

Tuberculosis Public Health Services in Nevada

Legislative Briefing

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Overview of Tuberculosis Public Health Services in Nevada

Background

The mission of the Tuberculosis (TB) Program is to reduce the incidence of TB by the aggressive management of newly diagnosed cases and extensive preventive treatment of those infected with TB.

As the lead agency for TB prevention and control in Nevada, the Nevada State Health Division's TB Program:

- Provides leadership at the local, state and federal level to control TB in Nevada's diverse communities and institutions;
- Collects, analyzes and disseminates information on TB in Nevada;
- Develops and distributes fiscal resources to support TB control and prevention activities at the local level;
- Provides technical assistance, training and advocacy to various groups and organizations;
- Defines minimum standards for TB control and promotes adherence to those standards; and
- Fosters collaboration and coordination among public and private organizations

TB services in Clark County are provided by Southern Nevada Health District (SNHD), in Washoe County by Washoe County Health District (WCHD), in Carson City by Carson City Health and Human Services, and in the remainder of the state by the Nevada State Health Division Community Health Nursing Program (CHN). Laboratory services for the entire state are provided by the Nevada State Public Health Laboratory (NSPHL) in Reno.

TB services in Nevada are funded through a combination of federal funds, state general funds (SGFs), county/local health district funds, fees and other sources. Federal funds provided by the Centers for Disease Control and Prevention (CDC) cannot be used to fund medication.

Surveillance

TB is a contagious airborne disease (transmitted person to person) caused by the bacteria *Mycobacterium-tuberculosis* that affects everyone independent of age, race or socioeconomic status. In Nevada, 80% of TB cases affect the lungs, but it can also affect other parts of the body, such as the kidneys, spine or brain. One third (1/3) of the world's population is believed to be infected, but the disease lays dormant (latent TB infection [LTBI]) in most people unless their immune system is weakened.

Nevada consistently ranks among the top twenty states in the nation with the highest rates of TB. Nevada ranked 11th in 2009, 16th in 2008 and 20th in 2007. In 2009, Nevada had 106 cases of TB. Within the past 5 years (2005 – 2009), Clark County has had 80.4% to 90.2% of the TB cases in Nevada reported among residents of that county. During that same period, Washoe County had 5.9% to 14.3% of the cases, Carson City had 0% to 2.0% of the cases, and the rural/frontier counties had 0% to 4.5% of the cases. In 2010, 14% of TB cases in Nevada had two or more of the following risk factors: cancer, history of incarceration, HIV/AIDS, homeless, substance abuse, identified as a contact to an active case, smoking, or diabetes.

Nevada has been experiencing an alarming increase in the frequency of TB cases in youth. Because the immune system of a child is not as developed as adults, children with TB infection have a higher

chance of developing active TB disease. It is also more common for children to have TB that affects more than one part of the body, and for the TB to be more serious than it is for adults. Due to this rapid progression, it is imperative that these children are identified and treatment initiated as soon as possible.

Approximately two-thirds of Nevada's cases are foreign-born. Nevada is fortunate to be able to sustain a fairly constant number in this population and maintain a rate far below the national average. In 2010, 456 newly arriving refugees and immigrants identified as being at risk for TB received thorough and timely TB evaluations in Nevada. This ensures prompt detection of TB disease, appropriate treatment and prevention of future cases in this high-risk population.

Laboratory Screening

The NSPHL is the central laboratory for TB identification and susceptibility testing in Nevada. In 2010, the NSPHL processed 1,800 clinical specimens for over 1,000 persons suspected of having or identified as having TB, as well as persons having contact with them, to quickly and efficiently identify those infected.

Healthcare workers are required by law (NAC441A.375) to be screened for TB annually as they are exposed to, and care for, patients at risk for TB.

Prevention and Risk Reduction

The state and local health jurisdictions coordinate efforts and share resources to address the evolving concerns with the increasing numbers and complexity of Nevada's TB cases. Another priority is to identify interventions and program revisions that will improve Nevada's policies to prevent and control the spread of TB. In 2010, Nevada's TB programs screened over 8,000 individuals at risk for TB, treated over 3,000 for latent infection, and managed 114 active cases of TB disease.

Preventive therapy is not mandatory, but highly recommended to all persons diagnosed with latent TB infection (LTBI) in Nevada. The TB programs educate contacts about LTBI treatment options, and provide extensive education and counseling regarding the advantages of completing a treatment regimen for LTBI. They explain possible risks for the development of active TB disease if LTBI treatment is not completed and the protection LTBI therapy may provide. If the contact decides not to participate in a preventative treatment regimen they are provided information/education regarding the signs and symptoms to be aware of for TB disease and instructed to seek medical services if they experience these signs and/or symptoms.

TB Treatment in Nevada

Once a person is diagnosed as having TB, or suspected of having TB, by a private provider, hospital, clinic, etc. it is reported to the local health authority or Nevada State Health Division. The case is referred to the care of the TB public health clinic for that health district or to the Community Health Nursing Program in rural Nevada, that program then does the following:

- 1) Educates the patient about TB, how it is treated, side effects of medications, and performs laboratory tests.
- 2) Provides the patient DOT daily to ensure the patient completes the required treatment regimen and monitors for side effects.
- 3) Conducts a thorough interview to identify and assign a risk classification to all contacts.
- 4) Evaluates contacts for TB infection and provides education about sign and symptoms.

- 5) Provides preventive therapy to those identified as being infected (LTBI). The health district starts this process again for those contacts diagnosed as having active TB disease through the investigation.

Treating an uncomplicated susceptible case of TB requires the standard four-drug regimen be administered daily by DOT from a healthcare provider for a minimum of 6 months.

From 2001 through 2010, Nevada treated 19 Multi-Drug Resistant Tuberculosis (MDR-TB) cases, the most recently diagnosed in March 2010. All MDR-TB cases have complex treatment regimens with an extended duration of therapy which costs TB programs \$20,000 to \$200,000 per case each year.

Contact Investigations

The standard of care in Nevada is to conduct a contact investigation interview on every pulmonary case of TB regardless of the smear result; all household contacts of extra-pulmonary cases are evaluated for infection. If TB is diagnosed post-mortem, the family, friends and coworkers are interviewed and contacts evaluated for infection. Since 2001, Nevada has not had a single pulmonary case that did not have contacts identified.

For more information on the Tuberculosis Program, please visit the website at:
http://health.nv.gov/CD_HIV_TBProgram.htm