Abstract & Poster:

Background
- New York City (NYC) has the oldest, largest HIV epidemic in the Western world. There are currently over 105,000 New Yorkers living with HIV/AIDS (PLWHA) and nearly 4,000 new HIV diagnoses each year.
- The HIV Epidemiology & Field Services Program (HEFSP) undertakes periodic, incidence, resistance and acute surveillance, as well.
- HIV/AIDS has changed from conferring a limited life expectancy to being a chronic, manageable condition. This necessitates changes in surveillance with increased demand for care-related analyses.

Methods
- Evaluated the NYC HIV/AIDS surveillance system using CDC’s "Updated Guidelines for Evaluating Public Health Surveillance Systems."
- Identified and interviewed key stakeholders and staff, and analyzed surveillance data and reports.
- Focused on 2008 and 2009 activities.

Data flow, processing and volume:
- HIV infection
- Field Services Unit & Partner Services
- Laboratory
- DOHMH
- NYC DOHMH Surveillance Unit (NESS)
- Patient looks care
- Never tested
- WB, CD4, VL, PCR
- 859,000 records/yr
- Field Investigation
- 1 million records/yr
- >12,000/yr
- CDC target
- 95% within 12 months
- CDC of HIV/AIDS
- >5 million records
- NYC HIV/AIDS
- Surveillance
- Updated lab results, status & vital info
- Matching & Data Cleaning
- 1 million records/yr
- Previously reported
- Previously unreported
- Wait for more lab
- Field Investigation
- CDC of HIV/AIDS
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- Previously reported
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Results
- Completeness. Selected variables, when complete, facilitate record linkage and advanced analyses such as geocoding.
- Registry and eHARS completeness
- Case completeness: 98.0%
- CDC-defined: 62.0%
- with HEFSP expanded heterosexual definition: 64.0%
- Social Security Number: 68.3%
- Street address of residence (2008 new diagnoses): 95.1%

- Care-related indicators
- New 2008 diagnoses with a CD4 within 3 months: 66.7%
- PLWHA in care in 2007 who returned to care in 2008: 92.0%

- Timeliness. Proportion of currently known HIV diagnoses reported since the end of the diagnosis year. The upper left quadrant exceeds the CDC goal of 85% of diagnoses within 12 years.

- Yield from field investigations. In 2009, HEFSP initiated 14,991 field investigations that yielded 4,604 new cases.

- Sensitivity & Positive Predictive Value
- There is no gold standard with which to compare surveillance data, this prohibits direct sensitivity and PPV calculation.
- Sensitivity: 98%
- PPV: 100%

- Flexibility
- High data completeness, verified through rigorous chart abstraction.
- Increased provider reporting would strengthen completeness and validity.

- Acceptability
- Highly acceptable due to: legal mandate, sustained political will, dedicated community interest, high incidence and prevalence.
- Limited by burden of time on providers and HIV-associated stigma.

- Limitations
- In an effort to describe NYC’s system broadly, in-depth attribute analysis is not included in this presentation.
- While estimated case sensitivity is high, sensitivity calculation for system components (yield from field investigation, data matching) may be more pertinent.

Conclusions
- NYC’s HIV/AIDS surveillance system is large and complex. While clearly successful at enumerating cases, HEFSP faces increased demand for care-related analyses possible because of the wealth of lab-reported data. The challenges of data management and record linkage necessary for such analyses warrant additional evaluation.

Limitations
- Limited by burden of time on providers and HIV-associated stigma.

Recommendations
- Earlier data release given the timeliness and high completeness of data.
- Continued improvement of provider reporting to enhance completeness and validity of demographic and risk variables. Novel reporting methods such as electronic provider forms and incentives should continue to be pursued.
- Simultaneously with this analysis, HEFSP has initiated field investigation of undetectable viral load tests to increase case yield and maximize resources.

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