THE CHANGING NATURE OF THE AIDS EPIDEMIC IN THE UNITED STATES

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INTRODUCTION

The AIDS crisis has impacted on all aspects of American life. Correctional institutions are not an exception to this pattern. Prison and jail administrators have been forced to confront many troubling questions as a result of the epidemic. Among these dilemmas are such controversies as: the efficacy of mandatory HIV testing, the propriety of segregating infected inmates, the distribution of condoms as well as other issues. In addition, the crisis has placed an enormous strain on already scarce correctional resources. Treating AIDS is expensive and there has been concern that the costs of healthcare for inmates could skyrocket as a result of the epidemic.

To date, almost all inmates diagnosed with AIDS are male, a disproportion number are members of minority groups and the leading risk factor for this disease among incarcerated individuals is a prior history of intravenous drug use (Moini and Hammett, 1990:16). In addition, the majority of correctional AIDS cases have occurred in jurisdictions where the rate of HIV infection among intravenous drug users is high (Blumberg, 1989). Despite fears of institutional tranmsmission, there is substantial evidence that this is occurring on a relatively infrequent basis (Horsburgh, Jarvis, McArthur, Ignacio and Stock,1990; Brewer, Vlahov, Taylor, Hall, Munoz and Park, 1988; Kelly, Redfield, Ward, Burke, and Miller, 1986).

To some extent, the pattern of AIDS cases which has been observed in correctional facilities reflects the epidemiology of the disease in the larger society. Should the nature of the epidemic

change, the dimensions of this problem in prisons and jails could become much more serious. For one thing, a greater number of cases would significantly add to the costs of medical treatment. Second, institutional transmission could become a greater concern with an expanded base of infected inmates. Therefore, it is imperative that correctional administrators not only monitor the epidemic, but remain alert with respect to any changes in epidemiology that may be occurring.

This study examines the changing nature of the AIDS crisis. The analysis relies on cases of "full-blown" AIDS which have been reported to the Centers For Disease Control (1992, 1991, 1990, 1989, 1988) since the beginning of the epidemic. Because the number of AIDS cases is to some extent a function of how the disease has been defined by the CDC (Altman, 1992), it would have been preferable to address this question utilizing epidemiological data regarding infection with the Human Immunodeficiency Virus (HIV). The latter would also have been a more accurate gauge because the incubation period between infection with the virus and actually manifesting symptoms of disease is quite lengthy. Unfortunately, these seriological studies are available only on a limited basis and often do not generate the detailed data regarding various "risk-factors" that are available from the CDC surveillance reports. In addition, cases of "full-blown" AIDS have been a reliable indicator of the direction that the epidemic has taken over the last decade. Despite a median incubation period of 9.8 years (Bacchetti and Moss, 1989), many persons do progress from infection to illness in a substantially shorter period of time.

THE NATURE OF THE EPIDEMIC

AIDS was first identifed in the United States in 1980 among gay males. In fact, public perception of this disease was largely shaped by the fact that during the early days of the epidemic, the overwhelming majority of cases occurred in this risk group (Altman,1987). However, it was not long before cases were also observed among intravenous drug users and in persons who had received blood transfusions. By the mid 1980s, it was clear that HIV could be transmitted through heterosexual as well as homosexual contact. Some even suggested that the virus would rapidly spread beyond the original risk groups into the general population (Masters and Johnson with Kolodny, 1988). Others asserted that the virus was not efficiently transmitted through heterosexual contact (Hearst and Hulley, 1988). This study is designed to assess whether there have been significant changes with respect to the epidemiology of the AIDS epidemic since 1988.

The analysis examines the cumulative number of AIDS cases that have been diagnosed since the disease was first identified in 1980. The focus is on two important demographic characteristics (race and gender) and the proportion of individuals diagnosed with full-blown AIDS in various risk categories. The aim is to determine whether the epidemic has changed in important ways and if so, what the implications are for correctional administrators.

Table 1 examines the 4 year period between July 1988 and July 1992. The data indicate that the number of adult/adoscent

AIDS cases increased during this time frame from 67,141 to 226,281 (more than 3.5 fold). In addition, there was some change with respect to the pattern of the epidemic. As the Table notes, the proportion of cases diagnosed among gay/bisexual males declined somewhat (5 percent) while the proportion of Persons with AIDS reporting a history of intravenous drug use increased by 3 percent. Despite all the alarm regarding heterosexual transmission, the proportion of cases that are attributable to heterosexual contact remains relatively small. This category increased from 4 percent of the total in 1988 to 6 percent in 1992.

RACE/ETHNICITY AND THE AIDS EPIDEMIC

Table 2 examines the racial/ethnic distribution of persons diagnosed with "full-blown" AIDS. The data indicate that there has been some change in this area. In 1988, Blacks and Hispanics accounted for 40 percent of the cases. By 1992, the proportion had increased to 45.5 percent. Clearly, the epidemic is growing most rapidly among minority individuals. Although these two groups constitute only one-fifth of the U.S. population, if the present trend continues, they will account for half of the diagnosed AIDS cases within the next 5 years.

Examination of Tables 3A-3C indicate that the distribution of AIDS cases is markedly different among Blacks and Hispanics from the pattern observed among Whites. More than three-quarters of the cases among whites are linked to homosexual/bisexual activity.

Intravenous drug use was the sole risk factor in less than 10 percent of the cases. The proportion of cases diagnosed among heterosexuals without a history of IVDU remains extremely small.

Among Blacks and Hispanics, the proportion of cases where homosexual/bisexual activity is the only risk factor is roughly comparable to the proportion diagnosed among persons with a history of IVDU. In addition, the proportion of cases linked to heterosexual transmission (especially among Blacks) is substantially higher than among Whites. Clearly, the epidemic is having a differential affect on minority communities.

During the 4 year period between 1988 and 1992, these patterns changed little. There was a small decrease in the proportion of cases linked to male homosexual/bisexual activity in all racial/ethnic groups. On the other hand, there was a slight increase in the proportion of AIDS cases that may be attributable to intravenous drug use. There was also a small increase in the proportion of cases among non-intravenous drug using heterosexuals (especially for Hispanics). In general, the racial patterns that developed in the earlier years of the epidemic are remaining stable.

GENDER AND THE AIDS EPIDEMIC

Table 4 indicates that the overwhelming number of AIDS cases in the United States have been reported among males. Although there was a small increase in the cumulative proportion of female cases between 1988 and 1992, males still account for almost 90 percent of the total cases to date. However, a recent change in the

definition of what constitutes "full-blown" AIDS by the CDC may lead to an increase in the proportion of diagnosed cases among females (Altman, 1992).

Examination of the data in Tables 5A and 5B reveal substantial differences with respect to the epidemiology of the disease between males and females. For males, homosexual/bisexual activity is the sole risk factor in approximately two-thirds of the diagnosed cases. About one-quarter of males with AIDS report a history of intravenous drug use. Heterosexual transmission accounts for a tiny fraction of the cumulative total. Among females, one-half of the individuals diagnosed with AIDS report a history of intravenous drug use as compared with 35 percent who became infected through heterosexual transmission. The remainder include females who were the recipients of contaminated blood or became infected in other/ undetermined ways.

There was little change in the trend with respect to risk factors for males between 1988 and 1992. The Tables indicate that somewhat fewer cases are linked to homosexual/ bisexual activity and a somwhat larger proportion have occurred in males with a history of intravenous drug use than was true 4 years ago. However, the percentage changes are very small. The same is true for heterosexual transmission. Between 1988 and 1992, there was a slight increase in the cumulative proportion, rising from 2 to 3 percent of the total.

Among females, there was somewhat more change with respect to the epidemiological pattern. The cumulative proportion of AIDS cases attributable to intravenous drug use declined slightly as did

the proportion that resulted from other factors. The latter is not surprising given the fact that a method of screening blood products became available in 1985. However, what is most striking in these data is the rise in the cumulative proportion of cases linked to heterosexual transmission. Between 1988 and 1992, this number rose from 29 to 35 percent of the total.

CONCLUSION

Examination of these data indicate that there has not been any dramatic change with respect to the epidemiology of the AIDS epidemic. However, some previous patterns are becoming more pronounced. For one thing, the proportion of AIDS cases that are being diagnosed among Blacks and Hispanics continues to rise at an alarming rate. Second, there has been some increase in the cumulative proportion of reported cases among females. Third, the proportion of cases diagnosed in persons with a history of intravenous drug use has risen slighly, especially among males. Finally, there has been an increase in the proportion of cases linked to heterosexual transmission among both females and minorities.

The analysis suggests that AIDS will continue to be a major concern for correctional administrators. Correctional populations are disproportionately minority and the reported increase in the proportion of Blacks and Hispanics diagnosed with this disease has to be troubling to those officials who had hoped that the problem of institutional AIDS would level off. In addition, the small rise in the proportion of cases diagnosed among intravenous drug users cannot

be good news either since a disproportionate number of inmates have a history of needle-sharing. Finally, although there has been some increase with respect to heterosexual transmission, the dramatic rise that some feared has not occurred to date.

REFERENCES

Altman, Dennis (1987). AIDS In the Mind of America: The Social, Political and Psychological Impact of a New Epidemic. Anchor Books.

Altman, Lawrence K. (1992). "Federal Health Officials Propose An Expanded Definition of AIDS," New York Times. October 28: A11.

Bacchetti P. and A.R. Moss (1989). "The Incubation Period of AIDS in San Francisco," Nature. Vol. 338, pp. 251-253.

Blumberg, Mark (1989). "Issues and Controversies With Respect to the Management of AIDS in Corrections," The Prison Journal. Vol. LXVIX, pp. 1-13.

Brewer, T. Fordham, David Vlahov, Ellen Taylor, Drusilla Hall, Alvaro Munoz and B. Frank Polk (1988). "Transmission of HIV Within a Statewide Prison System," AIDS. Vol. 2, No. 5, pp.363-366.

Centers For Disease Control (1992). HIV/AIDS Surveillance Report. Atlanta, Ga., U.S. Department of Health and Human Services, (July).

Centers For Disease Control (1991). HIV/AIDS Surveillance Report. Atlanta, Ga., U.S. Department of Health and Human Services, (July).

Centers For Disease Control (1990). HIV/AIDS Surveillance Report. Atlanta, Ga., U.S. Department of Health and Human Services, (July).

Centers For Disease Control (1989). HIV/AIDS Surveillance Report. Atlanta, Ga., U.S. Department of Health and Human Services, (July).

Centers For Disease Control (1988). AIDS Weekly Surveillance Report. Department of Health and Human Services, (July 18).

Hearst, Norman and Stephen B.Hulley (1988). "Preventing the Heterosexual Spread of AIDS: Are We Giving Our Patients the Best Advice?" Journal of the American Medical Association. Vol. 259, No. 16, pp.2428-2432.

Horsburgh, C. Robert, Joseph Q. Jarvis, Trudy McArthur, Terri Ignacio, and Patricia Stock (1990). "Seroconversion to Human Immunodeficiency Virus in Prison Inmates," American Journal of Public Health. Vol. 80, No. 2, pp. 209-210.

Kelley, Patrick.W., Robert R. Redfield, David L. Ward, Donald S. Burke, and Richard N. Miller (1986). "Prevalence and Incidence of HTLV-III in a Prison," (letter), Journal of the American Medical Association. Vol. 256, No. 16 pp. 2198-2199.

Masters, William and Virginia Johnson with Robert Kolodny (1988). Crisis: Heterosexual Behavior in the Age of AIDS. Grove Press.

Moini, Saira and Theodore M. Hammett (1990). 1989 Update: AIDS in Correctional Facilities. Washington, D.C.: National Institute of Justice, May.

TABLE 1

Number and Proportion of Cumulative Adult/Adolescent AIDS Cases by Risk Factor, 1988-1992

Risk Factor(s)	1988	1989	1990	1991	1992
Homosexual/ Bisexual Male	63 (42,182)	61 (60,007)	60 (82,304)	59 (105,741)	58 (130,822)
Intravenous (IV) Drug User	19 (12,721)	20 (20,084)	21 (29,487)	22 (39,904)	23 (51,477)
Homosexual Male and IV Drug User	7 (4,980)	7 (6,982)	7 (9,370)	7 (11,823)	6 (14,487)
Heterosexual Cases	4 (2,815)	5 (4,458)	5 (6,952)	6 (10,011)	6 (14,045)
Other [a]	7 (4,443)	6 (6,724)	6 (9,272)	7 (12,215)	7 (15,450)
TOTAL	100 (67,141)	100 (98,255)	100 (137,385)	100 (179,694)	100 (226,281)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

a: Includes hemophiliacs (persons who received infected blood transfusions), health care workers who became infected in an occupational setting, and those whose risk factor could not be determined.

TABLE 2

Number and Proportion of Cumulative Adult/Adolescent AIDS Cases by Race/Ethnicity, 1988-1992

Race/Ethnicity)	1988	1989	1990	1991	1992
White, Not Hispanic	59.0 (39,628)	57.4 (56,424)	56.1 (77,085)	54.8 (98,402)	53.4 (120,952)
Black, Not Hispanic	25.6 (17,197)	26.5 (26,025)	27.4 (37,682)	28.2 (50,675)	29.1 (65,872)
Hispanic	14.4 (9,696)	15.1 (14,879)	15.4 (21,237)	16.0 (28,798)	16.4 (37,162)
Other/Unknown [a]	0.9 (620)	0.9 (927)	1.0 (1,381)	1.0 (1,819)	1.0 (2,295)
TOTAL	100.0 (67,141)	100.0 (98,255)	100.0 (137,385)	100.0 (179,694)	100.0 (226,281)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

a: Includes Asian/Pacific Islanders and American Indian/Alaska Natives.

TABLE 3A

Number and Proportion of Cumulative Adult/Adolescent
AIDS Cases by Race Ethnicity and Risk Factor, 1988-1992

Whites, Not Hispanic	1988	1989	1990	1991	1992
Homosexual/ Bisexual Male	78 (30,983)	77 (43,504)	77 (59,000)	76 (74,866)	76 (91,390)
Intravenous (IV) Drug User	6 (2,484)	7 (4,035)	8 (5,964)	8 (8,141)	9 (10,483)
Homosexual Male and IV Drug User	8 (3,025)	7 (4,159)	7 (5,494)	7 (6,830)	7 (8,295)
Heterosexual Cases	1 (525)	2 (888)	2 (1,445)	2 (2,115)	2 (2,932)
Other [a]	7 (2,611)	6 (3,838)	6 (5,182)	6 (6,450)	7 (7,852)
TOTAL	100 (39,628)	100 (56,424)	100 (77,085)	100 (98,402)	100 (120,952)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

a: Includes hemophiliacs (persons who received infected blood transfusions), health care workers who became infected in an occuational setting, and those whose risk factor could not be determined.

TABLE 3B

Number and Proportion of Cumulative Adult/Adolescent
AIDS Cases by Race Ethnicity and Risk Factor, 1988-1992

Blacks, Not Hispanic	1988		1989		1990		1991		1992	
Homosexual/ Bisexual Male	38	(6,526)	37	(9,675)	36	(13,717)	36	(18,088)	35	(23,029)
Intravenous (IV) Drug User	38	(6,454)	38	(10,017)	39	(14,777)	39	(19,978)	39	(25,892)
Homosexual Male and IV Drug User	7	(1,233)	7	(1,777)	7	(2,475)	6	(3,220)	6	(3,981)
Heterosexual Cases	11	(1,879)	11	(2,831)	11	(4,273)	12	(5,972)	13	(8,327)
Other [a]	6	(1,105)	6	(1,725)	6	(2,440)	6	(3,417)	7	(4,643)
TOTAL	100	(17,197)	100	(26,025)	100	(37,682)	100	(50,675)	100	(65,872)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

a: Includes hemophiliacs (persons who received infected blood transfusions), health care workers who became infected in an occuational setting, and those whose risk factor could not be determined.

TABLE 3C

Number and Proportion of Cumulative Adult/Adolescent
AIDS Cases by Race Ethnicity and Risk Factor, 1988-1992

Hispanic	1988		1989		1990		1991		1992	
Homosexual/ Bisexual Male	44	(4,250)	42	(6,208)	41	(8,673)	40	(11,566)	40	(14,865)
Intravenous (IV) Drug User	38	(3,721)	40	(5,941)	40	(8,598)	40	(11,601)	40	(14,864)
Homosexual Male and IV Drug User	7	(698)	7	(1,011)	6	(1,347)	6	(1,700)	6	(2,113)
Heterosexual Cases	4	(394)	5	(705)	6	(1,117)	6	(1,840)	7	(2,692)
Other [a]	6	(633)	6	(1,014)	6	(1,442)	6	(2,091)	6	(2,628)
TOTAL	100	(9,696)	100	(14,879)	100	(21,237)	100	(28,798)	100	(37,162)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

a: Includes hemophiliacs (persons who received infected blood transfusions), health care workers who became infected in an occuational setting, and those whose risk factor could not be determined.

TABLE 4

Number and Proportion of Cumulative Adult/Adolescent
AIDS Cases by Gender, 1988-1992

Gender	1988	1989	1990	1991	1992
Males	91.8 (61,676)	91.1 (89,528)	90.5 (124,385)	89.8 (161,493)	89.2 (201.958)
Females	8.1 (5,465)	8.9 (8,727)	9.5 (13,000)	10.1 (18,201)	10.7 (24,323)
TOTAL	100.0 (67,141)	100.0 (98,255)	100.0 (137,385)	100.0 (179,694)	100.0 (226,281)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

TABLE 5A

Number and Proportion of Cumulative Adult/Adolescent AIDS Cases by Gender and Risk Factor, 1988-1992

Risk Factor	1988	1989	1990	1991	1992
Males					
Homosexual/ Bisexual	68 (42,182)	67 (60,007)	66 (82,304)	65 (105,741)	65 (130,822)
Intravenous (IV) Drug User	16 (9,896)	17 (15,550)	18 (22,798)	19 (30,641)	19 (39,364)
Homosexual Male and IV Drug User	8 (4,980)	8 (6,982)	8 (9,370)	7 (11,823)	7 (14,487)
Heterosexual Cases	2 (1,219)	2 (1,856)	2 (2,824)	2 (3,976)	3 (5,521)
Other [a]	6 (3,399)	6 (5,133)	6 (7,089)	6 (9,312)	6 (11,764)
TOTAL	100 (61,676)	100 (89,528)	100 (124,385)	100 (161,493)	100 (201,958)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

a: Includes hemophiliacs (persons who received infected blood transfusions), health care workers who became infected in an occuational setting, and those whose risk factor could not be determined.

TABLE 5B

Number and Proportion of Cumulative Adult/Adolescent AIDS Cases by Gender and Risk Factor, 1988-1992

Risk Factor	1988	1989	1990	1991	1992
Females					
Intravenous (IV) Drug User	52 (2,825)	52 (4,534)	51 (6,689)	51 (9,263)	50 (12,113)
Heterosexual Cases	29 (1,596)	30 (2,602)	32 (4,128)	33 (6,035)	35 (8,524)
Other [a]	19 (1,044)	18 (1,591)	17 (2,183)	16 (2,903)	15 (3,686)
TOTAL	100 (5,465)	100 (8,727)	100 (13,000)	100 (18,201)	100 (24,323)

Sources: AIDS Weekly Surveillance Report (July 18,1988) and HIV/AIDS Surveillance (1989-1992)

a: Includes hemophiliacs (persons who received infected blood transfusions), health care workers who became infected in an occuational setting, and those whose risk factor could not be determined.