

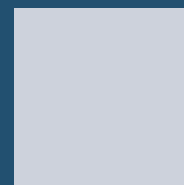
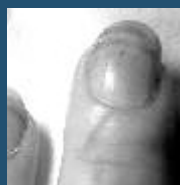
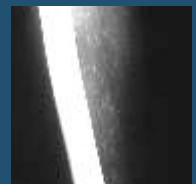
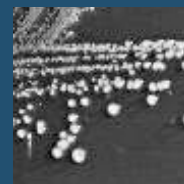
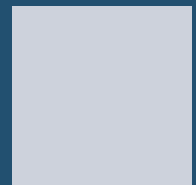
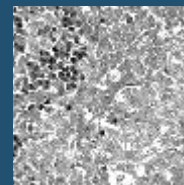
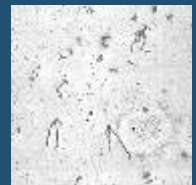
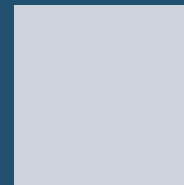
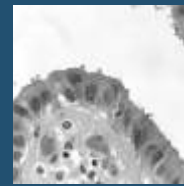
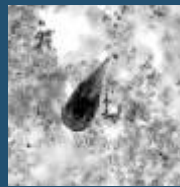
For Health Care Providers

# COMMUNICABLE DISEASE REPORT

## 2009-2013

The purpose of notifiable condition reporting is to provide the information necessary for officials to protect the public's health by tracking communicable diseases and other conditions. Based on these reports, public health officials take protective steps, such as verifying treatment of persons already ill, securing preventive therapies for individuals who came into contact with infectious agents, investigating and halting outbreaks, and removing harmful health exposures. Public health workers also use the data collected during investigations to assess broader patterns, including historical trends and geographic clustering. By analyzing the broader picture, public health is able to take appropriate actions, including outbreak investigation, redirection of program activities and policy development.

January  
2015



[srhd.org](http://srhd.org)

# ENTERIC DISEASE

Enteric (gastrointestinal) disease is most frequently caused by food- or water-borne pathogens. These illnesses are largely preventable through good hygiene, proper food handling including thorough cooking, and appropriate animal handling. Enteric infections including shigellosis, salmonellosis, Shiga toxin-producing *Escherichia coli* (STEC), and giardiasis are more frequently reported in children up to 5 years of age.

Campylobacter infection remains the most frequent cause of reported bacterial gastroenteritis in Spokane County, as is true in Washington and the United States (US). Most cases are sporadic and outbreaks involving multiple persons and person-to-

person spread are uncommon. Locally in 2013, reported cases declined dramatically, but statewide the rate of reported cases continued the upward trend begun in 2010.

As a matter of routine, enteric infections are reported less often in Spokane County residents as compared to other state residents, but reported cases of the most common enterics, except for STEC, declined dramatically in 2013. Statewide, overall enteric infection numbers were stable, but STEC infections increased significantly.

In Washington in 2013, a total of 298 STEC cases were reported; 55% were serotype O157:H7 and 16% were O26.

Twenty other serotypes accounted for the other (29%) cases. The recent increase of non-O157 STEC cases reported reflects new laboratory testing practices. Most cases are reported during the summer and early fall.

Although single cases are not reportable, SRHD monitors and provides guidance on control of outbreaks of gastroenteritis, particularly those associated with long term care facilities, due to the fragile health of many residents in those institutions. In 2013, 30 such outbreaks were reported, affecting at least 800 individuals; 7 of the outbreaks were confirmed to be caused by Norovirus.

## ENTERIC DISEASE



|   |                  | 2009               |                  | 2010                |                  | 2011              |                  | 2012                |                  | 2013                |                  |
|---|------------------|--------------------|------------------|---------------------|------------------|-------------------|------------------|---------------------|------------------|---------------------|------------------|
|   |                  | Cases              | Rate per 100,000 | Cases               | Rate per 100,000 | Cases             | Rate per 100,000 | Cases               | Rate per 100,000 | Cases               | Rate per 100,000 |
| <b>Campylobacteriosis</b>                   | Spokane County   | 62                 | 13.3             | 73                  | 15.5             | 54                | 11.5             | 70                  | 14.7             | 42                  | 8.8              |
|   | Washington State | 1,030<br>(1 death) | 15.4             | 1,315<br>(2 deaths) | 19.5             | 1,538             | 22.7             | 1,551<br>(3 deaths) | 22.7             | 1,631<br>(4 deaths) | 23.7             |
| <b>Cryptosporidiosis</b>                    | Spokane County   | 4                  | *                | 4                   | *                | 1                 | *                | 3                   | *                | 4                   | *                |
|   | Washington State | 102                | 1.5              | 102                 | 1.5              | 88                | 1.3              | 101                 | 1.5              | 84                  | 1.2              |
| <b>Shiga-toxin producing <i>E. coli</i></b> | Spokane County   | 10                 | 2.2              | 11                  | 2.3              | 14                | 3.0              | 13                  | 2.7              | 19                  | 4.0              |
|   | Washington State | 206                | 3.1              | 226<br>(1 death)    | 3.4              | 203               | 3.0              | 239                 | 3.5              | 330<br>(3 deaths)   | 4.8              |
| <b>Giardiasis</b>                           | Spokane County   | 55                 | 11.8             | 47                  | 10.0             | 31                | 6.6              | 39                  | 8.2              | 24                  | 5.0              |
|   | Washington State | 467                | 7.0              | 521                 | 7.7              | 529               | 7.8              | 512                 | 7.5              | 548                 | 8.0              |
| <b>Listeriosis</b>                          | Spokane County   | 1                  | *                | 0                   | *                | 1                 | *                | 1                   | *                | 1                   | *                |
|   | Washington State | 24<br>(4 deaths)   | 0.4              | 24<br>(1 death)     | 0.4              | 19<br>(2 deaths)  | 0.3              | 26<br>(5 deaths)    | 0.4              | 21<br>(1 death)     | 0.3              |
| <b>Salmonellosis</b>                        | Spokane County   | 41                 | 8.8              | 46                  | 9.8              | 39                | 8.3              | 63                  | 13.2             | 33                  | 6.9              |
|   | Washington State | 820<br>(2 deaths)  | 12.3             | 780<br>(3 deaths)   | 11.6             | 589<br>(2 deaths) | 8.7              | 842                 | 12.4             | 670<br>(1 death)    | 9.7              |
| <b>Shigellosis</b>                          | Spokane County   | 4                  | *                | 3                   | *                | 4                 | *                | 1                   | *                | 3                   | *                |
|   | Washington State | 153                | 2.3              | 112                 | 1.7              | 104               | 1.5              | 133                 | 2.0              | 122                 | 1.8              |

\* Incidence rates not calculated for <5 cases.

# VACCINE-PREVENTABLE DISEASE

During 2009-2013, there was no significant change in overall rates for diseases prevented by standard childhood immunizations, except for pertussis. There were no reported cases of *Haemophilus influenzae* (H.flu), measles, mumps, rubella, tetanus or diphtheria in Spokane County.

Measles was declared eliminated from the United States in 2000 and elimination has been maintained through high population immunity.

During 2012, a statewide pertussis outbreak occurred. More than 4,900 cases were reported, resulting in an overall incidence of 72.1 cases per 100,000 Washington residents, with a rate in infants less than one year of age of 428.0/100,000. Three hundred and seventy-nine (379) infants under one year of age were reported as having whooping cough and 72 of them were hospitalized. Of those hospitalized, 57 (79%) were three months of age or

younger. Children aged 5-9 and 10-13 years old also had high incidence rates (220.0 and 301.1 per 100,000, respectively). The pertussis outbreak strained resources of health departments, schools, medical offices, and healthcare facilities throughout the state.

Along with pertussis and hepatitis A and B (see next section), two other vaccine-preventable diseases occur regularly in Spokane County – meningococcal disease and influenza. In the US, almost all cases of meningococcal disease are caused by serogroups B, C and Y, but the vaccine currently licensed in the US protects against serogroups A, C, Y and W-135 only. The highest incidence of meningococcal disease occurs among infants, with a second peak occurring in late adolescence. In 2013, isolates from most Washington cases were submitted for determination of serogroup; 9 were serogroup B, 3 serogroup Y, 2 serogroup C, and 2 serogroup W-135.

Other isolates were other serotypes or were not tested. Three meningococcal disease-associated deaths occurred.

Only persons hospitalized due to influenza are reportable in Spokane County. One hundred and eighty three (183) Spokane County residents hospitalized due to influenza (169 flu A and 14 flu B) were reported from November 2012 through July 2013. The number of hospitalizations was 21% greater than during the 2012-2013 flu season, which was 28% higher than in the 2011-2012 flu season (151 vs. 118), a noteworthy upward trend. Seventy percent of those hospitalized were working age adults (18-65) and 51% were female. Although influenza is an annual threat to population health, the level of flu vaccination in the general population is estimated to be in the 40% range most years.

## VACCINE-PREVENTABLE DISEASE

|   |                  | 2009             |                  | 2010              |                  | 2011              |                  | 2012            |                  | 2013             |                  |
|---|------------------|------------------|------------------|-------------------|------------------|-------------------|------------------|-----------------|------------------|------------------|------------------|
|   |                  | Cases            | Rate per 100,000 | Cases             | Rate per 100,000 | Cases             | Rate per 100,000 | Cases           | Rate per 100,000 | Cases            | Rate per 100,000 |
| <b>H. influenzae invasive disease</b> ▲ | Spokane County   | 0                | *                | 0                 | *                | 0                 | *                | 0               | *                | 0                | *                |
|   | Washington State | 9                | 2.1              | 10<br>(1 death)   | 2.3              | 8<br>(1 death)    | 1.8              | 4               | 0.9              | 11               | 2.4              |
| <b>Measles</b>                          | Spokane County   | 0                | *                | 0                 | *                | 0                 | *                | 0               | *                | 0                | *                |
|   | Washington State | 1                | *                | 1                 | *                | 4                 | *                | 0               | *                | 4                | *                |
| <b>Meningococcal Disease</b>            | Spokane County   | 4                | *                | 2                 | *                | 0                 | *                | 2               | *                | 0                | *                |
|   | Washington State | 26<br>(3 deaths) | 0.4              | 33<br>(3 deaths)  | 0.5              | 22                | 0.3              | 24<br>(1 death) | 0.4              | 20<br>(3 deaths) | 0.3              |
| <b>Mumps</b>                            | Spokane County   | 1                | *                | 0                 | *                | 0                 | *                | 0               | *                | 0                | *                |
|   | Washington State | 6                | 0.1              | 7                 | 0.1              | 2                 | *                | 2               | *                | 2                | *                |
| <b>Pertussis</b>                        | Spokane County   | 4                | *                | 7                 | 1.5              | 18                | 3.8              | 198             | 41.6             | 48               | 10.0             |
|   | Washington State | 291              | 4.4              | 607<br>(2 deaths) | 9.0              | 962<br>(2 deaths) | 14.2             | 4,916           | 72.1             | 748              | 10.9             |

▲ In persons aged <5 years old

\* Incidence rates not calculated for <5 cases.

# HEPATITIS

## Hepatitis A

Statewide, cases of hepatitis A were at epidemic levels in the late 1980s, peaking in 1989 with 3,273 cases (69.2/100,000). Subsequent and ongoing vaccination efforts have caused hepatitis A cases to drop to fewer than 70 cases a year since 2003. The number of hepatitis A cases has consistently been five or fewer per year in the last decade in Spokane County.

## Hepatitis B

Statewide, cases of hepatitis B were also at epidemic levels in the late 1980s, peaking in 1987 with a rate of 24.9/100,000. Subsequent and ongoing vaccination efforts have caused hepatitis B cases to drop to fewer than 100 cases a year since 2002. Typically, 12-31% of all hepatitis B cases reported are acute. Acute infection with hepatitis B leads to chronic disease in 5-10% of adults and in 90% of children born to infected mothers if the infant is not prophylactically treated. In Spokane County, the rate of acute hepatitis B infection fluctuates greatly from year to year, and is often much greater than the state rate.

From December 2000 through December 2011 (the latest year for which descriptive data are available), 15,664 cases of chronic hepatitis B were reported; 54% were among males and about two-thirds of cases were diagnosed in persons aged 25-54 years. There were approximately 50 hepatitis B deaths annually in the years 2006 through 2010 in Washington State. Statewide in 2012, one of the 343 infants born to Hepatitis B surface antigen positive women was perinatally infected.

## Hepatitis C

Reported cases of acute hepatitis C were elevated during 1983-1995, with a peak case rate of 5.5/100,000 in 1994. The rate of acute hepatitis C in Spokane County is usually at least three times the state rate. The reason(s) for this are unclear but may include better testing and reporting, more complete follow-up, and less likely, a much higher incidence of disease.

Due to the often unrecognized symptoms of hepatitis C infection, acute disease is infrequently diagnosed – typically less than

2% of reported cases are acute – and reported cases are commonly fewer in number than those of acute hepatitis B. Infection with hepatitis C leads to chronic illness in 80-85% of adults. Consistent with its capacity to progress to chronic disease, hepatitis C constitutes the largest portion of hepatitis cases, with a range of 400 to more than 600 cases usually reported to SRHD each year. Nationally, persons born between 1945 and 1965 comprise about 27% of the population, but account for 75% of all hepatitis C infections. In August 2012, the Centers for Disease Control and Prevention (CDC) recommended routine testing of this birth cohort for hepatitis C.

From December 2000 through December 2011, (the latest year for which descriptive data are available) 69,459 cases of chronic hepatitis C were reported in Washington; 62% were among males and about 60% of cases were diagnosed in persons aged 35-54 years. For the years 2006 through 2010, there was an average of 476 hepatitis C-related deaths annually.

## HEPATITIS

|                             |                  | 2009      |                  | 2010      |                  | 2011      |                  | 2012      |                  | 2013      |                  |
|-----------------------------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|
|                             |                  | Cases     | Rate per 100,000 | Cases     | Rate per 100,000 | Cases     | Rate per 100,000 | Cases     | Rate per 100,000 | Cases     | Rate per 100,000 |
| <b>Hepatitis A</b>          | Spokane County   | 1         | *                | 0         | *                | 0         | *                | 0         | *                | 1         | *                |
|                             | Washington State | 42        | 0.6              | 21        | 0.3              | 31        | 0.5              | 29        | 0.4              | 45        | 0.7              |
|                             |                  | (1 death) |                  |           |                  | (1 death) |                  | (1 death) |                  | (1 death) |                  |
| <b>Hepatitis B, Acute</b>   | Spokane County   | 10        | 2.2              | 12        | 2.6              | 1         | *                | 4         | *                | 13        | 2.7              |
|                             | Washington State | 48        | 0.7              | 50        | 0.7              | 35        | 0.5              | 34        | 0.5              | 34        | 0.5              |
|                             |                  |           |                  | (1 death) |                  |           |                  | (1 death) |                  | (1 death) |                  |
| <b>Hepatitis B, Chronic</b> | Spokane County   | 88        | 18.8             | 78        | 16.6             | 59        | 12.5             | 57        | 12.0             | 56        | 11.7             |
|                             | Washington State | 1,229     | 18.4             | 1,194     | 17.8             | 973       | 14.4             | 1,066     | 15.6             | N/A       |                  |
| <b>Hepatitis C, Acute</b>   | Spokane County   | 7         | 1.5              | 4         | *                | 10        | 2.1              | 13        | 2.7              | 14        | 2.9              |
|                             | Washington State | 22        | 0.3              | 25        | 0.4              | 41        | 0.6              | 54        | 0.8              | 63        | 0.9              |
| <b>Hepatitis C, Chronic</b> | Spokane County   | 401       | 86.0             | 425       | 90.2             | 545       | 115.3            | 637       | 134.0            | 663       | 138.1            |
|                             | Washington State | 5,401     | 80.9             | 5,374     | 79.9             | 4,776     | 70.6             | 4,668     | 68.5             | N/A       |                  |

\* Incidence rates not calculated for <5 cases.

# VECTOR-BORNE DISEASE

Vector-borne diseases occur infrequently in Spokane County and in Washington State. Surveillance for these diseases allows examination of changes in prevalence and geographic distribution. For example, since *Ixodes* ticks, the primary vectors for Lyme disease, have not been detected in our environs, Lyme disease diagnosed in Spokane County is presumably acquired out of the area (primarily in the eastern or mid-western US, or occasionally, in western Washington.) Statewide, 19 Lyme disease cases were reported in 2013. Nationally, approximately 95% of confirmed Lyme disease cases were reported from states in the Northeast, mid-Atlantic, and upper Midwest.

Tick-borne relapsing fever, carried by *Ornithodoros bermsii* ticks, occurs more frequently in eastern and central Washington, as well as northern Idaho, than in western Washington. Two of the

four cases reported statewide in 2013 occurred in Spokane County residents.

West Nile Virus (WNV) disease was first detected in the United States in 1999, and the first human WNV infections acquired in Washington were reported in 2006. In 2009, Washington had its highest number of cases reported to date, with 38 cases and 2 viremic blood donors. Of these cases, 36 were known to be endemically acquired in Washington. In 2013, 2 cases were reported in Washington, one in a symptomatic individual and the other in a viremic blood donor. Both were travel-associated. Other than WNV disease, the last reported human arboviral infection acquired in the state was Western Equine Encephalitis in 1988.

In recent years, 10-20 cases of travel-associated dengue fever and a few travel-associated Chikungunya cases have been reported annually in Washington.

Hantavirus Pulmonary Syndrome, due to exposure to infected mice and their excreta, has never been diagnosed in a Spokane County resident. Cases have been reported from surrounding counties, and Washington has the fifth largest number of cases (44) in the US.

Legionellosis is caused by a ubiquitous organism. Illness is more common with age over 50 years, smoking, diabetes, chronic lung disease, or immunosuppression (particularly due to corticosteroids or organ transplant). Hot water systems (showers), air conditioning cooling towers, evaporative condensers, humidifiers, whirlpool spas, respiratory therapy devices, decorative fountains, and potting soil have been implicated epidemiologically in outbreaks. In 2011, Spokane County had a small outbreak of Legionellosis cases related to a healthcare facility.

## VECTOR-BORNE DISEASE & LEGIONELLOSIS

|   |                  | 2009             |                  | 2010             |                  | 2011             |                  | 2012             |                  | 2013             |                  |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|   |                  | Cases            | Rate per 100,000 | Cases            | Rate per 100,000 | Cases            | Rate per 100,000 | Cases            | Rate per 100,000 | Cases            | Rate per 100,000 |
| <b>Arboviral Disease<sup>▲</sup></b><br>(previously viral encephalitis) | Spokane County   | 2                |                  | 0                |                  | 0                |                  | 1                |                  | 0                |                  |
|   | Washington State | 54               |                  | 24               |                  | 9                |                  | 20               |                  | 16               |                  |
| <b>Hantavirus pulmonary syndrome</b>                                    | Spokane County   | 0                | *                | 0                | *                | 0                | *                | 0                | *                | 0                | *                |
|   | Washington State | 3                | *                | 2                | *                | 2<br>(1 death)   | *                | 2<br>(2 deaths)  | *                | 0                | *                |
| <b>Lyme Disease</b><br>(travel-related)                                 | Spokane County   | 1                | *                | 1                | *                | 0                | *                | 1                | *                | 0                | *                |
|   | Washington State | 16               | 0.2              | 16               | 0.2              | 19               | 0.3              | 15               | 0.2              | 19               | 0.3              |
| <b>Malaria</b><br>(travel-related)                                      | Spokane County   | 0                | *                | 2                | *                | 1                | *                | 3                | *                | 3                | *                |
|   | Washington State | 26               | 0.4              | 39<br>(1 death)  | 0.6              | 24               | 0.4              | 26               | 0.4              | 30               | 0.4              |
| <b>Tick-borne relapsing fever</b>                                       | Spokane County   | 1                | *                | 1                | *                | 1                | *                | 1                | *                | 2                | *                |
|   | Washington State | 5                | 0.1              | 7                | 0.1              | 11               | 0.2              | 6                | 0.1              | 4                | 0.1              |
| <b>Legionellosis</b>  | Spokane County   | 2                | *                | 3                | *                | 5                | 1.1              | 6                | 1.2              | 3                | *                |
|   | Washington State | 29<br>(2 deaths) | 0.4              | 35<br>(4 deaths) | 0.5              | 43<br>(4 deaths) | 0.6              | 30<br>(5 deaths) | 0.4              | 52<br>(5 deaths) | 0.8              |

▲ Including yellow fever, WNV disease, dengue, and Japanese encephalitis

\* Incidence rates not calculated for <5 cases

# HIV/AIDS

AIDS has been a reportable disease in Washington since 1982, and for many years the number of cases reported was used to estimate the incidence of HIV disease.

Over time, as treatment and longevity after diagnosis of HIV infection improved, HIV disease came to be regarded more often as a chronic infection. Consequently, in 1999 HIV infection also became reportable, allowing better assessment of the burden of disease. The rate of incident disease has been mostly stable locally and statewide since 2002, decreasing slightly in the period 2009-2013 with an average of 23 and 517 cases, respectively. As of December 31, 2013, about 500 individuals in Spokane County were living with HIV disease, 58% of whom had a diagnosis of AIDS. Statewide, more than 12,000 people were known to be living with HIV disease and

56% had a diagnosis of AIDS. About one in three new cases are detected late in their illness and develop AIDS within 12 months of HIV diagnosis.

Note: HIV incidence data does not include persons who have anonymously tested positive, but who have not yet entered into medical care. Once medical care is accessed, the case is reported and counted.

Males continue to make up the vast majority of AIDS cases reported—90% overall since 1982, 85% in the 2009-2013 period. Cumulatively, 73% of cases are white, but only 57% of cases diagnosed during 2009-2013 were white. Blacks have had significantly higher case rates, currently 44.3/100,000 for males and 31.6/100,000

for females, than any other race or ethnic group. AIDS has been most commonly diagnosed in persons aged 30-39.

In 2009-2013, 57% of those diagnosed with HIV were individuals 25-44 years of age. More than 85% of cases reported were in men and more than 75% of those were men who have sex with men (MSM). Among all new HIV cases, about 17% report a history of injection drug use; this appears to be dropping over time. Sixteen percent of Washington State people living with HIV disease are foreign-born. About half of female cases are thought to have been contracted through unprotected sex with an HIV positive male. Since 2000, there have been seven cases of perinatal HIV transmission.

## HIV/AIDS

|                              |                  | 2009                |                  | 2010                |                  | 2011                |                  | 2012               |                  | 2013         |                  |
|------------------------------|------------------|---------------------|------------------|---------------------|------------------|---------------------|------------------|--------------------|------------------|--------------|------------------|
|                              |                  | Cases               | Rate per 100,000 | Cases               | Rate per 100,000 | Cases               | Rate per 100,000 | Cases              | Rate per 100,000 | Cases        | Rate per 100,000 |
| <b>Incident HIV Disease*</b> | Spokane County   | 18                  | 3.9              | 21                  | 4.5              | 26                  | 5.5              | 21                 | 4.4              | 21           | 4.4              |
|                              | Washington State | 550<br>(134 deaths) | 8.2              | 551<br>(107 deaths) | 8.2              | 514<br>(118 deaths) | 7.6              | 503<br>(79 deaths) | 7.4              | 470<br>(N/A) | 6.8              |

\* Incident HIV Disease refers to all newly-identified cases of HIV disease, with or without AIDS.

# SEXUALLY-TRANSMITTED INFECTION

Sexually Transmitted Infection (STIs) continue to be the most commonly reported of all communicable diseases in Washington, and accounted for more than 79% of all notifiable conditions reported to the Washington State Department of Health in 2013. Cases of chlamydia, gonorrhea, and initial adult genital herpes infection increased in 2013 as compared to 2012. Rates for primary and secondary P&S syphilis decreased slightly.

## Chlamydial Infection

Reports of chlamydial infection comprise the majority of all notifiable condition reports received in Spokane County. The 2012 rate is more than double the rate of cases reported in 1996, when the fewest cases in the last 2 decades were reported. Spokane County had the fourth highest rate of chlamydial infection reported by county and a higher rate than the state. Some of the increase may be due to increased screening and testing.

In Washington State, chlamydial infection also continues to be the most commonly reported STI. The chlamydial infection incidence rate showed a steady rise between 1996 and 2004 and then was relatively stable for 4 years until 2008. Since then, sharp increases in incidence have been seen in each succeeding year; some of the increase may be due to increased screening and testing. The overall incidence rate for Washington State in 2013 was 363.4/100,000. Women between 15 and 24 years of age have disproportionately higher rates than other age groups or males; this may be partially related to less frequent testing in men.

Nationwide in 2013, approximately 1.4 million cases of *Chlamydia trachomatis* infections were reported, corresponding to a

rate of 446.6/100,000, a slight decrease from 2011 when the largest ever number of cases for one condition was reported to the CDC. This is the first time since national reporting began that the rate of reported cases of chlamydia has decreased. As is true locally, the national case rate more than doubled between 1996 and 2011.

## Gonorrhea

Locally, the rate of reported gonorrhea cases in 2013 was almost double the rate reported for 2012 (68.51 vs 34.3/100,000). Some of the increase may be due to increased screening and testing.

Statewide, the rate of cases increased sharply from 2009 through 2012 and in 2013 by 33% as compared to 2012. Washington's gonorrhea rate (63.8/100,000) remains lower than the national incidence rate of 108/100,000. Forty percent of all reported cases reside in King County. Incidence of gonorrhea was highest among 20-24 year old females and 25-29 year old males.

In 2009, the national rate of reported gonorrhea cases reached an historic low of 98.1/100,000. However, during 2009-2012, the rate increased slightly each year. In 2013, a total of 333,004 gonorrhea cases was reported and the national gonorrhea rate decreased slightly to 106.1/100,000. The decrease in the gonorrhea rate during 2012-2013 was observed primarily among women.

*Neisseria gonorrhoeae*, the causative agent of gonorrhea, has progressively developed resistance to each of the antimicrobials used for treatment. Most recently, declining susceptibility to cefixime resulted in a change to treatment guidelines, so that dual therapy with ceftriaxone and either azithromycin or

doxycycline is now the only CDC-recommended treatment regimen for gonorrhea. The emerging threat of cephalosporin resistance highlights the need for continued surveillance of *N. gonorrhoeae* antimicrobial susceptibility.

## Syphilis

Primary and secondary (P&S) syphilis are the infectious states of the disease and indicate likely acquisition of the illness in the preceding year. Rates of P&S syphilis were stable in 2009-2013, except for a spike in 2011. The county rate of P&S syphilis is significantly lower than the state rate.

In 2013, almost 75% of the reported P&S syphilis cases occurred in people residing in the Puget Sound area (King, Snohomish, and Pierce counties). There continues to be a large disparity between rates in males and females, consistent with what has been observed since 1997, with cases occurring primarily in MSM in urban areas. Forty-one percent of the P&S syphilis cases were co-infected with HIV. No cases of congenital syphilis were identified in Washington in 2013.

Nationally, the 2013 case count and rate for P&S syphilis was the highest recorded since 1995. The number of P&S syphilis cases reported to CDC increased from 15,667 in 2012 to 17,375 in 2013, an increase of 10.9% and the rate increased from 5.0 to 5.5/100,000. The rate increased 12.0% among men (from 9.2 to 10.3/100,000 men) during 2012-2013, but for women was unchanged (0.9/100,000 women).

## SEXUALLY-TRANSMITTED INFECTION



|                                   |                  | 2009   |                  | 2010   |                  | 2011   |                  | 2012   |                  | 2013   |                  |
|-----------------------------------|------------------|--------|------------------|--------|------------------|--------|------------------|--------|------------------|--------|------------------|
|                                   |                  | Cases  | Rate per 100,000 | Cases  | Rate per 100,000 | Cases  | Rate per 100,000 | Cases  | Rate per 100,000 | Cases  | Rate per 100,000 |
| <b>Chlamydia</b>                  | Spokane County   | 1,637  | 352.0            | 1,617  | 343.8            | 1,780  | 376.6            | 1,923  | 404.3            | 2,037  | 424.4            |
|                                   | Washington State | 21,178 | 317.6            | 21,401 | 317.8            | 23,237 | 343.3            | 24,600 | 360.8            | 25,013 | 363.4            |
| <b>Gonorrhea</b>                  | Spokane County   | 131    | 28.2             | 137    | 29.1             | 158    | 33.4             | 181    | 34.3             | 329    | 68.5             |
|                                   | Washington State | 2,268  | 34.0             | 2,865  | 42.6             | 2,730  | 40.3             | 3,282  | 48.1             | 4,390  | 63.8             |
| <b>Herpes (initial infection)</b> | Spokane County   | 158    | 34.0             | 174    | 37.0             | 185    | 39.1             | 134    | 28.2             | 132    | 27.5             |
|                                   | Washington State | 1,875  | 28.1             | 2,028  | 30.1             | 2,149  | 31.8             | 2,197  | 32.2             | 2,207  | 32.1             |
| <b>Syphilis, early infectious</b> | Spokane County   | 7      | 1.5              | 4      | *                | 14     | 3.0              | 5      | 1.1              | 2      | *                |
|                                   | Washington State | 135    | 2.0              | 261    | 3.9              | 329    | 4.9              | 300    | 4.4              | 285    | 4.1              |

\* Incidence rates not calculated for <5 cases.

# TUBERCULOSIS (TB)

The crude incidence rate for tuberculosis (TB) is consistently lower in Spokane County than in Washington State. During 2009-2013, 35 active TB cases were identified and/or treated in Spokane County.

Over the last decade, the annual crude incidence rate of TB in Washington State has trended downward. As in past years, foreign-born persons as well as racial and ethnic minorities are at greatest risk for TB. Native Hawaiians/Pacific Islanders had an average incidence of 22.4/100,000 during 2010-2012, followed by Asians (18.7/100,000), Blacks (16.5/100,000), and American Indian/Alaska Natives (5.2/100,000). The highest case rate by age, 4.5 /100,000, is among those 65 and older, followed by persons 25-44 years of age with a rate of 3.9/100,000. In 2013, as in 2012, more than 77% of all cases reported

resided in King, Pierce, or Snohomish County. Of the 173 case specimens tested for drug susceptibility, almost 14% were resistant to one of the first line treatment drugs. Four (2.5%) of the specimens were multi-drug resistant (MDR).

Since the 1992 TB resurgence peak in the US, the number of TB cases reported annually has decreased by 64%. In 2013, as in 2012, fewer than 10,000 cases of tuberculosis were reported, resulting in a further decline to an overall case rate of 3.0/100,000 persons. Fifty-one percent of cases occurred in just four states: Texas, California, Florida, and New York.

TB case rates vary by well-known factors, such as age, race and ethnicity, and country of origin. Foreign-born persons have accounted for the majority of TB cases in the US every year since 2001, and

in 2013, 65% of TB cases occurred in foreign-born persons. Moreover, the case rate among foreign-born persons in 2013 was approximately 13 times higher than among US-born persons.

Since 1993, TB case rates have declined annually for almost all age groups. The highest burden of disease continues to be among older adults. Children aged ≤ 14 years had the lowest rate at 0.8 /100,000.

During 2009 through 2013, the percentage of primary MDR TB cases has remained stable at approximately 1%. Since 1997, the percentage of US-born patients with primary MDR TB has remained below 1%. However, of the total number of reported primary MDR TB cases, the proportion occurring in foreign-born persons increased from 25% (103/407) in 1993 to 92% (75/82) in 2013.

## TUBERCULOSIS



### Tuberculosis

Spokane County  
Washington State

|                  |  | 2009              |                  | 2010              |                  | 2011              |                  | 2012               |                  | 2013         |                  |
|------------------|--|-------------------|------------------|-------------------|------------------|-------------------|------------------|--------------------|------------------|--------------|------------------|
|                  |  | Cases             | Rate per 100,000 | Cases             | Rate per 100,000 | Cases             | Rate per 100,000 | Cases              | Rate per 100,000 | Cases        | Rate per 100,000 |
| Spokane County   |  | 9                 | 1.9              | 4                 | *                | 8                 | 1.7              | 7                  | 1.5              | 7            | 1.5              |
| Washington State |  | 256<br>(9 deaths) | 3.8              | 236<br>(6 deaths) | 3.5              | 200<br>(8 deaths) | 3.0              | 185<br>(10 deaths) | 2.7              | 209<br>(N/A) | 3.0              |

\* Incidence rates not calculated for <5 cases.

**References:** Spokane Regional Health District data, Washington State Communicable Disease Report 2013, Washington State HIV/AIDS Epidemiology Report - 2nd Half 2013, Washington State Chronic Hepatitis B and Chronic Hepatitis C Surveillance Report - April 2014