

Chlamydia Screening Coverage in Central Brooklyn

Chlamydia Evaluation Initiative (CEI)

Melissa Kyriakos Nelson, MSc

Background

- CDC recommends annual Chlamydia screening for all sexually active females age 25 or younger
- Only CT positive tests reported to NYC DOHMH
- CDC wants to examine how closely screening guidelines are being met
- Central Brooklyn (CB) selected for CEI as community suffers highest levels of CT morbidity
 - CB includes the neighborhoods of Crown Heights, Bedford-Stuyvesant, Prospect Heights, and Brownsville and is defined by 5 zip codes

Methodologies

- 1) Indirect Estimate
- 2) Laboratory Testing Data
- 3) Electronic Health Records (EHRs)
- 4) Managed Care Medicaid

Indirect Estimate

Population at risk = Female population * Proportion sexually active

Number screened = Female population with ≥ 1 CT infection in past 12 months / CT positivity, (+/- 95% Confidence Interval)

Screening Coverage = **Number screened** / **Population at risk**

*Levine WC, Dicker LW, Devine O, et al. Indirect estimation of chlamydia screening coverage using public health surveillance data. Am J Epidemiol 2004;160:91-96

Laboratory Prevalence Data

- Identified top performing laboratories for positive CT tests
- Requested raw, de-identified data for Central Brooklyn females age 15-19 and 20-25 tested for CT from January 2009 - June 2010
- Screening data elements:
 - Age at time of collection
 - Sex
 - Race/ethnicity (if available)
 - Patient zip code
 - Date of specimen collection
 - Facility source
 - Facility address or zip
 - Pathogen tested for
 - Test type
 - Specimen type
 - Test result

EHR Data

- eClinicalWorks (eCW)- EHR offered by Primary Care Information Project (PCIP) to primary care providers in NYC underserved communities
- CT screening and sexual history queries ran at CB and directly peripheral practices live on eCW for ≥ 1 year
- Screening coverage estimated using 15-19 and 20-25 year old female patient population

EHR Data (cont.)

- Sexually active population defined using social history “Smart Form”
- Groups A-E (meets one or more of below)
 - A. Reported ever having sex
 - B. Were ever prescribed an oral contraceptive by the practice
 - C. Reported ever having an STD
 - D. Were ever diagnosed with an STD by the practice
 - E. Ever had a pap ordered by the practice

Medicaid Managed Care Data

- Data request sent to NYS Department of Health Office of Health Insurance Programs
- Requested aggregate QARR 2010 data by zip code for females aged 16-20 and 21-24 separately
 - **No. of females** continuously enrolled for 1 year
 - **No. of sexually active females** continuously enrolled for 1 year
 - **No. of sexually active females tested for CT** continuously enrolled for 1 year

Results so far....

Results: Indirect Method

No. screened ($\pm 95\%$ CI)

= 3,541 to 3,723 females aged 15-19

= 6,858 to 7,210 females aged 20-25

Screening Coverage ($\pm 95\%$ CI)

= 67% to 71% of females aged 15-19

= 60% to 63% of females aged 20-25

Results: Laboratory Data

Age Group	RESULT		Total	Positivity	Screening Coverage
	Negative	Positive			
15 to19	3,583	588	4,171	14.1%	79%
20 to25	6,916	571	7,487	7.6%	65%
Total	10,499	1,159	11,658	9.9%	

Results: EHR Method

Area	Age	Sexually Active (A)	CT tested	Screening coverage
Central Brooklyn	15-19	87	56	64%
	20-25	111	59	53%
Peripheral to CB	15-19	162	111	69%
	20-25	220	120	55%

Area	Age	Sexually Active (A-E)	CT tested	Screening coverage
Central Brooklyn	15-19	157	95	61%
	20-25	247	129	52%
Peripheral to CB	15-19	363	220	61%
	20-25	693	390	56%

Lessons for replicating methods

- Laboratory data approach likely best indication of true screening coverage although difficult to coordinate
- EHR method will be very useful once practices are more familiar with product offered (eCW) and it becomes more widely used
- Indirect calculation is easy to carry out and overall a good estimate. However, it is highly sensitive to certain components of the calculation
- Must allow sufficient time for Medicaid data request. QARR indicators for CT have age limitations