***Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences***

***Summary Tuberculosis Disease Statistics for the Year 2024***

### Tuberculosis Disease - Massachusetts

In 2024, 254 residents of Massachusetts were diagnosed with tuberculosis (TB) disease (incidence rate 3.6 per 100,000 residents1). This represents a 13% increase over 2023. This number does not include Massachusetts residents diagnosed with latent tuberculosis infection (LTBI)2. The 2024 national TB disease case rate is 3.0 per 100,000 residents3. TB cases have been increasing both nationally and in Massachusetts since falling to historic lows prior to and during the COVID-19 pandemic. The causes of these increases are not fully understood but may be due to decreases in healthcare seeking behavior during the pandemic leading to more transmission when respiratory precautions were relaxed. TB is also highly associated with the movement of people and with various other populations within the commonwealth, described in more detail below.

### Race/Ethnicity

Racial and ethnic minority groups are disproportionately affected by TB; 90% of TB disease in 2024 was diagnosed in members of minority groups. The TB case rate per 100,000 residents in 2024 was 16.1 among Asian non-Hispanic residents, 18.7 among Black non-Hispanic residents, and 6.3 among Hispanic residents; compared with 0.54 among white non-Hispanic residents. Compared with white residents, the relative risk for being diagnosed with TB in 2024 was approximately 29.8 times higher among Asian (95% CI 19.2 to 46.4), 34.6 times higher among Black (95% CI 22,1 to 53.0), and 11.6 times higher among Hispanic (95% CI 7.3 to 18.5) residents.

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### Higher Risk Groups

*Persons Born outside the U.S. and Territories (non-U.S. born)*: Among 254 cases of TB disease in 2024, 228 (90%) were reported in non-U.S. born persons. 166 (66%) cases were in persons born in one of ten countries: Haiti (58, 23%), India (22, 9%), China (17, 7%), Vietnam (15, 6%), Brazil (13, 5%), Cambodia (12, 5%), Guatemala (9, 4%), Ecuador (8, 3%), Honduras (7, 3%), and Colombia (6, 2%). Sixty-one (24%) cases occurred in persons born in one of 27 additional countries outside the U.S.

*Children <15 Years of Age*: In 2024, 5 cases of TB disease were diagnosed in children under 15 years of age (2% of cases, incidence rate <1/100,000 children under 15 years old).

*Incarcerated in Prison/Jail*: No cases of TB disease were diagnosed in persons in the Massachusetts correctional system in 2024.

*Unstably Housed*: Of the 254 cases of TB disease reported in 2024, 22 (9%) were in persons experiencing homelessness within the previous year.

*HIV Co-infected*: 9 persons (4%) diagnosed with TB disease in 2024 were known to be co-infected with human immunodeficiency virus (HIV).

*Known Contacts to Massachusetts Cases*: 15 persons (6%) were known contacts to previous TB disease cases in Massachusetts, demonstrating the occurrence of community transmission within Massachusetts.

**Drug Resistance**

In 2024, 203 (80%) of the 254 TB disease cases were bacteriologically confirmed by positive culture for *Mycobacterium tuberculosis* and had isolates available for drug susceptibility testing. Resistance testing was successfully completed on 194 (96%) of the cultured isolates.

Resistance to one or more anti-TB drugs was detected in 52 (27%) of the isolates. Resistance to isoniazid (INH), either alone or in combination with other agents, was seen in 30 (15%) isolates. Three isolates were also identified as MDR-TB. With MDR-TB increasing worldwide, MDR-TB in Massachusetts is carefully monitored and remains a priority of the TB program.

**Characteristics of TB Disease Cases, 2024 (N=254)**

|  |  |
| --- | --- |
| **Demographics** | # (%) |
| Male | 143 (56%) |
| Female | 111 (44%) |
| Race/Ethnicity  |  |
| White, non-Hispanic | 26 (10%) |
| Black, non-Hispanic | 89 (35%) |
| Hispanic | 55 (22%) |
| Asian, non-Hispanic | 82 (32%) |
| Other, non-Hispanic |  2 (1%) |
| **Origin of Birth** |  |
| U.S.-born | 26 (10%) |
| Non-U.S. born | 228 (90%) |
| **Age (years)** |  |
| <5 |  3 (1%) |
| 5-14 |  2 (1%) |
| 15-19 |  8 (3%) |
| 20-24 | 23 (9%) |
| 25-44 | 101 (40%) |
| 45-64 | 72 (28%) |
| 65+ | 45 (18%) |

**Clinical Presentation**

**Primary site of disease**

|  |  |
| --- | --- |
| Pulmonary | 156 (61%) |
| Extra-pulmonary | 28 (11%) |
| Both  | 70 (28%) |

**Chest radiography**

|  |  |
| --- | --- |
| Cavitary disease only |  80 (31%) |
| Miliary disease only |  6 (3%) |
| Cavitary and miliary |  0 (0%) |
| Non-cavitary disease only | 135 (53%) |
| Normal | 33 (13%) |
| Not done |  0 (0%) |

**Known Higher Risk Groups[[1]](#footnote-2)**

|  |  |
| --- | --- |
| Non-U.S. born | 228 (90%) |
| Children <15 yrs old | 5 (2%) |
| Incarceration | 5 (2%) |
| Homelessness | 22 (9%) |
| Substance use[[2]](#footnote-3) | 21 (8%) |
| HIV co-infection | 9 (4%) |
| Contact to previous MA case | 15 (6%) |

**Drug Resistance** Culture confirmed cases with drug susceptibility results **(N=194)**

|  |  |
| --- | --- |
| Resistance to >1 drug | 52 (27%) |
| Resistance to INH | 30 (15%) |
| Resistance to INH and RIF (MDR-TB)  | 3 (2%) |

 Not mutually exclusive groups

2 Alcohol, injection and non-injection drug use

1. [↑](#footnote-ref-2)
2. [↑](#footnote-ref-3)