

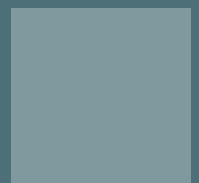
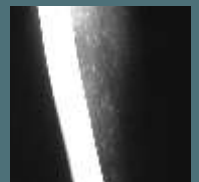
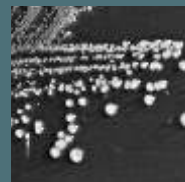
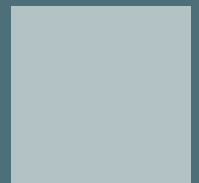
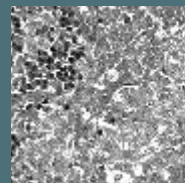
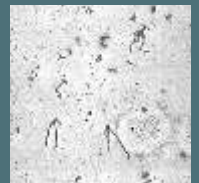
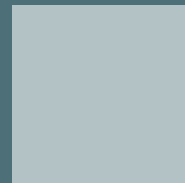
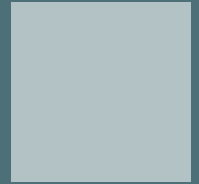
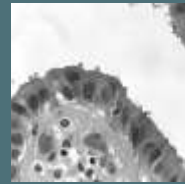
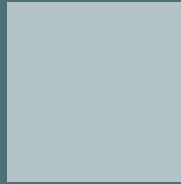
· For Healthcare Providers ·

COMMUNICABLE DISEASE REPORT

2002 - 2006

The purpose of notifiable conditions reporting is to provide the information necessary for public health officials to protect the public's health by tracking communicable diseases and other conditions. These data are critical to local health departments and the departments of health and labor and industries in their efforts to prevent and control the spread of diseases and other disorders. Based on these notifications, public health officials take these steps to protect the public: treating persons already ill, providing 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 these data 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.

December
2007



INTRODUCTION: This report presents summary data about notifiable conditions reported to the Spokane Regional Health District (SRHD) in 2006, with local and state data for the last 5 year period (2002-2006), as available.

ENTERIC DISEASE

Enteric (gastrointestinal) disease is most frequently caused by food or waterborne pathogens. These illnesses are mostly preventable through good hygiene and proper food handling.

Campylobacteriosis remains the most frequent cause of reported bacterial gastroenteritis in Spokane County, as is true in Washington and the United States. Rates in Spokane County are similar to state rates. Each year, giardiasis is reported significantly more often in Spokane County than in Washington State. Conversely, *E. coli*, listeriosis, salmonellosis, shigellosis and yersiniosis are reported less often in Spokane County residents as compared to state

residents as a whole. Rates of these illnesses have generally remained stable. (One exception to this is the 2002 rate for *E. coli* infection, which was due to a large, lettuce-associated outbreak in Spokane that year.) A small outbreak (6 cases) of shigellosis occurred in association with a local restaurant in 2005. In 2006, a sizeable increase in cases of cryptosporidiosis was reported as compared to the previous 4 years, but the total number is small; this mirrored a large increase in cases in the five northern counties of Idaho, but no particular source was identified in either area. Washington State rates of cryptosporidiosis over the same period (2002-2006) were stable. Also in

2006, 3 cases of (non-cholera) vibriosis, associated with consumption of raw oysters, and 3 cases of yersiniosis (all from different sources) were reported.

Norovirus Gastroenteritis

Although not a reportable illness, SRHD monitors outbreaks of norovirus illness, particularly those associated with long-term care facilities due to the fragile health of many residents in those institutions. In 2006, 30 such outbreaks were reported; 12 of those were laboratory confirmed to be caused by Norovirus. These outbreaks involved over 600 individuals.

ENTERIC DISEASE



		2002		2003		2004		2005		2006	
		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	56	13.2	67	15.6	49	11.3	74	17.0	67	15.1
	Washington State	1,032 (1 death)	17.1	943	15.5	861	14.0	1,045	16.7	993	15.6
Cryptosporidiosis	Spokane County	1	*	1	*	0	0	0	0	4	*
	Washington State	62	1.0	65	1.1	63	1.0	94	1.5	95	1.5
Enterohemorrhagic <i>E. coli</i>	Spokane County	43	10.1	10	2.3	2	*	3	*	9	2.0
	Washington State	166	2.7	128	2.1	153 (3 deaths)	2.5	149	2.4	162	2.5
Giardiasis	Spokane County	47	11.0	46	10.7	44	10.2	54	12.4	56	12.6
	Washington State	510	8.4	435	7.1	444	7.2	437	7.0	451	7.1
Listeriosis	Spokane County	0	0.0	0	0.0	0	0.0	1	*	0	0.0
	Washington State	11	0.2	13 (3 deaths)	0.2	13 (3 deaths)	0.2	14 (3 deaths)	0.2	18 (3 deaths)	0.2
Salmonellosis	Spokane County	26	6.1	30	7.0	31	7.2	40	9.2	29	6.5
	Washington State	655	10.8	699 (1 death)	11.5	660 (2 deaths)	10.7	626	10.0	626 (3 deaths)	9.8
Shigellosis	Spokane County	7	1.6	10	2.3	1	*	6	1.4	3	*
	Washington State	230	3.8	188	3.1	133	2.2	185	3.0	170	2.7

*Incidence rates not always calculated for <5 cases.

VACCINE PREVENTABLE DISEASE

From 2002 to 2006, there was no significant change in overall rates for diseases prevented by standard childhood immunizations, except for pertussis. There were no reported cases of rubella, tetanus, or diphtheria. Two (one confirmed and one probable) cases of mumps were reported in 2006, but neither was related to a large outbreak in the Midwest that year.

In 2004 and 2006, pertussis was diagnosed and reported in much greater numbers than in 2002, 2003 or 2005. It is likely that pertussis remains endemic in our community, and that testing/reporting waxes and wanes. The duration of immunity to pertussis (whether vaccine-induced or following illness) is probably less than ten years and until 2005, no vaccine was available

for those over age 7. Future incidence of pertussis may decline rapidly if uptake of the new adolescent/adult vaccines becomes widespread.

Statewide, the highest rate of and the most serious illness caused by pertussis continue to occur among children under the age of one, although 60% of disease occurs among those 10 and older. The incidence rate of pertussis in Washington in 2006 was the lowest it has been since 2001.

Along with pertussis and hepatitis B (see next section), two other vaccine preventable diseases occur with regularity in Spokane County; they are meningococcal disease and influenza. Meningococcal disease in Washington is often caused by strains not covered by

currently available vaccines.

There is no case-based reporting of influenza, but sentinel surveillance showed that 2006-2007 was a light influenza season statewide. Spokane cases first appeared sporadically in December. Reports of laboratory confirmed cases peaked in the third week of February and began to decrease at the end of March. In Spokane, only one outbreak of influenza-like illness in a long-term care facility was reported; this outbreak involved more than 15 individuals. Three schools reported illness outbreaks involving more than 10% of their students. Nationwide, the influenza season was mild as well and millions of doses of vaccine went unused.

VACCINE PREVENTABLE DISEASE



		2002		2003		2004		2005		2006	
		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
<i>Haemophilus influenzae</i> disease [▲]	Spokane County	0	0.0	0	0.0	0	0.0	1	*	0	0.0
	Washington State	5	1.3	13 (1 death)	3.3	4	1.0	5	1.2	5	1.2
Measles	Spokane County	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Washington State	1	0.0	0	0.0	7	0.1	1	0.0	1	0.0
Meningococcal Disease	Spokane County	2	*	4	*	3	*	5	1.1	3	*
	Washington State	76 (8 deaths)	1.3	61 (7 deaths)	1.0	42 (4 deaths)	0.7	53 (4 deaths)	0.8	45 (1 death)	0.7
Mumps	Spokane County	0	0.0	0	0.0	0	0.0	0	0.0	2	*
	Washington State	0	0.0	11	0.2	2	*	3	*	42	0.7
Pertussis	Spokane County	0	0.0	4	*	43	10.0	19	4.4	39	8.8
	Washington State	575	9.5	844	13.8	842	13.7	1,026	16.4	377 (1 death)	5.9

*Incidence rates not calculated for <5 cases.
[▲] Rates are for persons aged 0-4 years.

HEPATITIS

Hepatitis A

The number of hepatitis A cases has been consistently five or fewer cases per year since 2001. This could be attributed to the following factors: 1) Historically, hepatitis A outbreaks occur in 10 year cycles and Spokane County experienced a hepatitis A outbreak in 1997-1998. During the outbreak more than 500 cases were diagnosed and 35,000 community members were vaccinated. 2) Hepatitis A vaccine, first licensed in 1995, has been a component of the childhood vaccination series since 1999, ensuring the protection of thousands of children born since then.

Hepatitis B

The number of acute hepatitis B case reports has been fairly consistent since 2002; 15-31% of all hepatitis B cases reported are acute. Rates of acute hepatitis B in Spokane County are generally at least twice the state rate. The reasons for this disparity are unclear, but it is thought that Spokane County may have better case finding and reporting of acute hepatitis than is true in other counties. SRHD began accepting reports of chronic hepatitis B in 2000, which may have resulted in increased

reporting of acute hepatitis B as well. More than half of the cases of acute Hepatitis B had injection drug use (IDU) or sexual contact with someone who has IDU as their most likely risk factor for disease acquisition.

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. No perinatal transmission of hepatitis B was reported in Spokane County in 2006.

In 2000 when SRHD began accepting reports of chronic hepatitis B, there was an initial surge in case reporting, reflecting the significant number of previously diagnosed infections being routinely monitored. This was followed by a leveling off and fairly consistent numbers of cases reported since.

Hepatitis C

Due to the often unrecognized symptoms of hepatitis C infection, acute disease is infrequently diagnosed (typically less than 1% of reported cases are acute) and reported cases are significantly fewer in number than those of acute hepatitis B. However, rates of acute hepatitis C, like

rates of acute hepatitis B, have generally been at least double state rates. Like chronic hepatitis B reporting, the initial surge in reported cases of chronic hepatitis C in 2001 has been followed by fairly steady case reporting. Acute infection 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 over 500 cases reported to SRHD in 2006. Hepatitis C is not vaccine preventable. The Washington State Department of Health has not published rates for reported chronic hepatitis B or C, so no comparison is available.

Persons with either chronic hepatitis B or chronic hepatitis C are much more likely to suffer serious illness if infected with another type of hepatitis. To address this issue, SRHD instituted a vaccination program in the fall of 2006. Outreach was directed primarily at IDUs and 145 different clients were vaccinated with Twinrix (effective against both Hepatitis A and B); 72 individuals had at least 2 of 3 doses needed for complete protection as of the end of 2006. The outreach is ongoing.

HEPATITIS

		2002		2003		2004		2005		2006	
		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	4	*	4	*	2	*	1	*	5	1.1
	Washington State	162	2.7	76	1.2	69	1.1	63 (1 death)	1.0	52	0.8
Hepatitis B, Acute	Spokane County	15	3.5	12	2.8	9	2.1	14	3.2	19	4.3
	Washington State	83	1.4	90 (1 death)	1.5	64 (1 death)	1.0	80	1.3	80 (2 deaths)	1.3
Hepatitis B, Chronic	Spokane County	82	19.3	65	15.2	54	15.0	22	5.0	55	12.4
	Washington State	N/A		N/A		N/A		N/A		N/A	
Hepatitis C, Acute	Spokane County	3	*	1	*	6	1.4	2	*	5	1.1
	Washington State	27	0.4	21	0.3	23 (1 death)	0.4	21	0.3	23	0.4
Hepatitis C, Chronic	Spokane County	598	140.5	431	100.5	405	93.8	528	121.0	571	128.7
	Washington State	N/A		N/A		N/A		N/A		N/A	

*Incidence rates not always calculated for <5 cases. ** Chronic hepatitis C case counts have been revised. These numbers represent all unduplicated cases first diagnosed in Spokane County.

VECTOR-BORNE DISEASE

Vector-borne diseases occur infrequently in Spokane County and in Washington State; however, surveillance for these diseases allows us to determine prevalence and geographic distribution. For example, all Lyme disease diagnosed in Spokane County is presumed to be acquired out of the area (primarily on the Eastern Seaboard or in Western Washington), since the tick vector for Lyme does not live in our environs. Tick-borne relapsing fever, however,

occurs more frequently in Eastern and Central Washington than in Western Washington. Hantavirus Pulmonary Syndrome has never been diagnosed in a Spokane County resident, although cases have been reported from surrounding counties, and Washington has the fifth-largest number of cases in the U.S. In 2006, for the first time ever, West Nile Virus disease was diagnosed in three Washington residents who had not traveled out of state.

In 2006, the use of rabies Post-Exposure Prophylaxis (PEP) was reported for 12 individuals. (SRHD investigates over 800 animal bite incidents each year. Many of these exposures do not warrant use of PEP, but use of rabies PEP is thought to be greatly under-reported.) Although terrestrial animals in our state rarely are found to carry rabies, in any given year 5-10% of bats tested are rabid.

VECTOR-BORNE DISEASE & LEGIONELLOSIS

		2002		2003		2004		2005		2006	
		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
Arboviral Disease [▲] (previously viral encephalitis)	Spokane County	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	Washington State	1	0.0	8	0.1	3	0.0	6	0.1	8	
Hantavirus pulmonary syndrome	Spokane County	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Washington State	1	▲	2	*	2	*	1	*	3	*
Lyme Disease (travel-related)	Spokane County	1	*	1	*	1	*	1	*	1	*
	Washington State	12	0.2	7	0.1	14	0.2	13	0.2	8	0.1
Malaria (travel-related)	Spokane County	1	*	3	*	1	*	1	*	0	0.0
	Washington State	26	0.4	34	0.6	24	0.4	24	0.4	43	0.7
Tick-borne relapsing fever	Spokane County	1	*	0	*	3	*	4	*	0	0.0
	Washington State	7	0.1	6	0.1	6	0.1	6	0.1	2	*
Legionellosis	Spokane County	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Washington State	8	0.1	14	0.2	15	0.2	18	0.3	1	*

* Incidence rates not calculated for <5 cases

▲ Including yellow fever, West Nile virus illness, Dengue, and Japanese encephalitis.

HIV/AIDS

AIDS has been a reportable disease in Washington since 1982, and for many years AIDS case numbers were used to estimate incidence of HIV infection. Over time, as treatment and longevity after diagnosis of HIV infection improve, HIV disease has come to be regarded as a chronic infection. Consequently, in 1999, HIV infection also became reportable, so that the incidence of disease could be better monitored. There was an initial rise in HIV and AIDS case reports in 2000 and 2001 as a result of making HIV reportable. Rates of incident disease have been stable during 2002-2006.

[Note: HIV incidence data does not include persons who anonymously test positive who have not yet begun treatment for their infection.]

Newly diagnosed HIV cases in Spokane County have risk factors and a demographic profile similar to prevalent cases. Cases are primarily White men between the ages of 30 and 50 years who have engaged in unprotected sex with another man and/or who have used injection drugs or shared injection equipment. In 2006, women represented approximately 22% of the newly diagnosed HIV cases in Spokane County. African Americans are

disproportionately impacted by HIV disease in Spokane County. African Americans comprise less than 2% of the county's population, yet represent 8% of those with diagnosed HIV infections.

The combined cases of new HIV infections and existing cases of HIV disease that may or may not have progressed to AIDS are used to estimate prevalence. The prevalence of HIV disease is growing steadily at about 5% per year in both the county and the state. The prevalence rate for HIV disease is 82/100,000 for Spokane County and 150/100,000 for Washington State.

HIV/AIDS

		2002		2003		2004		2005		2006	
		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	22	5.2	23	5.4	26	6.0	23	5.3	27	6.1
	Washington State	572 (17 deaths)	9.5	564 (28 deaths)	9.3	566 (7 deaths)	9.2	583 (13 deaths)	9.3	583 (11 deaths)	9.1

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

SEXUALLY TRANSMITTED DISEASE

Spokane County experienced a marked increase from 2002 to 2006 in its combined reportable STD cases, with a peak in 2004. (This rate includes chlamydia; gonorrhea; early, congenital and late/late latent syphilis; herpes [initial infection]; granuloma inguinale; Lymphogranuloma venereum; and chancroid.) With 1,394 cases of STDs (excluding HIV/AIDS cases) in 2006, the incidence rate for all STDs was 314.1/100,000 population.

Chlamydia:

Specifically, in 2006 there was a 5% increase in reported cases of chlamydia. The incidence of chlamydia in females was highest among those 20-24 years of age (1,884.8 per 100,000) and in males was highest for those 20-24 years of age (739.7 per 100,000). Five percent of males and 8% of females had repeat infections, suggesting incomplete therapy and/or re-infection by untreated partners.

In Washington State, chlamydia is the most frequently reported notifiable disease,

accounting for 73% of all disease reports. Cases declined slightly (4%) from 2005 to 2006, but this may be a reporting artifact. Data from the Infertility Prevention Project, which normally diagnoses a significant portion of chlamydia cases statewide, indicates that screening rates were down due to problems with client ability to access services. Overall, the incidence rate was 279.5 per 100,000 population for 2006, with the highest rates in females aged 15-19 (2,108 per 100,000) and females aged 20-24 (2,146 per 100,000.) Nationwide, for the first time ever, more than one million cases of chlamydia were reported in 2006.

NOTE: Women are more often screened for chlamydia than men. Because active screening is preferentially offered to women, the incidence of chlamydia in men may be under-diagnosed. Screening all sexually active females 15-24 years of age is *recommended*; screening all sexually active males 15-24 years of age is *suggested*.

Gonorrhea (GC):

Spokane County saw a slight (1%) decrease in the number of gonorrhea cases reported. In 2006, the incidence rate of gonorrhea (131.8/100,000) was highest among females 20-24 years old. Among men, the gonorrhea incidence rate (82.9/100,000) peaked among those 25-29 years old.

In Washington in 2006, gonorrhea cases and rates are at a 13-year high. Statewide, 60% of total female morbidity in 2006 was among those 15-24 years of age. For males, the burden of disease continues to be distributed more evenly across age groups, with 65% of cases reported among those older than 25 years of age. Washington State males had a higher incidence rate (72.2/100,000) than females (60.6/100,000). A major factor contributing to this difference between men and women is an ongoing outbreak of gonorrhea among men who have sex with men (MSM).

SEXUALLY TRANSMITTED DISEASE

		2002		2003		2004		2005		2006	
		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
Chlamydia	Spokane County	905	212.6	988	230.5	1,101	254.9	1,071	245.5	1,121	252.6
	Washington State	14,936	247.2	16,796	275.6	17,635	285.9	18,617	297.6	17,819	279.5
Gonorrhea	Spokane County	124	29.1	97	22.6	152	35.2	121	27.7	120	27.0
	Washington State	2,925	31.7	2,073	34.0	2,153	34.9	2,331	37.3	4,231	66.4
Herpes (initial infection)	Spokane County	147	34.5	163	38.0	172	39.8	155	35.5	148	33.3
	Washington State	1,914	31.7	2,073	34.0	2,153	34.9	2,331	37.3	2,446	38.4
LGV	Spokane County	0	*	0	*	0	*	0	*	0	*
	Washington State	0	0.0	1	0.0	0	0.0	3	0.0	0	*
Syphilis, early infectious, <1 yr.	Spokane County	1	*	1	*	0	*	0	*	2	*
	Washington State	70	1.2	82	1.3	150	2.4	152	2.4	182	2.9
Total* (excluding HIV/AIDS cases)	Spokane County	1,179	277	1,252	292	1,430	331	1,355	311	1,394	314.1
	Washington State	N/A	330	N/A	359	N/A	372	N/A	400	N/A	390.8

*Also includes Late and congenital syphilis, disseminated GC, and Chancroid.

TUBERCULOSIS

Spokane County

The crude incidence rate for tuberculosis (TB) is consistently lower in Spokane County than it is in Washington State. During 2002-2006, 41 TB cases were identified in our county. Those cases had 768 contacts identified; 534 (70%) of contacts were skin (PPD) tested. Of contacts tested, 37 (7%) were infected with TB. Of those infected, 27 (73%) started treatment and 24/27 (89%) completed treatment. Of the three who didn't complete treatment, 1 was lost to follow-up, 1 refused to continue, and 1 had their medications discontinued by the provider.

In 2006, 10 cases of TB (6 male and 4 female) were reported. Although the population of Spokane is 85-90% White and only about 10% of residents are foreign-born, 40% of TB cases were non-

White and 70% were foreign born, reflecting the greater incidence of TB in non-White and foreign born individuals, as is true statewide and nationwide.

State Highlights

Statewide, annual numbers of newly reported TB cases have risen slightly in recent years, although the incidence rate has remained relatively stable. From 2000 to 2006, case counts ranged from 245 to 262 per year.

The incidence rate was 4.1 cases per 100,000 population; this was slightly less than the national rate of 4.6 per 100,000.

In 2006, 65% of cases were male as compared to 56% in 2005. Tuberculosis rates were highest among racial and ethnic minorities; Asians, African Americans, and American Indian/Alaska Natives continue

to have higher rates of TB than Whites. Seventy-three percent of the 2006 tuberculosis cases in Washington were among foreign-born immigrants or refugees from countries with high rates of tuberculosis including Vietnam, Mexico, the Philippines, and Ethiopia.

Co-morbidity with HIV remains low in Washington TB cases. Drug sensitivity testing in 2006 revealed that of the 201 tuberculosis case specimens available for analysis, 24 (12%) were resistant to isoniazid. Only four cases (2%) had specimens that were resistant to both isoniazid and rifampin. In 2006, isoniazid resistance was slightly higher in specimens collected from foreign-born persons (10%) than in specimens from U.S.-born persons (7%).

TUBERCULOSIS



Tuberculosis

Spokane County
Washington State

		2002		2003		2004		2005		2006	
		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		7	1.6	4	*	7	1.6	13	2.9	10	2.2
Washington State		252	4.1	250	4.0	245	3.9	256	4.0	262	4.1

*Incidence rates not calculated for <5 cases.

Prominent communicable disease issues for SRHD in 2007

- ◆ Outbreak of *Salmonella*-Contaminated "Veggie Booty" Snack Food
- ◆ Outbreak of *Salmonella*-Contaminated Peanut Butter
- ◆ Outbreak of *Salmonella*-Contaminated Pot Pies
- ◆ Norovirus Outbreaks in Long-Term Care
- ◆ Contamination of Milk at Rogers High School
- ◆ Methicillin-Resistant Staph Aureus (MRSA)
- ◆ Waiting for West Nile Virus
- ◆ Investigation of Psittacosis in Pet Birds
- ◆ Tick-Borne Relapsing Fever and Tick Paralysis
- ◆ Washington State Annual Bioterrorism Exercise (WASABE)
- ◆ Spike in HIV incidence
- ◆ STD Medical Coalition
- ◆ Pertussis in Schools
- ◆ Pandemic Flu Planning

CONTRIBUTORS: Dorothy MacEachern, Epidemiologist | Susan Sjoberg, Program Manager | Linda Lillard, Graphics Specialist

Spokane Regional Health District, Epidemiology | 1101 West College Avenue #360, Spokane, WA 99201-2095
 DIRECT: 509.324.1442 CD REPORT LINE: 509.324.1449 URGENT PUBLIC HEALTH 24 HR: 509.324.1500 FAX: 509.324.3623 TDD: 509.324.1464