TB Update for Civil Surgeons

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Randall Reves, MD
Topics

1. Discuss overseas screening and the importance of civil surgeons in TB elimination
2. Review the new I-693 Technical Instructions for TB screening
3. Who, when and how to refer patients to Public Health for TB follow-up
Objectives

After this course, you will be able to:

1. Describe the role of the civil surgeon in TB elimination
2. Complete the I-693 correctly
3. Explain when and how to refer patients to the Denver Metro TB Clinic
4. Describe when and how to treat latent TB
Tuberculosis Epidemiology

~ 2 billion people are infected - A Third of the World!
10% will develop active TB in their lifetime
→ 10 million new active TB / yr
→ 2 million deaths / yr
Estimated TB incidence rate, 2005
WHO Global Surveillance Report, 2008

- 10.2 million new cases
- 14.4 million prevalent cases
- 1.5 million deaths
- 500,000 cases of MDR TB

www.who.int/tb
Reported TB Cases United States, 1982–2009

Number of TB Cases in U.S. vs Foreign-born Persons United States, 1993–2007
Bennett 2007, CDC 2000
18y/o male from Somalia

- in the U.S. for 5 months
- moved to Denver from Chicago and presents to the TB Clinic
- Empty bottle of rifampin prescribed 2 months earlier
- Denies any symptoms or signs of TB
18y/o male from Somalia
18y/o male from Somalia

- Fax report from Chicago: patchy LUL infiltrate, 3 negative smears & cultures

- Is this active TB?
- What is the likelihood of drug resistance?
- Should he be isolated (quarantined)? Where?
18y/o male from Somalia

- He is instructed to remain isolated at home except to come to the TB clinic (including a written letter / isolation order read via an interpreter)
- HIV (-)
- Sputum AFB smears are: Neg, Neg, 1(+)
CXR from Chicago Arrives

August

October
18y/o male

3 weeks later, cx (+) TB resistant to all first-line drugs:
- INH, Rif, PZA, EMB, and Streptomycin
- Second-line susceptibilities are unknown

Temporary visa holders
~ 35 million

Legal Permanent Residents (LPR), overseas
527,000

Undocumented immigrants
~ 9 million living in US

Total ~ 45,168,000

Status adjusters already in U.S.
641,000

Source: Dept. of Homeland Security, Office of Immigration Statistics
TB Screening of Migrants “Entering” U.S. (1)

- Panel Physicians
- Legal Permanent Residents (LPR), overseas 527,000
- 98% from countries with higher TB burden
- Status adjusters already in U.S. 641,000
- Civil Surgeons
TB Screening of Migrants “Entering” U.S. (2)

98% from countries with higher TB burden

Panel Physicians

Legal Permanent Residents (LPR), overseas 527,000

Status adjusters already in U.S. 641,000

Civil Surgeons
American Residents, Country of Birth

Kransky, Based on 2000 US Census
Legal Permanent Residents, 1900-2009

Prior Overseas TB Screening

Chest radiograph

≥ 15 years old

Active TB

AFB sputum smears (3)

All (-) (at least one +)

Noninfectious TB
Class B1

Infectious TB
Class A

Inactive TB
Class B2

No TB
47 year-old Ukranian immigrant (1)

- 10/96 visa applicant in Moscow
- RUL fibrosis on overseas CXR, Dx of inactive TB
- 9/97 immigrated to Denver
47-year old Ukranian immigrant (2)

- 9/97, arrived in Colorado
- 11/97, family brings him to the TB Clinic
- 10 lb. weight loss, fatigue, cough
- AFB positive sputum smears
Performance of Overseas TB Screening Program (1)

Percentage of suspected TB immigrants confirmed to have active TB after arrival in the USA

Class B1 (suspect active)  3.3% to 14%

Class B2 (suspect inactive) 0.4% to 3.8%

Binkin - report to the IOM - 2000
Performance of Overseas TB Screening

- Visa applicants in Vietnam; 10/98-10/99

14,098 screened

1,331 (9.4%) CXR “active” TB

1,179 submitted 3 sputum specimens

82 (7%) smear (+)
101 (8.6%) sm (-), cult (+)

1.3% prevalence!

### Overseas TB Screening: Changes

<table>
<thead>
<tr>
<th>Category</th>
<th>1991</th>
<th>2007</th>
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<tbody>
<tr>
<td>Valid (nl)</td>
<td>12 months</td>
<td>6 months</td>
</tr>
<tr>
<td>Valid (B1)</td>
<td>6 months</td>
<td>3 months</td>
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<tr>
<td>TST</td>
<td>Not used</td>
<td>Ages 2-14*</td>
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<tr>
<td>Sputums</td>
<td>Smears (B1)</td>
<td>Sm/Cx/DST</td>
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<tr>
<td>Monitoring†</td>
<td>None</td>
<td>Monthly Cx</td>
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<tr>
<td>Contacts</td>
<td>None</td>
<td>TST (B3)</td>
</tr>
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</table>

* In countries with incidence > 20/100,000
† During treatment for active tuberculosis
Implementation of the 2007 Technical Instructions for Tuberculosis Screening and Treatment
TB Screening of Migrants “Entering” U.S.

Panel Physicians

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Civil Surgeons
Civil Surgeon Evaluation for Status Adjusters (1)

Purpose:

- Identify applicants with communicable diseases
- Document vaccination against vaccine-preventable diseases
- Identify applicants with mental disorders associated with harmful behavior and/or drug abuse
Civil Surgeon Evaluation for Status Adjusters (2)

- Conduct medical examination
  - Class A diseases
  - Class B diseases
- Ensure immunizations up-to-date
- Obtain consultation as necessary
- Complete I-693
Communicable Diseases of Public Health Significance

- Tuberculosis
- Leprosy (Hansen’s Disease)
- Sexually Transmitted Infections:
  - Syphilis
  - Chancroid
  - Granuloma Inguinale
  - Lymphogranuloma venereum
- HIV testing is no longer required
Role of the Civil Surgeon

- Establish a working relationship with the TB control program
- Verify the applicants identity
- Perform the initial exam
Role of the Health Department

- Provide training on performing TST
- Recommend a radiologist if needed
- Evaluate applicants with abnl CXR
- Perform mycobacterial lab evaluation
- Provide medical management and contact investigation
- Provide or facilitate the treatment of latent TB
Questions?