

Identifying new HIV infections among partners testing HIV-negative at notification: Matching HIV registry to partner services data



**Dipal Shah, Sarah Braunstein, Arpi Terzian, Chi-Chi Udeagu and
Colin Shepard**

HIV Epidemiology and Field Services Program

Bureau of HIV/AIDS Prevention and Control

New York City Department of Health and Mental Hygiene

<http://www.nyc.gov/html/doh/html/dires/hivepi.shtml>

Presenter: Dipal Shah

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ORIGINAL ARTICLE

Prevention of HIV-1 Infection with Early Antiretroviral Therapy

Myron S. Cohen, M.D., Ying Q. Chen, Ph.D., Marybeth McCauley, M.P.H.,
Theresa Gamble, Ph.D., Mina C. Hosseinipour, M.D.,

Cohen MS, Chen YQ, McCauley M, et al. Prevention of HIV-1 Infection with Early Antiretroviral Therapy. *NEJM* 2011;**365**:493-505.

New York State Law and Partner Services

Public Health Law (63.8) passed in 1998 and implemented in 2000:

- **Named HIV reporting**
- **Partner notification**
 - Requires providers to talk to HIV-infected patients about their partners
 - Requires providers to report known sex or needle sharing partners to health department
 - Gives providers the opportunity to delegate the notification to the health department

Public Health Does It Better

Sexually Transmitted Diseases, December 2008, Vol. 35, No. 12, p.000–000
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Human Immunodeficiency Virus Partner Elicitation and Notification in New York City: Public Health Does It Better

MAUREEN C. MALAVE, MPH,* DIPAL SHAH, MPH,* JUDITH E. SACKOFF, PhD,* STEVE RUBIN, BBA,††
AND ELIZABETH M. BEGIER, MD*

2005 Assessment of NYC PS System:

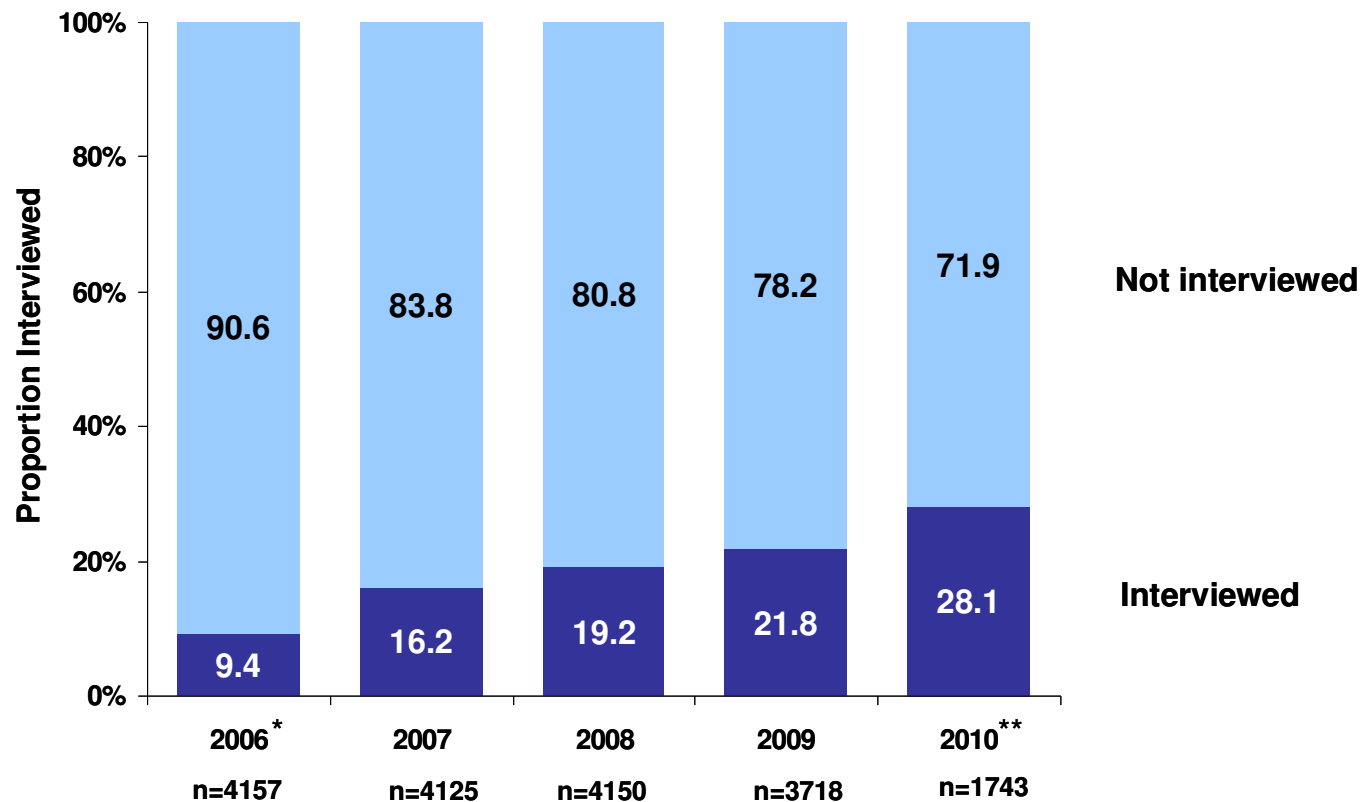
- **DOHMH staff elicited 4 times as many partners as community providers**
- **70% of DOHMH-elicited partners notified vs. 48% of community-elicited partners**

Field Services Unit (FSU) – Est. 2006

- **Helps HIV infected patients and their providers notify sex and needle-sharing partners of their exposure**
- **Helps notified partners get tested for HIV, including through field-testing**
- **Helps HIV-positive patients and partners to link and/or return to medical care, if necessary**
- **Helps DOHMH better understand risk information through patient face-to-face interviews**

FSU Expansion Led to Increase in Newly Diagnosed NYC Cases Interviewed

**Proportion of New HIV Diagnoses in NYC Interviewed*
by the NYC DOHMH Field Services Unit**



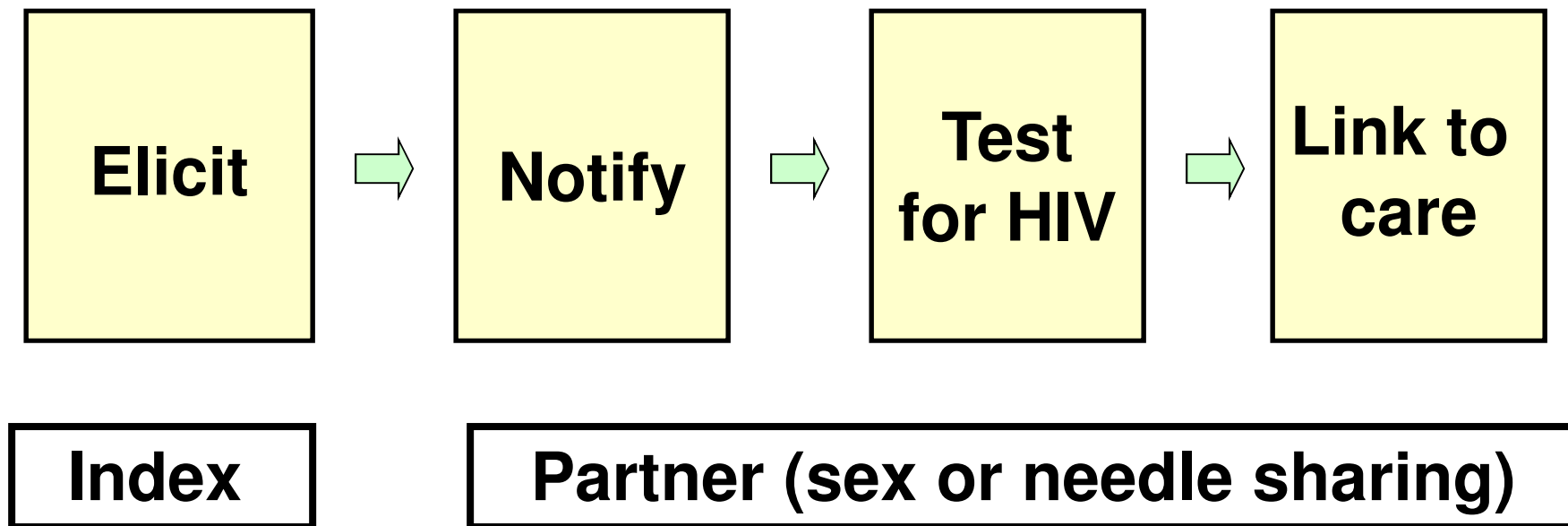
*FSU created in June 2006, so data for 2006 are for 6 months only.

**2010 data are for January-June 2010 only

NYC DOHMH HIV Partner Services (PS)

PS includes confidential partner notification , prevention counseling, testing for HIV and other types of STDs, treatment or linkage to medical care or prevention services

PARTNER NOTIFICATION



Partner Notification Disposition Codes

<u>Disposition</u>	<u>Definition</u>
1	Notified - Previous Positive
2	Notified - Previous Negative, New Positive
3	Notified - Previous Negative, Still Negative
4	Notified - Previous Negative, Not Re-tested
5	Notified - Not Previously Tested, New Positive
6	Notified - Not Previously Tested, Still Negative
7	Notified - Not Previously Tested, Not Tested Now
G	Not Notified - Insufficient Information to Begin Investigation
H	Not Notified - Unable to Locate
J	Not Notified - Locate, Refused Counseling and Testing
K	Not Notified - Out of Jurisdiction
L	Not Notified – Other
V	Not Notified - Deferred due to risk of domestic violence

Obtaining Partner HIV Status Information

- **FSU notified partners in the field (a partner's home, official car)**
- **Partners were assisted with HIV testing in clinics (including by being escorted) to a:**
 - Health department STD clinic
 - FSU participating facility
 - Consent obtained to view HIV test results

Analysis Objective

**Estimate number of notified
HIV-negative partners who are
identified as HIV-positive at
one-year following report.**

Study Population and Eligibility Criteria

Study Population

- **Sex and needle-sharing partners reported to the NYC DOHMH**
 - September 1, 2006 to September 30, 2007

Eligibility Criteria

- **Partners having required minimum identifying information:**
 - last name and first name and date of birth (DOB) or age

NYC HIV Surveillance Registry (eHARS)

- **Population-based registry**
 - Every case of AIDS reported in NYC since 1981
 - Every case of HIV reported in NYC since 2000
- **Over 200,000 individuals reported**
 - ~ 50% have died
- **Information collected includes**
 - Names
 - Demographic information
 - Risk behaviors
 - Opportunistic infections
 - Laboratory data related to HIV/AIDS status

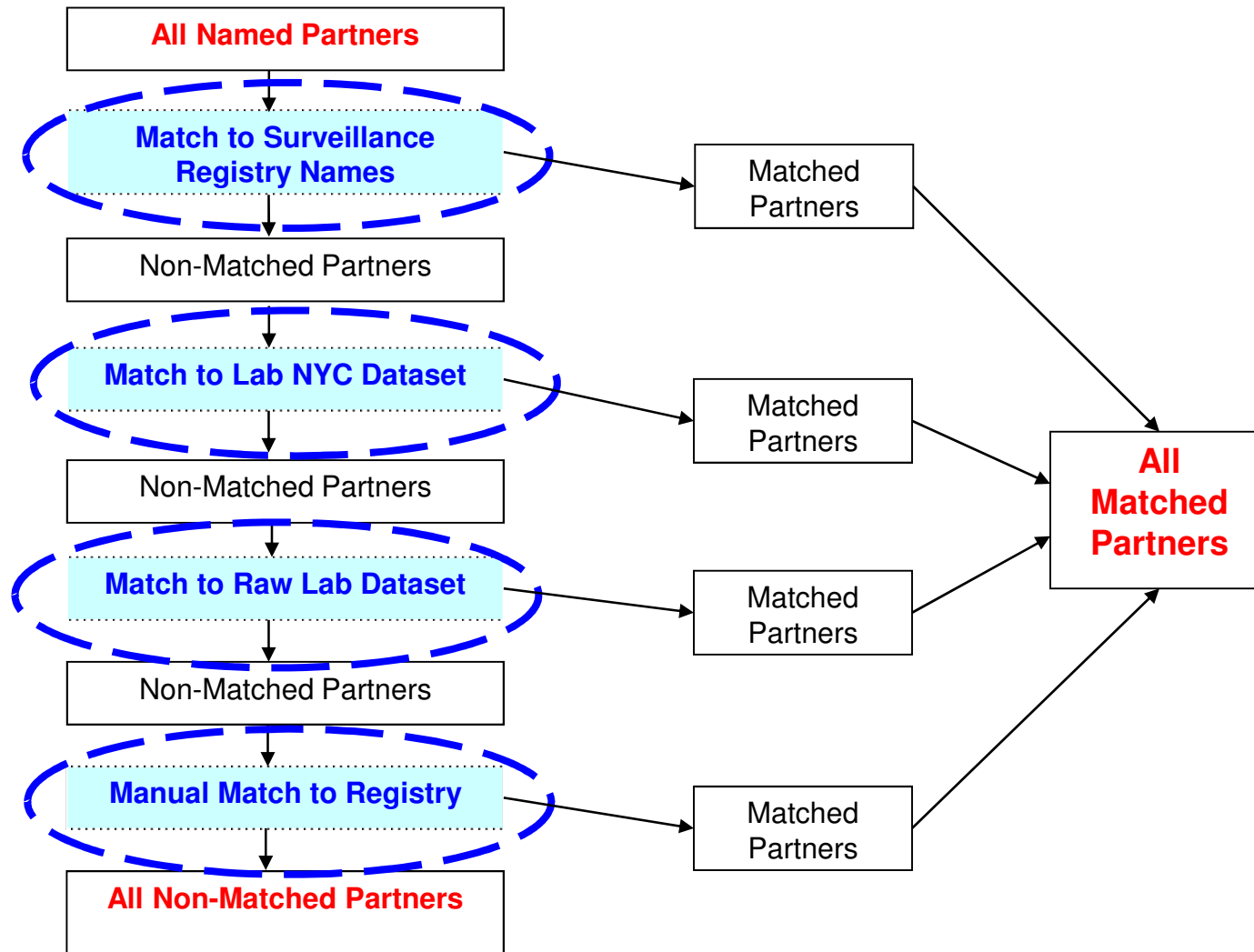
Matching Partners to the Registry

Multi-Step Linkage Process

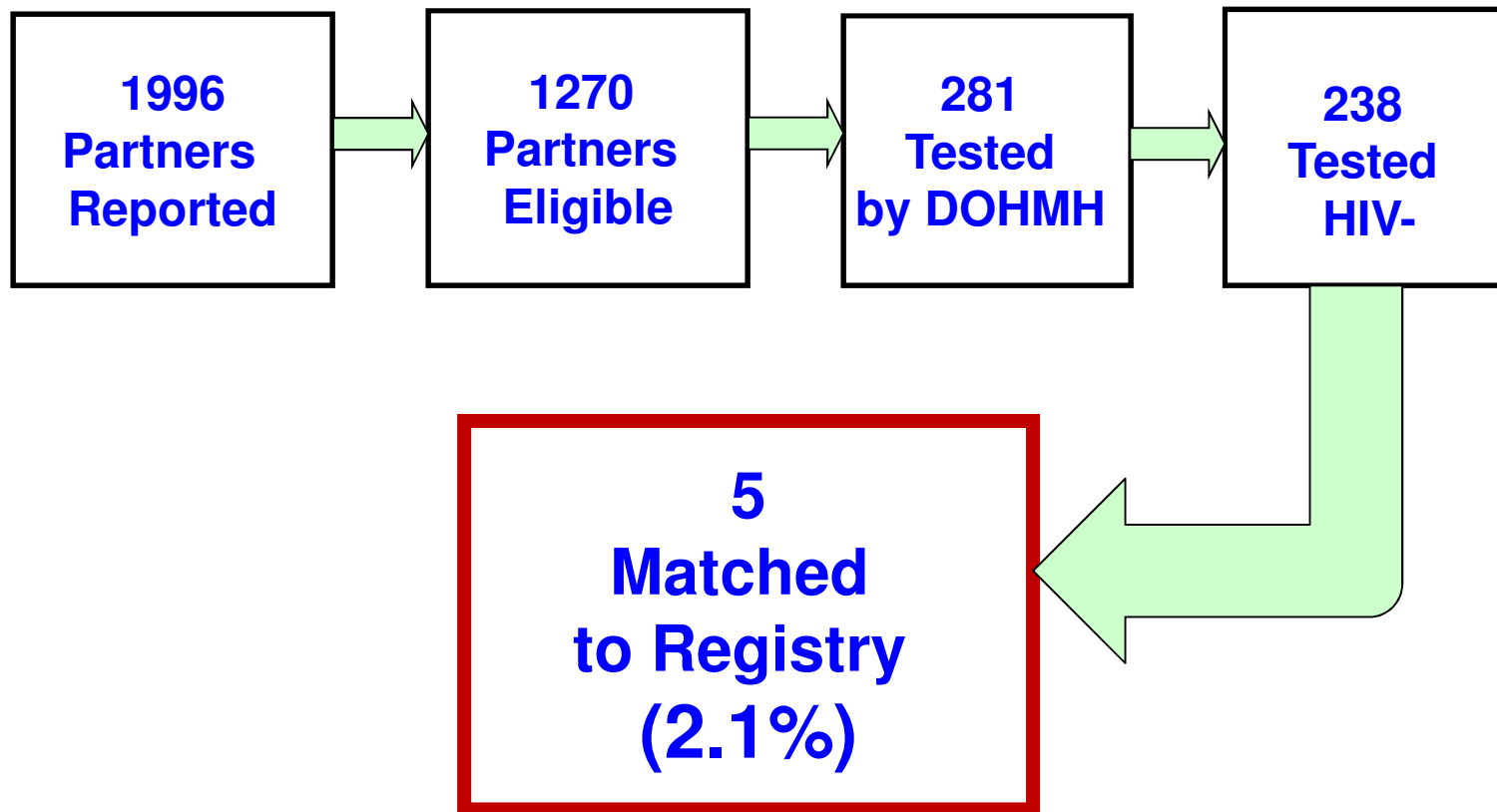
Key Codes

- 1**='(1)full last, first1-6, dob'
- 2**='(2)full last, first1-3, dob'
- 3**='(3)last1-4, first1-2, dob'
- 4**='(4)last1, last3-8, first2-8, dob'
- 5**='(5)last4-7, full first, dob'
- 6**='(6)last3-6, first1-3, dob'
- 7**='(7)last1-4, first name, any 2 parts of dob'
- 8**='(8)soundex, first3-5, dob'
- 9**='(9)last1-6, first name, mob, day ob'
- 10**='(10)last2-4, first2-4, dob

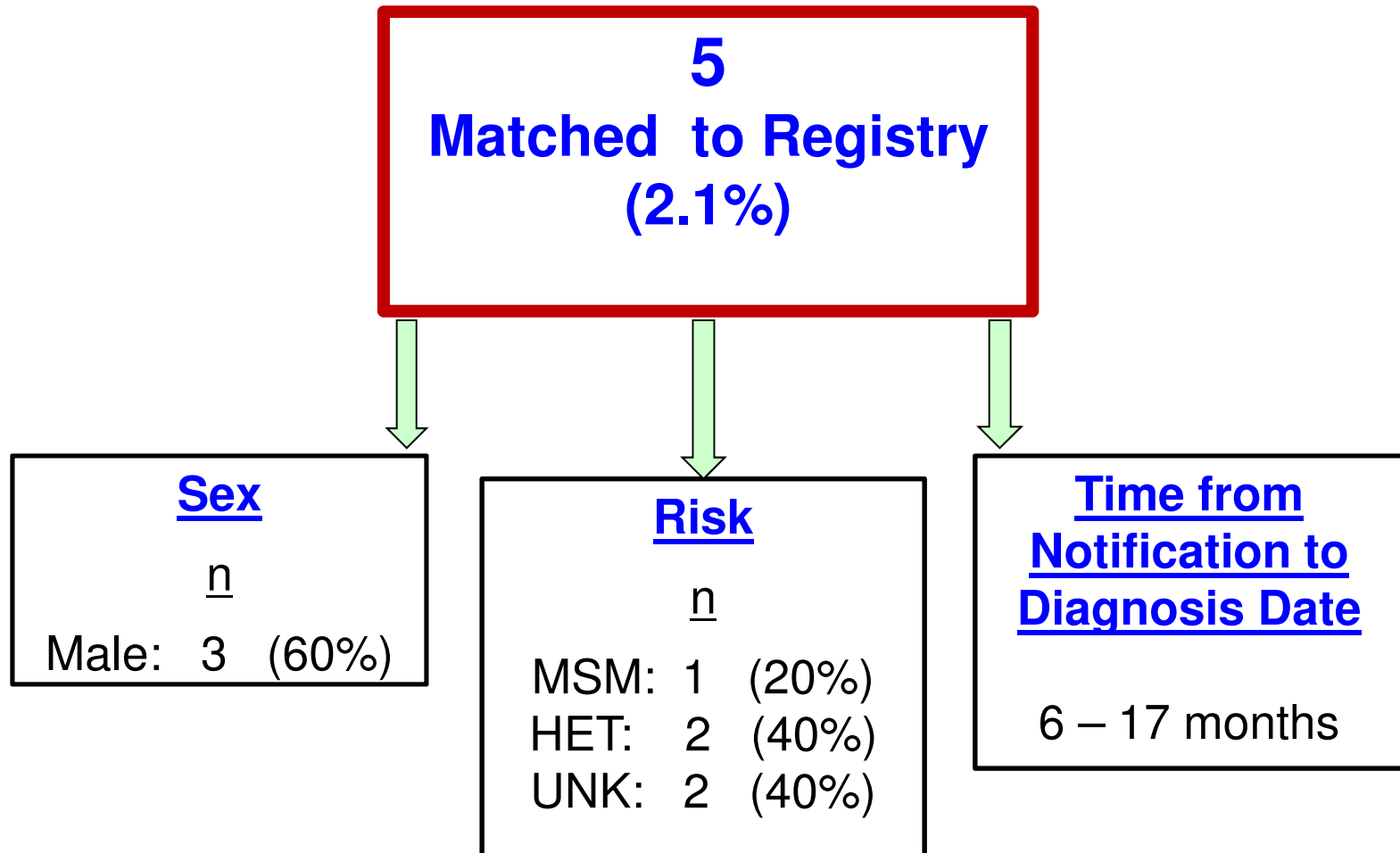
Matching partners to the Registry



2% of partners testing HIV- found in the HIV Surveillance Registry



2% of partners testing HIV- found in the HIV Surveillance Registry



Discussion

- **First time NYC partner data has been evaluated on such a large scale**
- **Reflection of work towards a CDC goal to integrate separate systems for identifying newly diagnosed persons who are potential candidates for partner services**
 - HIV Surveillance Registry
 - STD Partner Reporting
 - Field Services Database
 - Global Partner Database

Discussion

- **2% of partners who tested negative at notification were found in the registry**
 - **Comparable rate to that previously observed among uninfected members of HIV serodiscordant heterosexual couples in which the infected partners did not initiate antiretroviral therapy***
 - **Minimum estimate of partners newly-infected with HIV following notification because partners:**
 - May have been diagnosed outside NYC
 - Did not test after notification or study period
 - May have been in acute phase of infection, therefore did not test positive
 - May have used alias names and/or DOB at testing, therefore did not match to the registry

* Donnell D, Baeten JM, Kiarie J, et al. Heterosexual HIV-1 transmission after initiation of antiretroviral therapy: a prospective cohort analysis. *Lancet* 2010; **375**: 2092-2098.

Limitations

- **Reported partner population**
 - Index cases self-report to providers or DOHMH
 - Limited to providers who actively elicit and report partners
 - Limited to number of FSU sites
- **Reported partner data incomplete**

Next Steps

- **Improve partner data**
 - FSU at more sites
 - Providers education and outreach
- **Consider outreach to partners HIV-negative in the months following notification to promote follow-up HIV testing**
- **More frequent matches to the HIV Surveillance registry to capture seroconverters in a more timely manner**

Conclusion

- **Matching partners to a HIV Surveillance Registry has many useful purposes that can help guide future HIV prevention and partner notification efforts.**
- **Data linkage activities involving HIV partner service data and jurisdictional HIV registries should be performed routinely to identify new cases.**

Acknowledgments

- **Providers reporting partners to the DOHMH**
- **NYC DOHMH**

HIV Epidemiology and Field Services, Bureau of HIV Prevention and Control

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Bureau of STD Control

- Disease Intervention Specialists