Undiagnosed HIV Infection Among New York City Jail Entrants, 2006: Results of Blinded Serosurvey

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Background

HIV in New York City
- HIV prevalence in NYC population as of 12/31/2005 (known cases, diagnosed and reported to HARS and not known to be dead):
  - Males: 1.5%
  - Females: 0.7%
- HIV prevalence from most recent NYC jail serosurvey conducted in 1998:
  - Males: 7.6%
  - Females: 18.1%

NYC Correctional System
- NYC Department of Correction (DOC) operates 11 facilities:
  - Rikers Island (9 facilities)
  - 2 borough facilities
- During 2006:
  - 93,327 male admissions (84,363 unique individuals)
  - 11,895 female admissions (8,075 unique individuals)
  - Average daily census of 13,000 - 14,000
  - Median length of stay: 7 days
  - 25% of admissions are released within 3 days

Routine Medical Screening
- DOHMH Bureau of Correctional Health Services (BCS) coordinates medical, mental health, and dental services for all inmates in NYC Correctional System (Rikers Island, 9 facilities)
  - Includes routine, voluntary health screening at intake for all newly admitted inmates
  - Blood drawn for routine syphilis screening
  - HIV rapid testing offered beginning 2/2005
  - As of April 2006, CHS used electronic record system for intake screening (Rikers Island Intake System or RIS) at 6 facilities

HIV Testing Program
- Conducted 8,500 tests in 2003; after introduction of rapid testing in March 2004, testing volume increased to 25,000 in 2005
- Believed to be second-highest volume HIV test in NYC (after NYC DOHMH STD clinic)
- Among all NYC providers, NYC jails were largest volume HIV case reporter during 2005, with 180 new diagnoses (4.6% of all new diagnoses in NYC)

Objectives
- To determine prevalence of HIV infection in persons newly admitted to the NYC Correctional System
- To ascertain the proportion of HIV+ persons who are aware of their HIV status
- To understand extent to which jail testing currently detects previously undiagnosed HIV
- To ascertain the proportion of HIV+ persons who are known to the surveillance system

Study Population
- Consecutive new admissions to NYC Correctional System with remnant serum available from routine syphilis screening performed at intake
- Specimens collected for blinded HIV testing until target sample size reached (Targets: 4,411 males, 1,791 females).

Methods

Data Collection
- New admissions with specimen available for testing (vs. no specimen available) were:
  - Younger
  - More likely to be black or Hispanic than white/other
  - Less likely to be IDU (37% less among males, 25% among females)
  - Less likely to self-report having HIV (34% less among males, 56% among females)
  - Less likely to be in HIV surveillance registry (52% less among both males and females)

Unlinking/Laboratory Testing
- Records linked to corresponding specimen specimens assigned random surve illness ID number
- Data and specimens then stripped of all personal identifiers

HIV Seroprevalence
- Overall HIV prevalence in new admissions:
  - Males: 219 (4.99) ± 4.1% ± 5.3%
  - Females: 171 (9.78) ± 9.3% ± 11.5%
  - Combined (male and female) HIV prevalence = 6.5% (5.5% - 0.7%)
- HIV Seroprevalence in New Jail Admissions by Risk, Race

Results

Sample vs. Non-sample
- New admissions with specimen available for testing (vs. no specimen available) were:
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Multivariate predictors of HIV Seropositivity
- Self-reported risk factor

Results (cont’d)

Conclusions

- HIV prevalence among new admissions has decreased since 1998 serosurvey
  - 8% vs. 5%

- Possible underreporting of HIV-positive serostatus at intake

- Possible underreporting of risk factors at intake

- Matching to surveillance registries is an imperfect process
  - 21% HIV-negative persons matched to HIV registry

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