Tuberculosis: A Serious Re-Emerging Threat

Unmet Needs

- Provide federal funding of $252.4 million consistent with the HHS Secretary’s Advisory Council for the Elimination of Tuberculosis to meet the CDC goal of tuberculosis elimination in the United States.

- Increase funding for laboratories to implement new and existing diagnostic tests that can identify tuberculosis and screen for drug resistance.

- Provide funding for CDC to conduct an assessment of laboratory tuberculosis testing capacity.

- Develop a plan of action that will address extensively drug resistant tuberculosis (XDR-TB) to prevent it from invading the United States.

- Increase funding for universal genetic fingerprinting of tuberculosis specimens, which makes rapid detection of clusters of recent tuberculosis transmission possible to expedite public health intervention.

- Direct CDC to develop a strategic plan for implementing and maintaining a systems approach to tuberculosis control.

- Assess the true costs of providing tuberculosis laboratory services because the cost to identify individual cases rises as the number of cases declines and the cost of services will vary from one jurisdiction to another.

- Develop recommended testing methods for different patient populations, as well as guidelines to help jurisdictions select the appropriate level of service.

CDC FUNDING

Tuberculosis Prevention

(Dollars in millions)

<table>
<thead>
<tr>
<th>FY</th>
<th>Funding</th>
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<tbody>
<tr>
<td>2007</td>
<td>$137 (Enacted)</td>
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<tr>
<td>2008</td>
<td>$137 (President’s Request)</td>
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<tr>
<td>2008</td>
<td>$252.4 (APHL Required Amount)</td>
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(+$17 million for universal genotyping; +$10 million to sustain and enhance laboratory capacity)

- Improve laboratory staff proficiency in complex tuberculosis testing procedures in light of fewer specimens being tested in relation to the decline in tuberculosis.

Background

Tuberculosis is a serious re-emerging infectious disease that affects the lungs and respiratory system as well as other organs and can lead to death if left untreated. This illness is transmitted person to person via the air by coughing, sneezing and even talking. Tuberculosis has re-emerged as a co-infection with Human Immunodeficiency Virus (HIV) since HIV weakens the immune system and allows for the easier proliferation of tuberculosis.

Today, despite an overall decline in cases, tuberculosis continues to incur significant social, public health and economic costs in the US. Approximately one-third of the world’s population is latently infected with the bacterium that causes tuberculosis. An estimated 10
million to 15 million US citizens have latent tuberculosis infection, and about 10 percent of these individuals will develop tuberculosis at some point in their lives. About 15,000 new cases of tuberculosis disease were diagnosed in 2002 in the US. Costly tuberculosis outbreaks still occur, and multi-drug resistant-tuberculosis continues to spread. Now the nation is facing a new tuberculosis threat, extensively resistant tuberculosis (XDR-TB), a form of tuberculosis that is resistant to both first line drugs and three of the six second line drugs available for treatment. XDR-TB is a deadly form of tuberculosis that can be incurable, especially to people with HIV/AIDS, and is swelling to epidemic proportions in southern Africa. A number of laboratories have already reported this deadly new strain of tuberculosis in the United States. The CDC provisionally estimates that the direct medical treatment costs of an XDR-TB patient ($132,000) are on average 2.5 times higher than those of a multi-drug resistant tuberculosis (MDR-TB) patient ($53,000) and may be much higher depending on hospitalization length and location of treatment. Altogether, tuberculosis-related costs approach $1 billion each year in the US.

To reach the goal of the elimination of tuberculosis in the US, improvements in laboratory testing must be maintained and translated into improvements in the treatment, prevention, and control of tuberculosis. Despite advances in laboratory methods, lack of coordination for referral of specimens and cultures continues to lead to unnecessary delays in laboratory testing, reporting and initiation of treatment.

Currently all 50 state public health laboratories perform some level of tuberculosis testing and serve as referral and reference laboratories for culture identification and tuberculosis drug susceptibility testing in support of other public and private sector laboratories. State public health laboratories have used CDC funding over a period of many years to create modern laboratories with the latest diagnostic equipment approved for tuberculosis isolation and identification, biosafety equipment to protect laboratory staff and premises, personnel sufficient to meet the need for rapid laboratory confirmation of tuberculosis and ongoing staff training in the use of state-of-the-art diagnostic equipment and rapid testing procedures. As laboratories have become better equipped and personnel better trained, federal funds have been used less to upgrade tuberculosis laboratories and more to maintain core tuberculosis capabilities and infrastructure.

Of the $139 million allocated for tuberculosis control, only $10 million goes to supporting public health laboratory testing. This number has been stagnant at $10 million annually since 1995. With inflation factored in, the funding has experienced a 25 percent decrease in real dollars. Although it is tempting to think that funding can decrease in proportion to the decrease in the number of tuberculosis cases, below a certain point this reasoning falls apart, since a base level of funding (in real dollars) is necessary to maintain the tuberculosis control infrastructure.

REFERENCES

