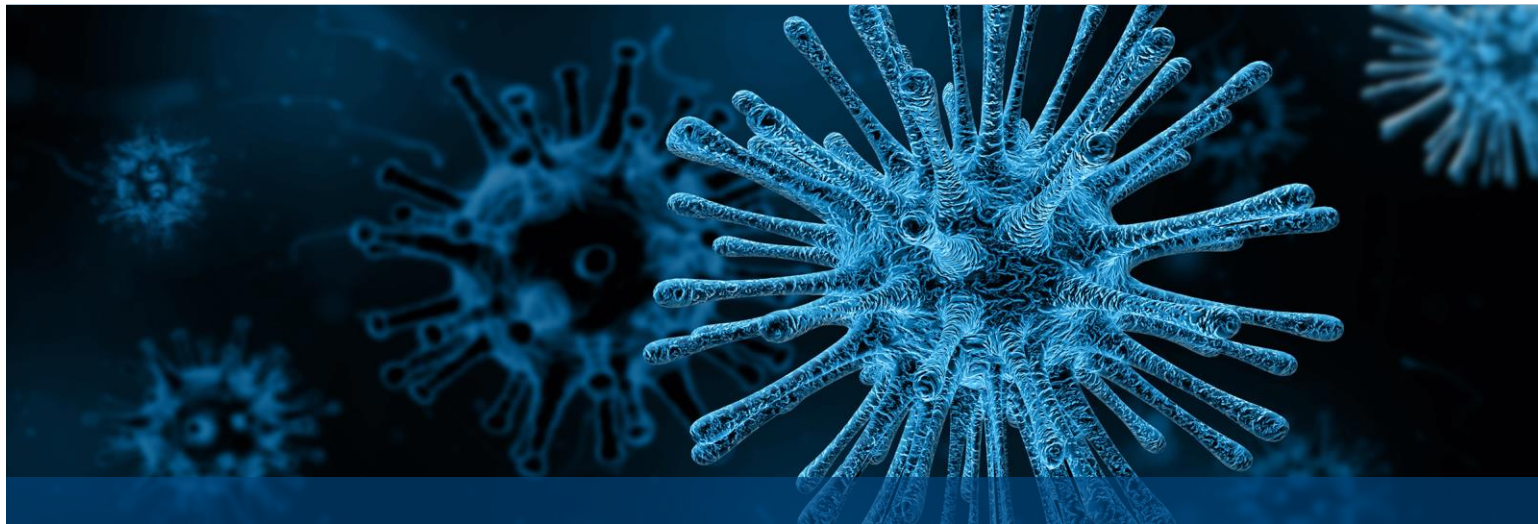




Communicable Disease Data Report

Pierce County, Washington
2012-2018

Table of Contents

Introduction	1
Contributors	1
Resources	1
Enteric Diseases.....	2
Campylobacteriosis.....	2
Salmonellosis	2
Giardiasis.....	2
Vibriosis.....	2
Shiga Toxin Producing <i>E. coli</i>	3
Shigellosis.....	3
Enteric Disease Cases and Rates, 2012-2018.....	4
Vaccine-Preventable Diseases.....	5
Vaccine-Preventable Diseases	5
Hepatitis A.....	5
Hepatitis B	5
Measles	5
Invasive Meningococcal Disease.....	6
Invasive <i>Haemophilus influenzae</i>	6
Mumps	6
Pertussis (Whooping Cough).....	6
Vaccine-Preventable Disease Cases and Rates, 2012-2018.....	7
Hepatitis C.....	8
Hepatitis C Cases and Rates, 2012-2018.....	8
Tuberculosis	9
Tuberculosis Cases and Rates, 2012-2018.....	9
Sexually Transmitted Diseases	10
Chlamydia.....	10
Gonorrhea	10
Syphilis	10
HIV.....	11
Sexually Transmitted Disease Cases and Rates, 2012-2018	11
Other Reportable Conditions	12
Legionellosis.....	12
Coccidiomycosis	12
Acute Flaccid Myelitis	12
Tickborne Relapsing Fever	12
Other Reportable Condition Cases and Rates, 2012-2018	13

Introduction

Pierce County healthcare providers and laboratories report notifiable conditions and clusters of disease to Tacoma-Pierce County Health Department. We ensure:

- Early follow up.
- Disease control interventions.
- Rapid outbreak detection.

Additionally, we analyze collected data to:

- Determine disease rates, trends and geographic clustering.
- Develop prevention programs and policies and refine outbreak investigation.

We publish this Communicable Disease Data Report annually to ensure healthcare providers and laboratories have access to Pierce County disease data summaries to inform their practice. These summaries include total number of cases and incidence per 100,000 population.

Contributors

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Resources

This report and the following resources are available at tpchd.org/providers, our website for healthcare providers.

- Reporting forms.
- Notifiable conditions list.
- Advisories and alerts.
- Guidelines.

To report an immediately notifiable condition, call (253) 798-6410—24 hours a day, 7 days a week.

To report other notifiable conditions, call (253) 798-6534. Or fill out a report form at tpchd.org/notifiableconditions and fax it to (253) 798-7666.

If you have questions, call (253) 798-6410.

Enteric Diseases

Enteric diseases are infections of the intestines. Bacteria or other parasites that spread through contaminated food or water, contact with animals or unwashed hands cause enteric diseases. In Pierce County, many people with enteric diseases recently travelled outside the United States. We monitor enteric diseases to detect outbreaks and stop their spread in households and communities. Most enteric diseases resolve over time without treatment.

Campylobacteriosis

Campylobacter bacteria cause campylobacteriosis, the most commonly reported enteric disease in Pierce County. Symptoms include diarrhea (sometimes bloody), abdominal pain and vomiting. It usually resolves without treatment.

Risk factors include undercooked poultry, unpasteurized milk, untreated water and contact with animals. People with farm animals or chicken coops are at higher risk. Since 2012, about 240 cases are reported in Pierce County each year.

Salmonellosis

Salmonella bacteria cause salmonellosis, also common in Pierce County. Symptoms include fever, diarrhea, headache, abdominal pain and nausea with or without vomiting. Most people recover without treatment. Severe cases may require antibiotics.

Risk factors include raw poultry, contaminated eggs, unpasteurized milk and produce. People with farm animals, reptiles or exotic pets (like hedgehogs or sugar gliders) are at higher risk. Since 2012, an average of 87 cases were reported in Pierce County each year.

Farm animals and pets are often a source of enteric disease.

Wash your hands with soap and water after touching pets or other animals. Proper handwashing helps prevent the spread of disease. Children younger than five years are at higher risk for serious illness. Households with young children should not have reptiles or exotic pets because they can carry *Salmonella* bacteria.

Giardiasis

A protozoan causes giardiasis. Many cases have no symptoms. Some report diarrhea, abdominal pain, nausea, fatigue and weight loss. Infections generally resolve over time without treatment. Severe or prolonged cases can be treated with anti-protozoal medicine.

Although it can spread from person to person, most cases involve swallowing untreated water, like from a lake, stream or contaminated well. Many people with giardiasis traveled to or were born outside the United States. In recent years, cases of giardiasis have decreased. Since 2012, an average of 42 cases were reported each year in Pierce County.

Vibriosis

Vibrio bacteria cause vibriosis. The bacteria are often found in raw or undercooked shellfish—especially during warm months (May through September). Vibriosis is less common in Pierce County but remains a concern because we are on Puget Sound where shellfish are harvested.

Symptoms include abdominal pain, watery diarrhea, vomiting, headache and fever. On average, less than 10 cases are reported in Pierce County each year.

Norovirus causes most foodborne illness outbreaks.

When multiple people get sick after eating at the same restaurant, we investigate. People can report foodborne illness at (253) 798-4712 or tpchd.org/report. Norovirus is not a reportable condition.

Shiga Toxin Producing *E. coli*

Escherichia coli (*E. coli*) is a group of bacteria that normally live in people's and animals' intestines. Some *E. coli* bacteria produce Shiga toxin. This toxin can cause severe abdominal pain and diarrhea (often bloody). Although most Shiga toxin producing *E. coli* (STEC) infections resolve without treatment within one week, some are life-threatening and require hospitalization and supportive care. Patients with STEC should not take antibiotics, as they increase the risk of kidney damage caused by hemolytic uremic syndrome.

Unpasteurized milk is unhealthy.

From 2007 to 2012, 26 states reported 81 outbreaks linked to unpasteurized (or "raw") milk—81% were *Campylobacter*, 17% were STEC. The outbreaks made 979 people sick and led to 73 hospitalizations—and 59% of the outbreaks involved at least one child younger than five years.

Risk factors include contact with cattle or other farm animals and undercooked beef, unpasteurized milk and produce. Since 2012, STEC infections reported in Pierce County have steadily increased, with 44 cases reported in 2018. This increase is due to a more sensitive testing method.

Shigellosis

Shigellosis is a bacterial infection of the intestines. Symptoms include diarrhea (frequently bloody), fever and abdominal pain. Children (especially those in diapers) in childcare, international travelers and men who have sex with men are at higher risk for shigellosis.

Although shigellosis is usually spread by close contact between people, outbreaks have been caused by infected food handlers and contaminated food. Reports of shigellosis have increased since 2016 due to a more sensitive testing method.

Enteric Disease Cases and Rates, 2012-2018

Campylobacter		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	221	253	217	250	230	272	248
	Rate	27.3	31.1	26.4	30.1	27.1	31.8	27.6
Washington	Cases	1,551	1,631	1,591	1,847	1,911	2,219	2,077
	Rate	22.8	23.7	22.8	26.2	26.6	30.4	28.0

Cryptosporidiosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	22	24	18	24	14	19	23
	Rate	2.7	3.0	2.2	2.9	1.7	2.2	2.8
Washington	Cases	101	84	75	113	131	150	198
	Rate	1.5	1.2	1.1	1.6	1.8	2.1	2.7

Giardiasis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	48	46	41	42	41	46	31
	Rate	5.9	5.7	5.0	5.1	4.9	5.5	3.6
Washington	Cases	512	548	515	604	672	668	438
	Rate	7.5	8.0	7.4	8.6	9.3	9.2	5.9

Salmonellosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	75	74	77	95	101	116	76
	Rate	9.3	9.1	9.3	11.4	11.8	13.5	8.5
Washington	Cases	842	671	741	1,034	754	810	828
	Rate	12.4	9.8	10.6	14.6	10.5	11.1	11.2

Shigellosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	5	4	6	14	9	23	20
	Rate	n/a	n/a	n/a	1.7	n/a	2.7	2.3
Washington	Cases	133	122	157	152	191	286	419
	Rate	2.0	1.8	2.3	2.2	2.7	3.9	5.6

STEC		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	11	14	16	26	33	41	44
	Rate	n/a	1.7	2.0	3.1	3.9	4.8	5.0
Washington	Cases	239	331	299	419	340	404	540
	Rate	3.5	4.8	4.3	5.9	4.7	5.5	7.3

Vibriosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	4	11	9	9	2	6	14
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	1.6
Washington	Cases	67	90	92	68	63	96	217
	Rate	1.0	1.3	1.3	1.0	0.9	1.3	2.9

Vaccine-Preventable Diseases

Vaccine-Preventable Diseases

In the United States and other countries where children are highly vaccinated, vaccines brought many life-threatening diseases under control. Measles was eliminated in the United States in 2000. Elimination does not mean eradication (i.e., “wiped from the earth” like smallpox). Elimination means interruption of sustained disease spread. Large measles outbreaks in 2019 nearly caused the United States to lose our measles elimination status. Most of the cases in these outbreaks occurred in social groups where parents refused vaccines for their children.

A healthcare provider’s recommendation to vaccinate is crucial. Maintaining high levels of immunization in children keeps vaccine-preventable diseases at bay. Parents most often cite a strong recommendation from their child’s healthcare provider as the reason they accept vaccines for their child.

Hepatitis A

Hepatitis A is one of several viral illnesses that cause liver inflammation. Onset is usually abrupt with fever, nausea, abdominal pain and jaundice (yellow skin). Infected infants and young children usually have no symptoms. While there is no treatment for hepatitis A, most cases fully recover. The virus is found in infected people’s feces and spreads through close contact, contaminated food or untreated water. Risk factors include living homeless or being exposed in a developing country. From 2012 to 2018, less than five cases were reported in Pierce County each year.

Vaccinate people at high risk for hepatitis A.

CDC recommends giving hepatitis A vaccine to people living homeless, using drugs, international travelers, people with pre-existing liver disease and all children. Large outbreaks of hepatitis A among people living homeless or using drugs began occurring across the United States in 2017. Washington declared an outbreak among people living homeless or using drugs in 2019.

Hepatitis B

Hepatitis B is another viral liver disease. Most people with hepatitis B were exposed during birth from an infected mother. CDC recommends routine screening for people from countries where chronic hepatitis B prevalence is 2% or greater. This includes most countries in Asia, Africa, the Middle East, the Pacific Islands and Eastern Europe. In the United States, hepatitis B is mainly spread through sex. Men who have sex with men are at higher risk. People who use injection drugs can be exposed through infected blood.

Symptoms can include loss of appetite, joint or muscle pain, diarrhea, vomiting and jaundice. But most infected people do not have symptoms. About 5% of adults and up to 90% of infants develop chronic infection, which can lead to serious complications like liver cancer or cirrhosis. On average, less than five acute cases—and more than 100 chronic cases—are reported each year in Pierce County.

Measles

Measles is a very contagious virus that spreads easily through the air. Illness typically begins with high fever and cold-like symptoms (cough, conjunctivitis or runny nose). After two to four days, a rash starts near the hairline and moves down, covering the entire body. Serious complications can develop, like diarrhea, pneumonia or encephalitis. Children younger than five years are at higher risk for severe illness. Measles should be strongly suspected in unimmunized people with fever and rash who travelled outside the United States.

Diagnosing measles requires lab testing.

Washington State Public Health Lab performs PCR on nasopharyngeal swabs and urine. Call us right away at (253) 798-6410 to arrange testing for suspect cases.

Invasive Meningococcal Disease

Neisseria meningitidis bacteria can cause serious, life-threatening illness. The bacteria spread through sneezing, coughing, sharing food or utensils and close contact. Symptoms include fever, headache, stiff neck, vomiting, light sensitivity and confusion.

The most common invasive infections are meningitis and bloodstream infections. Pneumonia and joint infections can also occur. Meningococcemia is a bloodstream infection that causes fever, septic shock and rash or bruise-like patches on the skin. Even with antibiotic treatment and supportive care, case fatality is 10% to 15%. On average, less than five cases of invasive meningococcal disease are reported in Pierce County each year.

Invasive *Haemophilus influenzae*

Haemophilus influenzae bacteria can cause many types of infections, minor (most ear infections) to serious (bloodstream infections). Only *Haemophilus influenzae* type B (HiB) is vaccine preventable. Though their names are similar, *Haemophilus influenzae* and seasonal influenza are not related.

Respiratory droplets or contact with an infected person spreads HiB. Although HiB is treatable with antibiotics, it can result in life-threatening illness, like bloodstream infections, meningitis, pneumonia and epiglottitis.

Only the invasive forms of *Haemophilus influenzae* in children younger than five years are reportable. Labs send positive cultures to Washington State Public Health Lab for serotyping. In Pierce County, fewer than five cases of HiB are reported each year.

Thanks to vaccination, children get HiB much less frequently.

Before the advent of HiB vaccine in the 1980s, about 20,000 invasive HiB infections occurred each year in the United States, mostly in children. Despite antibiotic treatment, 2% to 6% of children with HiB meningitis died. And 15% to 30% of survivors sustained hearing impairment or permanent severe nervous system problems.

Mumps

The mumps virus is best known for causing painful inflammation of the salivary glands. As many as half of all mumps cases are either asymptomatic or experience only mild, non-specific symptoms like low-grade fever, headache, decreased appetite and muscle and joint pain. Three to ten percent of adolescent and adult males can experience inflammation and pain of the testicles (orchitis). Mumps spreads mainly through contact with saliva. Pierce County usually has less than five cases of mumps each year. However, 2016 through 2017, we had an outbreak of 62 cases.

Pertussis (Whooping Cough)

Bordetella pertussis bacteria cause the respiratory illness pertussis. The bacteria attack the outer lining of the airway, causing severe inflammation lasting for several weeks. Symptoms include severe coughing spells, vomiting after coughing and gasping for air (making a “whoop” sound) in between coughs. Complications include pneumonia, seizures and encephalopathy. The bacteria spread through respiratory droplets. Without antibiotic treatment, an infected person is contagious for several weeks.

Infants younger than three months are at highest risk for severe illness—protecting them is a public health priority. Tdap vaccine is recommended for every pregnant woman at 27 to 36 weeks gestation. Antibody from the vaccine passes to the unborn baby and may protect them in their first weeks of life when they are most vulnerable to severe illness.

Vaccine-Preventable Disease Cases and Rates, 2012-2018

<i>Haemophilus influenza</i>		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	0	2	0	0	2	2	3
	Rate	0	n/a	0	0	n/a	n/a	n/a
Washington	Cases	4	11	9	5	9	7	13
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	0.2

Hepatitis A, acute		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	1	1	4	0	2	1	2
	Rate	n/a	n/a	n/a	0	n/a	n/a	n/a
Washington	Cases	29	45	26	26	31	28	35
	Rate	0.4	0.6	0.4	0.4	0.4	0.4	0.5

Hepatitis B, acute		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	1	3	2	5	6	4	6
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Washington	Cases	34	34	44	34	45	45	51
	Rate	0.5	0.5	0.6	0.5	0.6	0.6	0.7

Hepatitis B, chronic		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	113	24	93	119	168	150	205
	Rate	14.0	3.0	11.3	14.3	20.0	17.5	23.5
Washington	Cases	1,139	901	1,119	1,310	1,521	1,787	2,177
	Rate	16.7	13.2	16.1	18.6	21.2	24.4	29.3

Measles		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	0	0	3	0	0	0	0
	Rate	0	0	n/a	0	0	0	0
Washington	Cases	0	4	33	10	0	3	8
	Rate	0	n/a	0.5	n/a	0	n/a	n/a

Meningococcal disease		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	3	1	4	1	8	2	7
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Washington	Cases	24	20	17	10	13	11	20
	Rate	0.4	0.3	0.2	n/a	0.2	n/a	0.3

Mumps		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	0	2	0	0	16	47	1
	Rate	0	n/a	0	0	1.9	5.5	n/a
Washington	Cases	2	2	9	7	152	779	58
	Rate	n/a	n/a	n/a	n/a	2.1	10.7	0.8

Pertussis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	783	116	86	157	87	119	66
	Rate	96.9	14.2	10.5	18.9	10.2	13.9	7.6
Washington	Cases	4,916	748	600	1,383	618	740	847
	Rate	72.1	10.9	8.6	19.6	8.6	10.1	11.4

Rubella		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	0	0	0	0	0	0	0
	Rate	0	0	0	0	0	0	0
Washington	Cases	0	1	0	0	0	0	0
	Rate	0	n/a	0	0	0	0	0

Hepatitis C

The hepatitis C virus causes hepatitis C liver infection. It is the most common bloodborne illness in the United States, with an estimated 2.4 million people infected. Newly infected people often have no symptoms or mild symptoms. When symptoms do occur, they can include fever, fatigue, dark urine, abdominal pain, nausea or jaundice (yellow skin).

Risk factors include using injection drugs, needle stick injuries in healthcare settings, receiving contaminated blood or being born to an infected mother. Less frequently, people become infected from sex with an infected person, sharing personal items like toothbrushes or razors, or unregulated tattooing. CDC recommends routine testing for people with any risk factors.

People born between 1945 and 1965 (“baby boomers”) are at higher risk for hepatitis C. Baby boomers make up about 25% of the United States population but about 75% of hepatitis C cases. CDC recommends one-time testing for baby boomers.

Without treatment, about one in five people with chronic hepatitis C develop liver cirrhosis (scarring). About 5% of chronic cases develop liver cancer or other complications. Disease progression increases with age, alcohol use, immunosuppressive therapy and co-infection with hepatitis A, hepatitis B or HIV. Antiviral treatment for chronic hepatitis C is available and most health insurance plans cover it. More than 90% of patients who receive treatment are cured.

Thousands of Pierce County residents are likely living with hepatitis C without knowing it. About 900 new infections are reported each year in Pierce County, 20 to 30 of which are acute. In 2018, cases of acute hepatitis C spiked when a Pierce County healthcare worker’s unsafe injection practices caused an outbreak.

All pregnant women should be screened for hepatitis C.

CDC recommends hepatitis C screening for pregnant women with known or suspected risk factors. But this can leave some cases undetected. We recommend screening all pregnant women for hepatitis C.

Infected women should be treated before their next pregnancy.

Fewer women with hepatitis C means fewer babies exposed to hepatitis C. This is crucial because pregnant women and children younger than three years cannot receive antiviral hepatitis C treatment.

Exposed infants should receive RNA testing at two to six months of age.

Most exposed infants are not tested. We found 25 exposed infants in Pierce County in 2018. Eleven (44%) were tested. We work with pediatricians to get more babies tested.

Hepatitis C Cases and Rates, 2012-2018

Hepatitis C, acute		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	3	7	16	22	31	27	41
	Rate	n/a	n/a	2.0	2.7	3.7	3.1	4.7
Washington	Cases	54	63	83	63	95	73	118
	Rate	0.8	0.9	1.2	0.9	1.3	1.0	1.6

Hepatitis C, chronic		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	490	337	423	952	1002	1187	838
	Rate	60.6	41.4	51.5	114.7	118.7	138.1	96.1
Washington	Cases	4,865	4,438	5,995	7,085	8,118	8,839	8,085
	Rate	71.4	64.5	86.0	100.3	113.0	120.9	108.9

Tuberculosis

Mycobacterium tuberculosis bacteria cause tuberculosis (TB). The bacteria spread from person to person through the air. Although most cases involve the lungs, infection is possible anywhere in the body.

Not everyone infected with TB bacteria becomes sick. Latent TB infection (LTBI) occurs when a person's immune system fights the bacteria and keeps them from multiplying inside the body. People with LTBI do not feel sick and are not infectious. Without treatment, 5% to 10% of people with LTBI will develop TB disease.

If a person's immune system is unable to control the infection, the person will develop TB disease. People with TB disease usually feel sick and are contagious. Symptoms of TB disease include cough lasting three or more weeks, chest pain, bloody sputum, weight loss, fever, chills and night sweats. People born in countries where TB is common are at highest risk. Other risk factors include contact with a person who has TB disease, travel to areas of the world where TB is common, living homeless, using injection drugs and immune system deficiency. Untreated TB disease can be fatal.

Although TB disease is treatable and curable, the treatment can be complicated and expensive. It usually takes six to nine months to complete. It is very important that people with TB disease take all medication exactly as prescribed. If they stop taking the medication too soon, they can become sick again. If they do not take the medicine correctly, the TB bacteria may become resistant to those drugs. Resistant TB is more difficult and more expensive to treat. Because TB is very serious, and the public health threat is high, we observe patients while they take their medicine. This protects the patient's and the community's health.

Think TB.

CDC recommends testing people from countries where TB is common, if they show more than one of these symptoms:

- Persistent cough, especially with bloody sputum.
- Fever and night sweats.
- Fatigue, malaise, weakness.
- Pneumonia that does not improve with standard treatment.
- Weight loss, poor appetite, failure to thrive.

Treating LTBI controls TB in the United States.

Treating LTBI greatly reduces the risk of progressing to TB disease. In the United States, up to 13 million people may have LTBI. Without treatment, on average, 1 in 10 will progress to TB disease. Strongly consider treating those at high risk for progressing to TB disease:

- Recently infected (for example, close contacts of an active TB case, children and recent immigrants).
- Have HIV or another condition affecting their immune system.
- Take medication to suppress their immune system.
- Have diabetes, severe kidney disease or cancer.
- Have alcoholism or substance abuse.
- Live homeless.

TB rates in Pierce County are low and have been stable in recent years. About 20 cases are reported each year.

Tuberculosis Cases and Rates, 2012-2018

Tuberculosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	17	19	12	14	21	17	18
	Rate	2.1	2.3	1.5	1.7	2.5	2.0	2.1
Washington	Cases	185	210	194	207	204	207	189
	Rate	2.7	3.1	2.8	2.9	2.8	2.8	2.5

Sexually Transmitted Diseases

Chlamydia

Chlamydia trachomatis bacteria cause chlamydia, a common sexually transmitted infection. Chlamydia spreads through unprotected sex and childbirth. Chlamydia is more dangerous for women because it can cause permanent damage to the reproductive system and complications like pelvic inflammatory disease, ectopic pregnancy and infertility.

Most people with chlamydia do not have symptoms. If symptoms do exist, they usually do not appear until a week or two after exposure, sometimes longer. Symptoms in men can include testicular pain, burning when urinating and milky or watery discharge from the penis. Symptoms in women can include burning with urination, abdominal pain, unusual vaginal discharge and vaginal bleeding with intercourse.

Chlamydia is easily treated with broad spectrum antibiotics. CDC recommends annual chlamydia screening for all sexually active women younger than 25 years. In Pierce County, chlamydia rates have steadily increased over the last decade. In 2018, nearly 6,000 cases were reported in Pierce County.

Routinely asking patients about their gender and sexual history helps prevent the spread of STDs.

Sexual health is an essential component of primary medical care.

Men recently diagnosed with any STD should be screened for all STDs.

The same is true for women recently diagnosed with gonorrhea, syphilis or HIV. Screening should be site-specific.

Gonorrhea

Neisseria gonorrhoeae bacteria cause gonorrhea, another common sexually transmitted infection. Like chlamydia, people with gonorrhea often do not have symptoms. If they do have symptoms, men can experience testicular pain, burning when urinating and milky or watery discharge from the penis. Women can have burning with urination, abdominal pain, unusual vaginal discharge and vaginal bleeding with intercourse. Symptoms usually occur within a week of infection, but sometimes take longer to emerge.

Expedited partner therapy can prevent re-infection.

Patients diagnosed with chlamydia or gonorrhea should talk to their healthcare provider about expedited partner therapy (EPT). EPT allows sexual partners to get treated quickly without having to see a healthcare provider. Since most people with these STDs do not have symptoms, they often do not know they are infected. This can lead to re-infection. EPT is an effective way to ensure reproductive health and prevent the spread of STDs.

Because bacteria can develop resistance to antibiotics, effective treatment involves dual antibiotic therapy. CDC recommends annual screening for all sexually active women younger than 25 years. Pierce County gonorrhea rates increased dramatically between 2015 and 2017 but have since stabilized. In 2018, nearly 2,000 cases of gonorrhea were reported in Pierce County.

Syphilis

Treponema pallidum bacteria cause the sexually transmitted infection syphilis. Infection is categorized in four stages:

1. Primary—Painless ulcer (chancre) at infection site. Indicates infection occurred three to six weeks ago. Patient is highly infectious.
2. Secondary—Diffuse rash and/or sore in the mouth, vagina or anus. Indicates infection occurred within the last few months. Patient is highly infectious.
3. Early latent or latent—No visible symptoms. Infection occurred more than 12 months ago. Patient is less infectious, but transmission is still possible.
4. Tertiary—Advanced stage of untreated syphilis. Can involve multiple organ systems (brain, eyes, bones, etc.) and can be fatal. Typically occurs 10 to 30 years after infection.

Risk factors include unprotected sex, diagnosis of another sexually transmitted infection and same-sex partnerships among men and transgender women. About 90% of syphilis cases occur among men who have sex with men. The risk of infection increases when a person has been diagnosed with another STD.

Syphilis rates have dramatically increased in Pierce County, nearly tripling over the last decade. In 2018, 66 cases of primary or secondary syphilis were reported.

HIV

Human immunodeficiency virus (HIV) attacks and destroys cells that are an important part of the body's immune system. This reduces a person's ability to fight off other infections or cancers. Without treatment, HIV infection will lead to acquired immunodeficiency syndrome (AIDS).

HIV requires the exchange of certain body fluids to spread—mainly blood, semen or breast milk. In the United States, HIV is mainly spread through unprotected anal or vaginal sex or sharing needles or other drug injection equipment. HIV can also spread from mother to child during pregnancy, birth or breastfeeding.

Populations at high risk for HIV include men and transgender women who have sex with men, people who inject drugs, people who exchange sex for money or drugs and people who have been diagnosed with another sexually transmitted infection. People at risk for HIV should get tested at least once a year.

While there is no cure for HIV, it can be effectively controlled using antiretroviral therapy. The Pierce County HIV rate has been stable for many years. In 2018, about 1,500 people are living with HIV and 49 new cases were reported.

Sexually Transmitted Disease Cases and Rates, 2012-2018

Chlamydia		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	4,293	4,298	4,372	4,646	4,976	5,434	5,947
	Rate	531.2	527.7	532.3	559.7	589.2	632.3	681.7
Washington	Cases	24,600	25,013	26,246	28,721	31,193	32,454	34,754
	Rate	360.8	363.4	376.7	406.7	434.2	444.0	468.0

Gonorrhea		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	657	966	1,271	1,363	1,196	1,772	1,923
	Rate	81.3	118.6	154.8	164.2	141.6	206.2	220.5
Washington	Cases	3,282	4,390	6,136	7,203	8,165	10,022	11,215
	Rate	48.1	63.8	88.1	102.0	113.7	137.1	151.0

Herpes		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	346	364	400	474	474	409	482
	Rate	42.8	44.7	48.7	57.1	56.1	47.6	55.3
Washington	Cases	2,197	2,207	2,082	2,524	2,548	2,058	1,612
	Rate	32.2	32.1	29.9	35.7	35.5	28.2	21.7

HIV		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	47	56	40	65	42	41	49
	Rate	5.8	6.9	4.9	7.8	5.0	4.8	5.6
Washington	Cases	446	390	372	406	371	371	402
	Rate	6.5	5.7	4.7	5.8	5.2	5.1	5.4

Syphilis, primary/secondary		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	22	28	30	41	58	63	66
	Rate	2.7	3.4	3.7	4.9	6.9	7.3	7.6
Washington	Cases	300	285	337	452	566	674	809
	Rate	4.4	4.1	4.8	6.4	7.9	9.2	10.9

Other Reportable Conditions

Legionellosis

Legionella bacteria cause legionellosis, also called Legionnaire's disease, a rare but serious form of pneumonia. The bacteria are naturally found in freshwater environments. *Legionella* is most often spread to people through water systems, cooling towers containing water, hot tubs and decorative fountains. People are exposed when they breathe in tiny water droplets containing the bacteria.

Symptoms typically begin two to ten days after exposure and can include cough, shortness of breath, fever, muscle aches and headaches. Infection is not contagious. The same bacteria also cause Pontiac fever, a milder disease that does not involve pneumonia. People at higher risk include those who smoke; have respiratory disease, diabetes or compromised immune systems; or are older than 50 years. In Pierce County, eight cases of Legionellosis disease were reported in 2018.

Coccidiomycosis

Coccidioides fungus causes coccidiomycosis, also called Valley Fever, a rare fungal infection of the lungs. People are exposed when they breathe in fungal spores carried through the air. The fungus lives naturally in soil throughout the western United States, Mexico and South America. In the United States, most cases are reported in Arizona and California.

Most people with coccidiomycosis do not have symptoms. Some have flu-like symptoms that last a few weeks or months. Symptoms can include fatigue, cough, fever, shortness of breath, muscle aches and a rash on the upper body or legs. The disease is not contagious.

Severe cases can be treated with prescription antifungal medication. In Pierce County, most cases of coccidiomycosis occur among retired people 60 years or older, many of whom spend the winter months in the southwestern United States. In 2018, 12 cases of coccidiomycosis were reported in Pierce County.

Acute Flaccid Myelitis

Acute flaccid myelitis (AFM) is an extremely rare but serious disease that affects the nervous system. Although its cause is not well understood, experts think certain viruses—especially enteroviruses—may play a role. Most AFM patients have a recent history of respiratory illness and fever. Many patients are children. Symptoms include sudden weakness in the arms and legs, loss of reflexes and decreased muscle tone. Severe cases may also include facial drooping, difficulty swallowing, slurred speech and respiratory failure. No specific treatment for AFM exists. Patients should be referred to a doctor who specializes in treating brain and spinal cord illnesses.

In 2018, AFM was reported in two Pierce County children. Both had relatively mild weakness and made good recoveries. Prior to 2018, Pierce County had only one case of AFM, a child in 2016.

Tickborne Relapsing Fever

TBRF is linked to sleeping in cabins in mountainous areas of the western United States. Symptoms include high fever, headache and muscle and joint aches. Symptoms can wax and wane, causing a pattern of fever lasting about three days, seven days without fever, then another three days of fever.

TBRF is transmitted by a type of tick (“soft” ticks) that do not attach. People are exposed when they sleep in cabins or other buildings where rodents have nested. The ticks live in the nests and normally feed on the rodents. The ticks emerge at night and feed briefly. Because the bites are quick and painless, most people do not know they have been bitten.

Pierce County had a cluster of three TBRF cases in 2018.

Ticks infected with *Borrelia* bacteria bit a group of Pierce County campers staying in a rural Idaho cabin. The campers developed TBRF and were prescribed doxycycline. They all recovered well. Idaho public health officials ensured the ticks were eliminated from the cabin.

Other Reportable Condition Cases and Rates, 2012-2018

Coccidiomycosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	4	4	4	2	5	10	12
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Washington	Cases	0	10	14	25	40	0	62
	Rate	0	n/a	0.2	0.4	0.6	0	0.8

Legionellosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	3	2	3	7	5	8	8
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Washington	Cases	30	52	63	58	72	56	54
	Rate	0.4	0.8	0.9	0.8	1.0	0.8	0.7

Listeriosis		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	1	3	4	3	1	1	0
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	0
Washington	Cases	26	21	24	21	14	17	15
	Rate	0.4	0.3	0.3	0.3	0.2	0.2	0.2

Lyme Disease		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	2	3	1	2	8	3	2
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Washington	Cases	15	21	15	24	31	39	20
	Rate	0.2	0.3	0.2	0.3	0.4	0.5	0.3

Malaria		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	4	3	4	3	6	2	4
	Rate	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Washington	Cases	26	30	41	23	46	34	40
	Rate	0.4	0.4	0.6	0.3	0.6	0.5	0.5

Typhoid		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	0	0	1	0	1	1	0
	Rate	0	0	n/a	0	n/a	n/a	0
Washington	Cases	11	11	15	10	13	14	12
	Rate	n/a	n/a	0.2	n/a	0.2	0.2	n/a

Wound Botulism		2012	2013	2014	2015	2016	2017	2018
Pierce County	Cases	0	2	0	0	0	0	0
	Rate	0	n/a	0	0	0	0	0
Washington	Cases	2	4	0	2	1	4	0
	Rate	n/a	n/a	0	n/a	n/a	n/a	0



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