# Matching inpatient hospitalization records to the New York City HIV surveillance registry, 2013

Rachael Lazar<sup>1,2</sup>, Laura Kersanske<sup>2</sup>, and Sarah Braunstein<sup>2</sup>

<sup>1</sup>CDC/CSTE Applied Epidemiology Fellowship

<sup>2</sup>New York City Department of Health and Mental Hygiene

CSTE Annual Conference

Anchorage, AK June 21, 2016





## Speaker Disclosures

No commercial or financial relationships to disclose

#### Rationale for matching

- New York City (NYC) HIV surveillance registry used to monitor the clinical status of people with HIV/AIDS (PWHA)
- New York State's Statewide Planning and Research Cooperative System (SPARCS) maintains hospital discharge records for all hospitalized patients
- Linking these sources allows us to:
  - Gain a more complete picture of health care interactions among PWHA
  - Characterize PWHA receiving inpatient care
  - Identify reasons for hospitalization and comorbidities

### Match process

# 122,679 PWHA in the NYC HIV registry

- Alive as of 1/1/2013
- Diagnosed with HIV as of 12/31/2013

# 822,469 hospitalized individuals

At least one hospitalization in an NYC facility in 2013

## Match process

# 122,679 PWHA in the NYC HIV registry

- Alive as of 1/1/2013
- Diagnosed with HIV as of 12/31/2013

# 822,469 hospitalized individuals

At least one hospitalization in an NYC facility in 2013

#### 16 match rounds using keys

- Partial first/last name
- Full date of birth
- Partial SSN
- Sex
- Zip code

## Match process

# 122,679 PWHA in the NYC HIV registry

- Alive as of 1/1/2013
- Diagnosed with HIV as of 12/31/2013

## 822,469 hospitalized individuals

At least one hospitalization in an NYC facility in 2013

#### 16 match rounds using keys

- Partial first/last name
- Full date of birth
- Partial SSN
- Sex
- Zip code

#### **Manual review**

- Non-matches flagged as HIV-infected by hospital (N=1,948)
- Low match scores (N=83)

#### Resulting dataset

# 122,679 PWHA in the NYC HIV registry

- Alive as of 1/1/2013
- Diagnosed with HIV as of 12/31/2013

# 822,469 hospitalized individuals

At least one hospitalization in an NYC facility in 2013

16,648 matched PWHA with 27,049 hospitalization events

- Manual review resulted in matching 690 patients flagged as HIV-infected by hospital that did not match programmatically
- Overall, 12,990 (78%) of 16,648 PWHA were flagged as HIV-infected in hospital records

#### Conclusions

- Matched data can be analyzed at patient or event level to provide insight into clinical care patterns among NYC PWHA
- Match methods can be applied to additional years and to future matches with other data sources
- Limitation: lack of full name for match
- Next steps:
  - Compare hospitalization rates among demographic subpopulations
  - Characterize reasons for hospitalizations (HIV or other condition)

#### Acknowledgements

- Coauthors Laura Kersanske and Sarah Braunstein, NYC DOHMH
- This study/report was supported in part by an appointment to the Applied Epidemiology Fellowship Program administered by the Council of State and Territorial Epidemiologists (CSTE) and funded by the Centers for Disease Control and Prevention (CDC) Cooperative Agreement Number 1U38OT000143-03.