Overview: TB Case Management and Contact Investigation

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June 2, 2015

Overview

- Define tuberculosis (TB) case management
- Describe the roles and responsibilities of a PHN TB Nurse Case Manager
- Review contact investigation (CI) goals
- Discuss how to prioritize cases and contacts for CI
- Review contact screening and follow-up

Nurse TB Case Management: the Toughest Job You'll Ever Love...
What is TB Case Management?

- “A collaborative process that assesses, plans, implements, coordinates, monitors and evaluates the options and services available to meet an individual’s health needs, using communication and available resources to promote quality, cost-effective outcomes”

Cases Management Goals

- Render patient non-infectious by ensuring adequate course of treatment
- Prevent TB transmission / development of disease
- Identify / remove barriers to adherence
- Identify / address other urgent needs

Case Management Responsibilities (1)

Ensure that the patient:
- Completes an appropriate course of treatment
- Is educated about TB, its treatment, management, and adverse reactions
- Has documented culture conversion
- Has a contact investigation completed when indicated
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Case Management Responsibilities (2)

Ensure that:
• Patient completes medical evaluation / follow-up (clinical and toxicity monitoring)
• Response to therapy is evaluated regularly
• Treatment regimen adjusted, as needed
• Additional responsibilities:
  • Ensure adequate supply of drugs
  • Identify, train and monitor Directly Observed Therapy (DOT) Aide
  • Submit information / reports to AK TB Program

Patient-centered Care

Clinical Care

Socioeconomic Support

Emotional Support

TB Case Management: Key Components (1)

• Establish therapeutic relationship with the patient – an essential partnership
• Ongoing assessment of patient status
• Educate all patients / “families” about TB
• Ensure that TB treatment is continuous, appropriate, and completed

Adapted from: Bayona, J. The community based model of MDR-TB treatment. ICDLC NAR meeting, Vancouver, B.C. 2/2007

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TB Case Management: Key Components (2)

- Monitor patient’s status / response to treatment through completion
- Contact investigation – identify, evaluate, and follow-up on all contacts
- Address urgent health / other needs
- Ensure that staff have knowledge, skills, and caring attitude

TB Case Management: Key Components (3)

- Provide culturally sensitive / acceptable care
- Set goals, monitor outcomes, and appropriately document interventions
- Maintain communication with the primary care provider and patient’s “team”

The Case Management Process

1. Receive case report
2. Communicate with provider
3. Assess client
4. Develop treatment plan
5. Implement plan
6. Evaluate plan, ongoing
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“The microbe is nothing…the terrain everything”
Louis Pasteur

Case Management Challenges
- Public-private care coordination
- Transitions
- Co-morbidities
- Homelessness, substance abuse, mental illness
- Patients that move
- Cultural beliefs and language issues
- Drug resistance (particularly if MDR)
- Staffing shortages and staff turnover

Overview: TB Case Management and Contact Investigation
Contact Investigation – A Crucial Prevention Strategy

- On average, 10 contacts are identified for each person with infectious TB in the U.S.
- 20%–30% of all contacts have LTBI
- 1% of contacts have TB disease
- Of contacts who will ultimately have TB disease, approximately one-half develop disease in the first year after exposure

Benefits of Contact Investigations

- Finding and treating additional TB disease cases (potentially interrupting further transmission)
- Finding and treating persons with LTBI to avert future cases
Contact Investigations: a Public Health Responsibility

Decision to investigate an index patient depends on likelihood of transmission and risk to contacts

- Need to determine
  - Priority of case – e.g. 4+ AFB, cavitary, coughing?
  - Which contacts to evaluate first?
- May require partnering – e.g. CHA/Ps
- Complicated
  - Many interdependent decisions
  - Time-consuming interventions
  - Documentation

National TB Program Objectives

At least 95% of contacts to sputum AFB smear positive TB cases will be evaluated for infection and disease.

The Reality in Alaska:
In 2013, 90% of contacts to AFB smear positive cases were examined.

National TB Program Objectives

At least 85% of infected contacts to sputum AFB smear positive TB cases will complete therapy.

The Reality in Alaska:
In 2013, 82% of infected contacts to AFB smear positive cases started and completed therapy.
Definitions of abbreviations: AFB = acid-fast bacilli; C/W = consistent with; CXR = chest radiograph; TB = tuberculosis.


Decision to Initiate Contact Investigation

Highest priority for contact investigation....

...pulmonary, laryngeal or pleural TB:
AFB sputum smear positive or cavitary lesion on CXR
How to “clear” and manage contacts

- Tuberculin skin test (TST) or interferon gamma release assay (IGRA)
- Now and repeat in 8-10 wks. if negative
- Consider “window prophylaxis” for high risk contacts
- TSTs for children < 5 yrs. of age
- If prior (+) TST — symptom screening, sputum
- Newly infected contacts = LTBI treatment priority

Evaluation of Persons with Positive TB Test Results

Person has a positive test for TB infection
- TB disease ruled out
- Consider for LTBI treatment

Person accepts and is able to receive treatment of LTBI
- Develop a plan of treatment with patient to ensure adherence

If person refuses or is unable to receive treatment for LTBI, follow-up TST or IGRA and serial chest radiographs are unnecessary
- Educate patient about the signs and symptoms of TB disease

Treatment Regimens for Latent TB Infection

<table>
<thead>
<tr>
<th>Drug(s)</th>
<th>Duration</th>
<th>Interval</th>
<th>Minimum Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isoniazid</td>
<td>9 months</td>
<td>Daily</td>
<td>270</td>
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<tr>
<td></td>
<td></td>
<td>Twice weekly 76</td>
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<td></td>
<td>6 months</td>
<td>Daily</td>
<td>180</td>
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<tr>
<td></td>
<td></td>
<td>Twice weekly 52</td>
<td></td>
</tr>
<tr>
<td>Isoniazid &amp; Rifapentine</td>
<td>3 months</td>
<td>Once weekly</td>
<td>12</td>
</tr>
<tr>
<td>Rifampin</td>
<td>4 months</td>
<td>Daily</td>
<td>120</td>
</tr>
</tbody>
</table>

Note: Rifampin (RIF) and Pyrazinamide (PZA) should not be offered to persons with LTBI. RIF and PZA should continue to be administered in multidrug regimens for the treatment of persons with TB disease.
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References / Resources


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