

## 2019 Nebraska Department of Health and Human Services Tuberculosis Program Report

### Tuberculosis

Tuberculosis, or TB, is an infectious disease caused by a bacteria (germ). It generally affects the lungs, but can cause disease anywhere in the body. The germ may infect anyone, at any age. It can be spread when a person with active TB in their lungs

- coughs
- laughs
- sings
- speaks
- sneezes

and another person then inhales that air.

TB is **NOT** spread by shaking someone's hand, sharing food or drink, touching bed linens or toilet seats, sharing toothbrushes, or kissing.

The general symptoms of TB disease include feeling sick or weak, having weight loss, fever, and/or night sweats. The symptoms of TB of the lungs may include coughing, chest pain, and/or coughing up blood. Other symptoms depend on the part of the body that is affected. TB is curable and treatable with the correct antibiotics.

### Latent TB Infection vs. TB Disease

Individuals with latent TB infection have TB germs in their bodies, but they are not sick because the germs are not active. These people do not have symptoms of TB disease and they cannot spread the germs to others, however, they may develop TB disease in the future. They are often prescribed treatment to prevent them from developing TB disease. **Individuals with latent TB infection are not infectious whereas persons with TB disease are considered infectious and may spread TB bacteria to others.**

### Ways to be tested for TB

There are tests that can be used to help detect TB infection: a skin test or blood tests. The Mantoux tuberculin skin test is performed by injecting a small amount of fluid (called tuberculin) into the skin in the lower part of the arm. A person given the tuberculin skin test must return within 48-72 hours to have a trained health care worker look for a reaction on the arm. The blood test measures how the patient's immune system reacts to the germs that cause TB.

### TB in Nebraska

The Nebraska Department of Health and Human Services (DHHS) TB Program conducts surveillance, data analysis, program evaluation, and consultation for health care providers, health care facilities, and Nebraska's local health departments (LHD). There is close collaboration with Nebraska Public Health Laboratory (NPHL) to ensure appropriate laboratory testing for specimens.

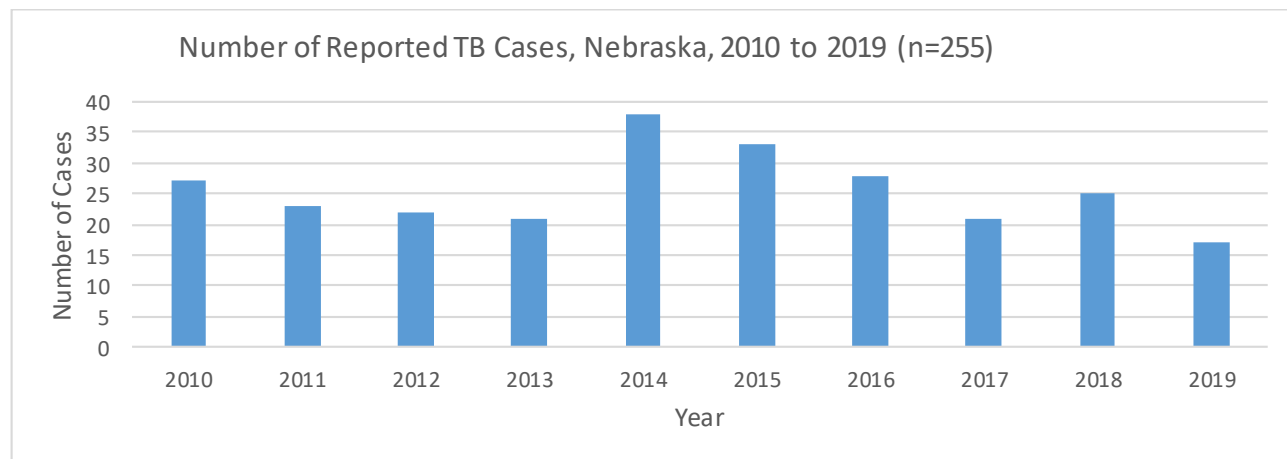
NPHL provides comprehensive testing services including acid-fast bacillus (AFB) smear, cultures, nucleic acid amplification, identification, and drug susceptibility testing for clinical mycobacterial samples statewide. The laboratory serves as a reference laboratory for all isolates suspected to be positive for TB and performs drug susceptibility testing for all first-time positive isolates. The laboratory also sends isolates to the Centers for Disease Control and Prevention (CDC) contract lab in Michigan for genotyping of all positive culture isolates.

Nebraska is comprised of 93 counties that are covered by 20 LHDs. The LHDs provide direct patient care for TB control activities. The LHDs coordinate with various medical providers and correctional health staff members within their jurisdiction to provide TB control and prevention services.

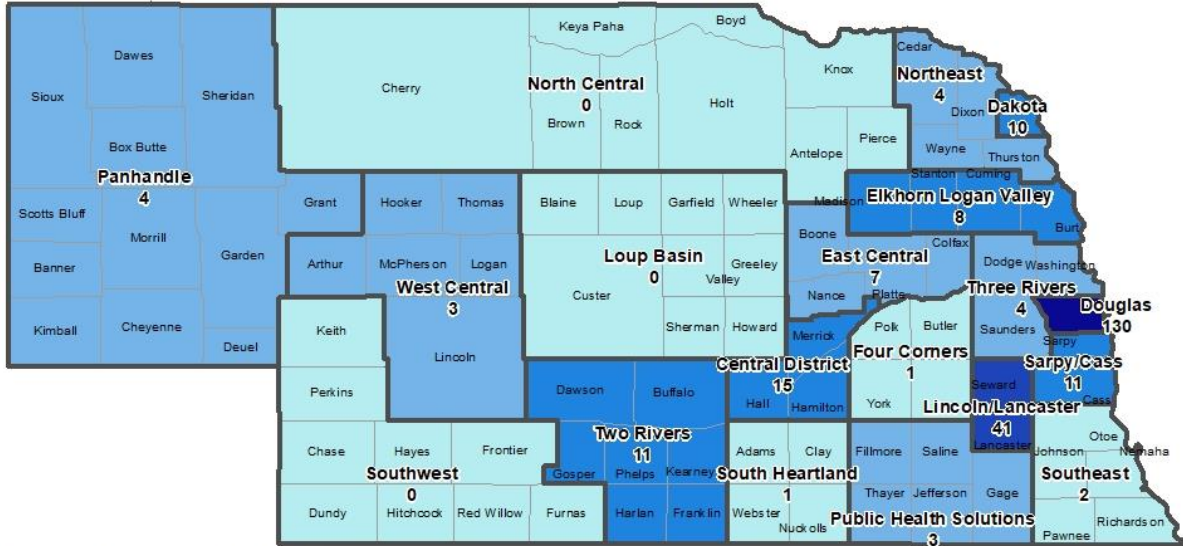
### **2019 Statewide Summary**

#### **Case Rates**

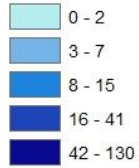
In 2019, Nebraska’s LHDs reported 17 cases of active TB with a case rate of 0.9 per 100,000. This represents a decrease in the number of cases (25 cases in 2018) to 2019. In the United States, a total of 8,920 (provisional) TB cases were reported in 2018 with a case rate of 2.7 cases per 100,000.



## Cumulative Reported TB Cases, by Local Health Department Jurisdiction Nebraska 2010 to 2019 (N=255)



Number of case from 2010 to 2019:

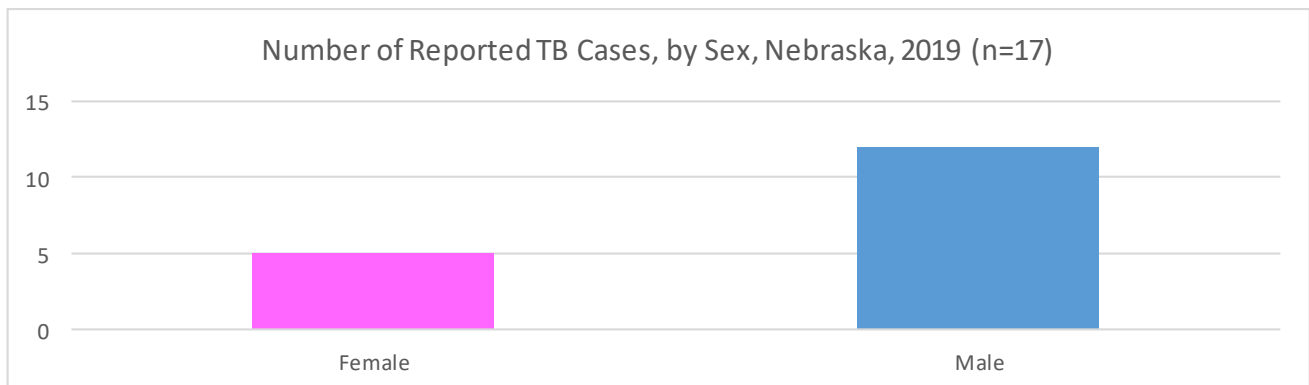


**Table 1: Five Year Totals for TB in Nebraska by Local Health Department**

Health Department or District Name	2015	2016	2017	2018	2019	Total
Central District HD	4	4	0	1	1	10
Dakota County HD	2	1	0	0	0	3
Douglas County HD	16	13	13	14	9	65
East Central HD	1	1	0	0	1	3
Elkhorn Logan Valley HD	1	0	1	1	0	3
Four Corners HD	0	0	0	0	0	0
Lancaster County HD	3	6	4	3	5	21
Loup Basin Public HD	0	0	0	0	0	0
North Central District HD	0	0	0	0	0	0
Northeast Nebraska Public HD	2	1	0	0	0	3
Panhandle Public HD	1	0	1	0	0	2
Public Health Solutions	0	0	0	0	0	0
Sarpy Cass Counties HD	1	1	1	4	1	8
South Heartland District HD	0	0	0	0	0	0
Southeast District HD	0	0	0	0	0	0
Southwest Nebraska Public HD	0	0	0	0	0	0
Three Rivers Public HD	2	0	1	1	0	4
Two River Public HD	0	1	1	1	0	3
West Central District HD	0	0	0	0	0	0
Total	33	28	22	25	17	125

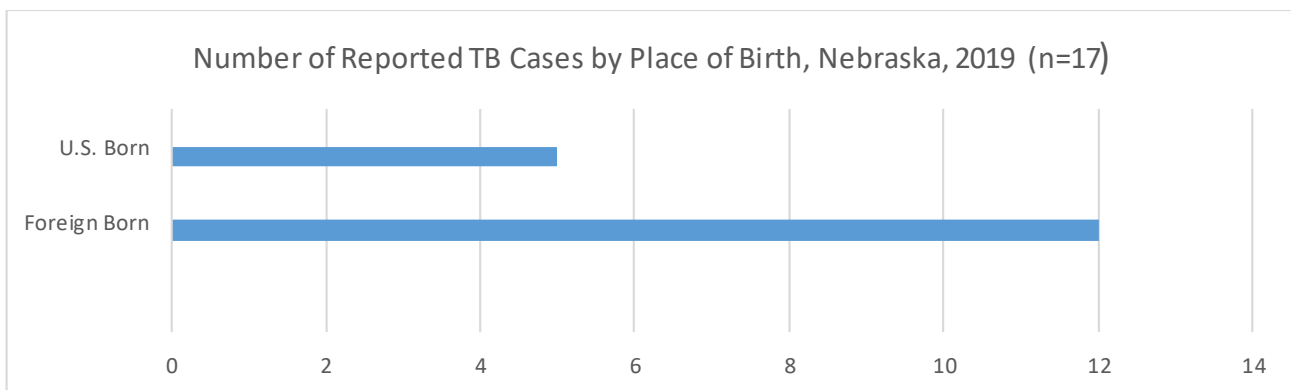
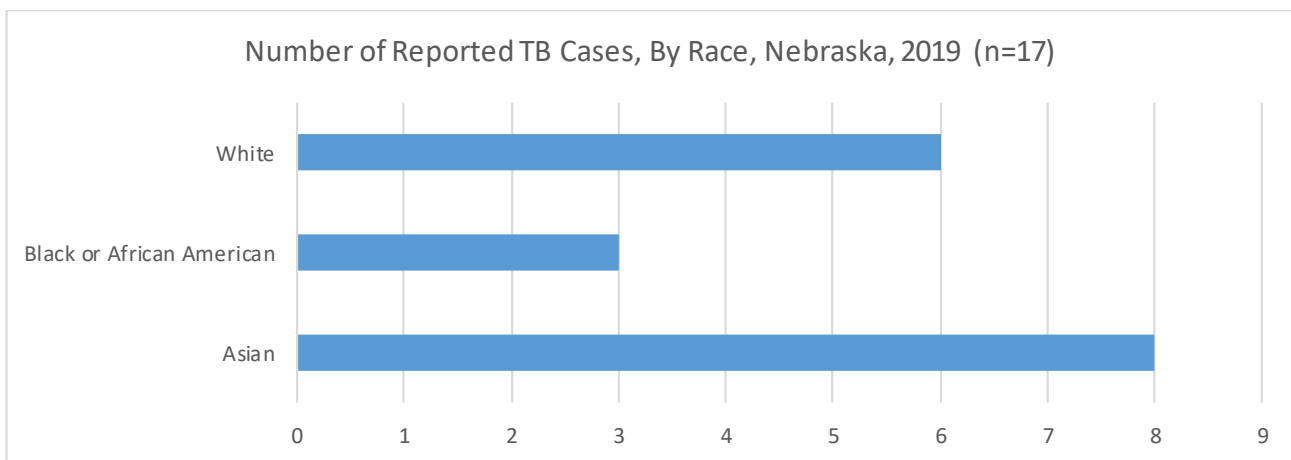
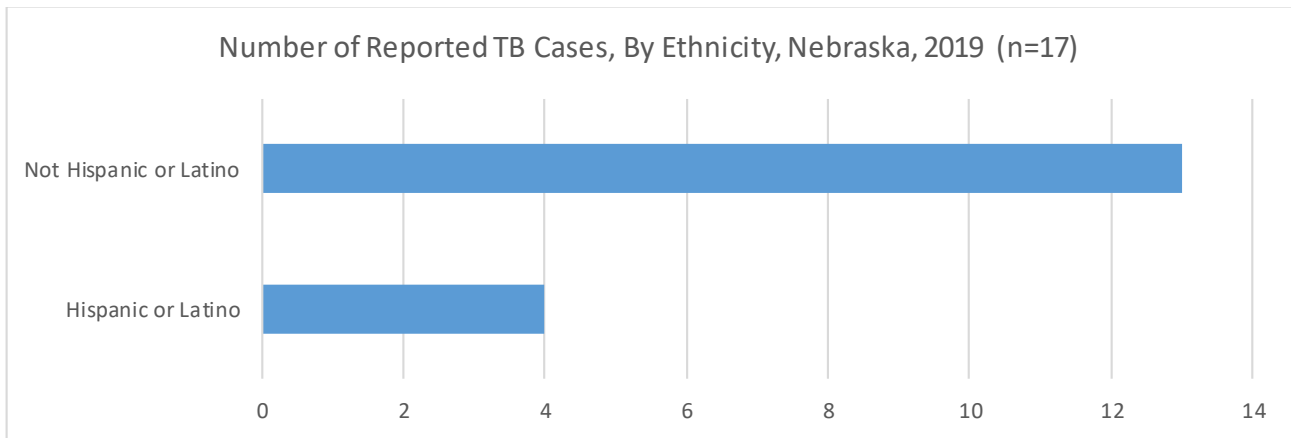
**Tuberculosis by Gender**

Tuberculosis tends to infect and lead to active TB disease in males more often than females. In 2019, 12 (71%) were males and 5 (29%) were females. This is consistent with nationwide and previous year’s surveillance.



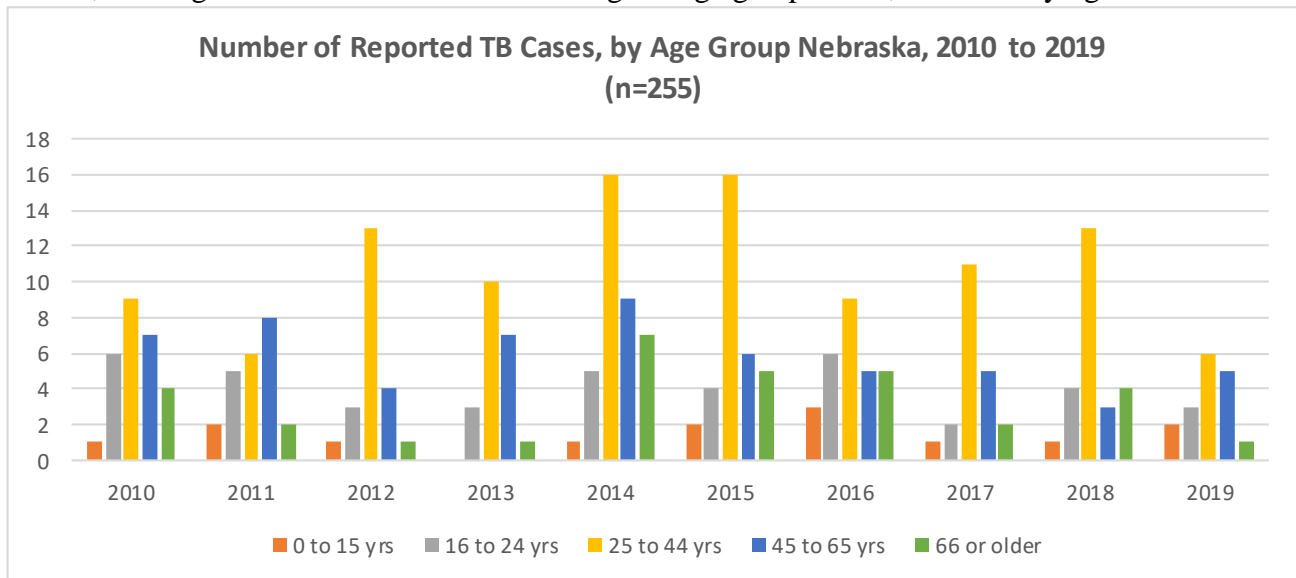
### Tuberculosis by Race, Ethnicity, and Place of Birth

The number of reported persons with TB in Nebraska for the last decade has been highest among racial and ethnic minorities. In 2019, Nebraska LHDs reported four (4) Hispanic and 13 non-Hispanic patients with TB. TB case numbers for 2019 by race include 8 Asians, 6 Whites, and 3 Blacks. Twelve of the 17 cases were foreign born which is 71% of the 2019 cases.



## Cases and Case Rates by Age Groups

In 2019, the largest number of cases were among the age group 25-44, followed by ages 45-64.



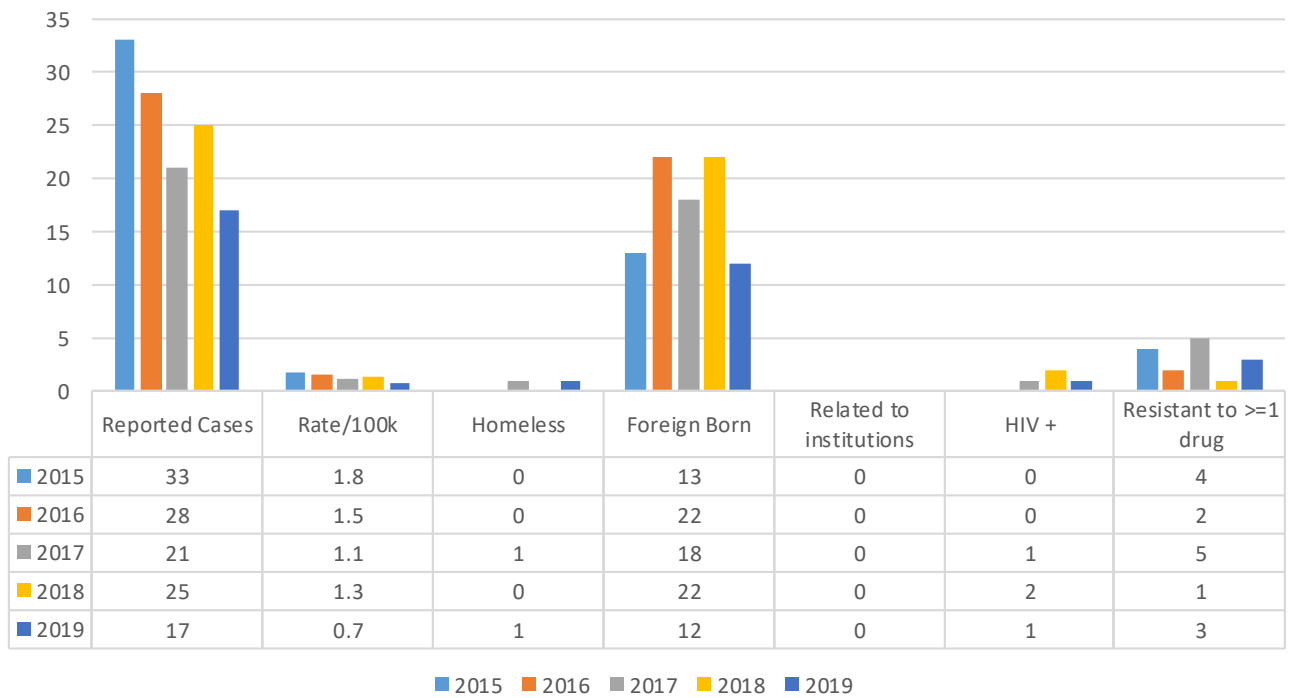
## Tuberculosis Cases by Major Site of Disease

TB most often attacks the lungs (pulmonary TB), but may also affect any part of the body (extrapulmonary TB). In 2019, 9 of the 17 cases were pulmonary and 8 of the cases were extrapulmonary.

## Persons at Higher Risk

Nebraska has been fortunate in that TB has not been prominent in higher risk populations such as homeless and HIV-positive patients. We continue to see complex TB cases which may require expert medical consultation from Heartland National TB Center, a CDC center of excellence.

Tuberculosis Cases In Nebraska with 4 Risk Factors, 2015 to 2019



**Conclusion**

A vital approach to eliminate TB is to identify and treat persons with TB infection and high risk of developing active disease in the future. The TB program continues to partner with LHDs, federal agencies, correctional facilities, and the international community to prevent and control TB in Nebraska. These partnerships have improved treatment completion, data quality, and communication among jurisdictions. With the continued partnerships with the LHDs is a key towards the elimination of TB.

NE Tuberculosis Contact:  
 Kristin Bertrang RN, MSN  
 Tuberculosis Program Manager  
 Division of Public Health  
 Nebraska Department of Health and Human Services  
 301 Centennial Mall South  
 Lincoln, Ne 68509  
 Office phone: 402-471-6441  
 Cell Phone: 402-416-0821  
 Fax: 402-742-8359

Tammy Wenz, RN, BSN  
Tuberculosis Focal Point  
Division of Public Health  
Nebraska Department of Health and Human Services  
301 Centennial Mall South  
Lincoln, Ne 68509  
Office phone: 402-471-8252  
Cell Phone: 402-560-1272  
Fax: 402-742-2355