

**PS20-2001: Tuberculosis Elimination and
Laboratory Cooperative Agreement**

**Annual Performance Progress and Monitoring
Report**

**Reporting period covers
January 1, 2020 – December 31, 2020**

Tuberculosis

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

Individuals with latent TB infection have TB bacteria in their bodies, but they are not sick because the bacteria are not active. These people do not have symptoms of TB disease and they cannot spread the bacteria 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 Tuberculosis

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. The newer TB blood tests do not react to the BCG vaccine which is beneficial to many foreign-born populations.

Tuberculosis in Nebraska

Nebraska's Department of Health and Human Services (DHHS) Tuberculosis 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), which ensures appropriate laboratory testing for specimens.

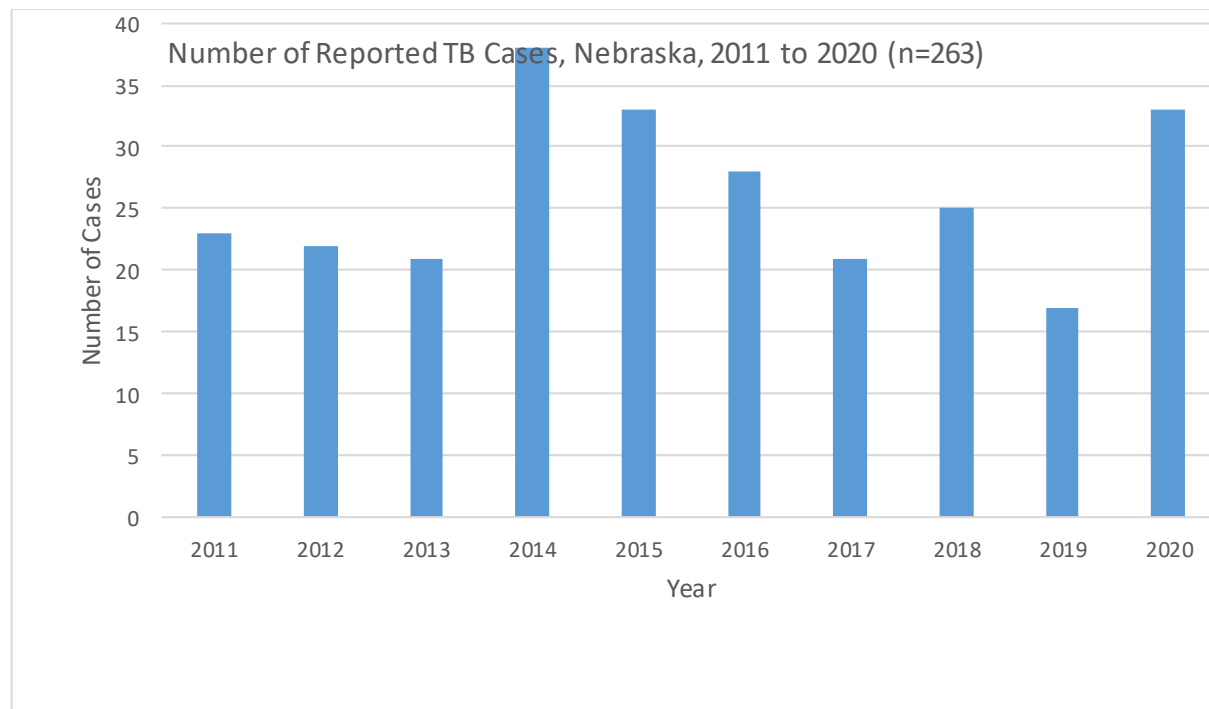
NPHL provides comprehensive testing services including acid-fast bacillus (AFB) smear, cultures, nucleic acid amplification, identification, and drug susceptibility testing for clinical mycobacterial samples statewide. The laboratory serves as a reference laboratory for all isolates suspected to be positive 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 health departments. The LHDs provide direct patient care for tuberculosis (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.

2020 State wide Summary

Case Rates

In 2020, Nebraska’s health departments reported 33 cases of active TB with a case rate of 1.7 per 100,000. This represents an increase in the number of cases (17 cases in 2019). In the United States, a total 7,163 (provisional) TB cases were reported in 2020 with a case rate of 2.2 cases per 100,000 persons.



Cumulative Reported TB Cases, by Local Health Department Jurisdiction Nebraska, 2011 to 2020 (N=261)

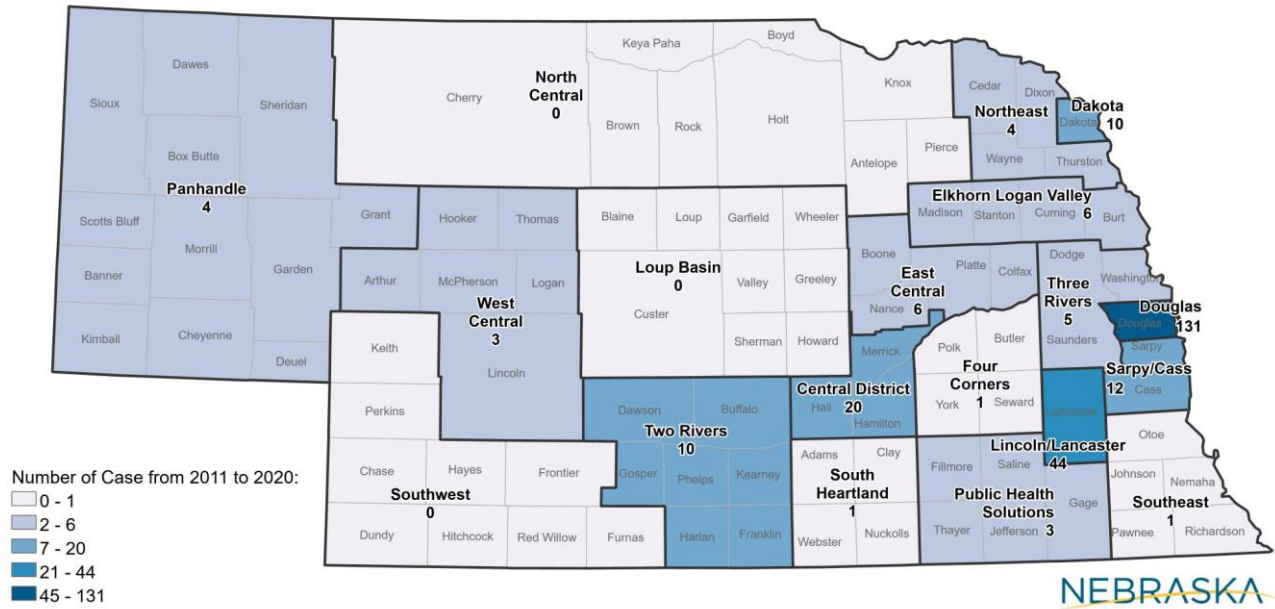


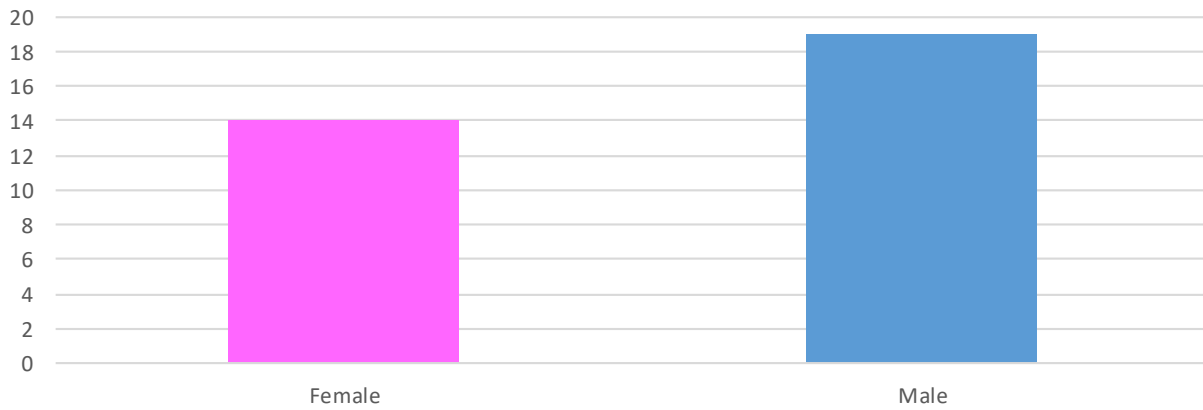
Table 1: Five Year Totals for TB in Nebraska by Local Health Department

Health Department or District Name	2016	2017	2018	2019	2020	Total
Central District HD	4	0	1	1	4	10
Dakota County HD	1	0	0	0	2	3
Douglas County HD	13	13	14	9	16	65
East Central HD	1	0	0	1	1	3
Elkhorn Logan Valley HD	0	1	1	0	0	2
Four Corners HD	0	0	0	0	0	0
Lancaster County HD	6	4	3	5	8	26
Loup Basin Public HD	0	0	0	0	0	0
North Central District HD	0	0	0	0	0	0
Northeast Nebraska Public HD	1	0	0	0	0	1
Panhandle Public HD	0	1	0	0	0	1
Public Health Solutions	0	0	0	0	0	0
Sarpy Cass CountiesHD	1	1	4	1	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	0	1	1	0	0	2
Two River Public HD	1	1	1	0	1	4
West Central District HD	0	0	0	0	0	0
Total	28	22	25	17	36	125

Tuberculosis by Gender

Tuberculosis tends to infect and lead to active TB disease in males more often than females. In 2020, 19 (58%) were males and 14 (42%) were females. This is consistent with nationwide and previous year's surveillance.

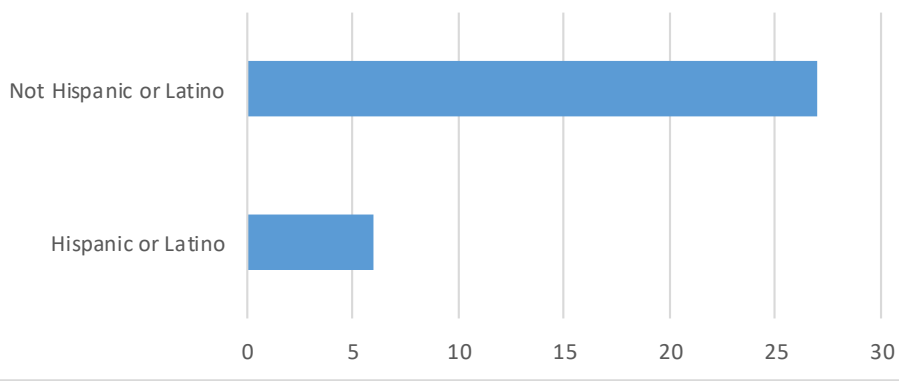
Number of Reported TB Cases, by Sex, Nebraska, 2020 (n=33)

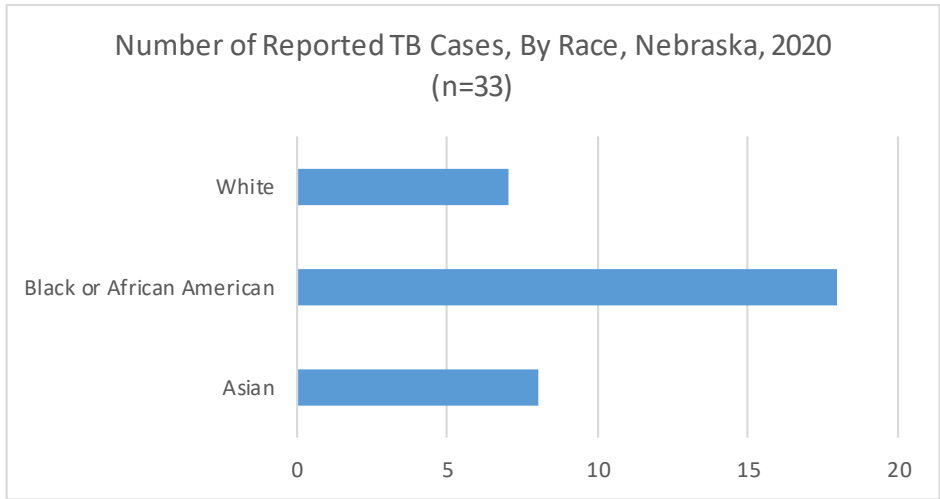


Tuberculosis by Race/Ethnicity

The number of reported persons with TB in Nebraska for the last decade has been highest among racial and ethnic minorities. In 2020, Nebraska health departments reported 21 of the 33 cases were foreign born, which is 64% of the 2020 cases. Six of the 33 cases reported Hispanic or Latino ethnicity in 2020. Blacks had the most cases (18), followed by White (7), and then Asians (8). The rise in cases among Blacks is unknown.

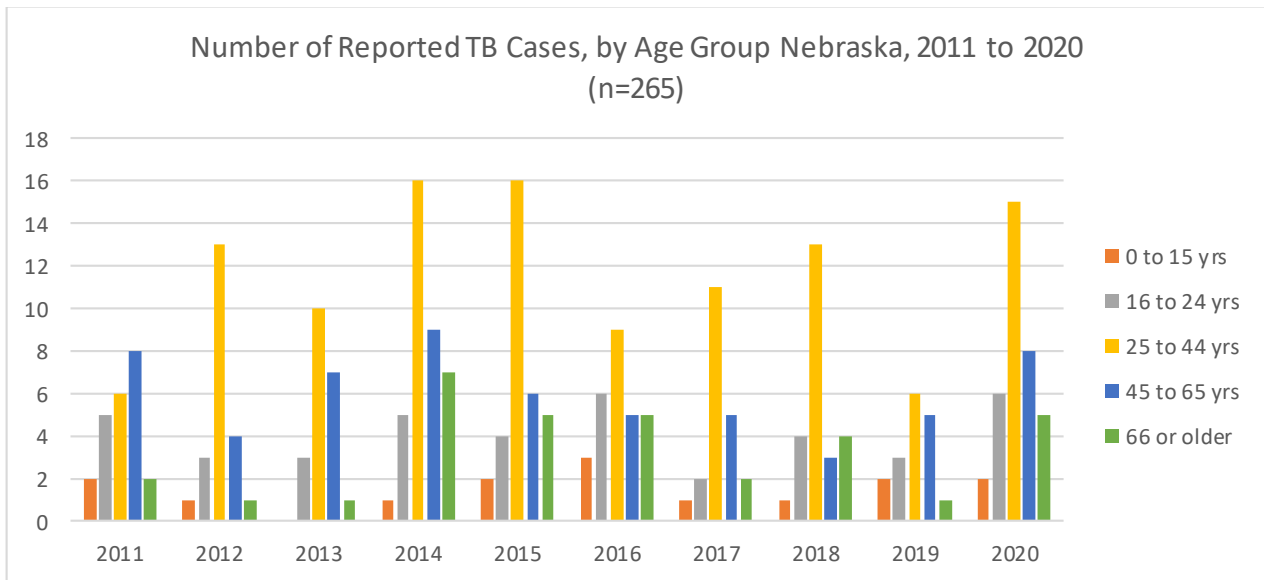
Number of Reported TB Cases, By Ethnicity, Nebraska, 2020 (n=33)





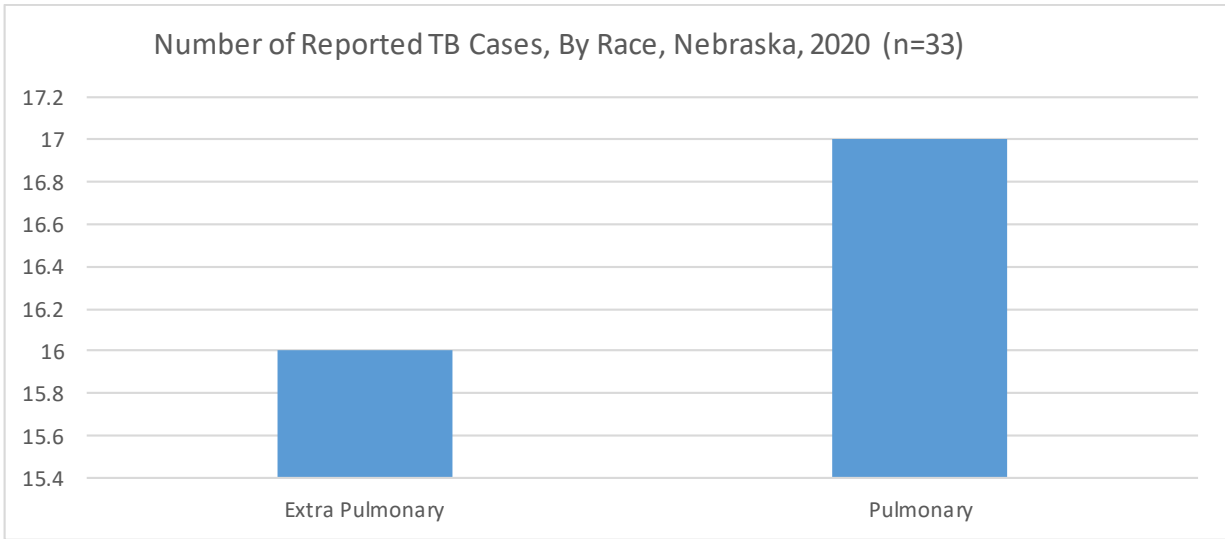
Cases and Case Rates by Age Groups

In 2020, the largest number of cases were among the age group 25-44, followed by ages 45-64.



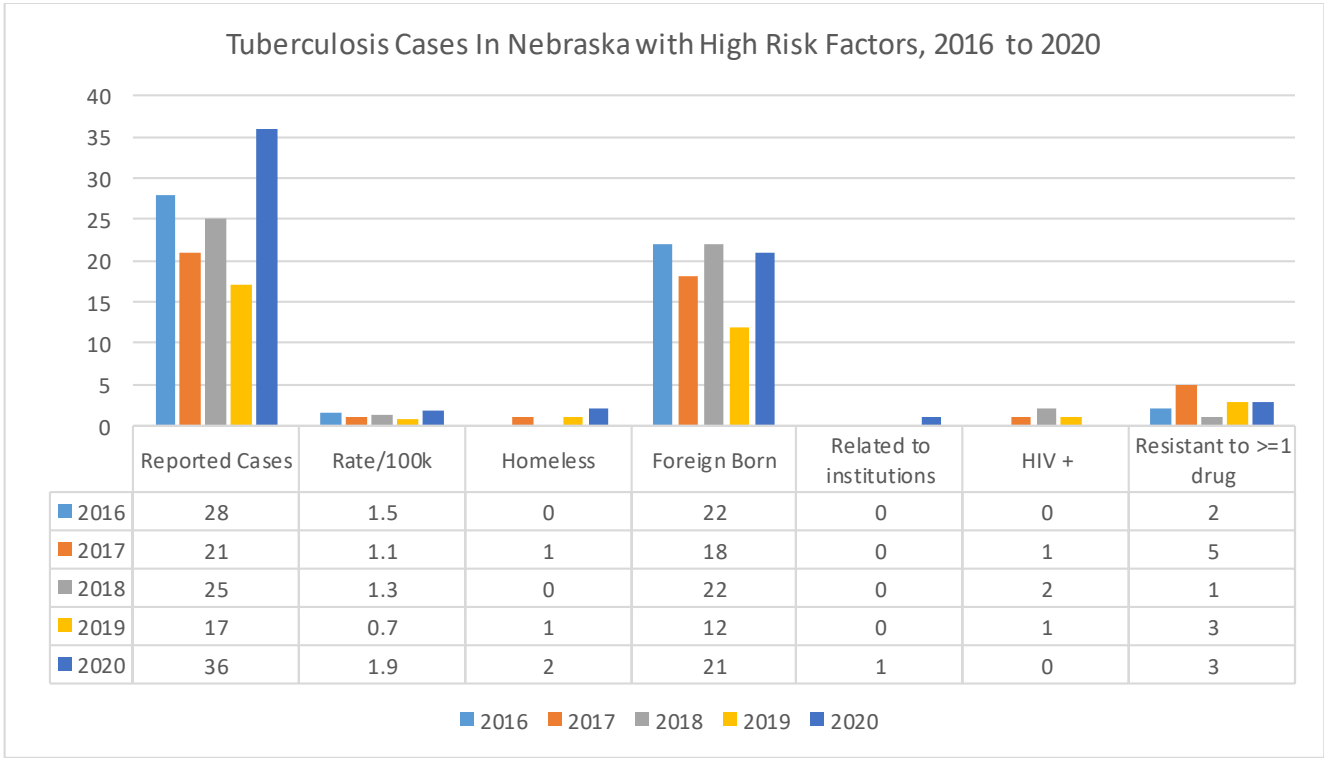
Tuberculosis Cases by Major Site of Disease

Tuberculosis most often attacks the lungs (pulmonary TB), but may also affect any part of the body (extra-pulmonary TB). In 2020, 17 of the 33 cases were pulmonary and 16 of the cases were extra-pulmonary.



High Risk Populations

Nebraska has been fortunate in that TB has not been prominent in high-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 Centers for Disease Control and Prevention center of excellence.



Nebraska TB Elimination Plan

A TB Elimination Plan was developed to eliminate TB in Nebraska. Community and professional members are welcome to attend meetings and offer feedback to the program. Numerous program goals

have been identified. The plan will be adjusted based upon programmatic needs and feedback from key partners.

Conclusion

Eliminating TB will require identifying and treating persons with ongoing TB infection and those with a high risk of developing the active disease in the future. The TB program continues to partner with health departments, 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 between different jurisdictions. Continued partnerships with health departments is a key towards the elimination of TB.

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