

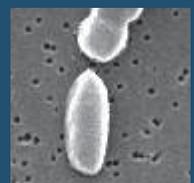
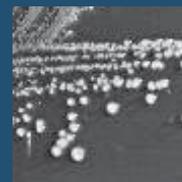
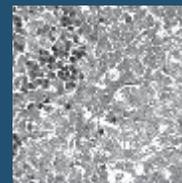
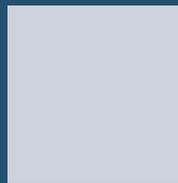
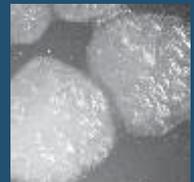
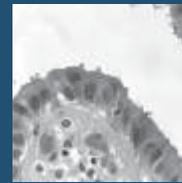
For Health Care Providers

COMMUNICABLE DISEASE REPORT

2008-2012

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.

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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 and thorough cooking, and appropriate animal handling. Some 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.

After a dip in the case rate in 2011, the number of *Campylobacteriosis* cases reported in Spokane County in 2012 returned to the average rate (14.7 cases/100,000 population) seen in the previous five-year period. *Campylobacter* infections remain the most-frequent cause of reported bacterial gastroenteritis in Spokane County, as is true in Washington and the United States. Most cases are sporadic and outbreaks involving multiple persons and person-to-person spread are uncommon. Statewide in 2011 and 2012, the rates of reported cases were higher

than they had been since the early to mid-1990s. There were 215 hospitalizations and three deaths caused by *campylobacter* infection in 2012.

Incidence of giardiasis in Spokane County is usually above the state rate, while listeriosis, shigellosis, yersiniosis, and STEC infections are reported less often in Spokane County residents as compared to other state residents.

In 2012, the rate of *Salmonella* infection in Spokane County exceeded the state rate for the first time in over a decade with no local outbreaks reported. Statewide, salmonellosis is the second-most common notifiable enteric infection with a range of 589-850 cases reported per year. *Salmonella* infections occur year-round with some increase during the spring and summer months. *Salmonella* can contaminate a wide-range of foods and many serotypes are reported.

In Washington in 2012, a total of 239 STEC cases were reported; 12 reported

Hemolytic Uremic Syndrome as a complication. Among 216 confirmed cases, only 118 (55%) were serogroup O157. The recent increase of non-O157 STEC cases reported reflects new laboratory testing practices. The 98 non-O157 STEC infections included 34 serogroup O26, 19 serogroup O103, 11 serogroup O121, and 11 serogroup O111 and 8 serogroup O145. Other serogroups accounted for 6% of STEC infections. Most cases are reported during the summer and early fall.

Although single cases are not reportable, Spokane Regional Health District (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 2012, 34 such outbreaks were reported, affecting at least 1,100 individuals; 12 of the outbreaks were confirmed to be caused by Norovirus.

ENTERIC DISEASE



		2008		2009		2010		2011		2012	
		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
Campylobacteriosis	Spokane County	79	17.2	62	13.3	73	15.5	54	11.5	70	14.7
	Washington State	1,069	16.2	1,030 (1 death)	15.4	1,315 (2 deaths)	19.5	1,538	22.7	1,551 (3 deaths)	22.7
Cryptosporidiosis	Spokane County	2	*	4	*	4	*	1	*	3	*
	Washington State	99	1.5	102	1.5	102	1.5	88	1.3	101	1.5
Enterohemorrhagic E. coli (EHEC)	Spokane County	6	1.3	10	2.2	11	2.3	14	3.0	13	2.7
	Washington State	189 (1 death)	2.9	206	3.1	226 (1 death)	3.4	203 (1 death)	3.0	239	3.5
Giardiasis	Spokane County	47	10.2	55	11.8	47	10.0	31	6.6	39	8.2
	Washington State	486	7.4	467	7.0	521	7.7	529	7.8	512	7.5
Listeriosis	Spokane County	1	*	1	*	0	*	1	*	1	*
	Washington State	29 (3 deaths)	0.4	24 (4 deaths)	0.4	24 (1 death)	0.4	19 (2 deaths)	0.3	26 (5 deaths)	0.4
Salmonellosis	Spokane County	39	8.5	41	8.8	46	9.8	39	8.3	63	13.2
	Washington State	846 (3 deaths)	12.8	820 (2 deaths)	12.3	780 (3 deaths)	11.6	589 (2 deaths)	8.7	842	12.4
Shigellosis	Spokane County	4	*	4	*	3	*	4	*	1	*
	Washington State	116	1.8	153	2.3	112	1.7	104	1.5	133	2.0

* Incidence rates not calculated for <5 cases.

VACCINE-PREVENTABLE DISEASE

During 2008-2012, 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) in those under age 5, or of measles, mumps, rubella, tetanus or diphtheria in Spokane County residents of any age.

During 2012, a statewide pertussis outbreak occurred. The overall incidence was 72.1 pertussis cases per 100,000 Washington residents with a rate in infants (under 1 year of age) of 428.0/100,000. Three hundred and seventy-nine infants were reported as having pertussis and 72 (19%) of them were hospitalized. Of those hospitalized, 57 (79%) were 3 months of age or younger and one infant died. Children aged 5-9 and 10-13 years old also had high incidence rates (220.0 and 301.1 per 100,000, respectively). The outbreak strained resources of health departments, schools, medical offices and health care facilities throughout the state.

Measles was declared eliminated from the United States in 2000 and elimination

has been maintained through high population immunity. No cases were reported in Washington in 2012, but the number of cases reported nationwide during 2011 (the latest year for which national statistics are available) was the highest since 1996. Of the 222 measles cases reported nationwide, 200 (90%) were associated with importations. Seventeen outbreaks accounted for 50% (112/222) of the cases. The median outbreak size was six cases (range: 3–21 cases) and outbreaks lasted a median of 18 days (range: 6–69 days). Of the 196 U.S. residents who had measles, 166 (85%) were unvaccinated or had unknown vaccination status.

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. Nationally, almost all cases of meningococcal disease are caused by serogroups B, C and Y, but the vaccine currently licensed in the United States 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 2012, isolates from all Washington cases were submitted for determination of serogroup; nine were serogroup B, eight serogroup Y, four serogroup C, one serogroup Z, and two were unable to be grouped. No meningococcal disease-associated deaths occurred.

Only persons hospitalized due to influenza are reportable in Spokane County. During the 2012-2013 flu season, 54% more Spokane County residents were hospitalized for influenza than in the previous year (151 vs. 98.) Fifty percent of hospitalized cases were 51 years of age or older and hospitalizations peaked in March, as in the previous flu season. Two deaths were reported among those hospitalized with influenza. Although vaccination is the best protection against flu and its complications, most years, only 40% of the general population receive a flu vaccination.

VACCINE-PREVENTABLE DISEASE

		2008		2009		2010		2011		2012	
		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
 Haemophilus influenzae invasive disease ▲	Spokane County	0	*	0	*	0	*	0	*	0	*
	Washington State	2	*	9	2.1	10 (1 death)	2.3	8 (1 death)	1.8	4	0.9
Measles	Spokane County	0	*	0	*	0	*	0	*	0	*
	Washington State	19	0.3	1	*	1	*	4	0.1	0	*
Meningococcal Disease	Spokane County	8	1.7	4	*	2	*	0	*	2	*
	Washington State	40 (4 deaths)	0.6	26 (3 deaths)	0.4	33 (3 deaths)	0.5	22	0.3	24 (1 death)	0.4
Mumps	Spokane County	0	*	1	*	0	*	0	*	0	*
	Washington State	14	0.2	6	0.1	7	0.1	2	*	2	*
Pertussis	Spokane County	6	1.3	4	*	7	1.5	18	3.8	198	41.6
	Washington State	460 (1 death)	7.0	291	4.4	607 (2 deaths)	9.0	962 (2 deaths)	14.2	4,916	72.1

▲ 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 caused hepatitis A cases to drop to fewer than 70 cases a year since 2003. In Spokane County, the number of hepatitis A cases has consistently been five or fewer each year during the last decade.

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 caused hepatitis B cases to decrease 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. Statewide, in 2012, of the 343 infants born to Hepatitis B surface antigen-positive women, one

infant was perinatally infected.

In Washington, from December 2000 through December 2011 (the latest year for which descriptive data are available), 15,664 cases of chronic hepatitis B were reported. Fifty-four percent of cases were among males and about two-thirds of cases were in persons aged 25-54 years. There were approximately 50 hepatitis B deaths annually in the years 2006 through 2010.

Hepatitis C

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

Owing 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. An average of 400 cases is reported each year.

Note: The case count for 2012 is significantly elevated for a few reasons: increased testing due to new recommendations and increased reporting from new laboratories. In addition, a process called de-duplication which identifies persons who have been previously reported elsewhere in the state (so that cases are not counted twice), has not yet been conducted.

From December 2000 through December 2011, 69,459 cases of chronic hepatitis C were reported in Washington. Sixty-two percent were among males and about 60% of cases were in persons aged 35-54 years. For the years 2006 through 2010, an average of 476 hepatitis C-related deaths occurred annually.

HEPATITIS

		2008		2009		2010		2011		2012	
		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
Hepatitis A	Spokane County	2	*	1	*	0	*	0	*	0	*
	Washington State	51	0.8	42 (1 death)	0.6	21	0.3	31 (1 death)	0.5	29 (1 death)	0.4
Hepatitis B, Acute	Spokane County	8	1.7	10	2.2	12	2.6	1	*	4	*
	Washington State	56	0.9	48	0.7	50 (1 death)	0.7	35	0.5	34 (1 death)	0.5
Hepatitis B, Chronic	Spokane County	67	14.6	88	18.8	78	16.6	59	12.5	57	12.0
	Washington State	1,606	24.1	1,305	19.5	1,284	19.1	1,027	15.2	N/A	
Hepatitis C, Acute	Spokane County	5	1.1	7	1.5	4	*	10	2.1	13	2.7
	Washington State	25	0.4	22	0.3	25	0.4	41	0.6	54	0.8
Hepatitis C, Chronic	Spokane County	340	74.1	383	82.4	446	94.7	460	97.3	637	134.0
	Washington State	5,789	87.9	5,746	86.1	4,925	73.2	6,091	89.9	N/A	

* Incidence rates not calculated for <5 cases.

VECTOR-BORNE DISEASE

Vector-borne diseases occur infrequently in Spokane County and in Washington. 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 these environs, Lyme disease diagnosed in Spokane County is presumably acquired out of the area (primarily in the eastern or mid-western United States, or occasionally in western Washington). Statewide, 15 cases were reported in 2012; only two had in-state exposures, likely in western Washington. 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.

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 WNV cases reported to-date, with 38 cases and two viremic blood donors. Of these cases, 36 were known to be acquired in Washington. In 2012, only four WNV cases were reported—two acquired in Washington and two associated with travel. Other than WNV disease, the last reported indigenously-acquired human arboviral was Western Equine Encephalitis in 1988.

In recent years, an average of 10-20 cases of travel-associated dengue fever, and a few travel-associated Chikungunya cases, were 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, although cases have been reported from surrounding counties. Washington has the fifth largest number of cases (44) in the United States.

In 2011, there was a small Spokane County outbreak of Legionellosis cases related to a health care facility. Statewide in 2012, 23/30 (77%) reported Legionellosis cases were admitted to intensive care units and 17 (57%) required ventilation. The median age was 56.5 years. Twenty-six cases (87%) listed at least one of the following risk factors: chronic liver or lung disease, immunosuppressive therapy, diabetes or smoking. Of 25 cases with a species identified, 22 (88%) were infected with *L. pneumophila*.

VECTOR-BORNE DISEASE & LEGIONELLOSIS

		2008		2009		2010		2011		2012	
		Cases	Rate per 100,000								
Arboviral Disease[▲] (previously viral encephalitis)	Spokane County	0		2		0		0		1	
	Washington State	20		54		24		9		20	
Hantavirus pulmonary syndrome	Spokane County	0	*	0	*	0	*	0	*	0	*
	Washington State	2	*	3	*	2	*	2 (1 death)	*	2 (2 deaths)	*
Lyme Disease (travel-related)	Spokane County	0	*	1	*	1	*	0	*	1	*
	Washington State	23	0.3	16	0.2	16	0.2	19	0.3	15	0.2
Malaria (travel-related)	Spokane County	4	*	0	*	2	*	1	*	3	*
	Washington State	32	0.5	26	0.4	39 (1 death)	0.6	24	0.4	26	0.4
Tick-borne relapsing fever	Spokane County	1	*	1	*	1	*	1	*	1	*
	Washington State	4	*	5	0.1	7	0.1	11	0.2	6	0.1
Legionellosis	Spokane County	1	*	2	*	3	*	5	1.06	6	1.2
	Washington State	19 (2 deaths)	0.3	29 (2 deaths)	0.4	35 (4 deaths)	0.5	43 (4 deaths)	0.6	30 (5 deaths)	0.4

▲ 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 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, with an average of 25 and 524 cases, respectively, reported each year. 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.

Based on the public health approach of testing individuals at high risk for HIV disease, SRHD staff detected 7/18 (39%), 8/21 (38%), 8/26 (31%), and 7/21 (33%), respectively, of new cases of HIV reported in 2009, 2010, 2011 and 2012 in Spokane County. As of Dec. 31, 2012, an estimated 449 individuals in the county were known to be living with HIV disease, 55% of whom had a diagnosis of AIDS.

Statewide in 2012, more than 11,000 people were known to be living with HIV disease and 60% had a diagnosis of AIDS. More than 85% of cases are in men; with 62% of all cases in men whose only

identified risk factor is having sex with men. Most female cases are thought to be contracted through unprotected sex with an HIV positive male. Among all new HIV cases, about one in six report a history of injection drug use, although this appears to be dropping over time. During 2008-2012, non-Hispanic blacks, who constituted 3% of the general population, accounted for 15% of all new cases, and Hispanics, who constituted 9% of the general population, accounted for 12% of all new cases.

HIV is most commonly diagnosed in males aged 30-39 and females aged 25-34. Seventeen percent of Washington residents living with HIV disease are foreign-born. Since 2000, there have been four cases of perinatal HIV transmission.

HIV/AIDS

		2008		2009		2010		2011		2012	
		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
Incident HIV Disease*	Spokane County	26	5.7	18	3.9	21	4.5	26	5.5	21	4.4
	Washington State	541 (86 deaths)	8.2	550 (100 deaths)	8.2	551 (86 deaths)	8.2	514 (47 deaths)	7.6	503 (N/A)	7.4

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

SEXUALLY-TRANSMITTED INFECTION

Sexually-transmitted infections (STIs) continue to be the most-commonly reported of all communicable diseases in Washington and accounted for more than 76% of all notifiable conditions reported to the Washington State Department of Health in 2012. Cases of chlamydia, gonorrhea and initial adult genital herpes infection increased in 2012 as compared to 2011. 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 two decades were reported. Spokane County had the seventh highest rate of chlamydial infection reported by county and the rate is higher than that reported for the state.

In Washington, chlamydial infection also continues to be the most-commonly reported STI. Its incidence rate showed a steady rise between 1998 and 2004, and then was relatively stable for four years until 2008. Since then, sharp increases in incidence are seen in each succeeding year. The overall incidence rate for Washington in 2012 was 360.8/100,000. Women between 15 and 24 years of age have disproportionately higher rates than other age groups, or males.

Nationwide in 2011 (the latest year for which national statistics are available), approximately 1.4 million cases of *Chlamydia trachomatis* infections were reported, the largest number of cases ever reported to the U.S. Centers for Disease Control and Prevention for any condition. This case count

corresponds to a rate of 457.6/100,000, an increase of 8% compared with the 2010 rate. Rates of reported chlamydial infections among women have been increasing annually since the late 1980s. The continued increase in chlamydia case reports in 2011 likely represents a continued increase in screening for this usually-asymptomatic infection, expanded use of more sensitive tests, and more complete national reporting; however, it also might reflect an increase in morbidity.

Gonorrhea

Locally in 2012, the rate of reported gonorrhea cases was 15% higher than in 2011, the second consecutive year of a 15% case rate increase. Statewide, the rate of cases increased sharply from 2009 through 2012. Forty-seven percent of all reported cases reside in King County. Incidence of gonorrhea is higher among 15-19 year old females than males of the same age, but incidence in males at every age above 19 years is significantly higher than in females of the same age.

After a 79% decline in the rate of reported gonorrhea during 1975–2009, during 2009–2011, the national rate of gonorrheal infection increased by 6% to 104/100,000. In 2011, the rate increased among men and women, among all racial/ethnic groups, and in all regions of the United States. As in previous years, the highest rates were observed among persons aged 15–24 years, among blacks, and in the South. In 2011, the gonorrhea rate among blacks was 17 times higher than the rate among whites (427 cases compared with 25 cases per 100,000 population, respectively).

Syphilis

Primary and secondary 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 mostly stable during 2008-2012. The county rate of P&S syphilis is significantly lower than the state rate.

Statewide, significant increases in the number of P&S syphilis cases were seen in both 2010 and 2011, with a 9% decrease in 2012. Almost 82% of the reported cases occurred in people residing in counties in the Puget Sound area (King, Snohomish and Pierce.) There continues to be a large disparity between rates in males and females; since 1997, cases occurred primarily in men who have sex with men (MSM) in urban areas. In 2012, 59% of the P&S syphilis cases were co-infected with HIV. Two cases of congenital syphilis were reported in 2012 in Washington, as were five cases of neonatal herpes.

During 2011 (the latest year for which national statistics are available), overall rates of P&S syphilis remained unchanged compared with 2010. Rates among women decreased 33% between 2008 and 2011 but increased among men for the 11th consecutive year. P&S syphilis rates were highest among men aged 20–24 years and 25–29 years for the fourth consecutive year. Notably, cases among MSM increased each year during 2007–2011 in 33 states. During 2007–2011, P&S syphilis rates among black men aged 20–24 years increased 75% (from 54.9 to 96.2 cases per 100,000 population); the magnitude of this increase (41.3/100,000) was the greatest reported, regardless of age, sex, or race/ethnicity.

SEXUALLY-TRANSMITTED INFECTION

		2008		2009		2010		2011		2012	
		Cases	Rate per 100,000								
Chlamydia	Spokane County	1,719	374.5	1,637	352.0	1,617	343.8	1,780	376.6	1,923	404.3
	Washington State	21,327	323.7	21,178	317.6	21,401	317.8	23,237	343.3	24,600	360.8
Gonorrhea	Spokane County	272	59.3	131	28.2	137	29.1	158	33.4	181	34.3
	Washington State	3,116	47.3	2,268	34.0	2,865	42.6	2,730	40.3	3,282	48.1
Herpes (initial infection)	Spokane County	187	40.7	158	34.0	174	37.0	185	39.1	134	28.2
	Washington State	2,009	30.5	1,875	28.1	2,028	30.1	2,149	31.8	2,197	38.2
Syphilis, early infectious	Spokane County	5	1.1	7	1.5	4	*	14	3.0	5	1.1
	Washington State	181	2.7	135	2.0	261	3.9	329	4.9	300	4.4

* 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. During 2007-2011, 34 active TB cases were identified and/or treated in Spokane County. In 2012, four active TB cases were reported, with all individuals starting treatment. Including cases that began treatment the previous year, nine cases completed treatment in 2012. Sixty-five contacts of the active cases were identified and 47 were tested; five were positive for TB infection and one was started on latent TB infection (LTBI) medications. An additional 95 individuals identified as having LTBI were seen initially through the SRHD clinic with 50 of them completing treatment; other LTBI cases were referred to private providers, refused treatment, or were lost to follow-up.

Over the last decade, the annual crude incidence rate of TB in Washington has trended downward to the current low of 2.7/100,000. 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 27.6/100,000 during 2009-2011, followed by Asians (21.2/100,000), blacks (18.9/100,000), and American Indian/Alaska Natives (5.1/100,000). The highest case rate by age is among those 65 and older (5.4/100,000), followed by persons 25-44 years of age (3.8/100,000). More than 78% of all cases reported reside in King, Pierce and Snohomish counties. Of the 161 case specimens tested for drug susceptibility, just over 19% were resistant to isoniazid, the first line treatment. Four (2.5%) of the case specimens were multi-drug resistant (MDR).

Since the 1992 TB national resurgence peak, the number of TB cases reported annually decreased by 63%. In 2012, for the first time, fewer than 10,000 (9,945) cases of tuberculosis were reported, resulting in an overall case rate of 3.2/100,000 persons. TB case rates vary by well-known factors, such as age, race and ethnicity, and country of origin. Foreign-born persons accounted for the majority

of TB cases in the United States every year since 2001. Sixty-three percent of TB cases occurred in foreign-born persons in 2012 and the case rate among foreign-born persons was approximately 11 times higher than among U.S.-born persons.

Since 1993, national TB case rates declined annually for almost all age groups. The highest burden of disease continues to be among older adults. In 2012, adults aged 65 years and older had a case rate of 5.1/100,000, while children aged ≤ 14 years had the lowest rate at 0.8 /100,000.

During 2009 through 2012, the percentage of primary MDR TB cases has remained stable at approximately 1%. Since 1997, the percentage of U.S.-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 86% (62/72) in 2012.

TUBERCULOSIS



	2008		2009		2010		2011		2012	
	Cases	Rate per 100,000	Cases	Rate per 100,000						
Tuberculosis										
Spokane County	8	1.7	9	1.9	4	*	8	1.7	7	1.5
Washington State	228 (2 deaths)	3.5	256 (9 deaths)	3.8	236 (6 deaths)	3.5	200 (8 deaths)	3.0	185 (10 deaths)	2.7

* Incidence rates not calculated for <5 cases.

References: Spokane Regional Health District data, Washington State Communicable Disease Report 2012, Washington State HIV/AIDS Epidemiology Report - 2nd Half 2012, Washington State Chronic Hepatitis B and Chronic Hepatitis C Surveillance Report - April 2013