

HIV Seroprevalence and Seroincidence Among Inmates Entering New York State Correctional System

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Background

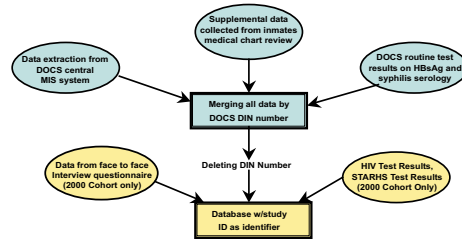
HIV among Inmates

- New York State ranks first in number of HIV-infected inmates in the nation
- At year end 1999, New York held over 25% of all prison inmates known to be HIV+ (Source: Bulletin, Bureau of Justice Dept., July 2001, NCJ 18456)
- In 2000, eight New York State prison inmates died of AIDS, down from 258 AIDS-related deaths in 1995 (Source: NYS Department of Correctional Services, 2001)

NYS Prison System

- All incoming inmates are processed through six central intake facilities
- Median Time spent in county jail before entering state prison system: 6-12 months
- Inmates Profile: (Under custody on 1/1/1999)
 - 70,000 held in 71 correctional facilities
 - 5% of all inmates were females
 - 65% of all inmates were from New York City
 - Median sentence: 48 months

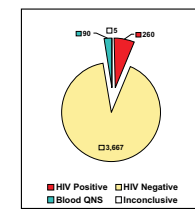
Methodology: Data Collection



Representativeness: Sample vs. Total Prisoner Population

Characteristic	Field Name	Total Under Custody (Jan. 1 1999)	Number (2000 cohort only)	Percent (2000 cohort only)
Gender	% Female	5.0%	839	20.9%
Age	Mean Age	32.5 yrs	4,012	32.4 yrs
Race & Ethnicity				
	White	15.4%	919	22.9%
	African American	50.8%	2,075	51.6%
	Hispanic	32.0%	952	23.7%
	Other	1.8%	76	1.9%
Birth Place	% Foreign Born	13.1%	316	7.9%
Marital Status	% Never Married	65.4%	2,859	71.4%
Academic Degree	% Highschool Diploma or Above	43.6%	1,516	37.7%
Illicit Drug Use	% Reporting Past Drug Use	58.7%	2,401	59.7%

Determining HIV Seroincidence (Year: 2000, Total N=4,022)



- Of the 260 seropositive specimens, 170 were STARHS tested (blood QNS=90)
- 10 recent infections (conversions happened within 140 days before entering state correctional system)

HIV Seroconverters versus HIV+ Non-seroconverters

Demographic Characteristics

	HIV Positive, Non-converters (2000 Cohort, N=250)		HIV Seroconverters* (2000 Cohort, N=10)	
	Number	Percent	Number	Percent
Sex:				
Male	141	56.4	4	40.0
Female	109	43.6	6	60.0
Race:				
White, non-Hispanic	26	10.4	2	20.0
Black, non-Hispanic	156	62.4	6	60.0
Hispanic	65	26.0	2	20.0
Other	3	1.2	0	0.0
Age:				
16-24	11	4.4	1	10.0
25-34	63	25.3	5	50.0
35 and over	175	70.3	4	40.0
Return Parole Violator Time Spent in Jail Before Entering State Prison				
0 Days	20	8.0	1	10.0
1-6 months	118	47.2	5	50.0
7-12 months	76	30.4	2	20.0
Over a year	36	14.4	2	20.0

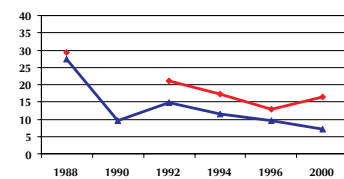
Conclusions

- HIV seroprevalence among inmates entering NYS correctional system decreased steadily over the 12 years of observational study
- This trend parallels the decline in self-reported injection drug use over the same period
- Recent HIV infection among incoming inmates indicates that transmission occurred during the 5 months before they entered the NYS correctional system

Trends

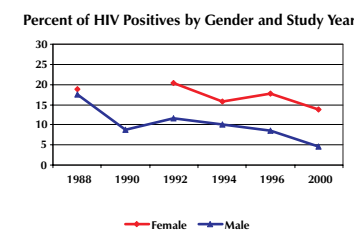
Self-reported Injection Drug Use

Percent of Inmates Ever Injected Illicit Drugs by Gender and Study Year



HIV Seroprevalence

Percent of HIV Positives by Gender and Study Year



Methodology: Study Design

- Six waves of data collection conducted in 1988, 1990, 1992, 1994, 1996 and 2000
- Consecutive incoming inmates selected from four of six central intake processing facilities
- Blinded seroprevalence survey through chart review of medical history evaluation records
- Leftover blood specimens collected for anonymous HIV testing; STARHS testing performed for 2000 cohort to determine HIV seroincidence

Demographic Characteristics

Characteristics	Female		Male		Total	
	Number	Percent*	Number	Percent*	Number	Percent*
RACE & ETHNICITY						
White, non-Hispanic	690	16.1	1,906	13.9	2,596	14.5
Black, non-Hispanic	2,285	53.4	7,100	51.9	9,385	52.3
Hispanic	1,246	29.1	4,440	32.5	5,686	31.7
Other	60	1.4	224	1.6	284	1.6
AGE GROUP						
16-24	694	16.4	4,284	31.4	4,978	27.9
25-34	2,067	48.8	5,510	40.4	7,577	42.4
35 and over	1,475	34.8	3,843	28.2	5,318	29.8
PAROLE VIOLATION						
Yes	559	23.9	1,833	24.8	2,392	24.6
No	1,778	76.1	5,573	75.3	7,351	75.5

Selected HIV Risk Factors

HIV Risk Factors	Female		Male		Total	
	Number	Percent*	Number	Percent*	Number	Percent*
Injection Drug Use (ever)						
Yes	781	18.4	1,532	11.2	2,313	12.9
No	3,476	81.7	12,134	88.8	15,610	87.1
Having Sex With the Same Sex (ever)						
Yes	1,141	27.5	218	1.6	1,359	7.7
No	3,012	72.5	13,354	98.4	16,366	92.3
Sex for Money and/or Drugs (ever)						
Yes	988	23.8	515	3.9	1,503	8.7
No	3,169	76.2	12,541	96.1	15,710	91.3

* Percentage may not add up to 100% due to rounding.

Results: Estimates of Annual Incidence Rate by Study Site

	# HIV+ Test w/STARHS	# HIV+ Test wo/STARHS	# HIV-	# Recent Infections	Adjusted Annual IR	95% CI
Bedford Hills (Female)	19	711	6	2.61%	0.80%-6.64%	
Downstate	96	26	1,011	2	0.88%	0.14%-3.06%
Elmira	37	14	930	1	0.77%	0.09%-2.42%
Ulster	8	31	1,015	1	0.53%	0.04%-2.42%
Total Male	29	71	2,956	4	0.69%	0.22%-1.69%

Notes for calculating Adjusted Annual Incidence Rate (AIR):
 * Methodology discussed in Guide to Calculating Incidence using STARHS Results from Cross-Sectional Survey (August, 2000; CDC)
 * % Infected per year = (# Recent HIV Infections / (# HIV Negative + # Recent HIV Infections)) * (365.25/140) * 100
 * Estimates of the Adjusted Annual Incidence should be used with caution as the adjustments account for a larger than usual proportion of HIV positive specimens that were not STARHS tested due to QNS. The estimates are derived using =140 days and a lower and upper limits of 122.4 and 160.2 (Source: New Subtype B Window Period.doc; CDC, unpublished data).

Selected HIV Risk Factors

	HIV Positive, Non-converters (2000 Cohort, N=250)		HIV Seroconverters* (2000 Cohort, N=10)	
	Number	Percent	Number	Percent
Illicit Drug Use:				
Used Illicit Drugs, ever	201	80.4	8	80.0
Used Illicit Drugs, in the past 6 months	124	49.6	6	60.0
Injected Illicit Drugs, ever	65	26.0	2	20.0
Injected Illicit Drugs, in the past 6 months	19	7.6	1	10.0
Sexual Risks:				
Had Sex with the Same Sex, ever	43	17.2	2	20.0
Had Sex for Money and/or Drugs, ever	45	18.0	1	10.0
Other Concerns:				
Hepatitis C positive	113	45.2	3	30.0
Hepatitis B positive	25	10.0	0	0.0
Mental Disorders (diagnosed by DOCS)	30	12.0	4	40.0

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