

07-03

## STATEMENT OF POLICY

### Tuberculosis Prevention and Control

#### Policy

The National Association of County and City Health Officials (NACCHO) strongly supports increasing categorical federal, state, and local funding for state and local health department programs to control active tuberculosis (TB) disease<sup>1</sup> and prevent spread through detection and treatment of tuberculosis infection.<sup>2</sup> NACCHO also encourages the adoption of federal and state guidelines and policies that improve access and reduce financial barriers to screening, testing, and treatment for TB infection. Such investments can lead to immediate benefits, accelerate declines in cases, yield long-term cost savings, and advance the goal of TB elimination in the United States.

#### Justification

Tuberculosis remains a leading cause of preventable infectious disease deaths worldwide<sup>3,4</sup> and the rising global emergence of multi-drug resistant tuberculosis (MDR-TB) and extensively drug resistant tuberculosis (XDR-TB) increase public health workload and pose public health challenges, particularly with the growing potential for importation and subsequent spread of these infections.<sup>1</sup> Domestically, TB continues to disproportionately affect vulnerable populations and requires strong public health infrastructure to maintain adequate elimination and control measures. Underlying risk factors for TB such as diabetes and renal disease are also rapidly on the rise and contribute to the threat of TB resurgence. Furthermore, TB is a disease for which there is no effective vaccine, but is curable and preventable.

In the United States, eliminating TB and strengthening domestic capacity to combat drug resistant TB are national public health goals.<sup>4</sup> Effective prevention and control efforts have been responsible for a marked and sustained decrease in the number of TB cases reported between the early 1990s and 2013.<sup>5</sup> Furthermore, ongoing research into novel interventions and treatments has yielded effective new options, such as better laboratory tests and short-course treatment regimens for TB infections. However, since 2013, after two decades of annual declines, incidence of TB in the United States has leveled.<sup>6</sup>

To achieve TB elimination, public health and community stakeholders must intensify efforts to interrupt TB transmission and increase their focus on detecting and treating TB infection.<sup>7</sup> Eliminating the reservoir of disease is key because as many as 85% to 90% of U.S. TB cases may originate from reactivation of infection.<sup>8</sup> Success in achieving elimination will depend on a number of factors including adequately resourcing state and local health departments to maintain core public health activities (e.g., TB surveillance and contact investigations) while increasing targeted testing and treatment for TB infection by primary care providers.<sup>9</sup>



Clinical guidelines that encourage treatment of TB infection; effective engagement of and support for community-based providers; and policies that ensure universal access and reduce financial barriers to screening, testing, and treating TB infection in primary care, will also be key. These efforts are labor- and resource- intensive, requiring funding and the recruitment, training, and retention of highly skilled health care workers. However, their benefits are clear. Past resurgences in TB cases have been directly attributed to decreases in funding for TB control and infrastructure and have taken billions of dollars to correct.<sup>10</sup>

Appropriately treating TB also prevents the emergence of costly and lethal drug-resistant strains. Drug-resistant *M. tuberculosis* poses substantial obstacles to TB care and prevention, including higher toxicity drugs, longer treatment regimens, and prolonged social isolation while patients are infectious. An analysis of outcomes for 135 patients with MDR-TB or XDR-TB in the United States during 2005-2007 demonstrated that 78% of patients completed treatment and that mortality was comparable to that for U.S. patients with drug-susceptible TB. However, these favorable outcomes came at a high cost: direct costs were estimated to be \$288,000 for a patient with MDR-TB and \$678,000 for a patient with XDR-TB, compared to \$45,000 for a patient with drug-susceptible TB (costs updated to 2015 dollars).<sup>11</sup> A large portion of those costs are born by the public health departments that provide intensive clinical and case management services and directly observed therapy for the duration of treatment, which frequently lasts 18-24 months for patient with drug-resistant TB. Preventing MDR/XDR TB in the U.S. will require a robust U.S. public health infrastructure to rapidly diagnosis and appropriately care for these patients.

To achieve TB elimination, it is critical that we strengthen local capacity to implement prevention and control activities and treat TB infections. Increased funding of TB control programs at the state and local level, along with public health policies that improve access to testing and treatment, are essential to protecting the community from a disease that is largely treatable and preventable. Along with incentives for state and local health departments to use new, innovative control and treatment modalities, these will ensure progress toward TB elimination and a world free of the scourge of this deadly disease.

## **References**

<sup>1</sup> “Active tuberculosis” refers to disease that occurs in someone infected with *Mycobacterium tuberculosis*. Active TB is characterized by signs or symptoms of active disease, or both, and is distinct from latent tuberculosis infection, which occurs without signs or symptoms of active disease. Source: World Health Organization. Systematic Screening for Active Tuberculosis: Principles and Recommendations, 2013. Retrieved April 10, 2017, from <https://www.ncbi.nlm.nih.gov/books/NBK294076/#top>.

<sup>2</sup> “Tuberculosis Infection” (AKA Latent Tuberculosis Infection), is defined as a state of persistent immune response to *Mycobacterium tuberculosis* without clinically-manifested evidence of active TB disease. Source: World Health Organization. Global tuberculosis report, 2016. Retrieved April 10, 2017, from <http://apps.who.int/iris/bitstream/10665/250441/1/9789241565394-eng.pdf?ua=1> .

<sup>3</sup> World Health Organization. (2015). Global Tuberculosis Report. Retrieved May 5, 2017, from [http://apps.who.int/iris/bitstream/10665/191102/1/9789241565059\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/191102/1/9789241565059_eng.pdf?ua=1)

<sup>4</sup> The White House. (2015). National Action Plan for Combating Multidrug-Resistant Tuberculosis. Retrieved May 5, 2017, from: [https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/national\\_action\\_plan\\_for\\_tuberculosis\\_20151204\\_final.pdf](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/national_action_plan_for_tuberculosis_20151204_final.pdf)

<sup>5</sup> Centers for Disease Control and Prevention. (2013). XDR TB CDC Fact Sheet. Retrieved May 4, 2017, from <https://www.cdc.gov/tb/publications/factsheets/drtb/xdrtb.pdf>

<sup>6</sup> Centers for Disease Control and Prevention. (2013). Reported Tuberculosis in the United States, Atlanta, GA: U.S. Department of Health and Human Services. Retrieved April 6, 2017, from <http://www.cdc.gov/tb/statistics/reports/2013/pdf/report2013.pdf>

<sup>7</sup> Centers for Disease Control and Prevention. (2016). Leveling of Tuberculosis Incidence — United States, 2013–2015. Morbidity and Mortality Weekly Report (MMWR), March 25, 2016 / 65(11);273–27. Retrieved April 14, 2017, from <https://www.cdc.gov/mmwr/volumes/65/wr/mm6511a2.htm>.

<sup>8</sup> Centers for Disease Control and Prevention. (2015). Advisory Council for the Elimination of Tuberculosis, Record of Proceedings, December 2015, [https://www.cdc.gov/maso/facm/pdfs/ACET/2015121516\\_ACET\\_Minutes.pdf](https://www.cdc.gov/maso/facm/pdfs/ACET/2015121516_ACET_Minutes.pdf)

<sup>9</sup> "Tuberculosis Elimination in the United States: An Achievable Goal or an Illusion?" American Journal of Respiratory and Critical Care Medicine, 186(3), pp. i–iii. Retrieved May 5, 2017, from <http://www.atsjournals.org/doi/full/10.1164/rccm.201206-1039ED>

<sup>10</sup> Patterson, J. (2001). A Clinician's Guide to Tuberculosis. Iseman Michael D.; Philadelphia, PA: Lippincott Williams & Wilkins, 2000;448 pages. Infection Control & Hospital Epidemiology, 22(5), 322-323. doi:10.1017/S0195941700075603

<sup>11</sup> Marks SM, Flood J, Seaworth B, Hirsch-Moverman Y, Armstrong L, Mase S, et al. Treatment practices, outcomes, and costs of multidrug-resistant and extensively drug-resistant tuberculosis, United States, 2005-2007. Emerg Inf Dis. 2014;5:812-20.

### **Record of Action**

*Proposed by NACCHO Infectious Disease Prevention and Control Workgroup*

*Approved by NACCHO Board of Directors May 1, 2007*

*Updated May 2016*

*Updated July 2017*

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