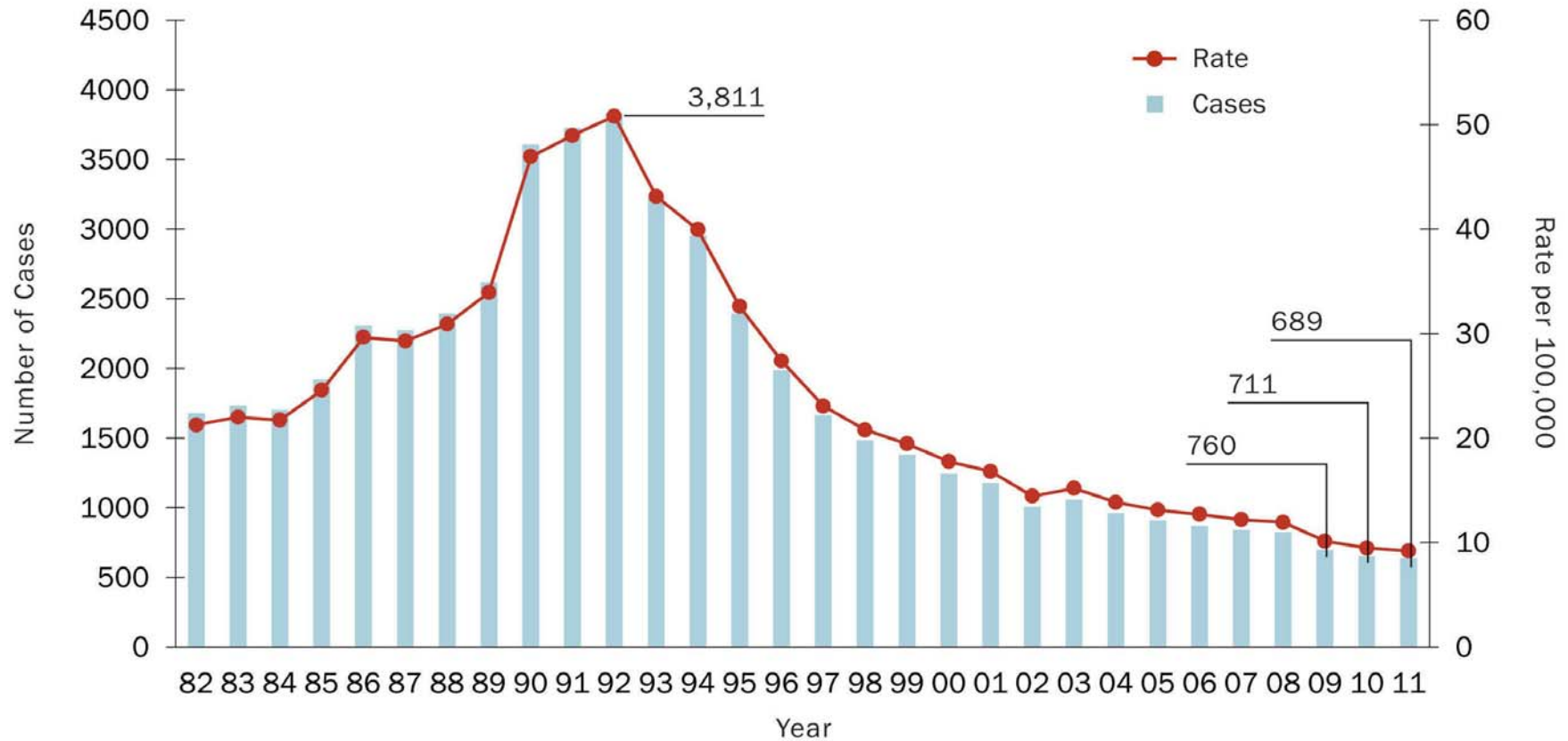




THREE-YEAR SUMMARY: 2009, 2010, 2011

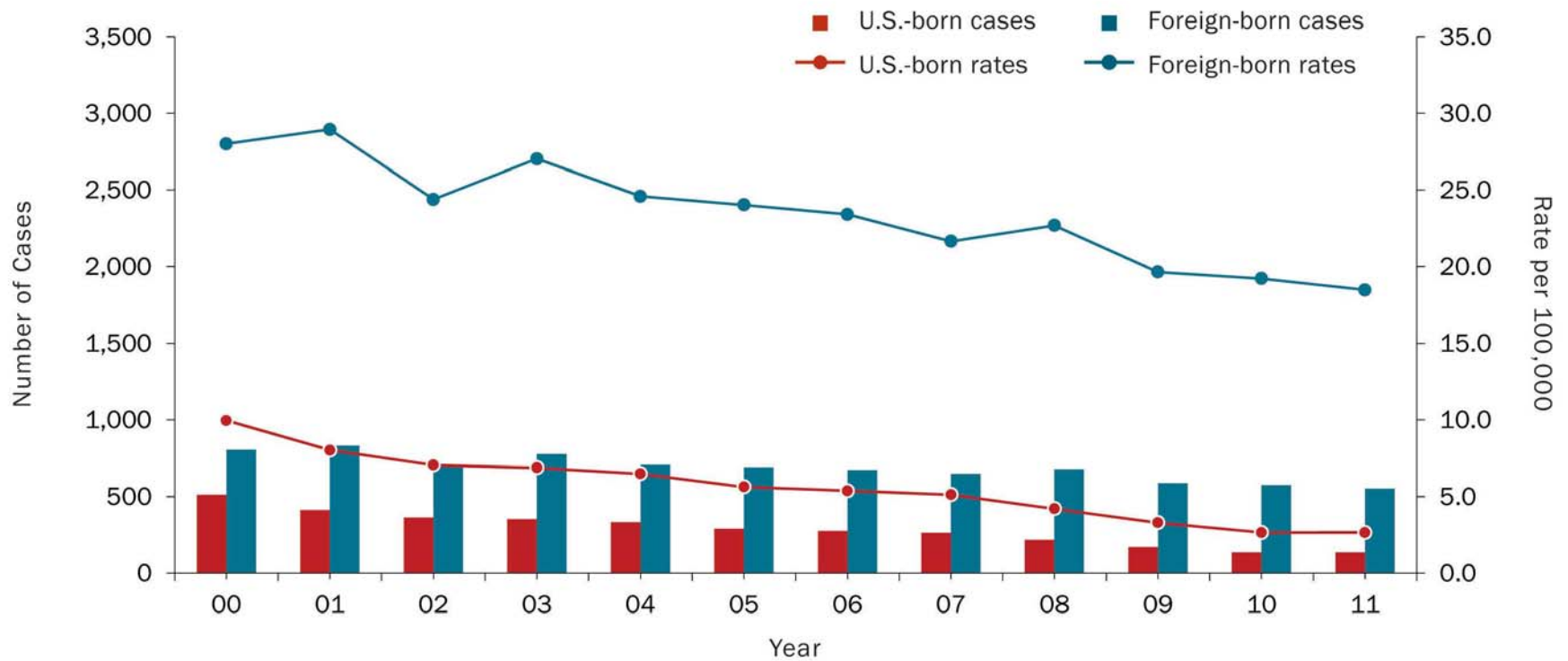
New York City Department of Health and Mental Hygiene
Bureau of Tuberculosis Control

Tuberculosis cases and rates¹, New York City, 1982-2011



1. Rates are based on official Census data and intercensal estimates prior to 2000. Rates from 2000 to 2006 are based on intercensal estimates, and for 2007 to 2011 on American Community Survey 3-year estimates (2008-2010)

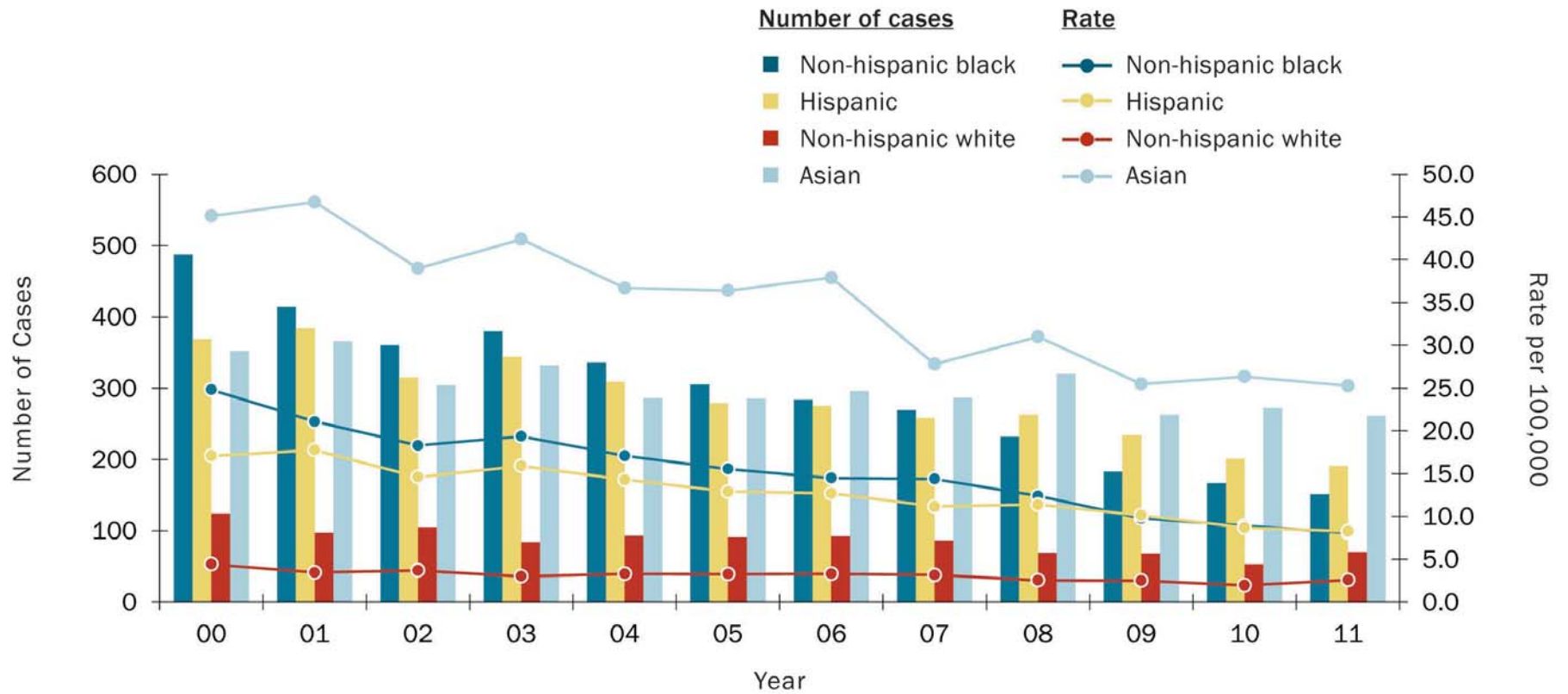
Tuberculosis cases and rates¹ by birth in the United States², New York City, 2000-2011



1. Rates are based on official Census data and intercensal estimates prior to 2000. Rates for 2000 to 2006 are based on 2000 Census data, and those for 2007 to 2011 on American Community Survey 3-year estimates (2008-2010)

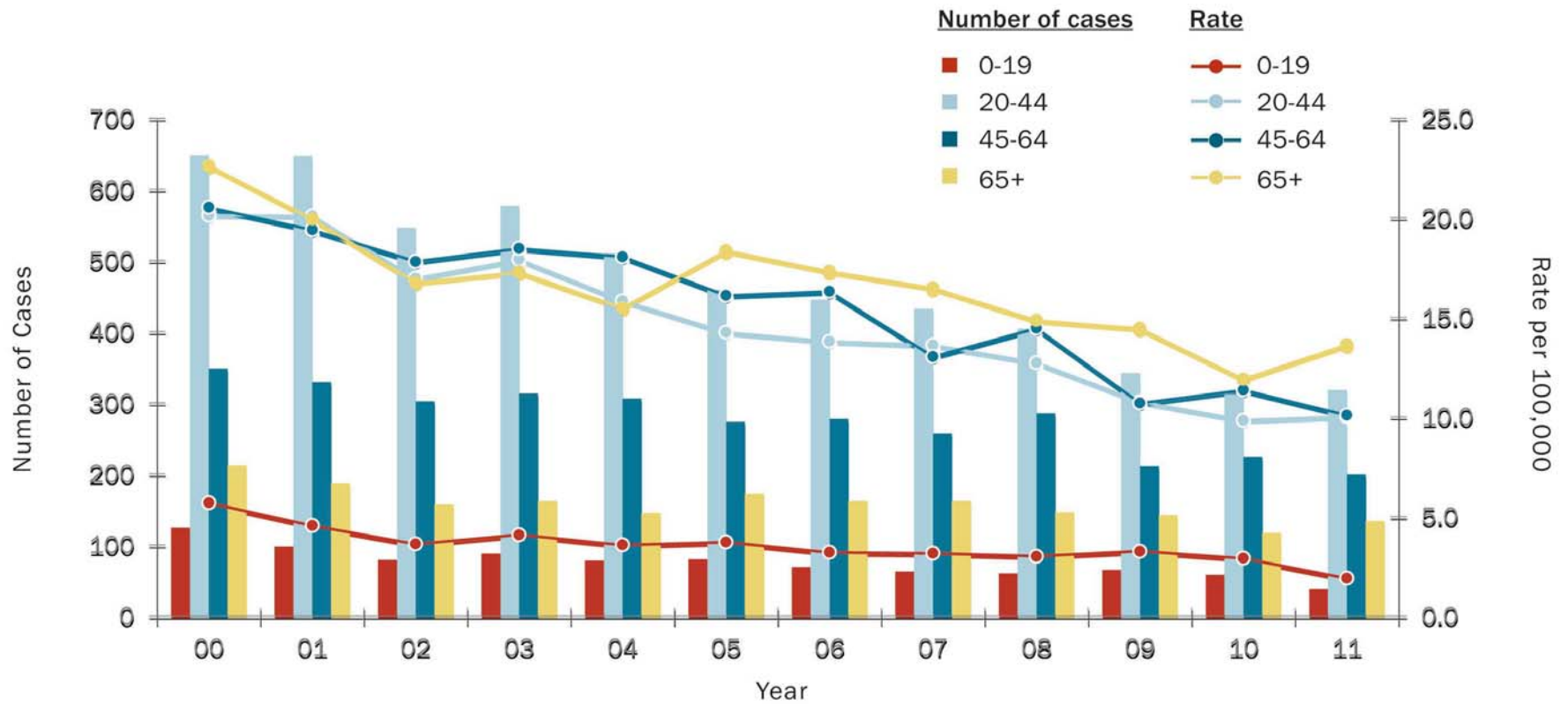
2. Puerto Rico and U.S. Virgin Islands are included as U.S.-born

Tuberculosis cases and rates¹ by race/ethnicity, New York City, 2000-2011



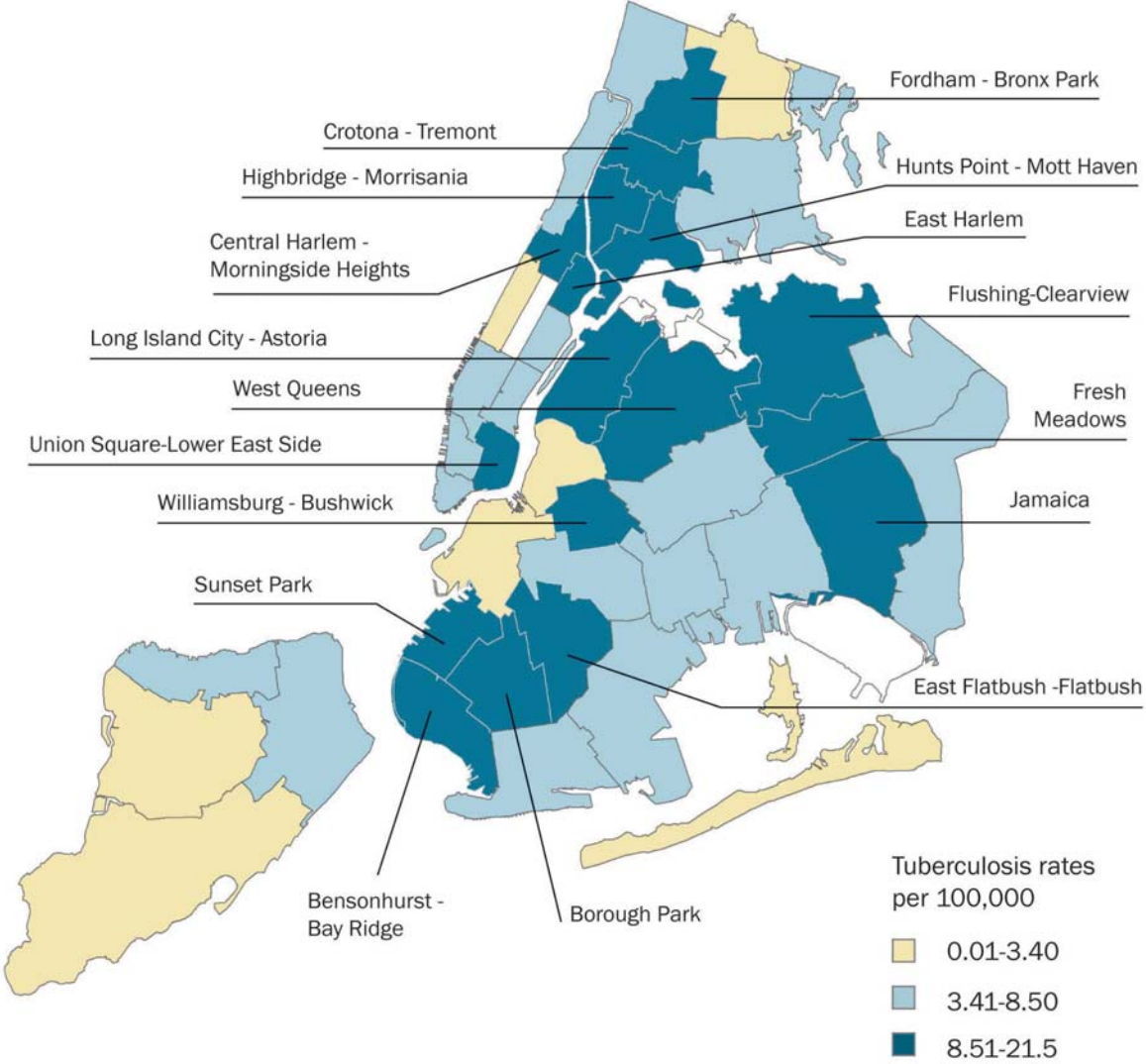
1. Rates are based on official Census data and intercensal estimates prior to 2000. Rates for 2000 to 2006 are based on 2000 Census data, and those for 2007 to 2011 on American Community Survey 3-year estimates (2008-2010)

Tuberculosis cases and rates¹ by age in years, New York City, 2000-2011



1. Rates are based on official Census data and intercensal estimates prior to 2000. Rates for 2000 to 2006 are based on intercensal estimates, and those for 2007 to 2011 are based on American Community Survey 3-year estimates (2008-2010)

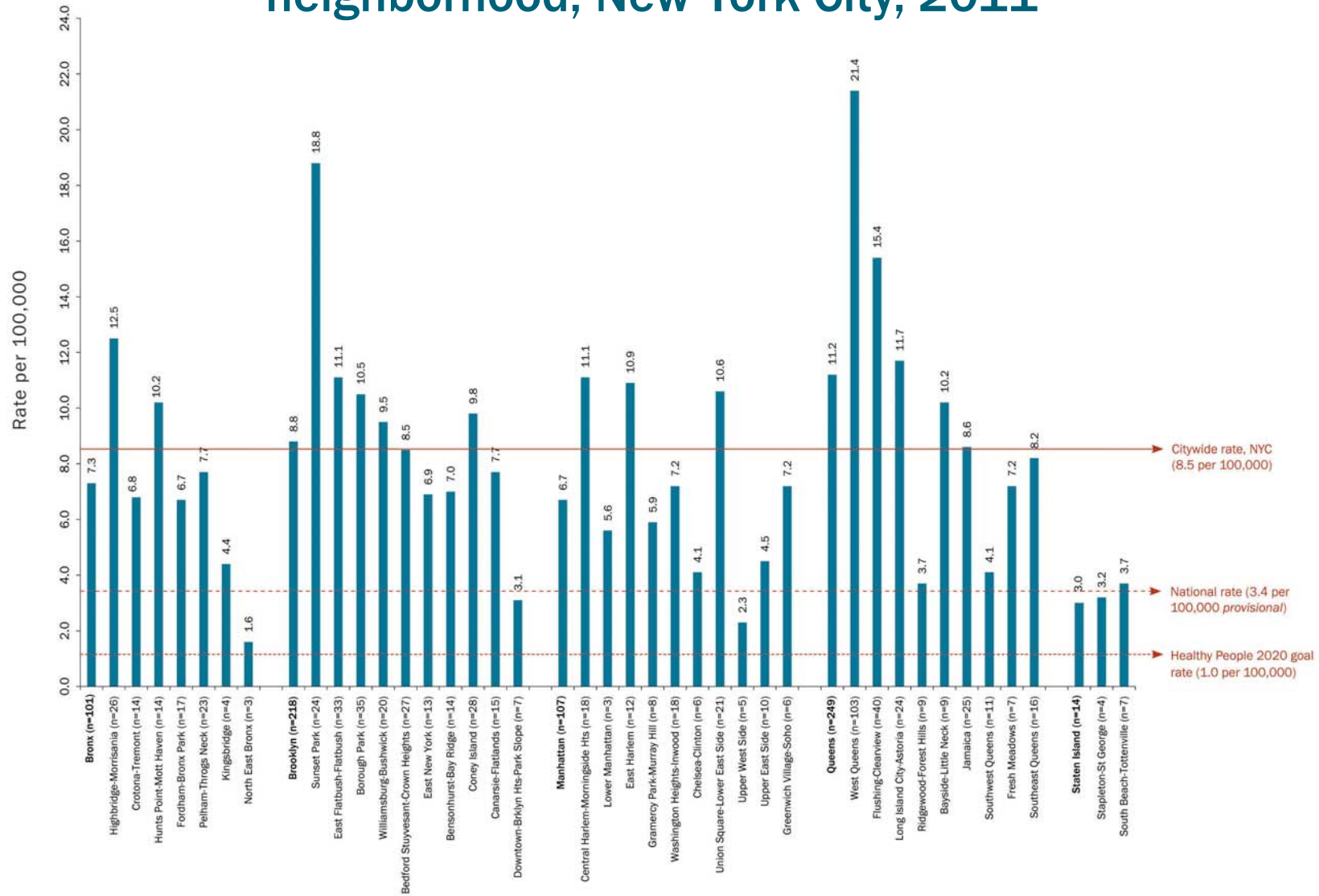
Tuberculosis rates¹ by United Hospital Fund (UHF) neighborhood, New York City, 2009-2011



1. Rates are based on 2010 Census data



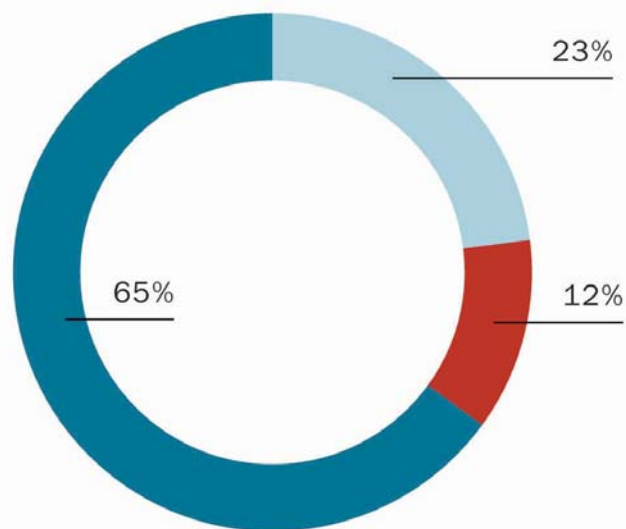
Tuberculosis rates¹ by borough and United Hospital Fund (UHF) neighborhood, New York City, 2011



1. Rates per 100,000 population are based on 2010 Census data. Caution should be used in interpreting case rates for neighborhoods with a small number of cases
 2. There were two cases with missing ZIP code information in 2011
 3. Neighborhoods with two or fewer cases counted during this period are not shown

Tuberculosis cases by disease site, New York City, 2009-2011

- Pulmonary only (n=1,414)
- Extrapulmonary only (n=495)
- Both (n=250)

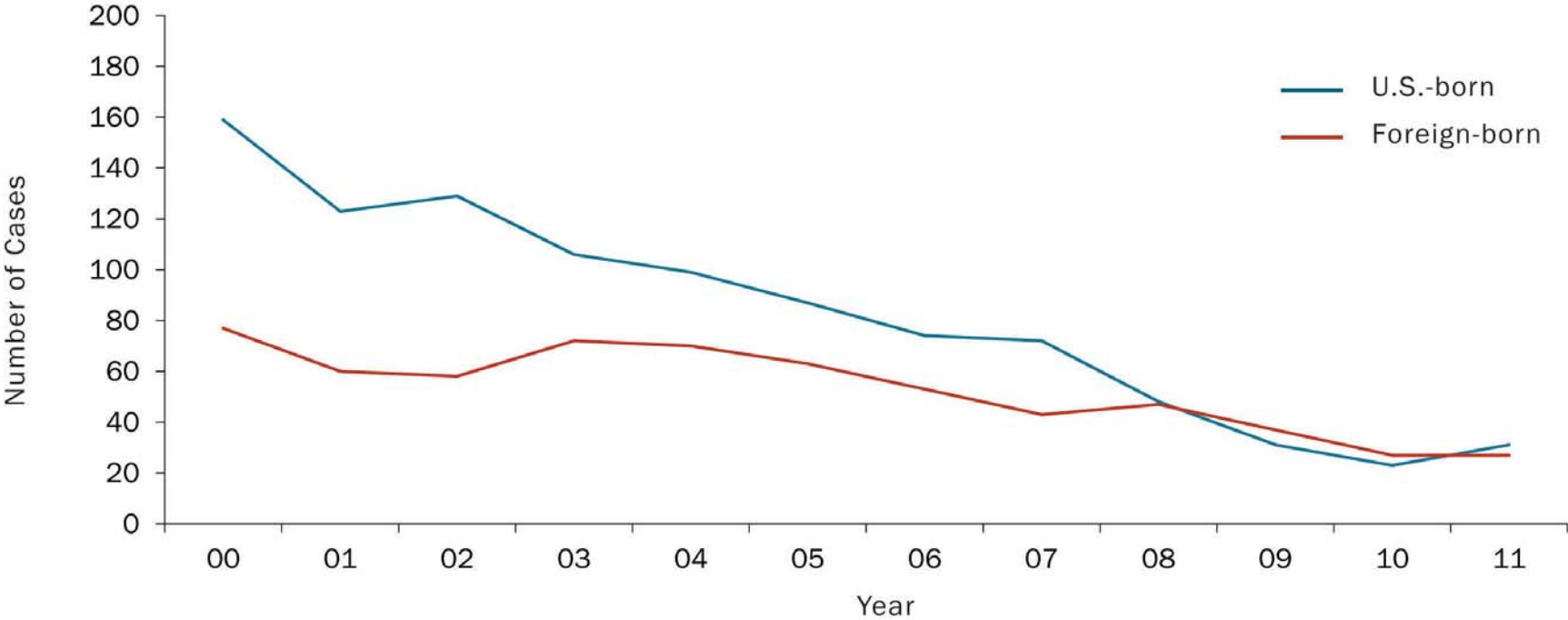


DISEASE SITE AMONG CASES WITH EXTRAPULMONARY TB DISEASE ONLY, NEW YORK CITY, 2009-2011

Disease Site ¹	2009	2010	2011
Lymphatic	93	72	64
Pleural	24	39	20
Peritoneal	7	14	6
Bone/joint	21	11	19
Meningeal	12	9	9
Genitourinary	16	9	9
Other	18	14	26

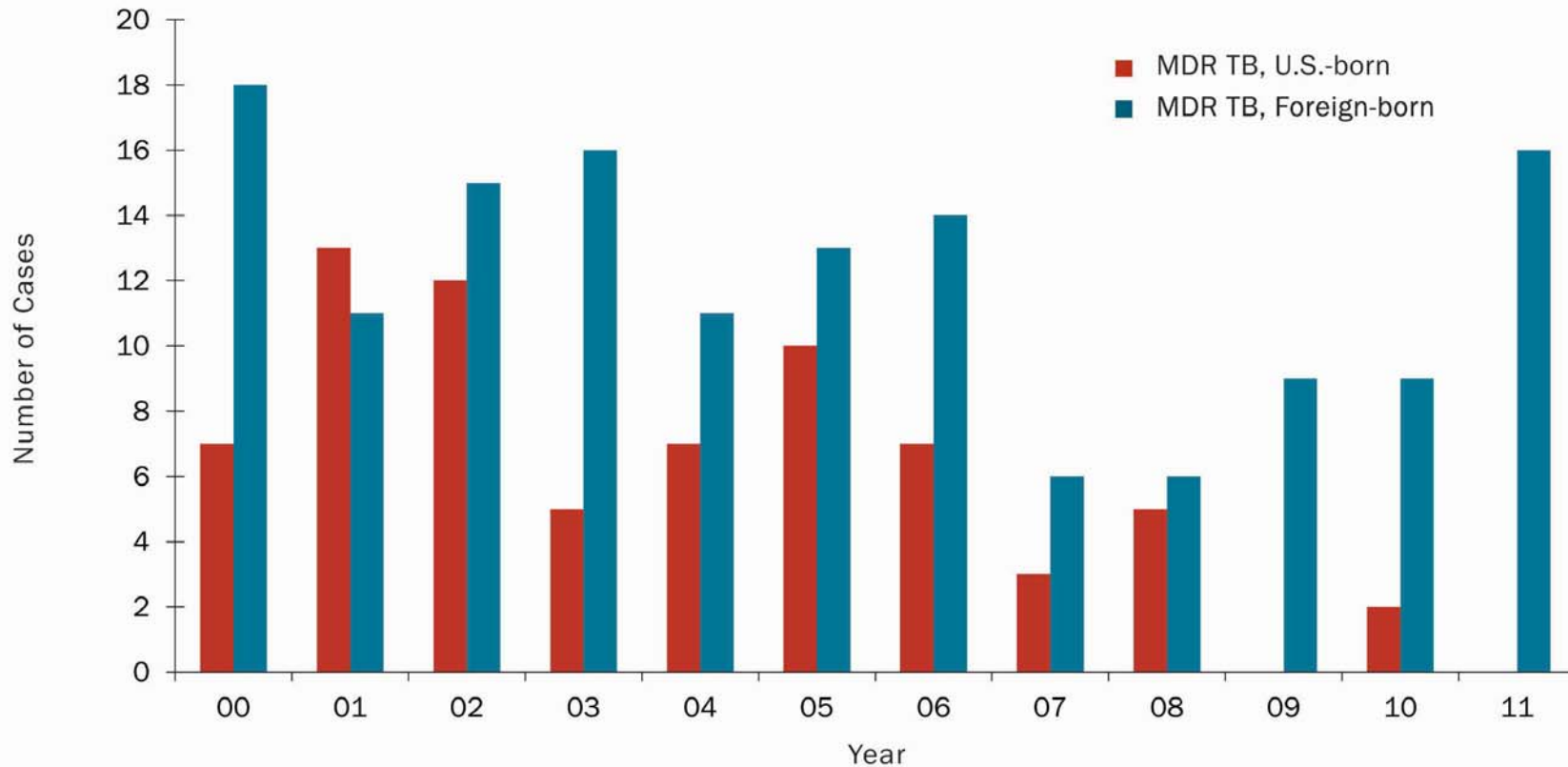
1. Categories are not mutually exclusive

HIV co-infection among tuberculosis cases by birth in the United States¹ (U.S.), New York City, 2000-2011



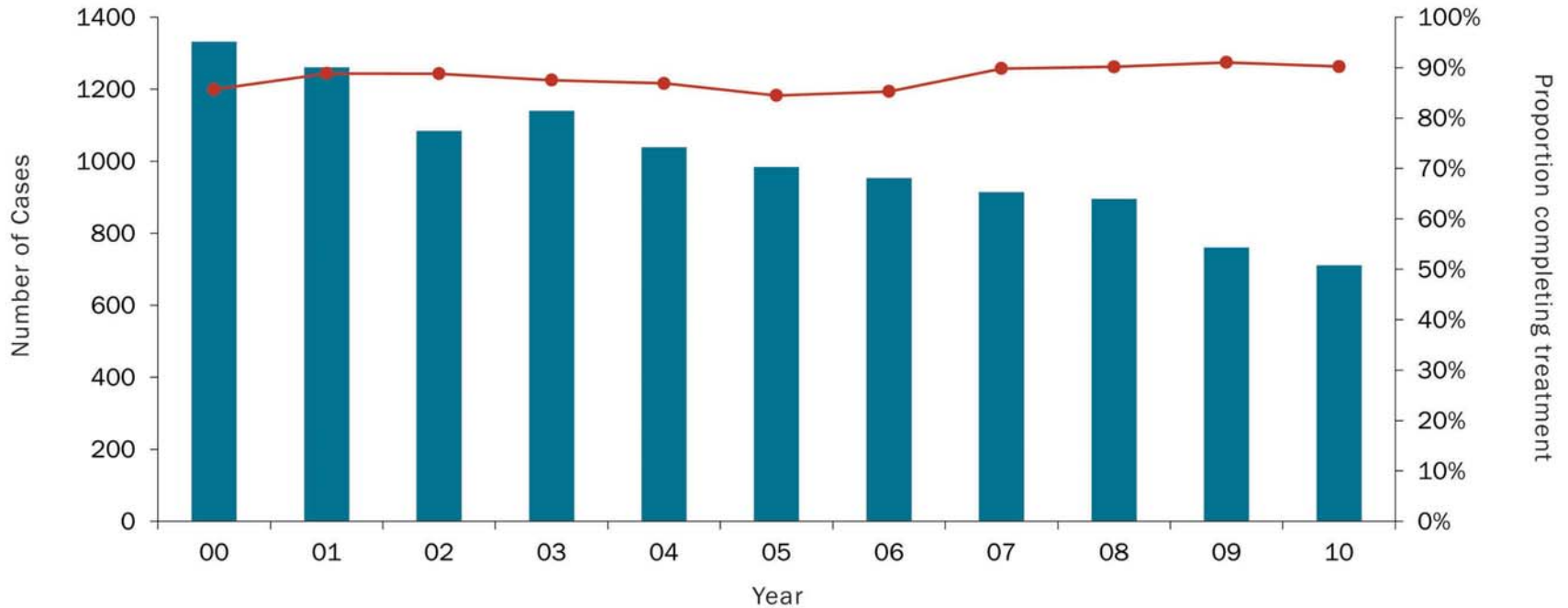
1. Puerto Rico and U.S. Virgin Islands are included as U.S.-born
2. Total number of HIV-infected cases may be more than the sum of U.S.- and foreign-born HIV-infected cases because area of birth is unknown for some cases

Multidrug resistant tuberculosis (MDR TB)^{1,2} by birth in the United States³ (U.S.), New York City, 2000-2011



1. Multidrug-resistant TB is defined as a TB strain resistant to at least isoniazid and rifampin
2. Multidrug-resistant TB includes extensively drug-resistant TB (XDR TB), defined as resistance to isoniazid and rifampin plus resistance to any fluoroquinolone and to an injectable second-line anti-TB medication, (e.g., amikacin, kanamycin or capreomycin)
3. Puerto Rico and U.S. Virgin Islands are included as U.S.-born

Tuberculosis treatment completion, ^{1,2} New York City, 2000-2010



- Number of cases counted
- Treatment completion, excluding those who never started treatment or had rifampin resistance

1. Treatment completion is analyzed with one year of delay to allow sufficient time for completion, therefore, data for 2011 is not presented
2. Treatment completion is calculated as per World Health Organization (WHO) and does not exclude patients who died

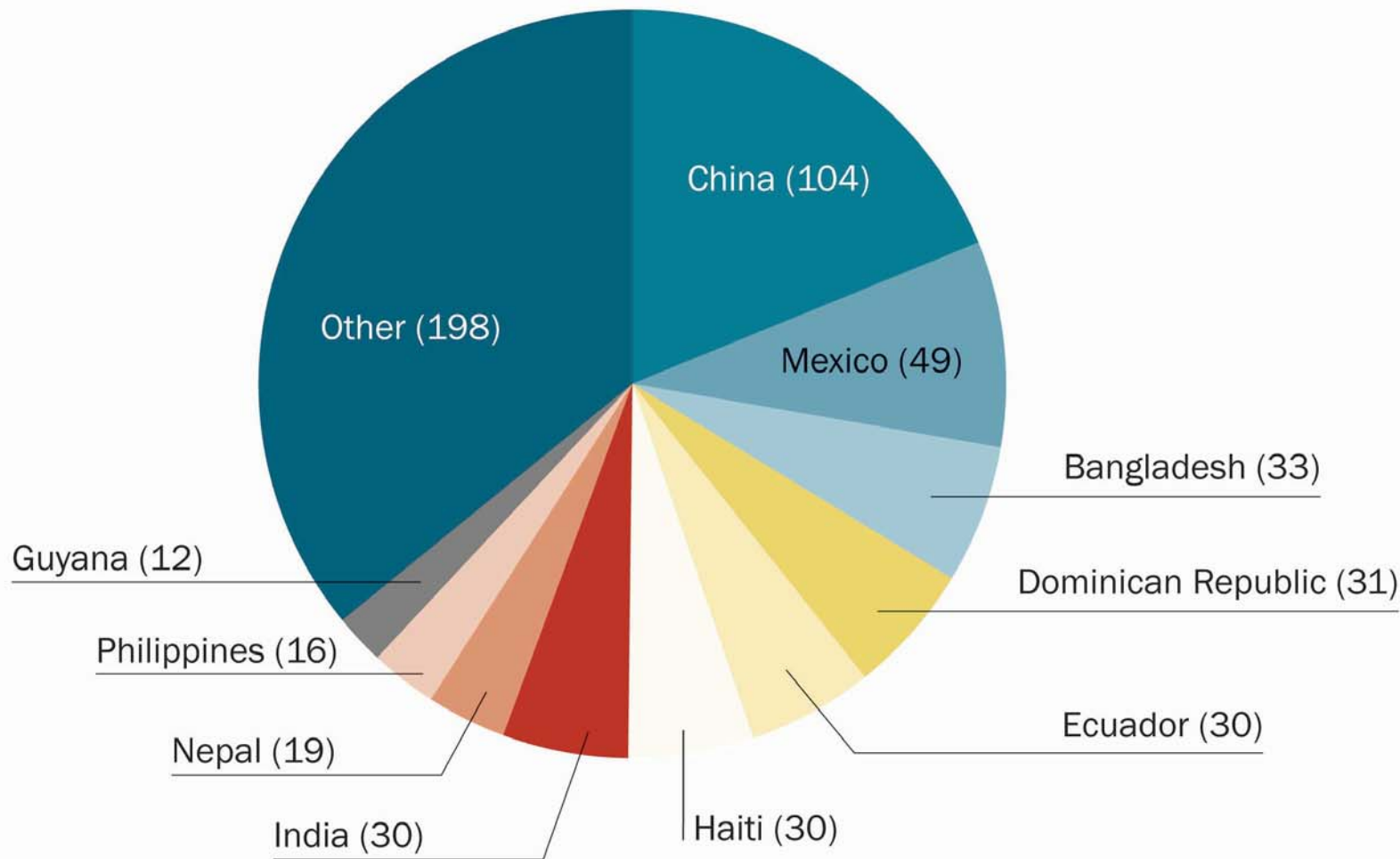
Tuberculosis cases with HIV co-infection by age in years, New York City, 2000-2011

Year	Age 0-19		Age 20-44		Age 45-64		Age 65+		Total	
	n	%	n	%	n	%	n	%	n	%
2000	2	2%	147	23%	86	25%	6	3%	241	18%
2001	0	0%	121	29%	59	18%	4	2%	184	15%
2002	2	3%	109	20%	78	26%	4	3%	193	18%
2003	1	1%	112	19%	64	20%	1	<1%	178	16%
2004	1	1%	94	18%	72	24%	2	1%	169	16%
2005	3	4%	83	18%	61	22%	4	2%	151	15%
2006	1	1%	64	14%	59	21%	3	<1%	127	13%
2007	0	0	58	13%	55	21%	3	2%	116	13%
2008	1	2%	44	11%	48	17%	2	1%	95	11%
2009	1	2%	39	11%	25	12%	3	2%	68	9%
2010	0	0	27	9%	25	10%	1	<1%	50	7%
2011	0	0	23	7%	30	15%	5	4%	58	8%

Tuberculosis cases by age in years and area of birth, New York City, 2011

Year and Area of Birth	Age 0-19		Age 20-44		Age 45-64		Age 65+		Total	Rate/100,000 ¹
	n	%	n	%	n	%	n	%		
Foreign-born	24	4%	275	60%	147	26%	106	21%	552	18.5
Caribbean and Latin America ¹²	13	6%	111	52%	57	27%	33	15%	214	13.8
Asia ¹³	9	3%	132	48%	76	28%	59	21%	276	33.9
Africa ¹⁴	2	6%	20	61%	9	27%	2	6%	33	28.1
Europe ¹⁵	0	0%	12	41%	5	17%	12	41%	29	6.1
U.S.-born ⁶	14	10%	43	32%	52	38%	27	20%	136	2.6
Unknown	0	0%	0	0%	0	0%	1	100%	1	-
Total	38	6%	318	46%	199	29%	134	19%	689	8.5

Number of foreign-born tuberculosis cases by country of birth, New York City, 2011



Select demographic characteristics among tuberculosis cases by birth in the United States (U.S.), New York City, 2009-2011

Characteristics	2009						2010						2011					
	U.S.-born		Foreign-born		Total		U.S.-born		Foreign-born		Total		U.S.-born		Foreign-born		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Age Group (years)																		
0-19	27	16%	38	6%	65	9%	19	14%	38	7%	58	8%	14	10%	24	4%	38	6%
20-44	53	31%	288	49%	342	45%	43	32%	269	47%	312	44%	43	32%	275	50%	318	46%
45-64	48	28%	160	27%	211	28%	43	32%	181	32%	224	32%	52	38%	147	27%	199	29%
65+	41	24%	101	17%	142	19%	31	23%	86	15%	117	16%	27	20%	106	19%	134	19%
Sex																		
Female	73	43%	232	40%	307	40%	53	39%	213	37%	267	38%	65	48%	227	41%	293	43%
Male	96	57%	355	60%	453	60%	82	60%	361	63%	443	62%	71	52%	325	59%	396	57%
Transgender	0	0%	0	0%	0	0%	1	1%	0	0%	1	<1%	0	0%	0	0%	0	0%
Race/ethnicity																		
Black Non-Hispanic	87	51%	95	16%	183	24%	72	53%	95	17%	167	23%	62	46%	89	16%	151	22%
White Non-Hispanic	24	14%	44	7%	68	9%	19	14%	34	6%	53	7%	28	21%	42	8%	70	10%
Hispanic	54	32%	179	30%	234	31%	39	29%	162	28%	201	28%	40	29%	150	27%	191	28%
Asian	4	2%	259	44%	263	35%	5	4%	267	47%	272	38%	4	3%	257	47%	261	38%
Multiple	0	0%	3	1%	3	<1%	1	1%	8	1%	9	1%	2	1%	6	1%	8	1%
Other	0	0%	0	0%	0	0%	0	0%	6	1%	6	1%	0	0%	8	0%	8	1%
Unknown ethnicity or race	0	0%	7	1%	9	1%	0	0%	2	0%	3	0%	0	0%	0	1%	0	0%
Time in the U.S.																		
Less than 1 year	n/a	n/a	71	12%	71	12%	n/a	n/a	95	17%	95	17%	n/a	n/a	71	13%	71	13%
1-5 years	n/a	n/a	147	25%	147	25%	n/a	n/a	157	27%	157	27%	n/a	n/a	149	27%	149	27%
Greater than 5 years	n/a	n/a	364	62%	364	62%	n/a	n/a	317	55%	317	55%	n/a	n/a	321	58%	324	59%
Unknown	n/a	n/a	5	1%	5	1%	n/a	n/a	5	1%	5	1%	n/a	n/a	11	2%	8	1%

Select clinical characteristics among tuberculosis cases by birth in the United States (U.S.), New York City, 2009-2011

Characteristics	2009						2010						2011					
	U.S.-born		Foreign-born		Total		U.S.-born		Foreign-born		Total		U.S.-born		Foreign-born		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Sputum smear positive	53	31%	223	38%	276	36%	53	39%	188	33%	241	34%	44	32%	185	34%	229	33%
Culture positive	92	54%	443	75%	539	71%	92	68%	419	73%	512	72%	92	68%	408	74%	501	73%
Clinical case ¹	77	46%	144	25%	221	29%	44	32%	155	27%	199	28%	44	32%	144	26%	188	27%
Cavitary chest x-ray ²	22	13%	85	14%	107	19%	17	15%	77	17%	94	17%	23	21%	83	19%	106	20%
Multidrug resistant ³	0	0%	9	2%	9	2%	2	2%	9	2%	11	2%	0	0%	16	4%	16	3%
Extensively drug resistant	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	2	<1%	2	<1%
Other drug resistant ⁴	11	12%	69	16%	81	15%	15	17%	69	17%	85	17%	12	13%	57	14%	69	14%
History of prior TB	6	4%	10	2%	16	2%	4	3%	8	1%	12	2%	5	4%	10	2%	15	2%
Last medical provider type ⁵																		
DOHMH chest center	78	46%	270	46%	348	46%	67	49%	280	49%	347	49%	52	38%	227	41%	279	40%
HHC hospital	30	18%	167	28%	197	26%	22	16%	160	28%	183	26%	18	13%	149	27%	167	24%
Private hospital	38	22%	56	10%	97	13%	25	18%	48	8%	73	10%	32	24%	64	12%	96	14%
Private physician	12	7%	69	12%	81	11%	16	12%	71	12%	87	12%	27	20%	102	18%	130	19%
Other provider	11	7%	25	4%	37	5%	6	4%	15	3%	21	3%	7	5%	10	2%	17	2%

1. As per CDC clinical case definition

2. Percent of cases with pulmonary disease

3. Multidrug-resistant is defined as resistant to at least isoniazid and rifampin. Percent is among those with positive culture and susceptibility done

4. Other-drug-resistance is defined as not multidrug-resistant, but resistant to one or more first-line drugs. Percent is among those with positive culture and susceptibility done

5. Facility or provider where/by whom the patient was last evaluated at the time of data extraction. Other providers include correctional facilities, Veterans Affairs hospitals, out-of-NYC, and psychiatric providers

Select social characteristics among tuberculosis cases by birth in the United States (U.S.), New York City, 2009-2011

Characteristics	2009						2010						2011					
	U.S.-born		Foreign-born		Total		U.S.-born		Foreign-born		Total		U.S.-born		Foreign-born		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Homeless ¹	11	7%	15	3%	26	3%	7	5%	8	1%	15	2%	5	4%	9	2%	14	2%
Employed ^{2,3}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	28	21%	163	30%	191	28%
Health care worker	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	3%	16	3%	20	3%
Injection drug use ²	6	4%	4	1%	11	1%	7	5%	0	0%	7	1%	8	6%	1	<1%	9	1%
Non-injection drug use ²	26	15%	10	2%	36	5%	14	10%	12	2%	26	4%	22	16%	17	3%	39	6%
Alcohol abuse ^{2,3}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	3%	8	1%	12	2%
Any drug or alcohol abuse ^{2,3}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	20%	25	5%	52	8%
Resident of correctional facility ⁴	5	3%	4	1%	10	1%	3	2%	7	1%	10	1%	5	4%	3	1%	8	1%
Resident of long-term care facility ⁴	4	2%	8	1%	12	2%	8	6%	26	5%	34	5%	9	7%	14	3%	23	3%

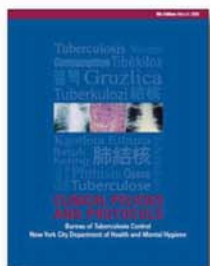
1. At time of diagnosis

2. In past 12 months before TB diagnosis

3. Not available for 2009 and 2010 due to differences in data collection in the new BTBC surveillance system

4. At time of diagnosis

Select educational materials for healthcare providers, patients and the public



CLINICAL POLICIES AND PROTOCOLS
 4th Edition.
 Describes policies, protocols and recommendations for the prevention, treatment and control of tuberculosis



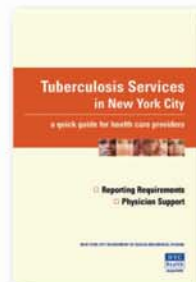
POCKET-SIZED REFERENCE GUIDE FOR PROVIDERS
Treatment and monitoring of drug-susceptible pulmonary tuberculosis
 Provides concise information about treatment and monitoring for pulmonary TB



GUIDELINES
Testing and Treatment for Latent TB Infection
 Recommended steps for LTBI testing and treatment to improve both diagnosis and treatment of LTBI



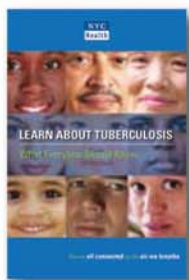
REFERENCE GUIDE
The Mantoux Tuberculin Skin Test: A Guide for Providers
 Step-by-step guide to administering and reading TST



PROVIDER BROCHURE
Tuberculosis Services in New York City: a Quick Guide for Health care Providers



EDUCATIONAL POSTER
 Provides basic TB information and includes illustrations with captions. Available in English, Spanish, French, Haitian Creole, Hindi, Urdu, Bengali, Tibetan, Tagalog and Chinese. Please email to request information: tbtraining@health.nyc.gov



PATIENT BROCHURE
Learn About Tuberculosis: What Everyone Should Know
 General information in easy-to-read format for all audiences. Available in English, Spanish, Chinese, Korean, French and Haitian Creole

- These and other educational materials are available at nyc.gov, search “tb-hcp kit” or by calling 311