CureTB: A strategy for mobile populations

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Outline

• History
• What is CureTB?
• How does CureTB work?
• Challenges
• Case studies
• Outcomes
• Partnerships
History of CureTB

1997
CureTB starts in San Diego County TB program as a binational collaboration with sister city Tijuana, Mexico

2013
CureTB expands to routinely include all Latin America

2016
Joints CDC’s Division of Global Migration and Quarantine (DGMQ) and expands to all countries, becoming transnational

2017
Formal agreement with US Immigration and Customs Enforcement (ICE) to link outbound persons to care
CureTB’s transnational mission

Estimated TB incidence rates, 2014

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CureTB is a program that helps with:

- Linkage to care for patients with active TB when they leave the United States
- Accurate and up-to-date information for receiving providers
- Motivation and resources for mobile individuals to continue care
- Linkage for comorbidities (HIV, mental health, etc.)
- Facilitation of positive outcomes and communication between partners
How does CureTB work?

Originating jurisdiction → CureTB → Destination jurisdiction
CureTB referral to treatment

1. Receive referral from originating provider/jurisdiction
2. Interview patient by telephone to develop rapport, educate, assist
3. Send accurate and up-to-date clinical information to downstream provider, state, national level
4. Maintain communication with patient and health system until linked to care
5. Determine treatment outcome and notify originating jurisdiction

Continuously motivate the patient by maintaining contact
Tips for a successful referral

• Anticipate, don’t wait → Call CureTB early. Don’t wait until your patient leaves. It’s best if we can talk to your patient before they leave.

• Provide complete clinical information → Downstream providers need detailed information (including CXR, adverse reactions, etc.).

• Update pending information when available, e.g. drug susceptibility testing → We will follow up if you forget!

• Ask your patient for at least 2 people (and their contact information) who will always know where they are → We will also review this when we talk to the patient.
Referral of patients with active tuberculosis
Verified or potential TB in a person moving outside the United States and needing >30 days of treatment

Source case finding
Diagnosed patient with TB with high probability of transmission from a specific individual in another country

Contact notification
Mexico and other countries*

Past Medical history
Mexico and other countries*

*Other countries considered case by case
Telephone interview process

Step 1: Telephone interview:
- Introduce ourselves
- Build an understanding of TB and its treatment
- How we can help them, and next steps
- Collect information to contact them after departure

Step 2: Confirm locating information by contacting family and friends

Step 3: Send information to downstream provider and national level
• Collects accurate information on drug susceptibility testing
• Results shared with provider in destination country
• Facilitates continuity of appropriate care
Health system challenges of controlling TB across borders

- Different resources
- Different health structures
- Different languages
- Different priorities and standards of care (examples)
  - Selective testing and/or treatment of contacts for latent infection
  - Smear-based diagnosis, limited culture/molecular diagnostics
  - No standard treatment recommendations for extended regimens for delayed culture conversion
  - Directly observed therapy may be “flexible”
  - No operational method to enforce public health TB regulations
CureTB in CDC’s DGMQ

- Aligns with DGMQ mission to reduce morbidity and mortality in globally mobile populations and prevent spread of communicable diseases
- System that coordinates public health interventions at US points of entry (i.e., quarantine stations)
- Participant in federal public health travel restriction activities when needed
- Linkages with Division of TB Elimination, Division of Global HIV and TB, US Department of Homeland Security, etc.
- Can leverage CDC health partners around the world
- Maintains linkage with TB control at state/local level through partnership with San Diego County TB program
CureTB stories
Traveler with drug resistance: 2016

• Young woman delivered baby in the United States.
  ▪ Found small cavitary lesion at delivery; smear +, culture+
  ▪ Started RIPE, then mutations to IR identified
  ▪ Left United States with infant
• Final drug resistance included INH, Rif, Emb, PZA, ethionamide, possible injectable
• Patient could not be located and was placed on federal public health travel restrictions
  ▪ CureTB located via National TB Program (NTP), and patient started on MDR regimen. Culture positive in country
  ▪ Followed until met criteria for travel restriction removal
Travel after release from custody

- 30-year-old man entered a border state and was apprehended. Had previous entries into US border state.
- Transferred to another state while in custody and smear + TB diagnosed after transfer
- On RIPE and fully susceptible
- Released back to Mexico after non-infectiousness was established
- Concerns were
  - Re-entry before treatment completion
  - How patient could get to non-border hometown
28-year-old man entered a border state and was apprehended. Had recent previous entry when TB workup was initiated. Results were now available: smear neg, culture pos, resistant to INH+Rif

Started on MDR regimen. Refused injectable.

Concerns were
- Best regimen if no injectable
- Adherence
- MDR followup in Mexico
Submit a CureTB referral by:

1. **Fax:** 404-471-8905

2. **E-mail:** CureTB@cdc.gov  
   - encrypted if contains PII

3. **Call:** 619-542-4013 (primary)  
   or  
   619-692-5623 (secondary)

Attach copies of relevant clinical information (labs, CXR, etc.).
Federal correctional facilities use their own forms.
## Outcome classification

<table>
<thead>
<tr>
<th>Positive outcomes</th>
<th>Negative outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Continues treatment</td>
<td>• Refused/abandoned treatment</td>
</tr>
<tr>
<td>• Completed treatment</td>
<td>• Lost–insufficient information</td>
</tr>
<tr>
<td>• Cured</td>
<td>• Lost–arrived but lost to followup</td>
</tr>
<tr>
<td>• Moved back–connected to followup</td>
<td>• Lost–never arrived</td>
</tr>
</tbody>
</table>

- Treatment stopped by provider
- Referral not required*  
- Died

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*Treatment completed in the US, TB ruled out, bonded out, less than one month of treatment needed*
CureTB has quarterly case reviews with Mexico NTP and other partners

- Follow up to harmonize outcomes and reporting
- Discuss difficult cases or specific barriers to continuity of care
Patient-centered care

Primary provider

Health department

Local

Federal

State

Community

ICE

Correction or detention facilities

Patient and family

= Treatment completion
CureTB contact information

Website: www.cdc.gov/usmexicohealth/curetb.html

Phone: (619) 542-4013 (primary) or (619) 692-5623 (secondary)

Email: CureTB@cdc.gov

Fax: (404) 471-8905

Address: 3851 Rosecrans St. P-575
          Suite 715
          San Diego, CA 92110
          USA
Questions?