Epidemiology of Tuberculosis Cases in Chicago

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Chicago Department of Public Health TB Program

- Serve City of Chicago, ~2.7 million people
- 17 FTE + CDC Assignee
  - Medical Director
  - Program Director
  - Epidemiologist
  - **Case Management**
    - 5 Public Health Nurses (PHN)
- **Field Services**
  - 7 Disease Investigators
  - 2 Public Health Assistants (DOT)
Number of TB cases and Rates by year, Chicago 1993 - 2017

- Chicago Cases
- Chicago Rate
- US Rate

Year | Chicago Cases | Chicago Rate | US Rate
--- | --- | --- | ---
1993 | 798 | 28.7 | 9.7
1994 | 287 | 4.7 | 2.9
1995 | 127 | 4.7 | 2.9
1996 | 100 | 3.0 | 2.9
1997 | 80 | 2.9 | 2.9
1998 | 60 | 2.9 | 2.9
1999 | 50 | 2.9 | 2.9
2000 | 40 | 2.9 | 2.9
2001 | 30 | 2.9 | 2.9
2002 | 20 | 2.9 | 2.9
2003 | 10 | 2.9 | 2.9
2004 | 5 | 2.9 | 2.9
2005 | 2 | 2.9 | 2.9
2006 | 1 | 2.9 | 2.9
2007 | 0 | 2.9 | 2.9
2008 | 0 | 2.9 | 2.9
2009 | 0 | 2.9 | 2.9
2010 | 0 | 2.9 | 2.9
2011 | 0 | 2.9 | 2.9
2012 | 0 | 2.9 | 2.9
2013 | 0 | 2.9 | 2.9
2014 | 0 | 2.9 | 2.9
2015 | 0 | 2.9 | 2.9
2016 | 0 | 2.9 | 2.9
2017 | 0 | 2.9 | 2.9
Number of Tuberculosis Reported, Chicago, 2016
Characteristics of TB Cases:
Mean, range and trend of age at report, Chicago
Characteristics of TB Cases:
Race and ethnicity, Chicago

- Rates:
  - White = 0.9
  - Black = 4.3
  - Hispanic = 5.5
  - Asian = 29.2
Characteristics of TB Cases:
Place of birth, Chicago

- 2008 first year Foreign Born accounted for more cases than US Born
  - USA and Chicago
Characteristics of TB Cases:
Country of origin among foreign born cases, Chicago, 2011-2015
Site of TB Disease, Chicago, 2012-2016

- In 2016, 108 pulmonary cases
  - 53% were sputum smear positive (N=57)
  - 51% had cavitation/s on CXR (N=55)
TB Treatment Completion, Chicago, 1993-2015

* Patients who died during or before treatment or who moved out of the country are excluded. Patients with resistance to rifampin, meningeal TB, TB of the bone or skeletal system, TB in the central nervous system and children with disseminated TB were also excluded due to expected longer duration of treatment. Treatment duration varies based on clinical presentations of each individual patient and the nature of their TB disease.
Direct Observation of Therapy DOT, Chicago, 2012-2016

![Bar chart showing the percentage of self-administered only, DOT and self-administered, and DOT only for each year from 2012 to 2016. The chart indicates a decreasing trend in self-administered only and an increasing trend in DOT and self-administered and DOT only over the years.]
MDR = Multidrug resistant. Indicates at least isoniazid and rifampin resistance, but not XDR.
XDR = Extensively drug resistant. Indicates MDR plus resistance to an injectable and a quinolone.
<table>
<thead>
<tr>
<th>Year</th>
<th>HIV Co-infection (% of tested)</th>
<th>Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>(%)</td>
</tr>
<tr>
<td>2012</td>
<td>8</td>
<td>(6.8%)</td>
</tr>
<tr>
<td>2013</td>
<td>10</td>
<td>(9.1%)</td>
</tr>
<tr>
<td>2014</td>
<td>8</td>
<td>(6.7%)</td>
</tr>
<tr>
<td>2015</td>
<td>7</td>
<td>(7.0%)</td>
</tr>
<tr>
<td>2016</td>
<td>6</td>
<td>(5.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>(6.9%)</td>
</tr>
</tbody>
</table>
Co-Morbidities of TB Cases, HIV, Chicago, 2012-2016

The bar chart shows the number of TB cases and the percentage of co-morbidities with HIV over the years 2012 to 2016. The percentage of positive cases (red) and negative cases (blue) is indicated for each year:

- **2012**: 6.8% positive, 93.2% negative
- **2013**: 9.1% positive, 90.9% negative
- **2014**: 6.7% positive, 93.3% negative
- **2015**: 7.0% positive, 93.0% negative
- **2016**: 5.1% positive, 94.9% negative

The trend indicates a slight increase in the percentage of positive cases over the years, with the highest percentage in 2016.
Characteristics of TB Cases, Chicago, 2012-2016