TB Control in New York City: Current status and progress towards elimination

Chrispin Kambili, MD
Assistant Commissioner of Health
Director, Bureau of TB Control, NYC DOHMH

World TB Day Conference
March 23, 2011

Every 20 Seconds
someone somewhere in the world
dies from TB!

What constitutes TB control?
- Identify prevalent cases
- Treat the cases to:
  - Reduce morbidity & mortality
  - Reduce transmission
- Mitigate impact of newly transmitted TB
- Address other LTBI

What's needed for effective TB control?
- Set a legal framework—Defines roles of government and providers
  - Legal framework in NYC is defined by State's Public Health Law and Sanitary Code, and NYC Health Code
    - Reporting requirements
    - Duties, roles and responsibilities
- Create an infrastructure of carry out the mandate
Specific Strategies

- Accurate and thorough case detection
  - Diagnosis
  - Surveillance
- Uninterrupted, effective and supervised treatment, and patient support
- Monitoring and evaluation system and impact measurement
- Adequate public health infrastructure ($)

Main elements of TB Control in US

- Case finding
  - passive - clinical presentation
  - active - contact tracing (source)
  & screening (migrants)
- Treatment of cases
  - Chemoprophylaxis (for latent TB)
  - BCG

Where can we intervene?
TB in NYC: Where have we been and where are we going?

Tuberculosis Cases and Rates
New York City, 1980 – 2010*

*Rates since 2000 are based on population estimates.

US and Foreign-Born Tuberculosis Cases and Case Rates
New York City, 1992 – 2010

Top 10 Countries of Birth for NYC TB Foreign-born TB Patients

1. Puerto Rico and U.S. Virgin Islands are included as US-born.
2. Rates are based on official Census data and intercensal estimates prior to 2000. Rates since 2000 are based on 2000 Census data.
2010 NYC TB cases by country of birth

- No 2010 cases born in this country
- One or more 2010 cases born in this country
- Top 20 2010 country of birth

Tuberculosis Cases by Borough
New York City, 2009 and 2010

- Manhattan (4.1)
- Queens (11.1)
- Brooklyn (9.0)
- Bronx (8.3)
- Staten Island (2.6)

*Rate per 100,000 based on 2009 population estimates*

TB cases counted in New York City by UHF neighborhood, 2010

- Number of TB cases:
  - 0
  - 1 - 9
  - 10 - 24
  - 25 - 49
  - 50 - 96

TB rates in New York City by UHF neighborhood, 2010

- TB case rate:
  - 0.0
  - 0.1 - 3.8
  - 3.9 - 9.1
  - 9.2 - 22.5

Rates are based on 2009 population estimates.
Top 10 Medical Facilities First Evaluating Patients for TB
New York City, 2010

<table>
<thead>
<tr>
<th>Facility Name</th>
<th># of Cases</th>
<th>% of all Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Elmhurst Hospital Center</td>
<td>64</td>
<td>9</td>
</tr>
<tr>
<td>2. Bellevue Hospital Center</td>
<td>48</td>
<td>7</td>
</tr>
<tr>
<td>3. Mount Sinai Hospital</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>4. Kings County</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>5. New York Hospital Medical Center of Queens</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>6. Fort Greene Chest Center</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>7. Beth Israel Medical Center, Maimonides Medical Center</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>8. Queens Hospital Center</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>9. Corona Chest Center, Jacobi Medical Center, Woodhull</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>10. Lutheran Hospital, Washington Heights Chest Center</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

Tuberculosis Cases by Site of Disease
New York City, 2010

- BOTH PULMONARY AND EXTRAPULMONARY DISEASE: 75 (11%)
- ONLY EXTRAPULMONARY DISEASE: 155 (22%)
- ONLY PULMONARY DISEASE: 481 (68%)

Extrapulmonary Sites among TB Cases
New York City, 2010

<table>
<thead>
<tr>
<th>Sites*</th>
<th>% of Total Extra-pulmonary Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lymphatic</td>
<td>42</td>
</tr>
<tr>
<td>Pleural</td>
<td>26</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
</tr>
<tr>
<td>Bone/Joint</td>
<td>9</td>
</tr>
<tr>
<td>Peritoneal</td>
<td>8</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>7</td>
</tr>
<tr>
<td>Meningeal</td>
<td>5</td>
</tr>
</tbody>
</table>

*Categories are not mutually exclusive

Trend in HIV-Infection and TB
New York City, 1992-2010
Those who do not learn from history are doomed to repeat it!

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

http://www.nyc.gov/health/tb

Tel: 311 or 212-788-4162 (TB Provider Hotline)