Epidemiological Profile of Tuberculosis in South Dakota, 2015

By Kristin Rounds, Tuberculosis Control Coordinator, South Dakota Department of Health

During the last 10 years, South Dakota averaged 14 cases of tuberculosis (TB) per year. During 2015, there were 17 cases of TB reported to the South Dakota Department of Health. Figure 1 shows the 10-year trend of TB cases reported in South Dakota.

Figure 2 on the next page illustrates the 100-year history of tuberculosis cases in South Dakota. Since the 1950’s there has been a dramatic decrease of cases due to the developmental of anti-tuberculosis medications. Case reductions are also a result of mandatory reporting of suspected TB cases to the Department of Health, case management, new treatment regimens and comprehensive contact investigations to ensure those exposed receive prompt intervention efforts.

For more information visit http://doh.sd.gov/diseases/infectious/TB/ or contact the following staff:

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The most recent data available nationally and regionally is from calendar year 2014. Figure 3 provides a comparison of the TB case rate per 100,000 population for the United States as well as a regional comparison of South Dakota with the border states of North Dakota, Minnesota, Iowa, Nebraska, Wyoming and Montana.

Figure 4 illustrates the historical trend of decreasing TB cases reported in the United States. In 2014 there were 9,421 TB cases reported in the US which was the lowest year on record, representing a 2.2% decrease from 2013. During 2014, 21 states reported increased case counts from 2013. The four states of California, Texas, New York and Florida accounted for 51% of the national case total. During 2014, 1% of the reported cases had primary multi-drug resistance which is defined as resistance to the TB medications of at least isoniazid and rifampin. During 2014, 66% of TB cases nationally were in foreign-born persons, the highest percentage ever reported.
Native Americans have historically reported the highest percentage of TB cases by race which continued in 2015 as they contributed 65% of the total TB cases reported. Table 1 and Figure 5 provide information on TB cases by race in 2015.

Table 1. Tuberculosis Cases Reported by Sex and Race
South Dakota 2015

<table>
<thead>
<tr>
<th>Race</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>% of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native American</td>
<td>6</td>
<td>5</td>
<td>11</td>
<td>65%</td>
</tr>
<tr>
<td>White</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>18%</td>
</tr>
<tr>
<td>Black</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>100%</td>
</tr>
</tbody>
</table>

Figure 5. TB Cases by Race South Dakota 2015

- Native American 65%
- White 18%
- Black 12%
- Asian 5%
The TB incidence rate, which measures the number of TB cases per 100,000 population, is the best measure for determining the progress towards the elimination of TB in South Dakota. Historically, Native American TB case rates have dropped considerably while white cases have consistently remained low. The black, Asian and other races mainly represent TB cases born outside of the United States who were diagnosed in South Dakota. Table 2 provides additional information on TB case rates for the last six years.

Table 2. Tuberculosis Morbidity Incidence Rates per 100,000 by Race & Year, South Dakota, 2010-2015

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>US Case Rate (All Races)</td>
<td>3.6</td>
<td>3.4</td>
<td>3.2</td>
<td>3.0</td>
<td>3.0</td>
<td>Not available*</td>
</tr>
<tr>
<td>SD All Races</td>
<td>1.8</td>
<td>1.8</td>
<td>2.3</td>
<td>1.1</td>
<td>1.0</td>
<td>2.1</td>
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<tr>
<td>SD Native American</td>
<td>15.0</td>
<td>6.1</td>
<td>9.7</td>
<td>6.1</td>
<td>3.7</td>
<td>13.4</td>
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<tr>
<td>SD White</td>
<td>0.3</td>
<td>0.7</td>
<td>0.9</td>
<td>0.1</td>
<td>0.4</td>
<td>0.4</td>
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<tr>
<td>SD Black</td>
<td>24.6</td>
<td>13.6</td>
<td>20.4</td>
<td>13.6</td>
<td>13.6</td>
<td>13.6</td>
</tr>
<tr>
<td>SD Asian</td>
<td>0.0</td>
<td>39.4</td>
<td>26.3</td>
<td>13.1</td>
<td>0.0</td>
<td>13.1</td>
</tr>
<tr>
<td>All Other SD Races</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
</tr>
</tbody>
</table>

*2015 US case rate data is not yet available.

The South Dakota TB elimination goal was to reduce tuberculosis cases to an incidence of no more than 3.5 cases per 100,000 by the year 2015. In addition there is a special population target goal of reducing Native American tuberculosis cases to less than 15 cases per 100,000 by 2015. As referenced in Table 2, both of these objectives were accomplished in 2015.

Tuberculosis cases in South Dakota have historically been located in a few geographic locations that consistently report the majority of TB cases. These include Minnehaha County which reports the highest number of foreign-born TB cases and Oglala Lakota (previously Shannon County), Todd and Pennington counties which report the highest number of Native American TB cases. More recently a cluster of Native American TB cases has been reported in Ziebach County. Figure 6 and Table 3 provide additional information on the counties of residence of the TB cases in 2015.

Figure 6. TB Cases Reported by County of Residence South Dakota 2015

Tuberculosis cases in South Dakota have historically been located in a few geographic locations that consistently report the majority of TB cases. These include Minnehaha County which reports the highest number of foreign-born TB cases and Oglala Lakota (previously Shannon County), Todd and Pennington counties which report the highest number of Native American TB cases. More recently a cluster of Native American TB cases has been reported in Ziebach County. Figure 6 and Table 3 provide additional information on the counties of residence of the TB cases in 2015.
Tuberculosis remains primarily a pulmonary disease with approximately 85% of cases nationally reported as pulmonary disease and 15% as non-pulmonary disease. South Dakota has historically reported a higher percentage of non-pulmonary TB disease. In 2015 this trend continued with 29% of cases reported with non-pulmonary sites of disease (two cases) or with both pulmonary and non-pulmonary sites of disease as described in Figure 7. The non-pulmonary sites of disease in 2015 included TB reported in the peritoneal, pleural, renal, lymph nodes and soft tissue.

The average age of a TB case in 2015 was 40 years of age. This is an increase in age as compared to 2014 when the average age was 31 years of age. There was one child less than 10 years of age reported during this time period. Figure 8 illustrates the age at diagnosis by gender for tuberculosis cases reported in 2015.

Historically most tuberculosis cases are diagnosed as adults in South Dakota. Figure 9 shows the majority of TB cases diagnosed in South Dakota were 40 years of age or older at the time of diagnosis from 1998 through 2015.
Co-infection with HIV is an important risk factor for the development of active TB. Because of this, all TB cases diagnosed in South Dakota are offered HIV testing. Co-infected TB cases require more monitoring for toxicity and are frequently treated with second line TB medications. Figure 10 describes the number of TB cases co-infected with HIV since 2003 documenting that HIV co-infected TB cases remain uncommon.

All culture positive TB isolates are tested for drug resistance to first-line TB medications including isoniazid (INH), rifampin (RIF), pyrazinamide (PZA), ethambutol (EMB) and streptomycin (SM). Multi-drug resistant TB is defined by CDC as resistance to at least INH and RIF and is a significant public health problem because of the difficulty in achieving a successful treatment outcome. Figure 11 shows drug resistant TB cases since 2000 illustrating that South Dakota most often has single drug resistant cases. In 2015 however, South Dakota reported the first multi-drug resistant TB case.

*The 2015 MDR-TB case was resistant to INH, RIF, PZA, EMB, SM, Rifabutin and Ethionamide.*
South Dakota has reported a higher than expected mortality rate during certain years, especially among Native American patients. Figure 12 shows the mortality rates by race since 2006 for all races.

![Figure 12. Percentage of TB Case Mortality by Race](image)

The workload in the TB Control Program consists of four categories of patients:

1) **TB cases** (persons diagnosed with active TB)
2) **TB suspects** (persons suspected of active TB with a pending diagnosis)
3) **TB contacts** (persons exposed to an infectious TB case)
4) **Latent TB infection** (persons reported with a positive TB skin test or positive IGRA test [interferon gamma release assay])

Disease Intervention Specialist (DIS) staff are responsible for ensuring appropriate investigation, treatment and follow-up of these individuals statewide. Figure 13 describes this cumulative caseload which is divided among 19 DIS staff illustrating that the active TB cases and suspect TB cases represent the smallest number of patients reported. TB contacts and patients with latent TB infection make up the greatest percentage of assigned workload for DIS staff within the TB Control Program.
Analysis of Foreign-Born TB Cases in South Dakota

Tuberculosis cases who were born outside the United States continue to represent an important risk group in the United States as well as in South Dakota. Figure 14 describes the percentage of foreign-born TB cases in South Dakota. Second generation TB cases (US-born TB cases born to foreign-born parents) are a relatively new risk group that has been identified nationally. TB cases were first reported in this group in South Dakota in 2008 and then again in 2012.
Most foreign-born persons who develop active TB usually do so within the first two years after arrival in the United States. Figure 15 describes that 68% of foreign-born TB cases since 2000 developed active TB within the first 5 years of their arrival. Because of this increased risk, these individuals are targeted for preventive TB program activities including targeted TB skin testing and preventive treatment programs.

Foreign-born TB cases continue to come from many areas of the world; however the majority of the TB cases reported in South Dakota are of African descent. Figure 16 describes the country of birth for the foreign-born TB cases reported in South Dakota since 2000. Countries of birth for the other category include Afghanistan, Bhutan, China, El Salvador, Honduras, Indonesia, Kenya, Palau, Romania, Russia, Nepal, Mauritania, Vietnam, South Africa and South Korea.
Another factor in the increase of foreign-born TB cases in South Dakota is the change geographically where TB cases are reported. Historically, the highest percentage of TB cases have been reported from counties that included and bordered American Indian reservations. This remains the same most years however some years there has been a shift of TB cases reported from Minnehaha County as illustrated in Figure 17. This is due to the fact that most foreign-born persons who resettle in South Dakota do so in Minnehaha County. More recently a cluster of TB cases has been reported in American Indians in Ziebach County. Foreign-born TB cases are consistently reported in younger persons as compared to US-born patients in South Dakota. This presents additional TB program management issues as these TB cases more commonly have young children who have been exposed at home and they are typically employed requiring an investigation at their worksite which increases the number of contacts that must be screened and treated. Figure 18 illustrates that the majority of foreign-born TB cases are diagnosed while young adults.
Foreign-born TB cases represent a unique challenge to the South Dakota TB Control Program because of cultural issues, language barriers and a greater likelihood of drug resistance. As cases continue to increase in South Dakota, additional time and resources will need to be dedicated to address these unique issues. Figure 19 describes the increasing trend of the percentage of foreign-born TB in the United States since 2000.

Latent TB Infection and Prevention Activities
Ensuring for appropriate treatment and follow-up of active TB cases and suspects is the highest priority of the Tuberculosis Control Program. However, in order to achieve TB elimination in South Dakota, an emphasis must be placed on preventing future cases of TB. This is accomplished by follow-up of persons infected with latent TB infection. These individuals are infected with the TB bacteria (Mycobacterium tuberculosis) but have not yet developed an active form of the disease. By finding and treating these individuals, future TB cases can be prevented and therefore the TB Control Program dedicates time and resources to this preventive strategy.
Figure 20 presents the number of patients reported with latent TB infection (positive TB skin tests or positive IGRA testing) over the last 10 years. All of these individuals have the potential to develop active TB disease and potentially be infectious to others.

On August 2, 2011, the South Dakota Department of Health implemented an administrative rule change which changed the reporting requirement for latent TB infection. Prior to that, all persons diagnosed with latent TB infection were reportable to the South Dakota Department of Health. As of August 2, 2011, only patients with latent TB infection who have at least one of the following TB risk factors are now reportable:

- Foreign-born persons who entered the US within the last 5 years
- Persons evaluated for tumor necrosis factor-alpha therapy
- Immunosuppressive therapies (i.e., high dose steroids)
- Radiographic evidence of prior TB
- Children less than 5 years of age
- Close contact to infectious TB
- HIV infection
- Diabetes
- Renal dialysis
- Silicosis
- Organ transplant
- Head and neck cancers
- Leukemia
- Hodgkin's disease

This reporting change allows the Department of Health to focus staff time, medication and resources towards those patients who have the highest risk of developing active tuberculosis. Due to this change, only the above patients are eligible for Department of Health nurse case management and medication. Health care providers and facilities are asked to report only patients with LTBI who meet this new reporting requirement by mailing or faxing the “Latent Tuberculosis infection Report Form” to the TB Control Program (reporting instructions are on the form). The form is available on the South Dakota Department of Health website: [http://doh.sd.gov/diseases/infectious/tuberculosis](http://doh.sd.gov/diseases/infectious/tuberculosis). Patients who do not meet this reporting criteria should be referred to their private health care provider for evaluation and treatment at their own expense. All patients currently being managed by Department of Health staff will be allowed to finish their prescribed course of treatment regardless of their risk factor status.
Figure 21 presents the number of patients with latent TB infection that started a course of preventive treatment as well as the number who completed this treatment. The treatment is usually done with Isoniazid (INH) which is provided free of charge to patients by the TB Control Program.
Reportable Disease List Update

The new year 2016 brings updates to the list of South Dakota mandatory reportable disease and conditions.

**Additions:**
- Chikungunya.
- Carbon monoxide poisoning.
- Coccidioidomycosis.
- Colorado tick fever.
- *Haemophilus influenzae* invasive, all subgroups (previously only serogroup b (Hib) was reportable).
- Hantavirus pulmonary infection (in addition to Hantavirus pulmonary syndrome).
- Lead blood, elevated levels.
- Leptospirosis.
- MERS (Middle East respiratory syndrome).
- Pesticide-related illness or injury (acute).
- Silicosis.
- Vibriosis.
- Active Tuberculosis upgraded to Category I.

**Deletions:**
- Vancomycin-intermediate *Staphylococcus aureus* (VISA). (Note that Vancomycin-resistant *Staphylococcus aureus* [VRSA] remains reportable.)

The full disease list is found at: http://doh.sd.gov/documents/diseases/infectious/RptDiseaseList.pdf. A copy of the reportable disease poster is inserted in this issue of the South Dakota Public Health Bulletin and will also be printed in South Dakota Medicine. If you need several copies please call 800-592-1861.

**Submission of clinical materials required by laboratories.** Laboratories must submit isolates or, if an isolate is not available, laboratories must submit material containing the infectious agent to the South Dakota Public Health Laboratory for the following:
- Anthrax (*Bacillus anthracis*);
- Brucellosis (*Brucella spp.*);
- Diphtheria (*Corynebacterium diphtheriae*);
- *Haemophilus influenzae*, invasive;
- Novel Influenza A;
- Listeriosis (*Listeria monocytogenes*);
- Meningococcal disease, invasive (*Neisseria meningitidis*);
- Plague (*Yersinia pestis*);
- Salmonellosis (*Salmonella spp.*);
- Shiga toxin-producing *Escherichia coli* (STEC);
- Shigellosis (*Shigella spp.*);
- Tuberculosis (*Mycobacterium tuberculosis* and *Mycobacterium bovis*);
- Tularemia (*Francisella tularensis*);
- Typhoid (*Salmonella typhi*);
- Vancomycin-resistant *Staphylococcus aureus* (VRSA); and
- Smallpox (*Variola*)

**Epi Listserve:** https://listserv.sd.gov/scripts/wa.exe?A0=SDEPI


**South Dakota Laws:**
NASA video features South Dakota’s efforts to forecast West Nile virus

NASA recently released a video (https://www.youtube.com/watch?v=agZo0izSNg&feature=youtu.be) featuring SDSU’s work to combine environmental and mosquito surveillance data with the Department’s of Health’s disease data to predict West Nile virus (WNV) risk. The goal of the project is to increase understanding of the transmission dynamics of the virus and help communities strategically target their mosquito control spraying efforts.

Support for the project is provided by a grant from NASA’s Applied Science Public Health and Air Quality Program. The video features interviews with SDSU biology professor Michael Hildreth, Michael Wimberly, a senior scientist at SDSU’s Geospatial Sciences Center of Excellence, Lon Kightlinger, State Epidemiologist for the Department of Health, and Aberdeen Parks Superintendent Mark Hoven.

The project includes the Mosquito Information Systems website, http://mosquito.sdstate.edu, which provides weekly assessments of WNV risk across the state during the transmission season.

Cryptosporidiosis, Shiga Toxin-producing Escherichia coli infections article published

Public Health Veterinarian Dr. Russ Daly and Infectious Disease Epidemiologist Nick Hill co-authored an article in the January Zoonoses and Public Health journal. An abstract of the article, Characterizing the Role of Animal Exposures in Cryptosporidiosis and Shiga Toxin-producing Escherichia coli Infections: South Dakota, 2012, can be viewed at http://onlinelibrary.wiley.com/doi/10.1111/zph.12251/abstract. South Dakota has high rates of cryptosporidium and shiga toxin-producing Escherichia coli strains when compared to the U.S. as a whole. Direct animal contact has been identified as a possible route of exposure for the illnesses.

Health Department Releases 2015-2020 Strategic Plan

The Department of Health has released its 2015-2020 strategic plan, offering a roadmap for improving public health over the next five years under the broad goal areas of healthcare accessibility and quality, health across the lifespan, response to public health threats, strategic partnerships, and strengthening the public health infrastructure. Each goal area includes detailed objectives and strategies along with key performance indicators and a commitment to eliminating health disparities cuts across the entire plan.

The plan is the result of six months of analysis and data review by an internal work group as well as input from external stakeholders about the strengths and weaknesses of the public health system in the state. The strategic plan and supporting materials can found on the department’s website at doh.sd.gov/strategicplan/. As work on the plan proceeds, watch the site for progress reports and trend information on performance indicators. Also available on the site is a set of detailed data dashboards for selected indicators—routine physician checkups, infant mortality, smoking, immunizations and suicide. The infant mortality dashboard is reprinted on the following page. Other dashboards will be reprinted in future issues.

The Department of Health is committed to continued collaboration with its partners in both the public and private sectors to achieve the vision of Healthy People, Healthy Communities, Healthy South Dakota.
South Dakota Strategic Plan 2015-2020—Infant Mortality Dashboard

Reduce the 5-year infant mortality rate from 6.9 per 1,000 births in 2010-2014 to 6.0 by 2020

<table>
<thead>
<tr>
<th>South Dakota Rate</th>
<th>South Dakota 2020 Target</th>
<th>U.S. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.9 (2010-2014)</td>
<td>6.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>

**Significance:**
Infant mortality is considered a gold standard for measuring the health of a population. Every year since 2000, approximately 11,000 infants were born to residents of South Dakota. Tragically, each year 50 to 100 of these babies die within their first year of life.

The infant mortality rate among American Indians in South Dakota is twice as high as the white infant mortality rate. In addition, it is the highest rate of any state in the nation at 11.9 per 1,000 births. South Dakota had a higher infant mortality rate due to preterm births than the U.S. as a whole. Low levels of early prenatal care correlate directly with high infant mortality rates. There are 8 counties in South Dakota that have less than 50% of pregnant women receiving prenatal care in the first trimester. These same counties also have higher infant death rates than the state rate. The rate of adult pregnant women smoking in South Dakota in 2014 was 14.8%. Parental smoking is a risk factor for SIDS, complications from prematurity and low birth weight, and other pregnancy problems.

The causes of infant mortality vary widely from case to case and can be attributed to many things including the health of the mother before and during pregnancy, how early the pregnancy was identified, the amount and quality of prenatal care received, the home environment, and the type of care the baby receives at home. For 2010-2014, the leading causes of infant mortality were: (1) congenital anomalies; (2) SIDS; (3) short gestation/low birth weight; and (4) accidents. Many of these deaths are preventable which means we can make a difference by recognizing the early signs of pregnancy, starting prenatal care as soon as possible, and using safe sleep practices.

**Definition:** Infant deaths per 1,000 live births

**Data Source:** South Dakota Vital Statistics Data

**Statistical Trend:**

**Date Last Updated:** 12/23/2015
### South Dakota Department of Health – Infectious Disease Surveillance

**Selected Morbidity Report, 1 January – 31 December 2015**

<table>
<thead>
<tr>
<th>Disease</th>
<th>2015 year-to-date</th>
<th>5-year median</th>
<th>Percent change</th>
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</thead>
<tbody>
<tr>
<td><strong>Vaccine-Preventable Diseases</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diphtheria</td>
<td>0</td>
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<td>n/a</td>
</tr>
<tr>
<td>Tetanus</td>
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</tr>
<tr>
<td>Pertussis</td>
<td>13</td>
<td>67</td>
<td>-81%</td>
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<tr>
<td>Poliomyelitis</td>
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<tr>
<td>Measles</td>
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<td>Mumps</td>
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<td>Rubella</td>
<td>0</td>
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<tr>
<td><em>Haemophilus influenza</em> type b</td>
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<td>n/a</td>
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<td><strong>Sexually Transmitted Infections and Blood-borne Diseases</strong></td>
<td></td>
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</tr>
<tr>
<td>HIV infection</td>
<td>24</td>
<td>31</td>
<td>-23%</td>
</tr>
<tr>
<td>Hepatitis B, acute</td>
<td>2</td>
<td>0</td>
<td>n/a</td>
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<tr>
<td>Chlamydia</td>
<td>3873</td>
<td>3924</td>
<td>-1%</td>
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<tr>
<td>Gonorrhea</td>
<td>1047</td>
<td>707</td>
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<tr>
<td>Syphilis, early</td>
<td>44</td>
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<td>+144%</td>
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<tr>
<td><strong>Tuberculosis</strong></td>
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<tr>
<td>Tuberculosis</td>
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<td>15</td>
<td>+13%</td>
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<td><strong>Invasive Bacterial Disease</strong></td>
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<td>Meningococcal, invasive</td>
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<td><strong>Enteric Diseases</strong></td>
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<td><em>E. coli</em>, Shiga toxin-producing</td>
<td>61</td>
<td>41</td>
<td>+49%</td>
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<tr>
<td>Campylobacteriosis</td>
<td>346</td>
<td>296</td>
<td>+17%</td>
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<td>Salmonellosis</td>
<td>229</td>
<td>170</td>
<td>+35%</td>
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<tr>
<td>Shigellosis</td>
<td>285</td>
<td>11</td>
<td>&gt;1000%</td>
</tr>
<tr>
<td>Giardiasis</td>
<td>126</td>
<td>111</td>
<td>+14%</td>
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<td>Cryptosporidiosis</td>
<td>249</td>
<td>145</td>
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<tr>
<td>Hepatitis A</td>
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<td>n/a</td>
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<tr>
<td><strong>Vector-borne Diseases</strong></td>
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<tr>
<td>Animal Rabies</td>
<td>29</td>
<td>32</td>
<td>-9%</td>
</tr>
<tr>
<td>Tularemia</td>
<td>25</td>
<td>7</td>
<td>+257%</td>
</tr>
<tr>
<td>Rocky Mountain Spotted Fever</td>
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<td>1</td>
<td>-200%</td>
</tr>
<tr>
<td>Malaria (imported)</td>
<td>3</td>
<td>2</td>
<td>-50%</td>
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<tr>
<td>Hantavirus Pulmonary Syndrome</td>
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<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Lyme disease</td>
<td>5</td>
<td>4</td>
<td>-25%</td>
</tr>
<tr>
<td>West Nile Virus disease</td>
<td>40</td>
<td>57</td>
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</tr>
<tr>
<td><strong>Other Diseases</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additionally, the following were reported: Chicken Pox (28); CRE (16); Dengue Fever (2); Hep A, (2); Hep B, chronic (50); Hep C (567); MRSA, invasive (159); Q Fever (5); Typhoid (1).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Communicable diseases are obligatorily reportable by physicians, hospitals, laboratories, and institutions. The **Reportable Diseases List** is found at [http://doh.sd.gov/diseases/infectious/reporting-communicable-diseases.aspx](http://doh.sd.gov/diseases/infectious/reporting-communicable-diseases.aspx) or upon request. Diseases are reportable by telephone, fax, mail, website, or courier.

**Secure website:** [www.state.sd.us/doh/diseaseresport](http://www.state.sd.us/doh/diseaseresport)

**Telephones:** 24 hour answering device 1-800-592-1804; for a live person at any time call 1-800-592-1861; after hours emergency 605-280-4810.

**Fax:** 605-773-5509.

**Mail** in a sealed envelope addressed to the DOH, Office of Disease Prevention, 615 E. 4th Street, Pierre, SD 57501, marked "Confidential Medical Report".