***Massachusetts Department of Public Health***

***Bureau of Infectious Disease and Laboratory Sciences***

***Summary Tuberculosis Statistics for the Year 2018***

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| **Characteristics of TB Cases 2018 (N=200)** | | |
| Demographics # (%) | | |
| Sex Male  Female | 113 (56.5%)  87 (43.5%) | |
| Race Ethnicity White, non-Hispanic  Black, non-Hispanic  Hispanic  Asian | 29 (14.5%)  51 (25.5%)  27 (13.5%)  93 (46.5%) | |
| Origin of Birth U.S. born  Non-U.S. born  Unknown | 28 (14%)  172 (86%)  0 (0%) | |
| Age (years) <5  5-14  15-19  20-24  25-44  45-64  65+ | 4 (2.0%)  3 (1.5%)  3 (1.5%)  15 (7.5%)  72 (36.0%)  52 (26.0%)  51 (25.5%) | |
| **Clinical Presentation (N=200)** | | |
| Primary Site of Disease Pulmonary  Extra-pulmonary  Both | 120 (60.0%)  61 (30.5%)  19 (9.5%) | |
| Chest Radiography Cavitary disease only Miliary disease only  Cavitary and miliary  Non-cavitary disease only  Normal findings  Not reported | 30 (15%)  8 (4%)  1 (0.5%)  125 (62.5%)  14 (7%)  22 (11%) | |
| **Higher Risk Groups+ (N=200)** | | |
| Non-U.S. born  Children <15 years of age  Incarcerated in prison/jail  Homeless  Substance use\*  HIV co-infection | 172 (86.0%)  7 (3.5%)  5 (2.5%)  3 (1.5%)  9 (4.5%)  13 (6.5%) | |
| **Drug Resistance** Culture confirmed cases with drug susceptibility results **(N=154)** | | |
| Pattern Resistance to at least 1drug  Resistance to at least INH  Resistance to at least INH and RIF *(MDR-TB)* | | 31(15.5%)  19 (9.5%)  1 (0.5%) |
| + Not mutually exclusive groups  **\*** Alcohol, injecting and non-injecting drug use | | |

### Tuberculosis - Massachusetts

In 2018, 200 cases (incidence rate 2.9 per 100,000 residents\*) of tuberculosis (TB) disease were reported to, and verified by, the Massachusetts Department of Public Health. The Massachusetts case rate remains similar to the United States (U.S.) national case rate (2.8 per 100,000 residents)**†.** The number of cases in 2018 represents a 4.8% decrease from the previous year. The multi-year trend continues to show an overall decline. Comparing the most recent five-year period (2014-2018) with the previous period (2009-2013), the average number of cases declined 13%, from 229 to 198 per year. Health disparities continue to be prominent, with populations born outside the U.S. at increased risk for TB. State and local prevention efforts continue to focus on these high-risk populations, as well as contacts of TB cases.

### Race/Ethnicity

Racial/ethnic minorities are disproportionately affected by TB; 85.5% of active TB disease in 2018 was diagnosed in members of minority groups. The TB case rate per 100,000 residents in 2018 was 26.6 among Asian non-Hispanic residents, 11.7 among black non-Hispanic residents, and 4.3 among Hispanic residents; compared with 0.6 among white non-Hispanic residents. Compared with white residents, the relative risk for being diagnosed with TB in 2018 was approximately 44.3 times higher among Asian (95% CI 43.9, 44.7), 19.5 times higher among Black (95% CI 19.0, 20.0), and 7.2 times higher among Hispanic (95% CI 6.7, 7.8) residents.

### Higher Risk Groups

Non-U.S. Born (persons born outside the United States and territories): Among 200 cases of TB in 2018, 172 (86%) were reported in non-U.S. born persons. 107 (62%) cases were in persons born in one of nine countries: India (26, 15%), China (20, 12%), Haiti (14, 8%), Vietnam (14, 8%), Brazil (8, 5%), Cambodia (8, 5%), Nepal (6, 3%), Cape Verde (6, 3%), and Morocco (5, 3%). The remaining 65 cases (38%) occurred in persons born in 35 additional countries.

Children <15 Years of Age: In 2018, seven cases of TB were diagnosed in children under 15 years of age (3.5% of cases, incidence rate <1/100,000 children under 15 years old). Five of the seven children (71.4%) were born in the U.S.

Incarcerated in Prison/Jail: Five cases of TB were diagnosed in correctional facility inmates in 2018.

Homeless: Of the 200 cases of TB reported in 2018, 3 (1.5%) were in persons experiencing homelessness within the previous year. Two (67%) were U.S.-born individuals.

HIV Co-infected (preliminary): Thirteen persons (6.5%) diagnosed with TB in 2018 were known to be co-infected with human immunodeficiency virus (HIV).

**Drug Resistance**

In 2018, 157 (78.5%) of the 200 TB cases were bacteriologically confirmed by positive culture for *Mycobacterium tuberculosis*,and had isolates available for drug susceptibility testing. Resistance testing was successfully completed on 154 (98%) of the 157 isolates.

Resistance to one or more anti-TB drugs was detected in 31 (15.5%) of the 154 isolates. Resistance to isoniazid (INH), either alone or in combination with other agents, was seen in 9.5%. With MDR-TB increasing worldwide, MDR-TB in Massachusetts is carefully monitored and remains a priority of the TB program.

\*US Born cases include Puerto Rico