

Factors Associated with TB Testing and Evaluation among Household Contacts Exposed to Tuberculosis

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Research Questions

1. What are the household contacts' characteristics associated with TB testing and evaluation?
2. Are there differences in the proportion of household contacts tested and evaluated among index cases with a nurse case manager versus a non-nurse case manager, after controlling for potentially confounding factors?

Background

- ✦ A case of TB can infect up to 10 to 15 contacts over a year (WHO, 2016).
- ✦ Failure to be identified as contact is the primary reason for disease development in 54% of TB patients (Chin et al., 2000).

Problem Statement

- ✦ In 2015, of the 577 reported cases, 3,920 contacts identified,
 - 3,162 (81%) tested & evaluated
 - 1,149 household contacts, 83 (7%) tested (Chorba, 2015).
- *National objectives on CI is to elicit 100% of contacts of TB cases & increase proportion of contacts tested and evaluated to 93% by 2020 (CDC, 2015)*

- ✦ In 2012, TB nurses were replaced by non-nurses as case managers in the DOHMH Clinics.

Methods

Design: Retrospective secondary analysis
Site: NYC DOHMH TB Registry
Sample: Household contacts from 2010 to 2014

Data Analysis Plan

Descriptive Analysis
Inferential Analysis
➢ Multiple Logistic Regression Analysis

Table 1. Variable List

Variable Label	Variable Description
DEMOGRAPHICS	
Age	Age of patient
Sex	Sex of patient
Race	Race/Ethnicity
Country	Country of Birth
Language	Primary Language
Insurance	Insurance
Borough	NYC Borough at the time contacts was identified
Zip Code	NYC Neighborhood (area-based poverty level) by zip code
TESTING	
Exposure	Extent of exposure - Close Other than close
Testing	Tested for TB
Type of Test	Type of Test TST/QFT
Pre/Post Window	Pre-window Post-window
Testing Site	Home/Clinic/Hospital
Prior TB/LTBI	History of prior TB disease or Infection
HIV	Tested for HIV/Status
EVALUATION	
Exposure	Extent of exposure - Close Other than close
Testing	Tested for TB
TST/QFT Result	Positive Evaluated
Evaluation	Chest x-ray Seen by MD
Not Evaluated	Died prior to testing
	Died prior to evaluation
	Refused evaluation
	Lost
	Moved
Disposition	Reasons record was closed
Case Manager	Provider type
Case Management	Purpose of activity
Return to Service	Phone call
	Home visit
	Facility visit
	Letter was mailed
	Other

Theoretical Framework

- ✦ Health Promotion Model by Nola Pender (2011)
- ✦ Interaction between behavior, environment & community
- ✦ Uncovering factors that determine contacts' environment will lead to a more effective counseling on testing & evaluation

Significance of the Study

- ✦ Inform strategies to improve acceptance of TB testing and evaluation among household contacts
- ✦ Inform staffing: TB nurses as case managers

Conclusion

Understanding the factors that prevent TB testing and evaluation among contacts is crucial in developing effective interventions in contact investigation; is important in decreasing transmission and incidence of TB

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