

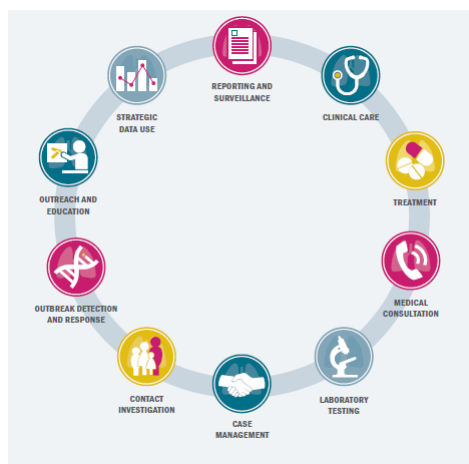
TUBERCULOSIS

IN NEW YORK CITY, 2018

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 Director, Office of Surveillance and Epidemiology
 New York City Bureau of Tuberculosis Control

STOP TB

KEY ACTIVITIES OF THE BUREAU OF TB CONTROL



- **Reporting and Surveillance – Annual Summary, 2018**
 - This report covers calendar year 2018
 - Provides robust surveillance data, summaries of core program activities and highlights
 - Data reflect the most complete information available as of January 22, 2018.

TB EDUCATIONAL RESOURCES FOR HEALTH CARE PROVIDERS AND THE PUBLIC



CLINICAL POLICIES AND PROTOCOLS

4th Edition.
Describes policies, protocols and recommendations for the prevention, treatment and control of TB



POCKET-SIZED REFERENCE GUIDE FOR PROVIDERS

Treatment and monitoring of drug-susceptible pulmonary tuberculosis
Provides concise information about treatment and monitoring for pulmonary TB



EDUCATIONAL POSTERS

"You Can Stop TB" 11x17 posters provide basic TB information and includes illustrations with captions. Available in English, Spanish, French, Haitian Creole, Hindi, Urdu, Bengali, Tibetan, Tagalog and Chinese.

Get tested/Get Treated 11x17 posters highlight the benefits of TB testing and encourage evaluation and treatment for symptoms of TB disease. These posters are only available in Chinese.

To request information or posters in hard copy or digital formats, please email tbtraining@health.nyc.gov



PATIENT BROCHURE

Taking Control of Your Tuberculosis (TB): What to Expect and How to Stay Healthy

General information for patients starting treatment for latent TB infection or active TB disease. Available in 18 languages.



TB EPIQUERY

Data on TB cases reported to the BTBC from 2001 to 2012 are now available on TB EpiQuery. EpiQuery is an interactive, user-friendly system designed to guide users through basic data analyses. Reported TB cases and case rates are available by select demographic and geographic characteristics. On a citywide level, select characteristics that are important to the epidemiology of TB are also available, including country of birth and HIV infection. To access TB EpiQuery, go to: <http://nyc.gov/health/epiquery>



NYC HEALTH EPI DATA BRIEFS:

Epi Data Briefs are short publications that highlight data findings from varying Health Department programs and projects. For more information and to access recently-published reports, go to: <http://www.nyc.gov/html/doh/html/data/epidata.shtml>



NEW YORK CITY HEALTH DEPARTMENT CHEST CLINICS

THE HEALTH DEPARTMENT PROVIDES AN ARRAY OF TB DIAGNOSTIC SERVICES INCLUDING:

- Testing for latent TB infection using the latest generation blood-based QuantiFERON®-TB Gold test and tuberculin skin tests
- Sputum induction
- Chest radiographs
- Medical evaluation
- Treatment for TB disease and latent TB infection
- Directly Observed Therapy (DOT) services, including video-based DOT

ADDITIONAL CLINICAL SERVICES PROVIDED AT EACH CHEST CLINIC INCLUDE:

- Outpatient medical and nursing care
- Phlebotomy services
- Social services referrals
- Human immunodeficiency virus (HIV) education and testing regardless of person's need for TB care
- TB evaluation for newly arrived immigrants and refugees referred by the Centers for Disease Control and Prevention

WASHINGTON HEIGHTS

600 West 168th Street, Third Floor
New York, NY 10032
212-368-4500 or 212-690-1348

MORRISANIA

1309 Fulton Avenue,
First Floor
Bronx, NY 10456
718-579-4157

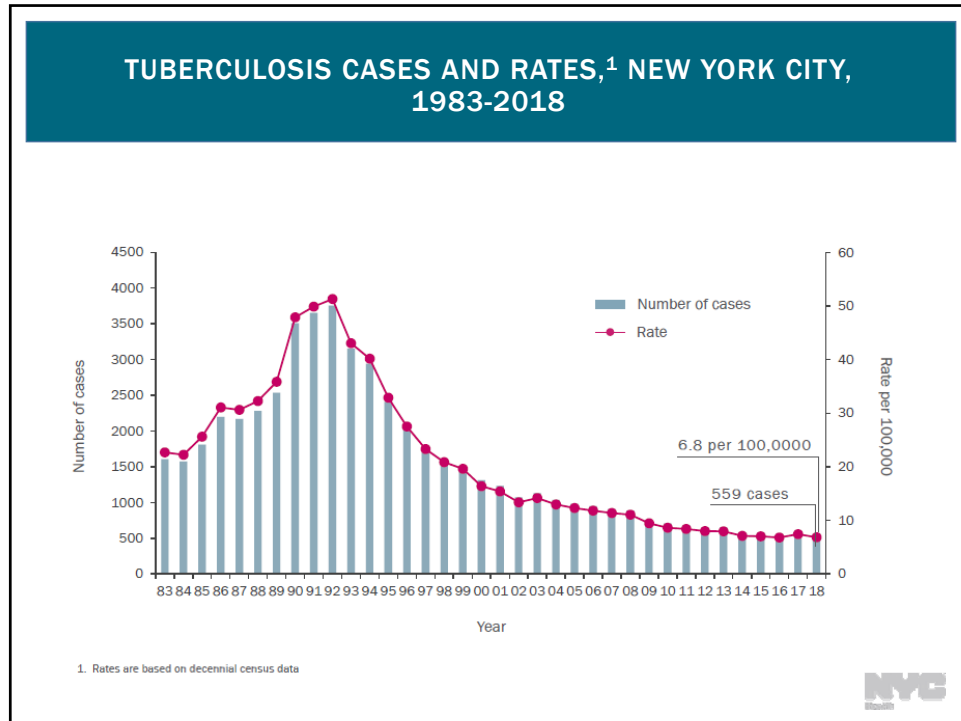
CORONA

34-33 Junction Blvd,
Second Floor
Queens, NY 11372
718-476-7635 or
718-476-7636

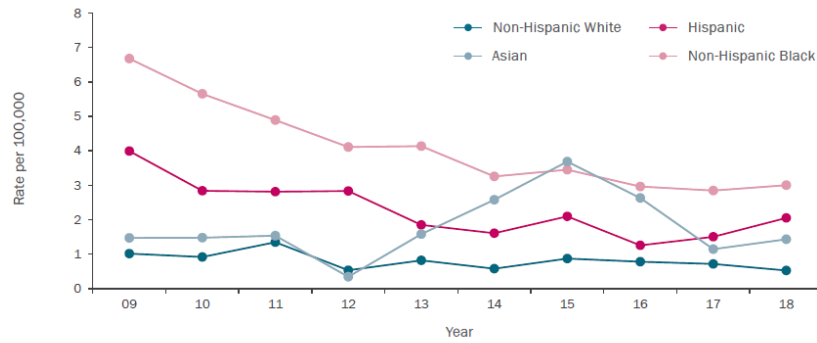
FORT GREENE

295 Flatbush Avenue Extension,
Fourth Floor
Brooklyn, NY 11201
718-643-8357 or
718-643-6951/4808





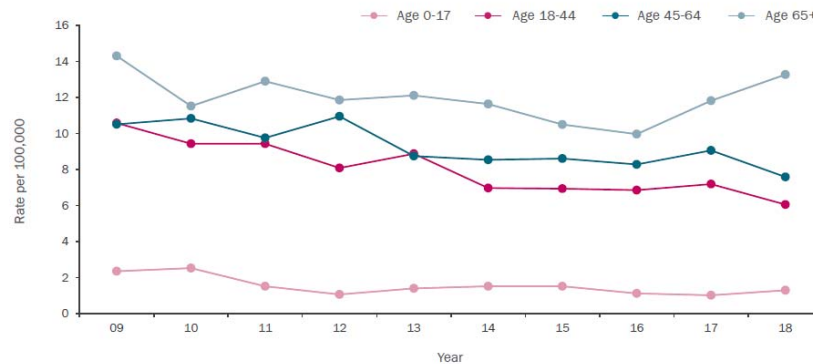
TUBERCULOSIS RATES BY RACE/ETHNICITY AMONG PATIENTS BORN IN THE UNITED STATES,¹ NEW YORK CITY, 2009-2018



1. Rates are based on one-year American Community Survey Public Use Microdata Sample data for the given year or the most recent available data. 2. Data shown does not include patients with multiple, other or unknown race/ethnicity. 3. U.S.-born includes individuals born in the U.S. and U.S. territories. 4. Excludes cases with unknown country of birth.



TUBERCULOSIS RATES BY AGE GROUP IN YEARS,¹ NEW YORK CITY, 2009-2018



1. Rates are based on New York City Health Department population estimates, modified from U.S. Census Bureau interpolated intercensal population estimates, 2000-2017. Updated September 2018.



TUBERCULOSIS RATES¹ BY AGE GROUP IN YEARS AND PATIENT CHARACTERISTICS AMONG CHILDREN YOUNGER THAN 18, NEW YORK CITY

FIGURE Tuberculosis rate^a by age group in years among patients younger than 18 years of age, New York City, 2018

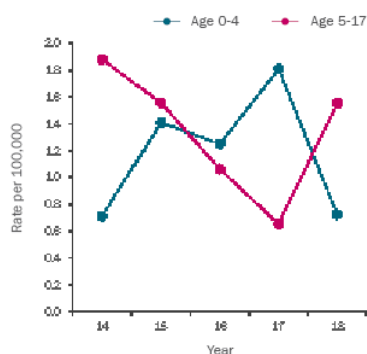


TABLE Select characteristics among patients younger than 18 years of age with tuberculosis, New York City, 2018 (n=23)

Patient characteristics	n (%)
Born in the United States (U.S.)	12 (52%)
Non-U.S.-born parent (among U.S.-born)	7 (58%)
Non-U.S.-born	11 (48%)
Years in the U.S. among non-U.S.-born:	
< 1 year	4 (36%)
1-5 years	6 (55%)
> 5 years	1 (9%)
Identified in association with another TB case	6 (26%)
Multidrug-resistant disease	2 (9%)
Died prior to or while on TB treatment	1 (4%)

1. Rates are based on New York City Health Department population estimates, modified from U.S. Census Bureau interpolated intercensal population estimates, 2000-2017. Updated September 2018.

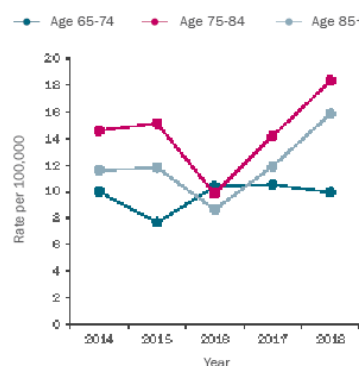


TUBERCULOSIS RATES¹ BY AGE GROUP IN YEARS AND PATIENT CHARACTERISTICS AMONG ADULTS OLDER THAN 65, NEW YORK CITY

TABLE Select characteristics among patients older than 65 years of age with tuberculosis, New York City, 2018 (n=164)

Patient characteristics	n (%)
Born in the United States (U.S.)	25 (15%)
Non-U.S.-born	139 (85%)
Years in the U.S. among non-U.S.-born:	
< 10 years	20 (14%)
10-25 years	49 (35%)
> 25 years	63 (45%)
HIV infection	3 (2%)
Immunosuppression (non-HIV)	18 (11%)
Prior history of TB disease	15 (9%)
Died prior to or while on TB treatment	27 (16%)

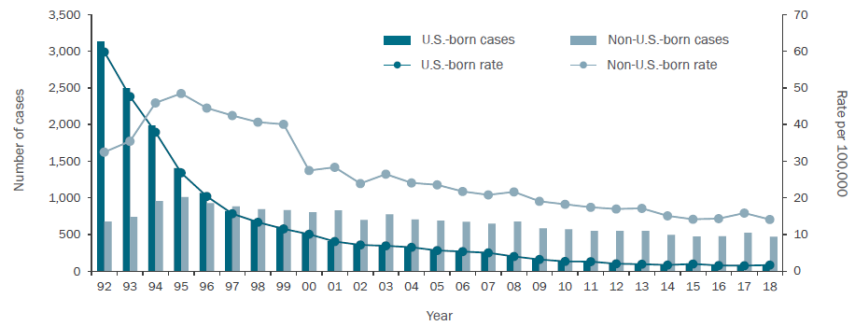
FIGURE Tuberculosis rate^a by age group in years among patients older than 65 years of age, New York City, 2018



1. Rates are based on New York City Health Department population estimates, modified from U.S. Census Bureau interpolated intercensal population estimates, 2000-2017. Updated September 2018.



TUBERCULOSIS CASES AND RATES BY BIRTH IN THE UNITED STATES,¹ NEW YORK CITY, 1992-2018

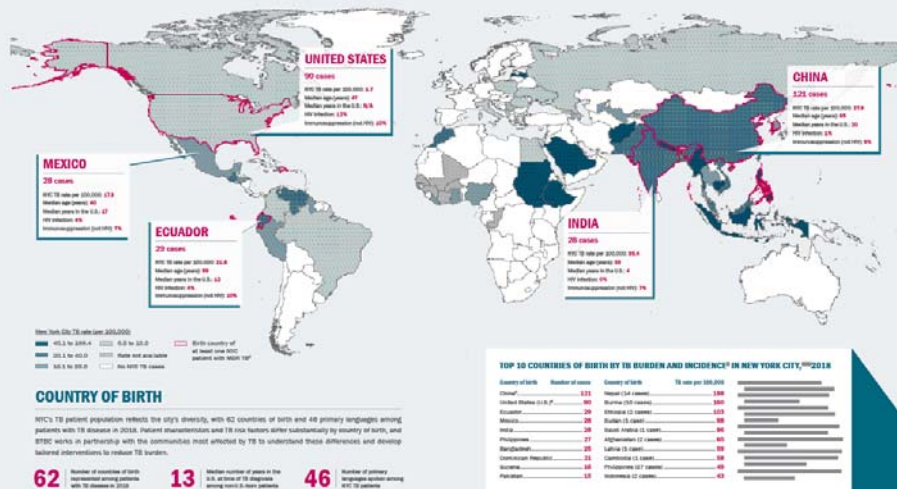


1. Rates prior to 2000 are based on 1990 U.S. Census data. Rates for 2000-2005 are based on 2000 U.S. Census data. Rates after 2005 are based on one-year American Community Survey data for the given year or the most recent available data. 2. U.S.-born includes individuals born in the U.S. and U.S. territories. 3. Excludes cases with unknown country of birth.

NYC
Health

TUBERCULOSIS CASES, RATES¹ AND SELECT CHARACTERISTICS BY COUNTRY OF BIRTH, NEW YORK CITY, 2018

FIGURE 15. Tuberculosis cases, rates¹ and select characteristics by patient country of birth, New York City, 2018

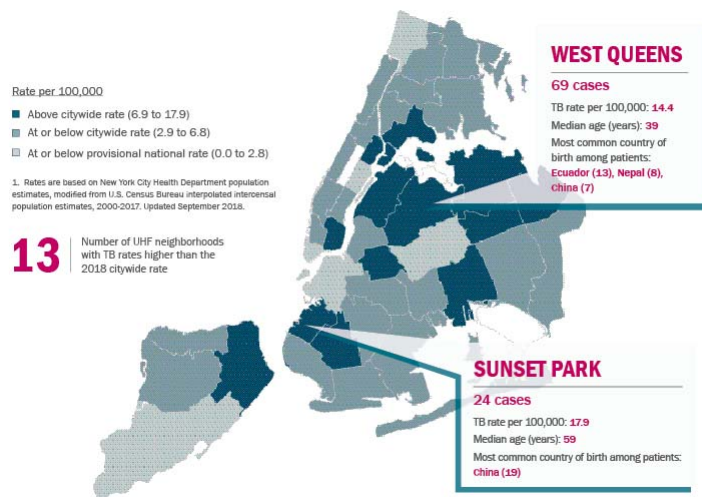


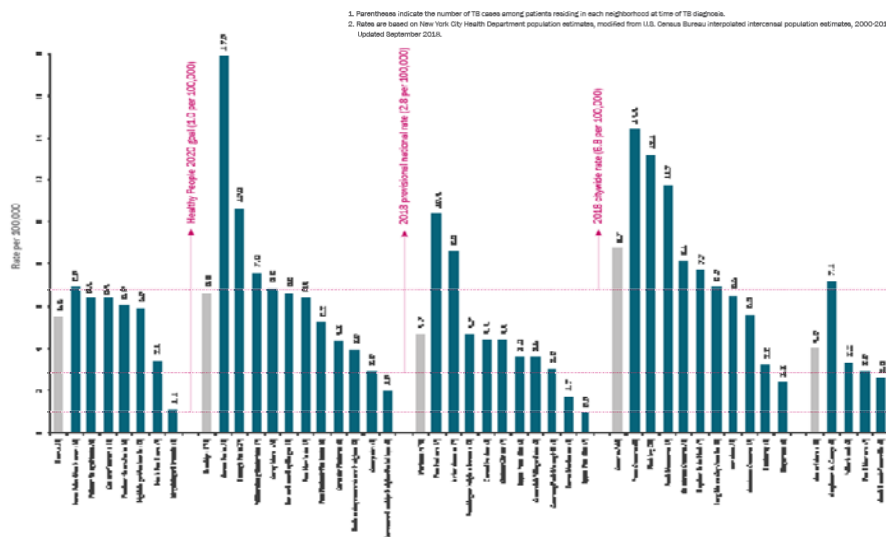
TOP TEN COUNTRIES OF BIRTH BY TB BURDEN AND INCIDENCE IN NEW YORK CITY, 2018

Country of birth	Number of cases	Country of birth	TB rate per 100,000
China ⁴	121	Nepal (14 cases).....	188
United States (U.S.) ⁵	90	Burma (10 cases).....	160
Ecuador.....	29	Ethiopia (2 cases).....	103
Mexico.....	28	Sudan (1 case).....	98
India.....	28	Saudi Arabia (1 case).....	86
Philippines.....	27	Afghanistan (2 cases).....	65
Bangladesh.....	25	Latvia (1 case).....	59
Dominican Republic.....	21	Cambodia (1 case).....	58
Guyana.....	16	Philippines (27 cases).....	49
Pakistan.....	15	Indonesia (2 cases).....	43



TUBERCULOSIS RATES¹ BY UNITED HOSPITAL FUND NEIGHBORHOOD, NEW YORK CITY, 2018





CLINICAL CHARACTERISTICS AND DRUG RESISTANCE

TUBERCULOSIS CASES BY DISEASE SITE, NEW YORK CITY, 2018



TABLE Disease site among tuberculosis cases with extrapulmonary disease,¹ New York City, 2018 (n=193)

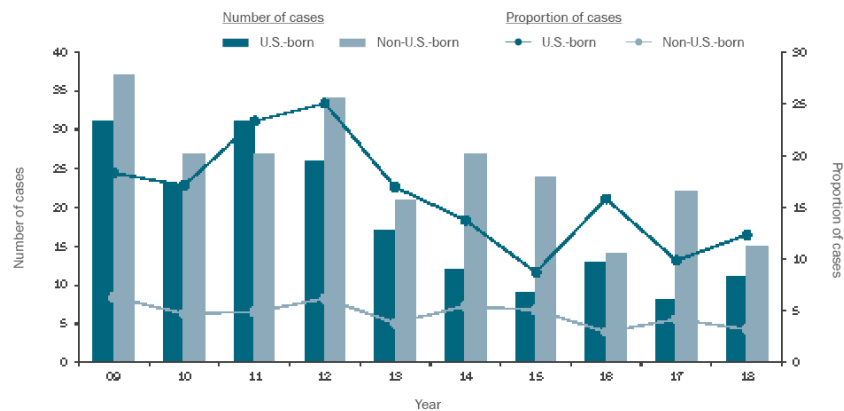
Disease site	Number of cases	Percent
Any extrapulmonary site	193	
Lymphatic	84	44
Pleural	55	28
Bone/joint	25	13
Genitourinary	11	6
Meningeal	5	3
Peritoneal	8	4
Laryngeal	0	0
Other	38	20

1. Categories are not mutually exclusive.

■ Pulmonary disease only ■ Extrapulmonary disease only
■ Both pulmonary and extrapulmonary disease sites



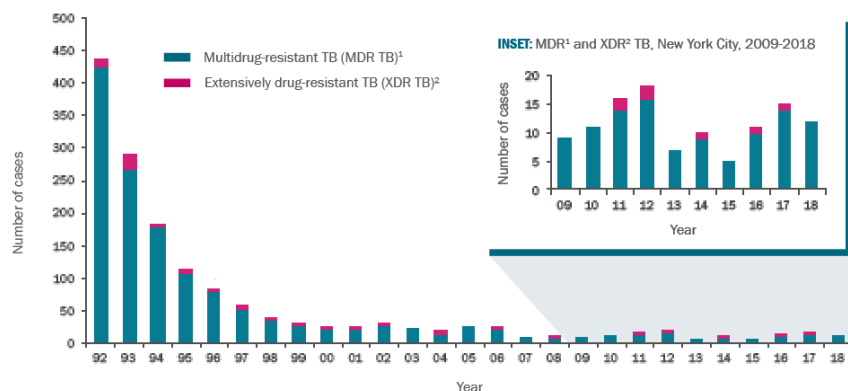
HIV INFECTION AMONG TUBERCULOSIS PATIENTS BY BIRTH IN THE UNITED STATES, NEW YORK CITY, 2009-2018



1. Excludes cases with unknown country of birth. 2. U.S.-born includes individuals born in the U.S. and U.S. territories. 3. 120 (22%) patients in 2018 had an unknown HIV status.



MULTIDRUG RESISTANCE AMONG TUBERCULOSIS CASES, NEW YORK CITY, 1992-2018



1. MDR TB is defined as resistance to at least isoniazid and rifampin. 2. XDR TB is defined as resistance to at least isoniazid and rifampin plus a fluoroquinolone and a second-line injectable anti-TB medication.



SELECT CHARACTERISTICS AMONG PATIENTS WITH MULTIDRUG RESISTANT TUBERCULOSIS, NEW YORK CITY, 2018

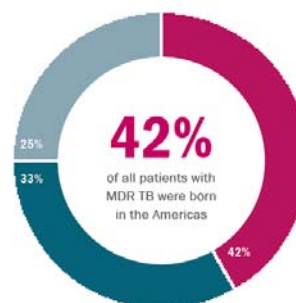
Select patient characteristics

Characteristics	
Median age (range)	32 (0-82)
Number born outside of the United States (U.S.) (%)	10 (83%)
Years in the U.S. among non-U.S.-born patients (%)	
< 5 years	5 (50%)
5-10 years	1 (10%)
> 10 years	4 (40%)
Pulmonary site of disease (%)	10 (83%)
Median number of drugs to which there was known resistance among MDR TB cases ² (range)	6 (3-9)
Median number of contacts identified around patients with MDR TB (range)	4 (0-56)

1. MDR TB is defined as resistance to at least isoniazid and rifampin.
2. Resistance to any fluoroquinolone was counted once

Region of Birth

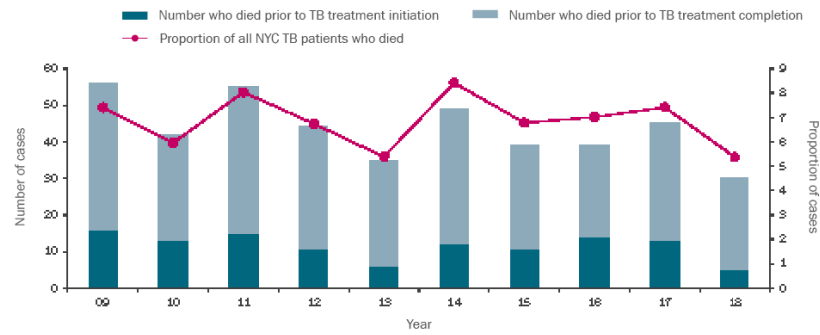
Americas South-East Asia Western Pacific



1. Based on World Health Organization regional definitions



NUMBER AND PROPORTION OF PATIENTS WITH TUBERCULOSIS WHO DIED BEFORE OR DURING TREATMENT, NEW YORK CITY, 2009-2018



1. A death is defined as any patient who died prior to or during TB treatment, regardless of the cause of death. This excludes any patient who died after the completion of TB treatment.



TRANSMISSION

STOP TB

CONTACT INVESTIGATION IN NON-HOUSEHOLD SETTINGS, 2018



TABLE Contact investigation outcomes in non-household settings¹ by number of exposed contacts, New York City, 2018 (n=55)

	≥ 15 exposed contacts	< 15 exposed contacts	Total
	n (%)	n (%)	n (%)
Number of sites	25	30	55
Likely transmission ²	8 (32%)	4 (13%)	12 (22%)
Transmission could not be assessed	0	3 (10%)	3 (5%)
Total number of contacts	1,014	159	1,173
Median contacts per site (range)	27 (16-127)	4 (1-12)	12 (1-127)
Contacts eligible for testing ³	861 (87%)	156 (96%)	1,037 (88%)
Contacts tested	817 (93%)	144 (92%)	961 (93%)
Contacts with a positive TB test result	57 (7%)	23 (16%)	80 (8%)

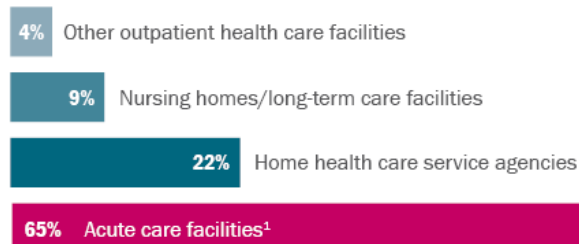
1. Excludes health care-associated investigations (n=162).

2. Proportion calculated among investigations where transmission could be assessed.

3. Contacts eligible for testing are defined as contacts without a known history of TB disease or documented positive test for TB infection who were alive subsequent to the diagnosis of the infectious TB case to whom they were exposed.



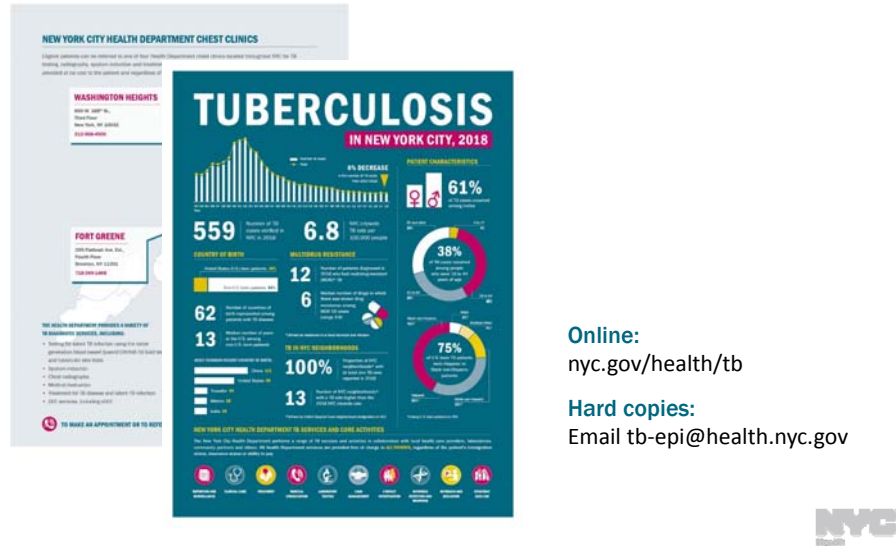
CONTACT INVESTIGATION IN HEALTHCARE-ASSOCIATED SETTINGS BY SITE TYPE, NEW YORK CITY, 2018



1. Includes hospitals and acute care clinics



INFOGRAPHICS, MAPS, AND HARD COPIES OF THE ANNUAL TB SUMMARY ARE AVAILABLE



Online:
nyc.gov/health/tb

Hard copies:
Email tb-epi@health.nyc.gov

ACKNOWLEDGEMENTS

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