanic men were about 2.5 times as likely to get AIDS as white men, black women 12 times as likely as white women; and Hispanic women 9 times as likely as white women. Bakeman et al. (1988) further report that minority CIs are higher than white CIs even if they remove the IV drug user cases (who, in their data, were 82 percent minority among men, and 77 percent minority among women). Thus, the

number of adult non-IV drug using homosexual and bisexual black male AIDS cases per million black adult males was 289; for Hispanics this rate was 297; but for whites it was only 186. This means that non-IV drug using gay minority men were about 1.6 times as likely to get AIDS as similar white men. Non-IV using black women were 8.0 times, and non-IV using Hispanic women 6.8 times, as likely to get AIDS as non-IV using white women.

AIDS among Children. Data on pediatric cases by transmission category and race are presented in table 4 (reprinted from Centers for Disease Control 1986b). Of the 350 children under the age of 15 with AIDS, 58.3 percent were black and 22.0 percent were Hispanic. The cumulative incidences of pediatric cases are that blacks were overrepresented by a factor of 15 and Hispanics by a factor of 9. Blacks were a majority of the cases in the largest transmission category—children with IV drug using mothers. They also were a majority in several of the smaller transmission categories: children whose mothers had a bisexual sex partner; whose mother was infected with HIV but had no identified risk factor; and those children with an undetermined risk factor. Blacks and Hispanics comprised almost all of the 38 cases of children with mothers who had an IV drug using sex partner, with 17 such cases in each group. Hispanics were also highly overrepresented among pediatric AIDS cases with mothers who are IV drug users. Whites were a majority in only two groups—those with hemophilia or other clotting factor disorders, and blood transfusion recipients (categories which have received a wildly disproportionate share of media attention, considering that only 67, or 19 percent, of the 350 pediatric cases were in these transmission categories).

AIDS in New York City. Surveillance data for New York City as of January 19, 1987, are presented in tables 5–8. New York City reported 8,887 adult cases (30 percent of the national total). Of these, the New York percentage of the national figures by race were 23 percent for whites, 38 percent for blacks, 50 percent for Hispanics, and 24 percent for others/unknown. Since much of our other data is based on studies in New York, and since (primarily minority) IV drug use cases are concentrated in New York, these figures are worth our consideration. They show a pattern that may become increasingly common as the epidemic spreads among IV drug users in cities like San Francisco, where HIV infection rates among IV drug users have

TABLE 4
Percentage Distribution of AIDS Cases among Children (age < 15 years), by Race/Ethnic Group, by Selected Transmission Category, as of September 8, 1986

Transmission category**	Total number	White*	Black*	Hispanic	Other*
U.S. population < 15 years	51,290,339	73.3%	14.6%	9.1%	3.0%
Children with hemophilia or other clotting factor disorder	18	66.7	27.8	5.6	0.0
Children whose mother:					
Was an IV drug user	162	8.6	63.0	28.4	0.0
Had a bisexual male sex partner	13	30.8	53.8	15.4	0.0
Had a male sex partner who was an IV drug user	38	10.5	44.7	44.7	0.0
Was infected with HIV but had no identified risk factor	11	9.1	81.8	9.1	0.0
Blood transfusion recipients	49	55.1	30.6	14.3	0.0
Undetermined risk factor	10	30.0	60.0	10.0	0.0
TOTAL***	350	19.4	58.3	22.0	0.3

* Non-Hispanic.
** Patients with more than one risk factor are shown only in the first applicable category listed.
*** The total includes 5 children whose mothers' only identified risk was a blood transfusion, one child whose mother's male sex partner had received a transfusion, and 43 children whose mothers were born in countries in which heterosexual transmission is believed to play a major role (virtually all of whom are black, non-Hispanic). The total excludes 2 children of unknown race/ethnic group.
Source: Centers for Disease Control 1986b, 665, with minor modifications.

TABLE 5
United States AIDS Cases by Transmission Category and Race, for New York City and Non-New York City, January 19, 1987

Transmission category	White, not Hispanic	Black, not Hispanic	Hispanic	Total*
Homosexual or bisexual male				
N.Y.C.	3,330	929	766	5,033
Not N.Y.C.	10,789	1,856	1,227	14,046
% N.Y.C.	23.6%	33.4%	38.4%	26.4%
IV drug user				
N.Y.C.	383	1,227	1,013	2,628
Not N.Y.C.	524	1,298	473	2,323
% N.Y.C.	42.2%	48.6%	68.2%	53.1%
Homosexual male & IV drug user				
N.Y.C.	183	157	121	462
Not N.Y.C.	1,273	345	166	1,798
% N.Y.C.	12.6%	31.3%	42.2%	20.4%
Hemophilia/coagulation disorder				
N.Y.C.	15	2	1	18
Not N.Y.C.	200	12	16	234
% N.Y.C.	7.0%	14.3%	5.9%	7.1%

TABLE 5—Continued

Transmission category	White, not Hispanic	Black, not Hispanic	Hispanic	Total*
Heterosexual cases**				
N.Y.C.	32	277	88	398
Not N.Y.C.	101	555	52	712
% N.Y.C.	24.1%	33.3%	62.9%	35.9%
Transfusion, blood/components				
N.Y.C.	49	14	4	68
Not N.Y.C.	370	70	26	476
% N.Y.C.	11.7%	16.7%	13.3%	12.5%
Undetermined, other				
N.Y.C.	46	113	73	280
Not N.Y.C.	275	280	113	638
% N.Y.C.	14.3%	28.8%	39.2%	30.5%
TOTAL				
N.Y.C.	4,038	2,719	2,066	8,887
Not N.Y.C.	13,532	4,416	2,073	20,227
% N.Y.C.	23.0%	38.1%	49.9%	30.5%

* Total includes persons of other races and of undetermined race.

** This category is composed of 521 persons (91 men, 430 women) who have had heterosexual contact with a person with AIDS or at risk for AIDS and 589 persons (474 men, 115 women) without other identified risks who were born in countries in which heterosexual transmission is believed to play a major role although precise means of transmission have not yet been fully defined. The latter set of persons is overwhelmingly Haitian.

TABLE 6
AIDS Cases: Risk by Race and Sex, New York City, January 19, 1987

	Males				Females			
Risk	White	Black	Hispanic	Other* Unknown	White	Black	Hispanic	Other* Unknown
Homo/bisexual	3,332	929	767	42	0	0	0	0
IV drug user	300	970	834	2	83	262	180	2
Homo/bisexual & IV drug user	181	148	114	1	3	9	7	0
Persons from countries where risks are unclear	0	155	0	0	0	39	0	0
Sex partners of at risk group	1	1	1	0	31	82	87	1
Transfusion	29	6	2	1	20	8	2	0
Hemophiliac	14	1	1	0	1	1	0	0
No identified risk	8	15	17	3	4	14	4	0
Other	27	49	36	2	7	35	16	0
TOTAL	3,892	2,274	1,772	51	149	450	296	3

* Includes 34 Asians and 7 American Indians. Because of small numbers and concern for confidentiality, risk group information is not provided for them.
Source: New York City Department of Health 1987.

TABLE 7
AIDS Cases: Percentage in Each Racial/Ethnic Group by Risk and Sex, New York City, January 19, 1987*

	Males				Females			
Risk	White**	Black**	Hispanic	Total*** (3 races)	White**	Black**	Hispanic	Total*** (3 races)
Homo/bisexual	66%	18%	15%	99%	0%	0%	0%	0%
IV drug user	14	46	40	100	16	50	34	100
Homo/bisexual & IV drug user	41	33	26	100	—	—	—	—
Persons from countries where risks are unclear	0	100	0	100	0	100	0	100
Sex partners of at-risk group	—	—	—	—	15	41	43	99
Transfusion	76	16	5	97	67	27	7	101
Hemophiliac	—	—	—	—	—	—	—	—
No identified risk	19	35	40	94	—	—	—	—
Other	24	43	32	99	12	60	28	100
TOTAL	49	28	22	99	17	50	33	100

* Where a percentage would be calculated with a denominator less than 30, figures are not given.
** Non-Hispanic.
*** Percentage of total who are white, black, or Hispanic.

TABLE 8
AIDS Cases: Percentage in Each Risk Group, by Racial/Ethnic Group, by Sex, New York City, January 19, 1987*

	Males			Females		
Risk	White**	Black**	Hispanic	White**	Black**	Hispanic
Homo/bisexual	86%	41%	43%	0%	0%	0%
IV drug user	8	43	47	56	58	61
Homo/bisexual & IV drug user	5	7	6	2	2	2
Persons from countries where risks are unclear***	0	7	0	0	9	0
Sex partners of at-risk group	0	0	0	21	18	29
Transfusion	1	0	0	13	2	1
Hemophiliac	0	0	0	1	0	0
No identified risk	0	1	1	3	3	1
Other	1	2	2	5	8	5
TOTAL	101	101	99	101	100	99

* Where a percentage would be calculated with a denominator less than 30, figures are not given.
** Non-Hispanic.
*** All are Haitians.

recently begun to climb (R. Chaisson, University of California, San Francisco, personal communication, 1986; J. Watters, Haight-Ashbury Free Medical Clinics, personal communication, 1987).

The racial breakdown of total AIDS cases in New York City is 45 percent white, 31 percent black, 23 percent Hispanic, and 1 percent others (of whom 34 were Asian and 7 were native American) or unknown. This compares with 1980 U.S. census figures that give a New York City population distribution of 52 percent white, 24 percent black, 20 percent Hispanic, and 4 percent other. AIDS seems to have hit blacks and even Hispanics at a higher rate than whites. One way of expressing this is that the cumulative incidence of AIDS cases per million population is 1,100 for whites, 1,600 for blacks, and 1,500 for Hispanics. (Since AIDS case data are not given for other races, CIs cannot be estimated for them.) These different CIs

should be interpreted with the realization not only that census data have been criticized for undercounting minorities, and that migration to New York may have been racially disproportionate since then, but also that AIDS surveillance reports may also be subject to racially imbalanced reporting or that whites may obtain medical care earlier.

Within the 2,628 IV drug use cases, 47 percent are black, 39 percent are Hispanic, and 15 percent are white. Although the exact racial distribution of the city's IV drug users is not known, our best estimate (based on admissions data, supplied by the New York State Division of Substance Abuse Services, of heroin users to drug treatment programs for 1980 and 1986) is about 38 percent for blacks, 38 percent for Hispanics, 23 percent for whites, and 2 percent for other races. It appears that blacks may be overrepresented, and whites underrepresented, among IV drug using AIDS cases in New York City.

As can be seen from the bottom row in table 7, the racial distribution of cases differs considerably by gender. Male cases are 49 percent white, which reflects the fact that 66 percent of the gay male cases occur among whites. Female cases are 50 percent black, a result of the greater relative weights of the IV drug user and heterosexual partner groups among female AIDS cases. From table 8, we can see that over 90 percent of New York City white male cases are gay, whereas for blacks and Hispanics about half the cases are not gay (mostly being IV drug users). For women, IV drug users comprise almost 60 percent of the cases in each racial group. Heterosexual partner cases are most prevalent among Hispanic women.

Racial distributions in New York AIDS cases have changed over time. Comparing the cases diagnosed prior to 1985 with those diagnosed in 1985, the percentage of white cases decreased from 52 percent of the total to 44 percent, blacks increased from 27 percent to 32 percent, and Hispanics increased from 21 percent to 24 percent (table 9). When we examine the ratios of 1985 cases to pre-1985 cases by race, we find that these ratios are .65 for whites, .90 for blacks, and .86 for Hispanics. This probably implies that the epidemic is further along the epidemic curve for whites than for minorities, and, thus, that the proportion of cases that is black and Hispanic will continue to increase. From table 10, we see that the percentages of cases among drug users and heterosexual partners increased, and those among gays decreased. Interestingly, the percentage of white cases who were gays

TABLE 9

Percentage of AIDS Cases of Each Transmission Category That Is in Each Racial Group, pre-1985 and 1985, New York City*

Risk	White, not Hispanic		Black, not Hispanic		Hispanic		Other/ don't know		Total
Homo/bisexual									
pre-1985	1,381	68.8%	359	17.9%	261	13.0%	7	0.3%	2,008
1985	915	64.8	256	18.1	230	16.3	12	0.8	1,413
IV drug user									
pre-1985	148	17.0	397	45.5	327	37.5	1	0.1	873
1985	104	13.3	382	48.7	296	37.8	2	0.3	784
Homo/bisexual & IV drug user									
pre-1985	56	32.6	59	34.3	56	32.6	1	0.6	172
1985	50	38.2	57	43.5	24	18.3	0	0.0	131
Heterosexual partner									
pre-1985	8	15.1	21	39.6	24	45.3	0	0.0	53
1985	8	13.3	27	45.0	25	41.7	0	0.0	60
Other									
pre-1985	123	61.2	50	24.9	25	12.4	3	1.5	201
1985	30	23.4	72	56.2	22	17.2	4	3.1	128

* Haitians who fall into a listed risk group are included as blacks. AIDS cases who give homosexual activity as a risk but whose drug use status is unknown are included as gays; and cases who have injected drugs but whose sexual orientation is unknown are included as IV drug users. There are only 167 of these cases in which either drug injection or sexual orientation is unknown before 1985, and 41 in 1985. The decline in these numbers of cases for whom only one of these categories is determined is a product of improved interviewing techniques.

TABLE 10
Percentage of Each Racial Group That Is in Each Transmission Category, pre-1985 and 1985, New York City*

	White, not Hispanic		Black, not Hispanic		Hispanic		Other/ don't know		Total	
Homo/bisexual										
pre-1985	1,381	80.5%	359	40.5%	261	37.7%	7	58.3%	2,008	60.7%
1985	915	82.7	256	32.2	230	38.5	12	66.7	1,413	56.2
IV drug user										
pre-1985	148	8.6	397	44.8	327	47.2	1	8.3	873	26.4
1985	104	9.4	382	48.1	296	49.6	2	11.1	784	31.2
Homo/bisexual & IV drug user										
pre-1985	56	3.3	59	6.7	56	8.1	1	8.3	172	5.2
1985	50	4.5	57	7.2	24	4.0	0	0.0	131	5.2
Heterosexual partner										
pre-1985	8	0.5	21	2.4	24	3.5	0	0.0	53	1.6
1985	8	0.7	27	3.4	25	4.2	0	0.0	60	2.4
Other										
pre-1985	123	7.2	50	5.6	25	3.6	3	25.0	201	6.1
1985	30	2.7	72	9.1	22	3.7	4	22.2	128	5.1
TOTAL										
pre-1985	1,716		886		693		12		3,307	
1985	1,107		794		597		18		2,516	

* See note for table 9.

increased, while the percentage of blacks who were gays decreased considerably. From table 9, it appears that black IV drug using cases have been increasing more rapidly than white.

Survival after AIDS Diagnosis

In a disease in which most of the patients die within two years of diagnosis, one possible effect of race may be to create differences in survival times after diagnosis—whether due to differences in seeking medical care, differences in the medical treatment that is available, differences in preexisting health, genetic differences, or other reasons. The mean survival time for blacks after diagnosis is eight months, while that for whites is 18 to 24 months (Weston 1986). In New York City, of all persons who have been diagnosed as having AIDS as of March 1987, 38.4 percent of non-Haitian blacks, 41.1 percent of Hispanics, and 45.5 percent of whites are still alive (M.A. Chiasson, New York City Department of Health, personal communication, April 1987). The meaning and analysis of survival time in AIDS cases is complicated by the fact that post-diagnosis mortality rates are affected by the initial diagnosis of the patient (Kaposi's sarcoma or opportunistic infection), patient's risk group, date of diagnosis, age, and sex. Richard B. Rothenberg, Centers for Disease Control (personal communication, February 1987), has been conducting a detailed study of factors that affect survival time. He reports that patients who are first diagnosed as having AIDS due to their developing Kaposi's sarcoma (KS) have longer mean survival times than patients with opportunistic infections such as pneumocystis carinii pneumonia; IV drug users tend to die sooner after diagnosis than gays; and there is a cohort effect in that patients who developed AIDS later in the epidemic were likely to benefit from newly developed knowledge about how to treat KS and opportunistic infections and thus to survive longer. These relationships, however, are univariate ones, and they do not take into account the interrelations among the variables listed or the effects of other variables (such as prior health status). In his multivariate analyses, Rothenberg finds that blacks and Hispanics with AIDS survive for a shorter period than do whites even when initial diagnosis, date of diagnosis, risk group, and sex are controlled.

The Social Meaning of Race for Persons with AIDS

Although we have collected no data on this topic, it has been suggested that the experience of having AIDS may be quite different for whites than for minorities, and for members of different social classes. Such differences would parallel differences in many other aspects of life. Thus, Suki Ports (personal communication, February 1987) of the Minority Task Force on AIDS of the New York Council of Churches suggests that "for lower-income people, and most minorities, it's a different disease from what it is for whites with education, employment, and therefore links through the job. For middle-class whites, AIDS leads to losses in these, and thus to a fight for what is being lost. For minorities, they've never had these advantages, so they tend to accept their AIDS problems without fighting, they lack the same drive (from losing) to fight, and lack educational tools to fight."

Similarly, there may be racial differences in the probability and timing of seeking medical care, and as Richard B. Rothenberg (personal communication, February 1987) speculated, the differences in post-diagnosis survival times may be due in part to minority patients being slower to seek medical care. Such racial differences may be due to many minority persons with ARC and AIDS being IV drug users, or to their being unemployed or in jobs that lack adequate health insurance (New York City Commission on Human Rights 1986). In the future, racial differences may occur in the probability of getting antiviral medication for either of two reasons. First, IV drug users are a difficult group upon whom to conduct controlled experiments, so they are less likely to be included in experimental protocols. Second, when medications get approved for prescription use, their cost may be prohibitive for many black and Hispanic patients. Black and Hispanic people with AIDS may also be affected by the lower quantity and quality of medical facilities in minority communities.

Finally, many persons with AIDS have benefited from the network of service and support organizations that have developed, starting with the Gay Men's Health Crisis in New York City. These organizations have performed a vital and heroic role, but have been more effective in serving persons with ties to the primarily white gay subculture than in serving those blacks and Hispanics with weaker ties to this subculture. This is often true in spite of determined efforts to prevent it. Thus, to the extent that volunteers have primarily been white,

TABLE 11
Seroprevalence among Gay Men in Four Cities: Percentage Seropositive

Race	Baltimore/ Washington	Los Angeles	Pittsburgh/ tristate area	Chicago (MACS)	Chicago
Whites	30%	51%	20%	42%	38%
Blacks	47	52	35	60	49
Others	46	41	27	50	41

Source: For the first four columns, Kaslow and Ostrow 1988; for the fifth column, Chmiel et al. 1986.

there are often cultural or other problems in offering assistance to gay blacks or Hispanics. These difficulties have been magnified for minority drug users with AIDS or ARC.

Seroepidemiology

Seroprevalence in General Populations. Since AIDS attack rates seem to vary by race and gender, we would expect exposure to HIV also to vary by race and gender. In one study, seroprevalence data were collected for 300,000 military recruits (Centers for Disease Control 1986a). For whites, they found a seroprevalence rate of 9/10,000; for blacks, 39/10,000; and for members of other racial groups, 2.6/10,000. Although this study has an extremely large number of subjects, it is clear that military recruits are not a representative sample of the population as a whole or even of their age groups. The researchers who conducted this study report that they have not determined the ways in which this sample differs from the population as a whole or from particular subgroups (D. Burke and R. Redfield, Walter Reed Army Institute of Research, personal communication to S.R. Friedman, October 21, 1986).

Blood donors also have been studied. Ward et al. (1986) report that in one city black potential donors were 5.6 times more likely to be seropositive than white potential donors. Blood donors, however, may also not be representative of the population as a whole.

Seroprevalence among Gays. Seroprevalence studies have also occurred for gay men (table 11). Chmiel et al. (1986) found that, among a sample of Chicago gays, 49 percent of blacks, 38 percent of whites,

and 41 percent of others were seropositive. The Multicenter AIDS Cohort Study (MACS) collected sera from gay men in the Baltimore/Washington area, Chicago, Los Angeles, and the Pittsburgh/tristate area (Kaslow and Ostrow 1988). Using the Dupont ELISA test, without confirmation by Western blot or other assay, MACS found that blacks were more likely to be seropositive than whites in all of these cities except Los Angeles. Samuel and Winkelstein (1987) report that in an area-probability sample of 1,034 single men aged 25 through 34 in a heavily gay neighborhood of San Francisco, 800 classified themselves as homosexual/bisexual; of these, 100 were of minority race. Seroprevalence rates were 48.7 percent (341/700) for non-Hispanic whites; 50 percent (22/44) for Hispanic whites; 66 percent (19/29) for non-Hispanic blacks; 30 percent (3/11) for Asians; and 40 percent (6/16) for other (3 Hispanic blacks, 2 native Americans, and 11 who stated "other"). The rate for non-Hispanic blacks was significantly greater than for non-Hispanic whites at the .05 level, and multivariate analysis confirmed that the white/black difference was not explained by differences in major risk factors (needle sharing, multiple sexual partners, or frequent receptive anal/genital contact with ejaculation). Summarizing these data on seroprevalence among gays by race, it appears likely that black gay men may be more likely to have been infected than whites. The small numbers of non-whites in all of these studies, and the difficulties in determining the sampling biases in convenience samples or the residential selectivity bias in the area sample, however, indicate that this conclusion must be interpreted as preliminary. Further research on this issue is clearly needed.

Seroprevalence among IV Drug Users. Tables 12 and 13 present data on HIV seropositivity by race and gender from two groups of drug-treatment patients we have studied. Antibody to HIV was measured by Abbott ELISA and Western blot. In the 1984 sample, Hispanic men were significantly more likely to be seropositive than white or black men. Three-fifths of both black and Hispanic women were seropositive, as compared to 44 percent of white women, but the small sample size meant that this difference was not statistically significant. In the smaller 1986 sample, almost three-fifths of black and Hispanic men were seropositive, as compared to 34 percent of white men (chi-squared $= 5.59$, $p < .025$). (The number of women subjects in this sample is too small to detect significant racial differences in seroprevalence among them.)

TABLE 12
Antibody to HIV, by Race and Gender, among Former Intravenous-drug-using Methadone and Drug Detoxification Patients in Manhattan, 1984: Percentage Positive

Race	Men	Women	Total
White	39%	44%	40%
N	71	18	89
Black	41%	60%	45%
N	75	20	95
Hispanic	58%	64%	60%
N	84	36	120
p (chi squared)	.031	.386	.012

Other studies have also been performed of seroprevalence by race among IV drug users. Most of them also find that minority users are more likely to be seropositive. In the Bronx, 42 percent of both Hispanic and black subjects were seropositive, as compared to 14 percent of whites. In logistic regression analyses of risk factors for seropositivity, race remained a significant predictor, but wide variation among clinics in different areas of the Bronx makes it likely that the observed racial relation to seropositivity is primarily a result of geo-

TABLE 13
Antibody to HIV, by Race and Gender, among Former Intravenous-drug-using Methadone Patients in Manhattan, 1986: Percentage Positive*

Race	Men	Women	Total
White	34%	41%	37%
N	38	22	60
Black	58%	57%	57%
N	33	14	47
Hispanic	59%	48%	54%
N	34	21	56
p (chi squared)	.061	.636	.066

* These patients were recruited in 1986 at a different drug treatment program from those attended by the subjects in table 12. The treatment programs are in the same area of Manhattan.

graphical clustering of the infection (Schoenbaum et al. 1986; P. Selwyn, Montefiore Medical Center/Albert Einstein College of Medicine, personal communication, 1987). Weiss (1986) reports that in New Jersey, black IV drug users, at 45 percent, were significantly more likely to be seropositive than whites (30 percent) or Hispanics (33 percent). In San Francisco, two studies have been conducted, with somewhat different results (Chaisson et al. 1986, 1987; Watters, Newmeyer, and Cheng 1986). Chaisson found a statistically significant difference by race: 6 percent for white subjects, and 14 percent for "black, Latino, and other" subjects. Analysis controlling for needle sharing (which was also related to seropositivity) showed that race remained a significant predictor of seropositivity. Watters, on the other hand, did not find significant racial differences: seropositivity rates were 9 percent for whites, 8 percent for blacks, 11 percent for Latinos, and 2 percent for others. Watters (personal communication, February 1987) reports that they have not determined why these two studies show different results.

Summary on Seroprevalence. The studies of HIV antibody seroprevalence give a picture similar to that given by AIDS case-surveillance data. Minorities are more likely to be seropositive than are whites. The evidence is quite strong that blacks are more likely to be seropositive than whites among IV drug users, gays, and the general population, although a few studies do find equal exposure rates. Data for Hispanics are scarce, but indicate that they are at least more likely to be seropositive among New York City IV drug users.

It has not been determined why these differences in infection rates exist. Some studies find that racial behavioral differences explain the racial seroprevalence differences in their samples; other studies find that racial seroprevalence differences remain after behavioral differences are accounted for. In those geographical areas and risk groups for which behavioral differences do not explain seroprevalence, this implies that there may be a higher risk of exposure to HIV per risky act. We would speculate that these higher risks may be a result of higher probabilities that one's sex or needle-sharing partner has been infected.

Susceptibility and Race: Preexisting Conditions and Behaviors, and Individual Knowledge and Risk Reduction

Racial Differences in Health among Seronegative IV Drug Users

Black and Hispanic risk-group members may be more likely to be in worse health conditions before exposure to HIV, and to have more frequent infection by other agents, than white risk-group members. On the other hand, among IV drug users, racial differences might be submerged by their poor health conditions. We were able to perform a limited and incomplete investigation of this question using data from our 1984 and 1986 samples of patients in detoxification and methadone treatment. We analyzed selected aspects of subjects' medical history: whether they had had hepatitis, gonorrhea, syphilis, herpes, pneumonia, tuberculosis, skin abscesses, night sweats of more than four-weeks duration, diarrhea of more than one-week duration, unexplained fever of more than four-weeks duration, or unexplained weight loss of 10 percent of their body weight or more. In order to avoid the effects of HIV infection, we restricted the analysis to seronegative subjects, and pooled the 1984 and 1986 data so that there would be enough cases of each of these diseases or conditions to analyze. The limited number of such cases made it impossible to control for other variables (such as the duration of stay in their drug treatment program, or age) that might also affect having had these diseases or conditions. Only one of these eleven variables was significantly related to race. Fifteen percent of seronegative whites reported having had diarrhea of one or more weeks duration, as compared to 2 percent of blacks and 7 percent of Hispanics (chi-square $= 8.6$, $p < .014$).

Thus, among the subjects studied and for the diseases and conditions investigated, there is no evidence that black or Hispanic IV drug users have been more subject to health problems than whites. We urge against generalizing from this conclusion to other drug users, and we suggest that further research about preexisting conditions may be useful in understanding racial patterns of response to HIV infection.

Racial Differences in Behaviors That May Affect Viral Transmission

Given the higher rate of AIDS cases in minority communities, and the scattered evidence for higher rates of seropositivity among minorities, it is worth considering why these differences exist. Research has not yet answered this question; indeed, relatively little attention has been paid to it in the literature. Many studies of risk behavior and/or seroprevalence among gay males, for example, have used convenience samples recruited in gay bars, hospitals, or physicians' offices that have resulted in numbers of minority subjects that are too small to analyze (Karolynn Siegel, Memorial-Sloan-Kettering Cancer Center, personal communication, February 1987).

In this section of the article, we will review some evidence about racial differences in risk behavior and in behaviors that reduce risk, including data from our studies of New York City drug users.

IV Drug Use Behaviors That Risk Transmission. A number of studies have found that drug-injection frequency is associated with seropositivity in New York (Cohen et al. 1985; Marmor et al. 1987; Schoenbaum et al. 1986) and New Jersey (Weiss et al. 1985). In our studies based on a 1984 sample of 307 methadone and detoxification patients, we found that the single variable that best predicts seropositivity among IV drug users is drug-injection frequency (Cohen et al. 1985; Marmor et al. 1987). In these 1984 data, drug-injection frequency varies significantly by race. Mean monthly drug-injection frequencies for the two years prior to the interview were 136 for Hispanics, 76 for blacks, and 46 for whites ($F_{2, 304} = 19.23$, $p < .0001$; difference between Hispanics and whites significant by Duncan multiple-range test). In our smaller 1986 sample of methadone patients, racial differences in mean monthly drug-injection frequencies during 1985 and 1986 were consistent with those found in 1984, but did not reach statistical significance. Hispanics averaged 31 injections, blacks 19, and whites 15 ($F_{2, 180} = 2.02$, $p < .14$). Sample differences make it unwise to infer anything from the lower mean injection frequencies for the 1986 group as compared to the 1984 sample.

Our analysis of risk factors for seropositivity (Cohen et al. 1985; Marmor et al. 1987) indicated that the proportion of injections that one took in shooting galleries (clandestine commercial establishments whose "owners" rent space, syringes, and needles to IV drug users

to use in shooting up) was a risk factor in addition to drug-injection frequency. Similar findings have been reported by later studies (Schoenbaum et al. 1986; R. Chaisson, University of California, San Francisco, personal communication, 1986). In the 1984 sample, the proportion of injections that took place in shooting galleries varies significantly by race. Hispanic subjects used shooting galleries 31 percent of the time, which was significantly more by the Duncan multiple-range test than the 18 percent for blacks or the 16 percent for whites ($F_{2, 284} = 8.18$; $p < .0004$).

On the other hand, in the smaller 1986 sample there was no racial difference in shooting gallery use. This may be because these respondents reported much lower levels of attendance at shooting galleries, since only 10 percent of their injections took place in these establishments.

We found one relationship in the 1986 data that indicates that white IV drug users may take certain risks more often than do nonwhites. In particular, whites are significantly more likely to inject with works which they had previously let others use: they did so 18 percent of the time, as compared to 7 percent for Hispanics, and 6 percent for blacks ($F_{2, 97} = 4.2$; $p < .02$).

Thus, among the IV drug users we studied in 1984, it appears that Hispanics were significantly more likely than whites or blacks to engage in two behaviors that have been tied to seropositivity: high drug-injection frequency and use of shooting galleries. Furthermore, although the data in the 1986 sample indicate similar racial variations in drug-injection frequency, they seem to show a somewhat different pattern of racial variation in specific injection practices.

Knowledge and Risk Reduction among IV Drug Users. In our 1986 study all subjects were asked about their deliberate attempts to reduce the risk of getting AIDS. Almost two-thirds (65 percent) report having made some behavioral change (in drug or sexual behavior, or both) in order to reduce their risk of getting AIDS. Relatively few of the subjects, 34 of 184 (18 percent), had attempted to reduce their sexual risk of infection by sexual transmission, and no racial differences in sexual risk reduction were discovered. A majority of the subjects (58 percent) had tried to reduce their drug-injection frequency or sharing works, or had tried to use new or clean needles more consistently. Seventy percent of blacks had done so, as compared to 57 percent of whites, and 49 percent of Hispanics (chi-squared = 5.045; df = 2; $p < .08$; if blacks are compared to whites and Hispanics, chi-squared

= 4.32; df = 1; $p < .05$). Blacks were significantly more likely, in particular, to report reductions in sharing works; 48 percent of blacks did so, as compared with 26 percent of whites and 23 percent of Hispanics (chi-squared = 9.4; df = 2; $p < .009$.)

One particularly revealing racial difference in knowledge was found among the drug users in the 1986 sample. Whites were significantly more likely than nonwhites to have heard of those techniques for cleaning works that are believed to kill HIV—i.e., bleach, hydrogen peroxide, alcohol, and boiling. Among those who had heard of at least one of these four techniques, whites were significantly more likely to have heard of bleach as a sterilizer. These differences suggest that scientific innovations concerning AIDS may diffuse more rapidly to white drug users than to black or Hispanic users.

In late 1986 the Street Studies Unit of the New York State Division of Substance Abuse Services interviewed 136 drug users in the streets of Brooklyn, the Bronx, and Queens. The interviewers were former drug users who conducted informal interviews about what respondents knew about AIDS and how they had tried to protect themselves. An attempt was made to keep the interview unobtrusive. Interviews were conducted in the form of informal street conversations, respondents were not informed that they were being interviewed, and data were not recorded at the scene of the interview but were instead written down after the interviewer left the scene. Thus, these data are an attempt to get information about IV drug users who are *not* in drug treatment in as natural a setting as possible; of course, street conversations are subject to biases of their own. In particular, it can be harder to ask neutral probes, and the memory of the interviewer may fail. Thus, these findings must be taken as minimal estimates of knowledge and behavior change. Finally, analysis of these data is still in the early stages, so the findings reported below must be regarded as preliminary.

With these caveats, the findings of the unobtrusive street survey are as follows. Of the 136 subjects, 21 were white, 63 black, and 52 Hispanic. When asked what they knew about how AIDS was transmitted, 60 percent of Hispanics, 73 percent of blacks, and 90 percent of whites mentioned IV-drug-related means of transmission (chi squared = 7.195; df = 2; $p < .03$). Knowledge about sexual transmission and reported attempts to reduce exposure by risk reduction involving drug use were reported less often by blacks and Hispanics than by whites, but neither of these relationships was statistically

significant. Blacks were more likely to report sexual risk reduction (44 percent) than whites (14 percent) or Hispanics (23 percent) (chi squared = 9.47; df = 2; $p < .0088$).

In summary, the data on racial differences in knowledge and risk reduction among New York City IV drug users present a somewhat unclear picture (rather than simply a picture of minorities with less knowledge and higher risks). In spite of this, we would offer some tentative generalizations in the hope that they may stimulate further research. White IV drug users seem more likely to learn about scientific innovations—in this case, the use of bleach as a sterilizing agent for injection equipment. On the other hand, the social organization of black drug users may make them more likely to act upon information about risk reduction.

Gay Behaviors That Risk Transmission. In spite of the fact that many studies of gays and AIDS have used sampling techniques that have resulted in too few interviews with blacks or Hispanics to analyze racial differences in risk behavior, we know of two studies in which these differences could be studied. In the Chicago portion of the MACS study, 584 whites and 46 nonwhites were interviewed in the first wave of the project in 1984. There were no significant differences between these racial groups in terms of such risk behaviors as the number of sex partners in the preceding month, number of anonymous sex partners, or number of occasions in which the subject had anally receptive sex. White gays were significantly more likely to be involved in the gay community network and marginally ($p < .053$) more likely to report that their gay peers had norms which encouraged safer sex (Jill Joseph, University of Michigan, Ann Arbor, personal communication, March 16, 1987). Samuel and Winkelstein (1987) report no significant racial differences in risk behaviors among San Francisco gay men interviewed in their area probability sample; they do, however, report a trend for a higher percentage of white than of black subjects to have had ten or more sexual partners in the previous two years ($p < .1$).

Another data source gives another way to approach the issues of how gay sexual practices changed after AIDS became known and of racial differences in risk-reduction attempts. Rectal gonorrhea is a disease that is transmitted through anal sex and that develops more rapidly than AIDS. Thus, statistics on rectal gonorrhea reflect safer sex practices or reductions in homosexual sexual frequency fairly rapidly.

The San Francisco Department of Public Health Bureau of Communicable Disease Control (1986) studied changes in rectal gonorrhea from October 1984 through September 1986. They found that male rectal gonorrhea declined every month during this period, with an exponential rate of decline of 5.7 percent per month that did not vary by race. Since data for the period before October 1984 have not yet been computerized, they have been unable to study whether there were any racial differences in when the declines began (G. Bolan, Department of Public Health, San Francisco, personal communication, February 1987.)

Heterosexual Behaviors That Risk Transmission. Sexual abstinence and condom use are believed to reduce the risk of heterosexual transmission of HIV. Mosher and Bachrach (1986, percentages from table 8) studied these behaviors among 8,000 women in 1982, before AIDS became a matter of public knowledge. They found that both were rare among women aged 15 to 44 years, and that white women are more likely to avoid heterosexual transmission due to celibacy or to contraceptive use, but two caveats have to be made to this conclusion. First, these differences in protection are relatively small—27.1 percent of white women, 19.3 percent of black women, and 24.2 percent of Hispanic women report one of the forms of lessened probability of exposure. The black/white difference is largest, but is less than 8 percent. Second, there is a methodological problem in that Mosher and Bachrach used a hierarchical definition of "current contraceptive method" so that women who reported using sterilization, the pill, the IUD, or the diaphragm as well as condoms would not be included as condom users. The most important implication, however, is that the pre-AIDS sexual practices of American heterosexual women provided little protection against HIV transmission if one's partner was infectious.

In our 1986 sample of drug users, we examined (for males and females separately, and separately for sexual activity with members of the same and the opposite gender, since the biological consequences may vary by gender) the frequency of sexual intercourse, the number of sexual partners, the number of regular sexual partners, the number of regular sexual partners who are IV drug users, and the number of regular sexual partners who are not IV drug users. We also examined data on prostitution and on sexual intercourse with persons who then or later were diagnosed as having AIDS. There were no significant racial differences in any of these behaviors.

Racial Variation in AIDS-related Knowledge, Beliefs, and Protective Behavior among the General Public

The beliefs that people hold about AIDS are extremely important. They affect what individuals do to protect themselves against it, and they can affect what groups do as well. Differences in beliefs among races can affect the ways in which they respond on both the individual and collective levels. Inasmuch as there is neither a vaccine to prevent HIV infection nor a treatment for it, and inasmuch as individual and group self-protection is the major way in which we can influence the course of the epidemic, racial differences in beliefs can lead to racial differences in the response to and development of AIDS.

As awareness has increased of the racial differences in AIDS incidence rates, concern has been expressed that minorities may be less able to protect themselves than whites because of the ways in which the epidemic is depicted in the media or because of lower educational levels (Nickens 1986). The New York City Commission on Human Rights (1986), for example, has suggested that "since many heterosexual minorities do not realize they are at risk for AIDS, they are not greatly affected by efforts to educate the public about modes of AIDS transmission. The little information that does arrive in the daily media implies that one is safe if one is not a white gay male or intravenous drug user." Since the data on AIDS incidence and seroprevalence indicate that minorities are probably at greater risk of exposure to HIV than are whites, any such failure to understand the epidemic and the ways in which one can protect oneself could lead to tragedy.

Not much is known, however, about racial variations in AIDS knowledge, beliefs, or protective behaviors among the general public. Although the generally higher educational levels of whites certainly lead to concern that blacks and Hispanics may learn about AIDS belatedly, it is neither good science nor good public health policy simply to assume that such a racial difference exists. After all, there are other sources of knowledge besides formal ones, and minorities have often benefited from these in the past. Thus, it is worth investigating what has been determined about racial differences in knowledge and beliefs.

One source of such information is opinion polls. One poll, conducted for *Newsday* in January 1987, found relatively little racial variation in knowledge, although it did find that Hispanic New Yorkers were

more likely to believe that AIDS could be transmitted by dirty toilet seats (Holmberg 1987). Bausell et al. (1986) report on a national telephone poll of 1,256 adults aged 18 and over that seems to challenge the view that minorities are less aware of AIDS and, therefore, less likely to protect themselves. They found that 41 percent of the total sample reported having taken special steps or precautions to avoid AIDS. Only 37 percent of whites (calculated by the authors of this article from tables in Bausell et al. 1986), as compared to approximately 60 percent of blacks and Hispanics, had tried to protect themselves. The article did not, unfortunately, indicate the nature of these protective steps, so we do not know whether there are racial differences in the efficacy of attempted risk reduction. They also report that blacks and Hispanics were more likely than whites to support government spending "as much money as it takes to find a cure or vaccine," and strongly to support government restrictions of gay behavior in gay bath houses and bars until AIDS is under contro'

The Illinois Department of Public Health sponsored a January 1987 telephone survey of 800 Illinois adults (Linda Haase, Illinois Department of Health, personal communication, February 1987). Of the respondents, 79 percent were white, 14 percent black, and 6 percent Hispanic or other. Hispanics were more likely to have a personal fear of AIDS: 59 percent of them said they were afraid they might get it, as opposed to about one-sixth of blacks and of whites; and 41 percent of Hispanics, as opposed to about one-third each of blacks and whites, said they were afraid someone they knew personally would get AIDS. When asked whether AIDS can be gotten by using a needle, all Hispanics, 97 percent of whites, but only 90 percent of blacks responded affirmatively. All the Hispanics, 95 percent of whites, and 91 percent of blacks said that unprotected sex with a person who has the AIDS virus can cause AIDS. A number of questions were asked to determine false beliefs about transmission; by and large, Hispanics tended to be most likely to have such erroneous beliefs. Nonwhite Illinois respondents were more likely than whites to say that government has "a lot" of responsibility for AIDS care, research, and education. Blacks and Hispanics also believe that government should spend more on AIDS treatment. When it comes to government spending for AIDS research and for AIDS education, on the other hand, although blacks remained most supportive, Hispanics were less so than whites.

In summary, the Illinois data indicate that Hispanics there accept

more untruths about AIDS, and that Hispanics have more concern about AIDS—but also that all Hispanics interviewed recognize the possibility of sexual and intravenous transmission. Indeed, the overwhelming majority of all races respond correctly when asked whether sex or needles can transmit AIDS, although approximately 10 percent of blacks reply "no" on each of these questions. The form of the questions, however, leaves it open whether such a large proportion have enough of an awareness of these risks for it to cross their minds when they have the opportunity to take drugs or have sex. The Illinois data also indicate substantial minority support for government action against AIDS. This support may imply that fears expressed by some AIDS activists about minority distaste for AIDS prevention programs may underestimate what can be done.

DiClemente and Boyer (1987) discuss a May 1985 survey of San Francisco public high school students' knowledge, attitudes, and beliefs about AIDS. Adolescents are sometimes viewed as particularly at risk of HIV infection due to the sexual and drug experimentation many youths engage in. San Francisco youths, with a major and well-publicized AIDS epidemic among gays, and a high gay seroprevalence rate (49 percent, according to Samuel and Winkelstein 1987), would be expected both to be aware of AIDS as a sexually transmitted disease and to be at risk for HIV sexual infection. Given the fact that only 33 cases of AIDS had been reported among heterosexual IV drug users as of the end of 1986, and that estimates of seroprevalence among IV drug users in the city were between 9 percent and 16 percent in a sample tested in 1985 and 1986 (Watters, Newmeyer, and Cheng 1986), we might expect considerably less knowledge about intravenous transmission among these youth.

The findings from the survey are somewhat encouraging about the extent of AIDS-related knowledge among high school students, and present a mixed picture of racial variations in this knowledge. Almost all of the subjects knew that AIDS could be transmitted by having sex with someone with AIDS or by sharing needles; if we look at the racial breakdowns, we find that 5 percent of the white as compared with only 1 percent of the black and 3 percent of the Hispanic students did *not* know about sexual transmission, and that 15 percent of the whites, 8 percent of the blacks, and 17 percent of the Hispanics were unaware of the risks of sharing works. These data indicate that black high school students may be less likely to be ignorant of these basic

transmission facts (unfortunately, neither here nor elsewhere do the authors report either statistical significance data or sufficient data to let us calculate them). On the other hand, 72 percent of the whites know that condoms lower the risk of sexual transmission, as compared to 60 percent of the blacks and 58 percent of the Hispanics.

DiClemente and Boyer also report on the misconceptions these adolescents hold. Black and Hispanic students are approximately twice as likely as whites to believe that AIDS can be contracted by touching, kissing, or being near someone with AIDS, and about 20 percent of black and Hispanic as compared with 9 percent of white students, believe that "all gay men have AIDS."

Collective Responses to AIDS

No systematic studies have been conducted about how different groups, institutions, communities, and races have responded to the AIDS epidemic. As a result, this section of the article is based upon impressionistic data, personal experience, and interviews with persons involved in AIDS-related projects. We raise more questions than we answer here, but do so in part with the hope that we will provoke others to conduct the research needed to analyze these issues more adequately.

Although the data presented above about the impact of AIDS show that the epidemic has affected thousands of blacks and Hispanics, there has been little organized black or Hispanic response as of this writing. The major black and Hispanic institutions have done little or nothing, and there has been no grass-roots flowering of new AIDS-related organizations in minority communities. In the last year or two, indeed, something new has occurred, such as the New York Council of Churches' Minority AIDS Task Force; the Minority AIDS Project in Los Angeles; the Kupuna Network in Chicago; and the Third World AIDS Advisory Task Force, Black Coalition on AIDS, and Latino Coalition on AIDS/SIDA Education and Action in San Francisco. In addition, the Southern Christian Leadership Conference has begun to get involved. These efforts are welcome, but they are, as yet, totally inadequate as compared to the need for minority mobilization around AIDS.

Why has there been such a limited response? It should be noted

that black and Hispanic organizations have few resources, so it is hard to mount new campaigns to deal with a new disease—particularly since many of the strongest minority organizations deal with issues of racism that seem far removed from AIDS. This explanation, however, is far from the whole story. Two additional factors seem to us to be of extreme importance. First, the epidemic has a public image as a white gay disease. As such, it does not seem to most blacks or Hispanics to be an issue for their special attention and mobilization. (Here, we should be careful not to misconstrue this lack of particular concern as heartlessness; as noted in our discussion of public opinion surveys, black and, to a lesser extent, Hispanic respondents are more likely than white to support government spending on AIDS research, education, and treatment.) Second, there are deep fissures in minority populations and leaderships about how to deal with the homosexuality and IV drug use aspects of AIDS. Overt homosexuality became somewhat more accepted among urban whites as a result of the gay activism of the last generation. Among blacks and Hispanics, gay activism was much more muted, and minority cultures remain homophobic (C. Harris and G. Nene, personal communication, Montefiore Medical Center, March 1986; Harris 1986). Thus, to many black and Hispanic persons, raising the idea of helping people with AIDS seems to be giving support to sexual behaviors they cannot accept. This can lead to phenomena such as the following example given by Suki Ports (personal communication, February 1987): "Sometimes minority churches are reticent to be public on AIDS—as in being open about AIDS as the cause of death at a funeral—because the churches are poor. They might need the money to get their boiler fixed, so they can't afford to lose economic support from the congregation. It's safer to talk about South Africa than AIDS in these churches."

The disagreements are even stronger in relation to IV drug use. Minority communities bear a disproportionate burden of crime by drug users seeking money for drugs, and a disproportionate loss of access to neighborhood facilities that are taken over by drug users. Thus, many blacks and Hispanics are unfriendly to drug users or to any proposals that seem to offer aid to drug users. One indicator of this attitude is a poster that was plastered on many lamp posts in Harlem in 1986. It says: "When will all the junkies die so the rest of us can go on living?"; on many occasions, we have seen approving graffiti added to these posters. This attitude has taken a more visible

form in some discussions of the appropriate policy to take toward AIDS among IV drug users. One proposal that has been raised—including by some authors of this article—is that experiments should be conducted about making sterile works available to IV drug users so they will not face legal or economic pressure to share works. Several black men in responsible positions in the New York area—including Benjamin Ward, the Police Commissioner, and James Curtis, head of Psychiatry at Harlem Hospital—have opposed this proposal as either not being effective (because IV drug users will not change their behaviors) or as being likely to increase IV drug use. It has also been opposed as being racist, as being directed against minorities, since the proposal ignores the effects of increased IV drug use on minority communities and on the minority individuals who may become IV drug users as a result of the greater availability of works. On the other hand, other blacks in responsible positions have supported the proposal. Thus, Beny Primm, Director of the Addiction Research and Treatment Center (and one of the authors of this article), has argued that "you may call people racist now if they adopt this policy; but if they do not do it, in five years you will accuse them of racist genocide." The point here is not to discuss the merits of the proposal, but rather to show that the disagreements can paralyze action.

One final collective response should be mentioned. It involves organization among drug users—a group that is important for this article because of its high proportion of blacks and Hispanics and because IV drug users are the major source of in utero transmission of HIV and of transmission to heterosexual partners. Two white ex-drug users who worked for the New York State Division of Substance Abuse Services initiated an organization to deal with AIDS among IV drug users, with gay AIDS groups as an underlying model. Since then, this group, called ADAPT, has been quite successful. It has scores of active members; engages in street education of drug users and their sexual partners; negotiates with shooting gallery owners to have sterile works, bleach, and other materials useful for relatively safe injection at hand; and assists AIDS patients in the New York jail at Rikers Island. ADAPT went through a number of leadership changes in its early days. Currently, its president is a Hispanic woman, and its leading members are composed of all races. In all of its intervention efforts, it is careful to develop an understanding of the implications of racial differences, and of cultural differences among persons of the

same race, for what it should do. (For additional discussion of collective self-organization among drug users, see Friedman et al. 1987.)

Conclusions and Recommendations

Findings: A Brief Recapitulation

Blacks and Hispanics are more likely than whites to get AIDS. This is true among gays, among IV drug users, among heterosexual partners, and among children.

Although the findings on risk behaviors and risk reduction are not conclusive, there is considerable evidence that blacks have been at least as likely as whites to attempt to reduce their risk. In particular, in spite of all the difficulties they face, many IV drug users have cut back on behaviors that put them and others at risk. As has been argued elsewhere, however, the demands of addiction and the social relationships that exist among IV drug users make continuous, complete risk avoidance extremely difficult; and deliberate attempts by drug users and exdrug users to organize themselves to reduce their risks are both possible and essential (Friedman et al. 1987; Friedman, Des Jarlais, and Goldsmith 1988).

Recommendations

Target Education at Minority Groups. One implication of the heavy impact of AIDS on minorities is that education campaigns should be conducted to build awareness of this fact. This will be a difficult and potentially dangerous process, and one that will require efforts by leaders and researchers of all races. If the data are presented only by white spokespersons, many blacks and Hispanics will reject them as just another white attempt to blame minorities for the nation's troubles. If white spokespersons do not get involved, this could lead to charges that minority leaders are just engaging in special pleading and to minority criticisms of whites as not caring about AIDS among other races. In addition, there is a serious risk that whites will come to see blacks and Hispanics as AIDS carriers. This would further burden minority individuals seeking jobs, promotions, or housing. Indeed, given recent racial tension and incidents of racial violence, of AIDS-

related harassment, and of incidents of violence against gays, it is possible that stigmatization of minorities as AIDS carriers might lead to physical attacks against them. In spite of these risks, however, public awareness of the minority dimension to AIDS is needed so that support for the other recommendations in this article will be forthcoming from persons and policy makers of all races.

A related dimension of the health education campaign concerns the need for education about safer sex. There appears to be a relative lack of knowledge about sexual transmission and safer sex among IV drug users (many of whom are black or Hispanic). Culturally sensitive education about these issues will be needed (Worth and Rodriguez 1987). (It is possible that the wide public education campaign about heterosexual transmission and condoms that is getting under way as this is being written in early 1987 may lead to greater awareness and sexual risk reduction among IV drug users and/or among the sexual partners of IV drug users and bisexual men. It should be remembered that discussion in the general media was sufficient to bring about considerable knowledge about AIDS among IV drug users long before any focused efforts to educate them about AIDS took place [Friedman, Des Jarlais, and Sotheran 1986; Selwyn et al. 1985].)

Strengthen and Increase the Medical Care Available to Minorities. In many parts of the country, black and Hispanic communities have inadequate medical resources available to them. The AIDS epidemic mandates that adequate resources be provided. Furthermore, hospitals that care for minority patients with HIV infections need to have staff who are capable of relating to the cultures of these patients. This is particularly obvious in the case of teaching ways to avoid transmitting HIV to other people, which involves discussions of sexual practices that can be hindered either by cultural insensitivity (or ignorance) on the part of medical personnel or by feelings of racially or professionally induced deference on the part of the patient.

Further Research Is Needed. There is need for more research about race and AIDS. This article is an effort to provoke such research, and the process of writing it has shown the authors how much is unknown. We need better information about racial variations in many aspects of the epidemic: HIV seroprevalence; survival time after diagnosis; AIDS-related knowledge and risk-reduction among gays, IV drug users, and heterosexuals; medical, public health, and social service responses, including access to experimental trials of medications; or-

ganization by risk groups in response to the epidemic; and barriers to effective responses by individuals and collectivities.

Encourage Minority Community Reach-out and Support Groups. Efforts to combat AIDS have been greatly helped by gay organizations that were established to meet the epidemic. These groups have offered assistance to the sick, conducted education campaigns, debated proposed changes in gay lifestyles and values (and thus made individual risk reduction more socially acceptable to other gays), and monitored AIDS research and AIDS policy to make sure that they have taken adequate account of the realities and needs of gay life. We believe that community efforts by blacks and Hispanics can help their communities to deal with this epidemic, too. AIDS makes it necessary to reduce any stigma that prevents homosexual or bisexual individuals from making their sexual orientation public so that they and others can engage in sexual risk reduction; similarly, it means that condom use must be seen as a medically necessary form of self-protection. In many parts of the black and Hispanic communities, such changes will not be easy. Sunny Rumsey, who has conducted many AIDS education sessions in minority communities for the New York City Health Department, argues that many minority cultures have tremendous resistance to homosexuality, so gays remain in the closet and many gay men get married, or have sex with women who do not know they are gay (presentation at an ADAPT meeting, March 5, 1987). AIDS-related organizations can help raise these issues and can help develop ways in which gays can come out of the closet safely. Their efforts, of course, will be helped immeasurably to the extent to which minority churches and other groups support them.

Similarly, AIDS-oriented black and Hispanic groups can reach out to IV drug users and help them in their efforts to reduce their risks. In most cases, this will require community groups to adopt a non-judgmental style. The point will not, in most cases, be to reproach drug users for immorality or even with their self-destructiveness, but rather to develop ways to help them minimize their risk of AIDS. In some instances, drug users will want help in stopping drug use, but in many others they will seek help only for preventing injection, or for discontinuing the sharing of works, or for learning how to sterilize works more effectively and consistently. Minority drug users will be more likely to accept education and assistance from supportive local groups than from white-dominated institutions.

Cooperate with and Support Drug Users' Own Reach-out and Support Efforts. Beyond this, minority community groups need to cooperate with drug users' and ex-drug users' own efforts to organize to deal with AIDS. In New York, as mentioned above, ex-drug users and others (including some current users) have formed ADAPT to reach out to IV drug users and others about AIDS. The formation of such organizations should be encouraged, and minority community groups can help them by making office space or other facilities available.

Aid by Government and Private Institutions. Finally, government and private institutions should offer financial and other assistance to black and Hispanic groups that try to deal with AIDS. Economic realities dictate that minority organizations often cannot get adequate funding through minority donations, so this outside support is extremely important. Given the cultural differences between whites, blacks, and Hispanics, and the long history of white or official actions that have hurt minorities, it will be important for assistance to be offered without putting conditions on their use that are derived from official or white conceptions of morality or proper language. Among many minority audiences, for instance, street language is the most appropriate way to get messages across; in others, discussion about sex must be much more guarded (at least to begin with) than for middle-class white audiences.

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