

Whatcom County Health Department
FOCUS REPORT ON
**SEXUALLY TRANSMITTED
DISEASES**



PUBLIC HEALTH
ALWAYS WORKING FOR A SAFER AND
HEALTHIER WASHINGTON

WCHD
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CHAPTER 1: INTRODUCTION



This report provides an in depth profile of sexually transmitted diseases (STDs) in Whatcom County, covering diseases of public health importance, the opinions of local stakeholders, and the current status of STD-related education in our public schools.

Before proceeding with the report, it is essential to understand just why STDs are an important public health topic. The following is an excerpt from the concluding statement from the National Institutes of Medicine's Summary Report, *The Hidden Epidemic—Confronting Sexually Transmitted Diseases*:

“STDs are hidden epidemics of enormous health and economic consequence in the United States. They are hidden because many Americans are reluctant to address sexual health issues in an open way and because of the biologic and social characteristics of these diseases. All Americans have an interest in STD prevention because all communities are impacted by STDs and all individuals directly or indirectly pay for the costs of these diseases....To successfully prevent STDs, many stakeholders need to redefine their mission, refocus their efforts, modify how they deliver services, and accept new responsibilities. In this process, strong leadership, innovative thinking, partnerships, and adequate resources will be required....”¹

To effectively prevent and treat STDs is an enormous challenge. Unlike other communicable diseases, prevention and treatment of STDs naturally involves a discussion of human sexual behaviors. This is a sensitive issue in the public or private arena. Yet, these discussions are necessary because the long-term consequences of contracting an STD can be very serious. For instance, some STDs can be passed from mother to baby during childbirth and certain STDs put individuals at greater risk for sterility, pelvic inflammatory disease (PID), and cervical cancer. Therefore, providing effective prevention and treatment options is critical regardless of the challenge.



“Women and infants disproportionately bear the long term consequences of STDs.”

--Centers for Disease Control

¹ *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*, National Academy Press, Washington, DC, 1997, p. 43.

There are other issues that contribute to problems in treating STDs. According to the Centers for Disease Control and Prevention report *Healthy People 2010*, groups with the highest rates of STDS are often the same groups in which access to health care is the most limited.² Some who do seek diagnosis and treatment may travel outside their county of residence to be treated and may choose to use an inaccurate name or address. Thus sexual contact tracing and partner notification may be incomplete, leading to further undiagnosed and untreated cases. Lapses in reporting by health care providers and labs also occur. To further complicate the ability to treat STDs, some individuals do not exhibit any symptoms of certain infections.

Despite the challenges associated with STDS, great strides have been made. For instance, sex education, using condoms correctly and consistently, risk reduction counseling, as well as screening and treatment of high risk populations have all been shown to be effective in encouraging more responsible sexual behavior, thus preventing STDs.

The remainder of this report provides detailed information on STDs in Whatcom County. Although there are over 25 diseases spread primarily through sexual activity, this report focuses on seven of primary public health importance. STD data has not been detailed by race or ethnicity because, according to the Washington Department of Health, the information would be inaccurate due to the very high rates of missing race/ethnicity data in reported STD cases.

Where differences in rates are reported as statistically significant (for example: state vs. county or male vs. female), these determinations have been made based on confidence interval data. While confidence interval data has some limitations as a test of statistical significance, these limitations are generally confined to situations in which the number of cases is quite small. For example, the number of syphilis cases is so small that no statements are made regarding statistical significance.

The report is organized as follows:

- Whatcom County STDs: chlamydia, genital herpes, gonorrhea, hepatitis B, HIV/AIDS, syphilis and human papillomavirus (HPV)
- Local Stakeholder Opinion
- What Our Public Schools Teach
- Conclusions

² Centers for Disease Control, *Healthy People 2010: 25 Sexually Transmitted Diseases*, <http://www.healthypeople.gov/document/HTML/Volume2/25STDS.htm>

CHAPTER 2: WHATCOM COUNTY STDs



This chapter presents seven STDs in some detail, including some background information on each but predominantly focusing on STD numbers, rates, and trends. National and state comparison data are presented if available and if they provide a useful comparison.

REPORTABLE HIGH-RATE STDs

CHLAMYDIA

Chlamydia is a bacterial disease that can be cured with antibiotics. Approximately 70 percent of women with chlamydia have few or no symptoms. If untreated, chlamydia is a major cause of pelvic inflammatory disease (PID) in women, which may lead to ectopic pregnancy, chronic pelvic pain, and infertility. Men are more likely than women to have symptoms. Left untreated, chlamydia may also cause sterility in men. Chlamydia infection in pregnant women is of particular concern because it may lead to preterm birth, eye infections or pneumonia in a newborn.

Chlamydia trachomatis infection is the most commonly reported notifiable STD in the United States. Since 1994, Chlamydia has comprised the largest proportion of all STDs reported to the Centers for Disease Control and Prevention (CDC). From 1987 to 2004, the U.S. rates of reported chlamydia infection increased from 50.8 to 319.6 cases per 100,000 population. This continuing increase in reported cases nationwide is influenced by expansion of screening for this infection (particularly among women), the use of more sensitive screening tests, and more complete reporting.

Chlamydia was the most commonly reported STD in Washington State from 1993 to 2005, the years covered by this report. Reported cases in 2005 totaled 18,617 infections, yielding a statewide incidence rate of 297.6 cases per 100,000 persons. As was true nationwide, females continued to be tested more frequently and consequently, diagnosed at a higher rate than males. The statewide chlamydia rate for females increased from 415 per 100,000 in 2004 to 429 per 100,000 in 2005—an increase of 3.4 percent. By far, the largest 2005 incidence rate was seen in females ages 20-24: 2,273 cases per 100,000.

According to the Washington Department of Health, increased screening does not solely account for the fairly consistent 6-10 percent annual state increase in chlamydia. There has been a steady increase in the burden of the disease from 1996 through 2005 with a leveling off seen in 2006. These trends are true nationwide also.

The following series of tables provide detailed information regarding chlamydia cases in Whatcom County. Table 1 compares Washington and Whatcom rates for all cases of chlamydia, including multiple

infections of the same individual. It is important to look at “all cases” because this number has implications for the extent of needed treatment resources even though it may not reflect the exact number of individuals infected. Map 1 shows chlamydia rates in 2003 for all Washington counties.

TABLE 1: Chlamydia—All Cases

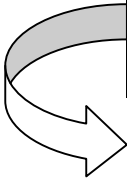
WA and Whatcom Crude Incidence Rates per 100,000 population

Year	Washington	Whatcom County
1993*	201	174
1994	197	196
1995*	173	133
1996*	166	133
1997	167	151
1998*	192	162
1999*	205	172
2000*	222	143
2001*	228	149
2002*	247	213
2003	275	250
2004	286	261
2005*	298	265

Washington State chlamydia rates have steadily increased since 1996 reaching a high of 298 cases per 100,000 in 2005.

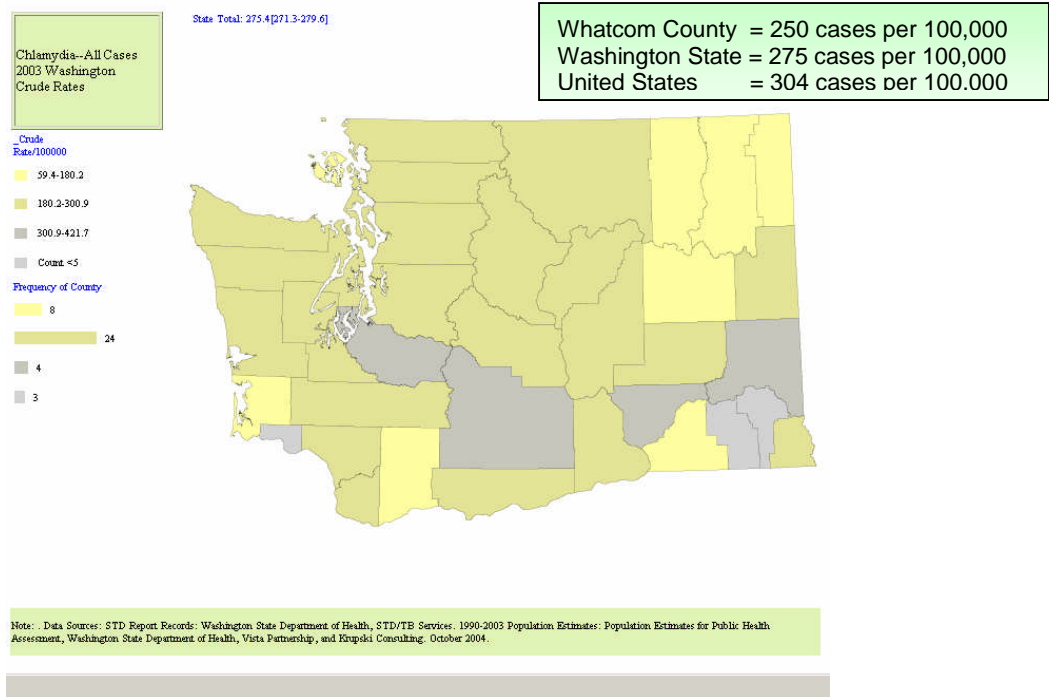
Whatcom County rates have been consistently lower than state rates. Whatcom rates took a jump in 2002 and reached a 13-year high of 265 cases per 100,000 population in 2005.

* = Years in which differences between WA & Whatcom rates are statistically significant.



Whatcom’s chlamydia rate in 2003 was similar to the majority of Washington State counties but less than the overall state rate. Washington State had a lower rate than the United States in that year.

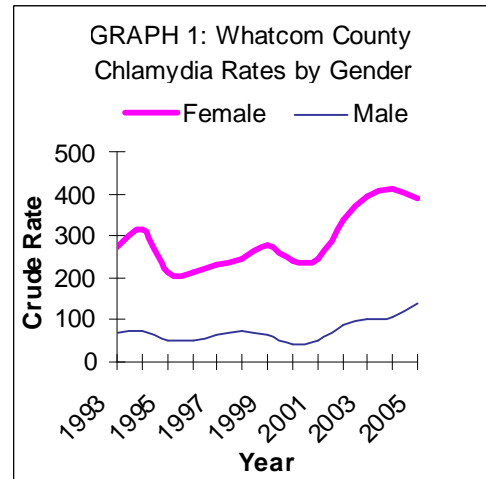
MAP 1: Chlamydia in Washington State Counties (2003)



The following tables provide more detailed information regarding gender-specific and age-specific rates of chlamydia in Whatcom County. Table 2 shows total chlamydia cases sorted by male and female with the actual case numbers and rates. This information is then displayed in Graph 1.

TABLE 2: Chlamydia—All Cases
Whatcom County Crude Incidence Rates and Count
by Gender per 100,000 population

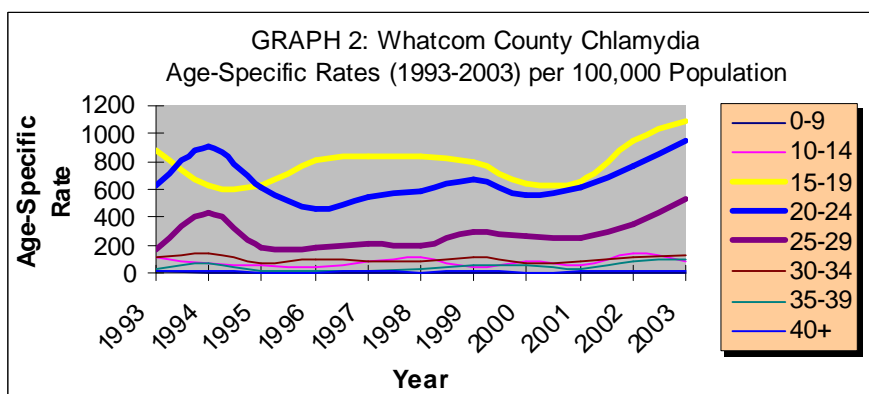
Year	Total		Female		Male	
	Rate	Count	Rate	Count	Rate	Count
1993	173.6	245	275.1	197	69.0	48
1994	195.8	285	312.9	231	75.3	54
1995	133.5	199	212.9	161	51.7	38
1996	133.2	204	213.8	166	50.3	38
1997	150.5	237	233.1	186	65.7	51
1998	161.7	259	246.3	200	74.7	59
1999	171.7	282	276.2	230	64.2	52
2000	142.7	238	241.1	204	41.4	34
2001	148.9	254	245.0	212	50.0	42
2002	213.1	367	336.7	294	86.0	73
2003	249.9	436	394.5	349	101.1	87
2004	260.6	462	411.7	370	105.2	92
2005	265.4	480	389.6	357	137.9	123



NOTE: Differences between males and female rates ARE statistically significant for all years.

Overall, Whatcom County females have been diagnosed with chlamydia at a rate that is 3-5 times that of males. These differences are statistically significant and are likely do to higher levels of testing in females. In 2005, more males were diagnosed with Chlamydia than in previous years, probably due to the availability of urine testing. Also, female rates declined slightly. This slightly narrowed the gap between males and females and resulted in a female rate that was 2.8 times that of males.

Graph 2 shows differences over time in chlamydia cases for various age ranges. As is typical for STDs, chlamydia rates are highest in the 15-19 and 20-24 age groups. In the 25-29 age group there has been a noticeable rise in the incidence of chlamydia. Higher rates for females ages 15-24 may reflect increased screening in this group. Whatcom County rates for these age ranges are still generally much lower than Washington and national rates, as evidenced by the 2004 rates for females ages 15-19. ↓



2004 Chlamydia Rates for Females Ages 15-19

United States:
2,762 cases/100,000

Washington State:
2,256 cases/100,000

Whatcom County:
1.639 cases/100,000

GENITAL HERPES

Genital herpes is a sexually transmitted viral infection. Unlike some of the other sexually transmitted diseases, it is not curable with antibiotics. Rather, it is a recurrent, lifelong infection where the symptoms can be decreased with specific medications. This fact alone makes it important because once an individual has contracted the disease they will have it for life unless a cure is found.

Symptoms of genital herpes vary widely. Some infections produce no symptoms, although the virus can still be communicable. On the other hand, first outbreaks of the disease may be quite severe with painful genital sores, tiredness, and fever. These same symptoms may recur later in life at the initial infection site. It is not known what causes these recurrences. Genital herpes, like other genital ulcer diseases, increases the risk of acquiring HIV. Becoming infected with genital herpes while pregnant can cause severe disease in, or even death of, a newborn.

Only a patient's first episode of genital herpes is reportable in Washington. Table 3 compares Washington and Whatcom rates for all first episodes of genital herpes from 1993 through 2003.

**TABLE 3: Genital Herpes—All First Episodes
WA and Whatcom Crude Incidence Rates
per 100,000 population**

Year	Washington	Whatcom County
1993*	39	55
1994*	39	56
1995*	34	47
1996*	33	54
1997	34	43
1998*	32	45
1999	33	38
2000	34	35
2001	31	22
2002	32	32
2003*	34	46
2004*	35	50
2005	37	43

Washington's genital herpes rates have been relatively consistent (31-39 cases per 100,000) from 1993 to 2003.

Whatcom County rates were higher than state rates in all but two years (2001 & 2002).

* = Years in which differences between WA & Whatcom rates are statistically significant.

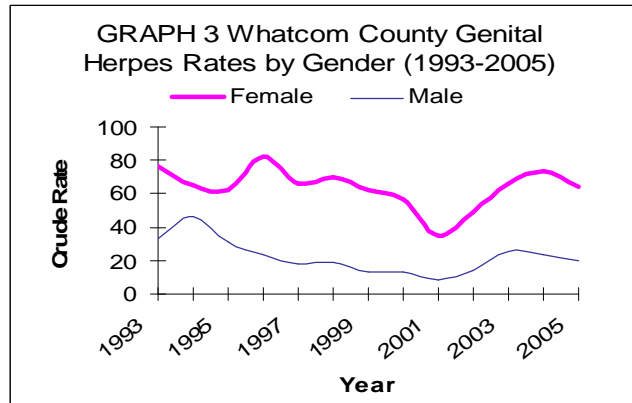
Generally, genital herpes rates are much lower than either chlamydia or gonorrhea but these genital herpes rates only include first episodes, unlike chlamydia and gonorrhea rates. Whatcom County genital herpes rates were higher than the Washington rates from 2003 through 2005 and the differences between the county and state rates were statistically significant in 2003 and 2004. The Whatcom rate decreased somewhat in 2005 and differences between state and Whatcom rates were not statistically different in that year. Better reporting by local health care providers may be a factor in higher Whatcom County rates.

The next two tables provide more detailed information regarding gender-specific and age-specific rates of genital herpes in Whatcom County. Table 4 shows genital herpes cases sorted by male and female with the actual case numbers and rates. This information is then displayed in Graph 3.

**TABLE 4: Genital Herpes—All First Episodes
Whatcom County Crude Incidence Rates and Count
by Gender per 100,000 population**

Year	Total		Female		Male	
	Rate	Count	Rate	Count	Rate	Count
1993*	55.3	78	76.8	55	33.1	23
1994	55.6	81	65.0	48	46.0	33
1995	46.9	70	62.2	47	31.3	23
1996*	53.5	82	82.4	64	23.8	18
1997*	42.6	67	66.4	53	18.0	14
1998*	44.9	72	70.2	57	19.0	15
1999*	38.4	63	62.5	52	13.6	11
2000*	35.4	59	56.7	48	13.4	11
2001*	21.7	37	34.7	30	8.3	7
2002*	31.9	55	49.3	43	14.1	12
2003*	45.9	80	65.6	58	25.6	22
2004*	49.8	87	73.4	66	24.0	21
2005*	42.6	77	64.4	59	20.2	18

* = Years in which differences between male and female rates are statistically significant.



Reported initial genital herpes infections are more common in Whatcom County females than males, the same trend that is seen with chlamydia and gonorrhea. These differences are statistically significant for each year of data with the exception of 1994 and 1995.

Table 5 and the accompanying graph, on the next page, provide a comparison of reported genital herpes rates in Washington and Whatcom County for ages 15-24 from 1992 through 2005.

TABLE 5
Genital Herpes Rates & Cases (Ages 15-24)
Per 100,000 Population

	Washington State		Whatcom County	
	Rates per 100,000 Population (Ages 15-24)	# of Cases	Rates per 100,000 Population (Ages 15-24)	# of Cases
YEAR				
1992	155	1,082	168	39
1993	128	914	129	31
1994	138	994	154	38
1995	115	839	126	32
1996	110	811	165	43
1997	108	818	129	35
1998	93	727	138	39
1999	109	872	131	39
2000	112	918	101	31
2001	95	794	57	18
2002	102	869	102	33
2003	110	957	133	44
2004	117	1,028	151	51
2005	118	1,063	110	38

Although Whatcom County's rates in this age group have generally been higher than the state, in 2000, 2001, and 2005 the rates were lower. The only year that the difference between state and county rates was statistically significant was 1996.

GONORRHEA

Gonorrhea is a bacterial disease that can be cured with antibiotics. Though not all infected individuals show symptoms, about 50 percent of women with gonorrheal infections will have symptoms of an abnormal vaginal discharge or painful urination. Men usually have a discharge from their penis and painful urination that may be severe. The bacteria may also cause eye infection, sore throat, or rectal infection, depending on where the bacteria are introduced into the body. If untreated, gonorrhea can lead to pelvic inflammatory disease (PID) in women, which can result in infertility, ectopic pregnancy and chronic pelvic pain. The most common complication in men is epididymitis, an infection starting near the testicles.

Gonorrhea is the second most commonly reported notifiable STD in the United States. From 1975 through 1997, the national gonorrhea rate declined 74.3% following implementation of the national gonorrhea control program in the mid-1970s. National gonorrhea rates have subsequently remained fairly level, however, the rate decreased 11.8% from 2000 to 2004. True increases or decreases may be masked by changing screening practices, use of diagnostic tests with different sensitivities, and changes in reporting practices. As with reporting of other STDs, the reporting of gonorrhea cases is incomplete. In 2004, the number of cases reported in the United States was 330,132 at a rate of 113.5 cases per 100,000 population.

In Washington State in 2005 the gonorrhea rate (59.7 per 100,000) had increased 74% from the 1998 rate of 34.3 per 100,000 (the lowest rate ever recorded in Washington State). In 2004 the rate was 45.5/100,000. Gonorrhea incidence is the highest in females age 20-24 with a rate of 248.2 cases per 100,000 population.

The following series of tables provide detailed Whatcom County information regarding gonorrhea cases. Table 6 compares Washington and Whatcom rates for all cases of gonorrhea, including multiple infections of the same individual. This number has implications for the extent of needed treatment resources even though it does not reflect the exact number of individuals infected. Map 2 shows gonorrhea rates in 2003 for all Washington counties.

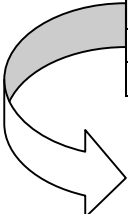
**TABLE 6: Gonorrhea—All Cases
WA and Whatcom Crude Incidence Rates
per 100,000 population**

Year	Washington	Whatcom County
1993*	72	28
1994*	54	29
1995*	51	28
1996*	36	15
1997*	34	8
1998*	34	7
1999*	37	12
2000*	41	7
2001*	50	13
2002*	48	31
2003*	45	33
2004	46	37
2005	60	65

Washington gonorrhea rates declined during most of the 1990s but have generally increased since 1999.

Whatcom County rates also declined in the 1990s and increased from 2001 through 2005.

* = Years in which differences between WA & Whatcom rates are statistically significant.



In 2003, Whatcom County had the 7th highest rate of gonorrhea in Washington though the State incidence rate was less than half that of the United States. Generally, Whatcom rates of gonorrhea have been lower than Washington rates.

MAP 2: Gonorrhea in Washington State Counties (2003)

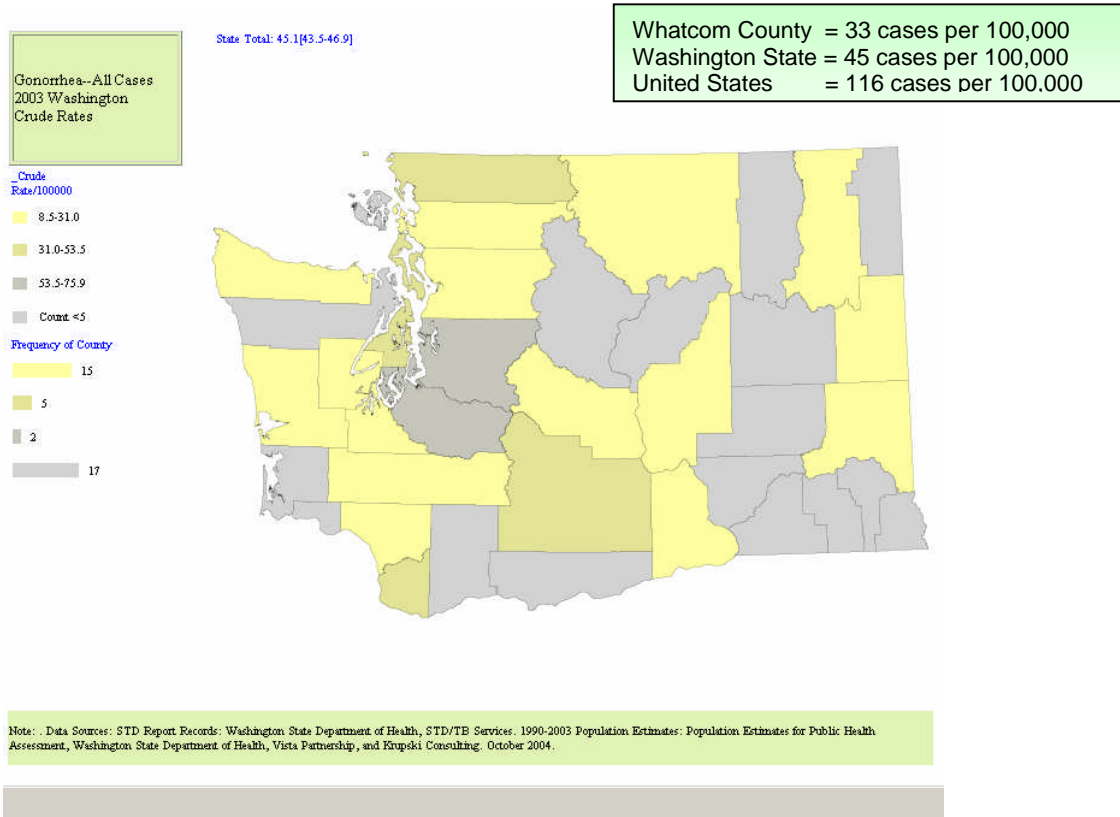
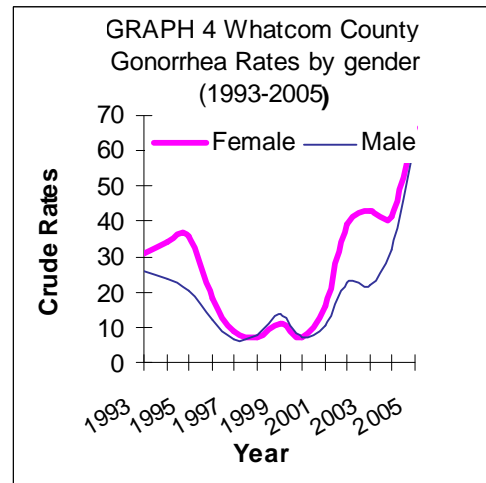


Table 7 and Graph 4 show all gonorrhea cases detailed by gender.

**TABLE 7: Gonorrhea—All Cases
Whatcom County Crude Incidence Rates by Gender
per 100,000 population**

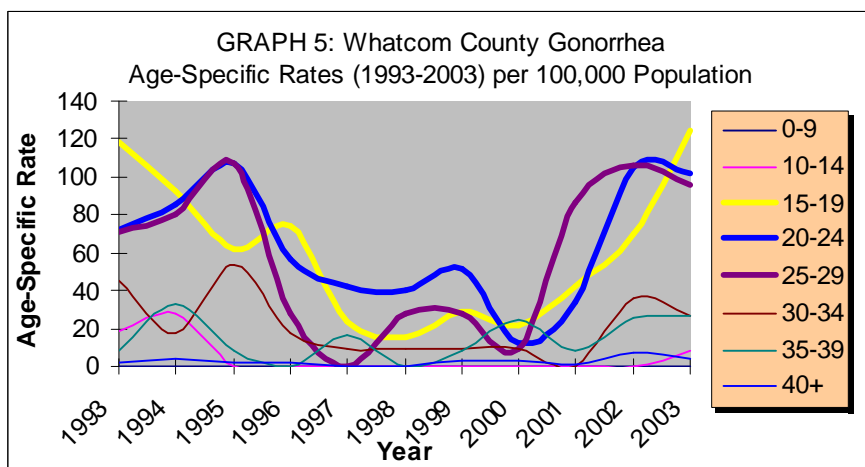
Year	Total		Female		Male	
	Rate	Count	Rate	Count	Rate	Count
1993	28.3	40	30.7	22	25.9	18
1994	28.9	42	33.9	25	23.7	17
1995	28.2	42	35.7	27	20.4	15
1996	15.0	23	18.0	14	11.9	9
1997	7.6	12	8.8	7	6.4	5
1998	7.5	12	7.4	6	7.6	6
1999	12.2	20	10.8	9	13.6	11
2000	7.2	12	7.1	6	7.3	6
2001	13.5	23	16.2	14	10.7	9
2002	30.8	53	38.9	34	22.4	19
2003	32.7	57	43.0	38	22.1	19
2004	36.7	65	41.2	37	32.0	28
2005	64.7	117	66.6	61	62.8	56



NOTE: Differences between male and female rates ARE NOT statistically significant in any year.

Although females have generally been diagnosed with higher rates of gonorrhea than males, the differences have not been as great as in the case of chlamydia and these differences are not statistically significant. Males actually had a slightly higher rate of gonorrhea in 1998 and 2000 and the rate for males in 2005 (62.8 per 100,000) was just under the female rate (66.6 per 100,000).

Graph 5 shows rate differences over time in gonorrhea cases for specific age groups. As is typical for STDs, gonorrhea rates are highest in the 15-19 and 20-24 age groups. In the case of gonorrhea, this graph shows that rates are also high among those ages 25-29. Compared with chlamydia, gonorrhea rates are lower in the 15-24 age population. However, rates have climbed steadily over the past few years in the 15-19 age group. In 2004, females ages 15-19 had rates higher than in Washington State, although these differences were not statistically significant. Whatcom County and Washington rates in the 15-19 age group were still well below those of the United State at 611 cases per 100,000. ↓



2004 Gonorrhea Rates for Females Ages 15-19

United States:
611 cases/100,000

Washington State:
198 cases/100,000

Whatcom County:
211 cases/100,000

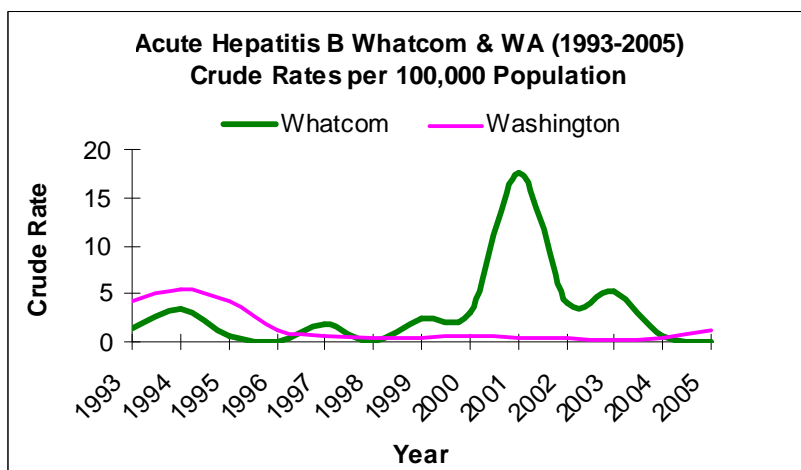
HEPATITIS B

Hepatitis B is a viral disease that is vaccine-preventable. Infection with hepatitis B virus (HBV) causes acute and sometimes chronic disease. Recovery from an acute hepatitis B infection provides lifelong immunity. However, about ten percent of those infected will develop a chronic HBV infection (carriers) which may lead to cirrhosis (scarring of the liver), liver failure or liver cancer. These long-term outcomes—although they may take decades to develop—are one reason why it is so important to halt the spread of this disease. In addition, a carrier can continue to spread the virus to others through sexual activity and sharing of body fluids. There are 100 to 200 newly diagnosed **acute** hepatitis B cases in Washington each year.

Symptoms of hepatitis B infection may include fever, lack of energy, nausea, vomiting, abdominal discomfort, and jaundice (yellow color in the whites of the eyes or skin). Some persons who have hepatitis B, particularly young children, have no symptoms. Hepatitis B is spread by direct contact with body fluids, such as blood and semen, of an infected person. This can happen when intravenous drug users share needles or through having sex with someone acutely infected with hepatitis B or a carrier. Transmission can also occur between people living together for a long time in the same household or institution. Infected women can pass the virus to their babies.

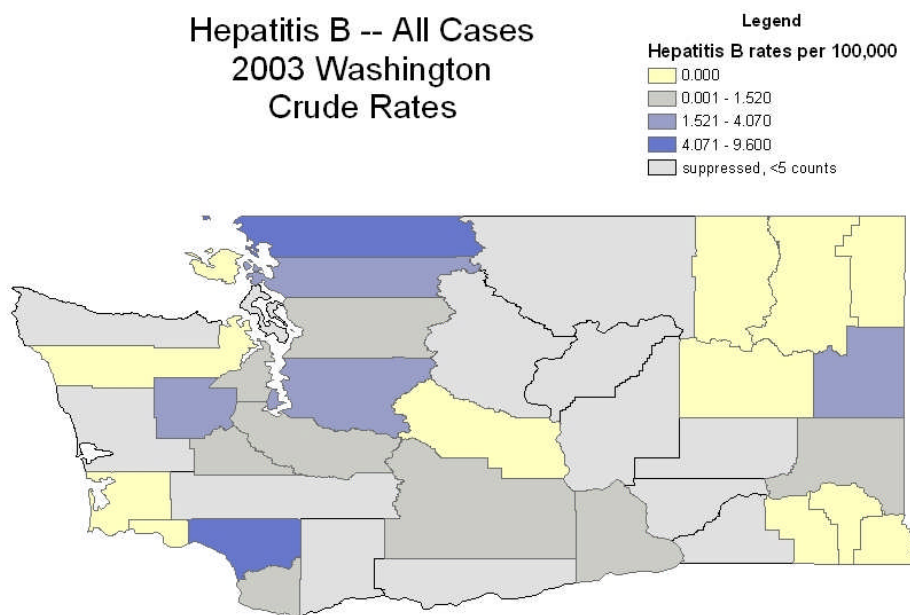
During the mid-to-late 1990's, hepatitis B rates were extremely low in Whatcom County. This was followed by an increase or “spike” in the number of cases (30) in 2001. Because the majority of the 2001 cases were associated with intravenous drug use (IDU), Health Department interventions targeted intravenous drug users and their sex partners. Prevention strategies included case finding through blood testing, free vaccinations, risk reduction through behavioral change, and distribution of sterile injection supplies at the Needle Exchange. These interventions had an impact as demonstrated by the decrease in cases in the following years. Graph 6 provides a comparison of crude rates for acute hepatitis B between Whatcom County and Washington for the years 1993-2005. Statistical significance has not been calculated using confidence interval data because of small case numbers.

GRAPH 6:



Whatcom Acute Hepatitis B rates have generally been below 5 cases per 100,000 and rates have paralleled Washington rates with the exception of a spike between 2001 and 2003.

Map 3 shows Hepatitis B rates for all Washington counties for 2003. In that year, Whatcom County had one of the highest rates in the state, although rates decreased in 2004 and 2005. In 2005, there were only four cases of acute Hepatitis B in Whatcom County for a rate of only 2.2 cases per 100,000.



REPORTABLE LOW-RATE STDs

HIV/AIDS

Acquired Immunodeficiency Syndrome (AIDS) is caused by infection with human immunodeficiency virus (HIV), a retrovirus that attacks the immune system and causes a progressive depletion of CD4+ T-lymphocytes, which are crucial for immune function. HIV can be transmitted when blood, semen, vaginal fluids, or breast milk from an infected person enters the body of an uninfected person. HIV must get into the bloodstream or body in order to cause infection. Transmission most often occurs during unprotected sex or during injection drug use when equipment is shared. Also, an infected woman who becomes pregnant can transmit HIV to her baby during pregnancy or during birth. A person

infected with HIV can transmit it, whether or not they appear sick, have an AIDS diagnosis, or are successfully treating their infection with antiretroviral drugs.

Without effective treatment, the resulting immunodeficiency causes susceptibility to opportunistic infections and malignancies; immunodeficiency becomes more severe over time and usually ends in death. Developments in HIV treatment have considerably improved the prognosis for patients with HIV infection, but the side effects of these drugs and the development of resistance to these drugs continue to be problematic.

Nationally, several studies suggest that an increasing number of men who have sex with men (MSM) are acquiring STDs.³ Data also suggest that an increasing number of MSM are engaging in sexual behaviors that place them at risk for STDs and HIV infection. While trends in prevalence of STDs and HIV infection are being tracked in major U.S. cities, including Seattle, these studies do not include data from Whatcom County. Based on 2004 national study data, median HIV prevalence among MSM was 11 percent (range 6-14%).

In 2004, 443 cases of AIDS were reported in Washington, a 13 percent decrease from cases reported in 2003. The incidence rate of AIDS in 2004 was 7.2 cases/100,000 population, compared to the national rate of 15.0 cases/100,000 population (2003 data). According to the Washington Department of Health, the majority of the state's 2004 reported HIV cases (86%) were male. The highest age-specific rate for males was in the 30-39 year old age group. For females, the age-specific HIV rate was highest among women 20-29 years of age.

While the number of cases fluctuates annually, the trend has been fairly level in Washington and Whatcom County, reflecting trends seen nationally. The following shows the number of new HIV and AIDS cases in Whatcom County from 2000-2005:

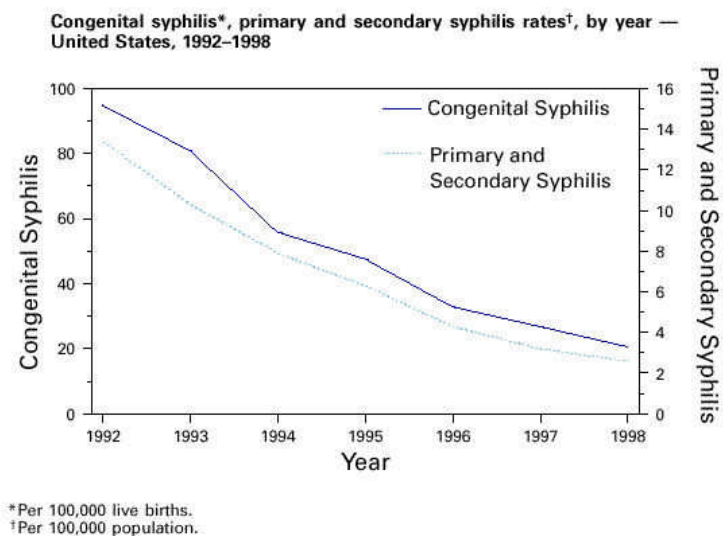
<i>Year</i>	<i># of New HIV Cases</i>	<i># of New AIDS Cases</i>	<i>Total # of New HIV/AIDS Cases</i>
2000	2	1	3
2001	2	6	8
2002	2	6	8
2003	2	6	8
2004	6	2	8
2005	6	3	9

³ *Sexually Transmitted Disease Surveillance 2004*, Department of Health & Human Services: Centers for Disease Control and Prevention, 2004, pp. 71-72.

SYPHILIS

Syphilis infection is caused by the spirochete *Treponema pallidum* (a type of bacteria). Syphilis is divided into four disease stages—primary, secondary, early latent and late/late latent. *T. pallidum* is transmitted through direct contact with lesions of primary or secondary syphilis or from an infected mother to her fetus. Untreated syphilis is infectious during the first three stages. Untreated late or late latent syphilis may cause damage to the central nervous system, heart or other organs. Similar to other genital ulcer diseases, syphilis can facilitate the transmission of HIV.

The syphilis bacterium can infect the baby of a woman during her pregnancy. Depending on how long a pregnant woman has been infected, she may have a high risk of having a stillbirth or of giving birth to a baby who dies shortly after birth. An infected baby may be born without signs or symptoms of disease, but if not treated immediately, the baby may develop serious problems such as developmental delay or seizures. Death may also occur in rare cases.



The rate of primary and secondary (P&S) syphilis reported in the United States decreased during the 1990s; in 2000, the rate was the lowest since reporting began in 1941. Despite national progress toward syphilis elimination, this STD remains an important problem in the South and in urban areas such as Seattle. Eighty-two percent of Washington State P&S syphilis cases in 2004 were reported by King County. Many of the other cases in the state may have been associated with this 2004 outbreak that occurred almost exclusively among men who have sex with men (MSM).

Syphilis is a low-incidence STD in Washington State. There were 150 primary and secondary syphilis infections in 2004 for an incidence rate of 2.4 cases per 100,000 population. The rate among males 20-44 years of age was almost 30 times higher than that of females in the same age group (11.3 cases/100,000 males versus 0.4 cases per 100,000 females).

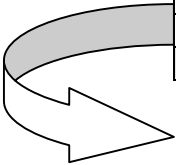
Table 8 compares Washington and Whatcom rates for all cases of syphilis from 1993 through 2003. Map 4 shows Washington syphilis rates in 2003 by county.

**TABLE 8 Syphilis—All Cases
WA and Whatcom Crude Incidence Rates
per 100,000 population**

Year	Washington	Whatcom County
1993	8	3
1994	5	4
1995	4	3
1996	2	3
1997	2	4
1998	3	3
1999	4	0
2000	3	1
2001	3	2
2002	3	1
2003	4	0

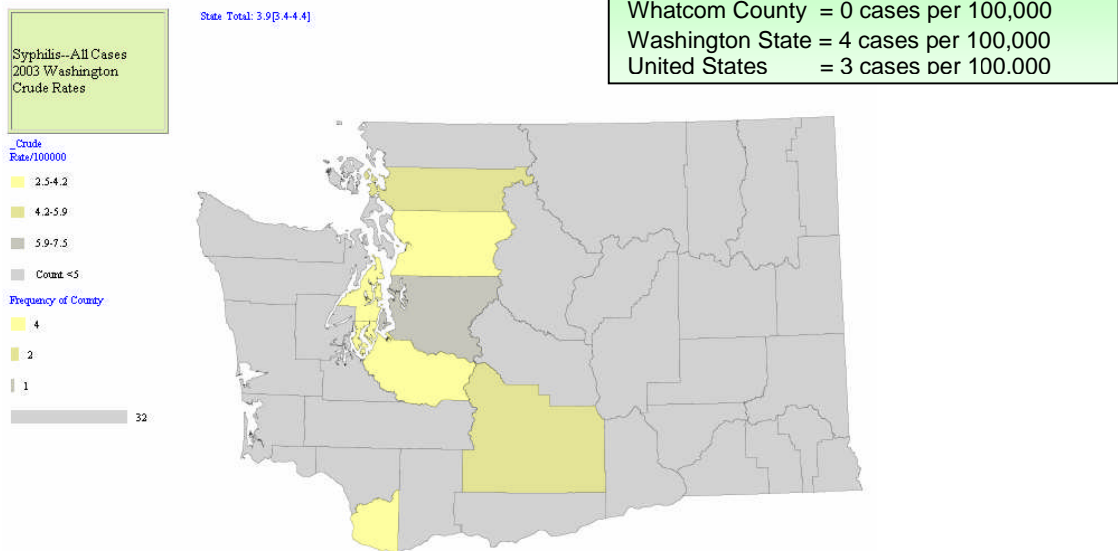
Since 1998, Washington syphilis rates have generally held steady at 3-4 cases per 100,000 population.

Whatcom County rates have been even lower, ranging from 0-3 cases per 100,000 since 1998.



Whatcom County's rate of syphilis in 2003 was similar to the majority of Washington State counties, as all but six counties had less than 5 cases. Map 4 shows that Washington had a slightly higher rate than the United States in that year (4 versus 3 cases), while Whatcom had no cases.

MAP 4: Syphilis in Washington State Counties (2003)



Note: . Data Sources: STD Report Records: Washington State Department of Health, STD/TE Services. 1990-2003 Population Estimates: Population Estimates for Public Health Assessment, Washington State Department of Health, Vista Partnership, and Krupski Consulting, October 2004.

A NON-REPORTABLE STD OF IMPORTANCE

HUMAN PAPILLOMAVIRUS (HPV)

HPV is a virus that is transmitted by skin-to-skin contact, usually during sexual intercourse but not always. An infected mother can transmit HPV to her baby's respiratory tract while the baby is in the womb. The incubation period is unclear—probably between three weeks and one year. The infection can persist for one to two years; most infections clear spontaneously. Risk factors for HPV include: 25 years old or under, age 16 or under at first intercourse, multiple sex partners, and having a sex partner with multiple partners.

CDC estimates there are 6.2 million new HPV infections per year in this country for an incidence rate of 20.6 cases per 100,000 population. Also, it is estimated that 20 million Americans are currently infected. This is of great concern because cervical cancer is associated with persistent infections with high-risk types of HPV.

Human papillomavirus is an extremely important STD but reporting by health care providers is currently not required. There are more than 30 genotypes of HPV that are sexually transmitted. High-risk genotypes are associated with cervical changes that can progress to cancer. Low-risk genotypes are not thought to be associated with cancer. Most visible genital warts are from a low-risk type of HPV.

The Washington Department of Health estimates that 75 percent of sexually active women will be infected at some point in their lives by one or another of these types. The good news is that a vaccine is now available to prevent some of the types that are most likely to cause cervical cancer.

CHAPTER 3: LOCAL STAKEHOLDER OPINION



This chapter summarizes the most important points from a key informant survey that was undertaken in Spring 2006 by the Whatcom County Health Department with staffing assistance provided by a master's student from the University of Washington School of Nursing. The purpose of the survey was to determine what stakeholders involved in STD prevention/treatment in Whatcom County think about the causes of and prevention strategies for addressing rising STD rates in the county. A total of twelve respondents were interviewed. Stakeholders included non-governmental organizations, such as Evergreen AIDS Foundation, Mt. Baker Planned Parenthood, Whatcom County Pregnancy Center and Western Washington Health Center. Stakeholders from the following organizations were also interviewed: Bellingham School District, Interfaith Community Health Center, Sea Mar Community Health Center Visions program (for substance-abusing young women), and the HIV/AIDS Program of the Health Department. Interview questions were organized around four themes: organizational expertise, perceptions of the problem, interventions, and leadership. Each in-person interview lasted thirty to forty-five minutes and each interview was tape-recorded and transcribed by project staff. The small number of respondents (n=12) is a limitation to the study findings detailed below.

KEY FINDINGS:

- **ORGANIZATION EXPERTISE:** The most common resource provided by stakeholder organizations was prevention education, followed by STD testing and treatment. Three organizations offer contraception and four promote community awareness. Whatcom County Health Department is the only organization with a needle exchange program.
- **PERCEPTIONS OF THE PROBLEM:** The following three issues were identified as “the most pressing” STD-related problems in Whatcom County:
 1. **Lack of free access (other than Planned Parenthood) to education, testing and treatment resources for one target population (ages 15-24).** Despite the fact that sex education is widely available in public schools, some respondents felt that there is a lack of scientifically accurate and comprehensive STD education available to adolescents and young adults
 2. **Lack of funding for STD-related services.** Almost everyone interviewed mentioned that cuts in program funding have been



occurring for approximately four years. Respondents almost universally stated that “more funding” is needed to adequately address the rise in STDs.

- 3. Teen sexual behaviors that put teens at risk for STDs.** In part, these behaviors are generated by the developmental stage of teens and young adults where they feel they are invincible.

Respondents also mentioned the following as primary and secondary causes of the rising rate of STDs: poverty, homelessness, multiple sex partners, IV drug use, and changes in societal norms. Several respondents felt the “abstinence only” perspective was contributing to rising rates of STDs because with that approach young people are less likely to receive information on STD prevention, particularly information on condoms. Proponents of abstinence education, however, emphasized that abstinence is the only method that is 100 percent effective for STD prevention. It was also mentioned that using condoms may give a false sense of security because condoms don’t prevent the spread of all STDs and are not foolproof. Still, according to one respondent:

“Abstinence, of course, is going to be part of the discussion because we’re talking about sex and choices. But it also means that I can say, ‘Look, we would love you to abstain from sex...but [if] you’re not, come in and see me regularly so we can talk about your needs and you can stay safe from getting gonorrhea, chlamydia, HIV, or hepatitis....’”

- **INTERVENTIONS:** Stakeholder responses regarding interventions to decrease STD rates in Whatcom County focused on community collaboration, education in the schools, parent involvement, and increased access to free or reduced-cost testing and treatment. The need for collaboration within the community was mentioned by 5 out of 12 respondents. “Wouldn’t it be great to have a health council that would involve schools and communities to decide what the needs are and how we can move people forward [on the issues surrounding STDs]?”
- **LEADERSHIP:** When respondents were asked what organization should take a leadership role in developing interventions, Whatcom County Health Department was mentioned by 11 out of 12 respondents. Respondents also mentioned that the following should be involved in any collaborative process: clinics, schools, parents, Planned Parenthood, St. Joseph Hospital, and other organizations working with children and parents.

The following recommendations were made by interviewees:

- ❖ Provide abstinence education while providing complete and accurate information to prepare young people for the day they eventually decide to have sex.
- ❖ Examine strategies for housing the homeless, since homelessness is a high-risk condition that may encourage STD transmission.
- ❖ At the local level, increase awareness of rates of STD infection, including trends in STD rates countywide.
- ❖ Provide uninsured individuals with access to free or low-cost testing and treatment.
- ❖ Take action, either through lobbying or grant-writing activities, to increase funding for programs dealing with education, access to care, testing and treatment of STDs.
- ❖ Support collaborative community forums with Whatcom County Health Department perhaps taking a leadership role to organize these processes.
- ❖ Expand parent education on how to talk to teens about sex.
- ❖ Expand needle exchange programs to include a stronger education component.



CHAPTER 4: WHAT OUR PUBLIC SCHOOLS TEACH



This chapter presents a summary of health education related to how STDs are taught in Whatcom County's public school systems. In September 2006, Whatcom County Health Department initiated a telephone survey of all public school districts in the county. The purpose was to determine the current state of STD-related education, including HIV/AIDS and sex education. A total of 14 interviews were conducted across the county's seven school districts (Bellingham, Blaine, Ferndale, Lynden, Meridian, Mt. Baker, and Nooksack Valley) from 9/7/06 through 9/25/06. The average telephone interview lasted 30 minutes. One respondent provided written comments via e-mail. The interview guide consisted of the following questions:

- What curricula are being used in your school district to address sexual health information and disease prevention? If different curricula are used at different grade levels, please detail what is being done at each grade level. If you are using a published curriculum, please name that curriculum.
- What participation options are available? For instance, is participation mandatory or voluntary? Do you have an abstinence track available for students?
- Is passive consent used or is active parental consent required for participation? Do many parents opt out for their student?
- How intensive is the curriculum? What are the number and length of class sessions (at each grade level)? Are follow-up classes offered? If so, what is the number and length of follow-up sessions?
- Who teaches? Is this a mandatory or voluntary assignment? If voluntary, how are teachers recruited? What are the criteria for teacher selection?

Prior to the interview, respondents were given a copy of the interview guide and a copy of *Washington's Guidelines for Sexual Health Information and Disease Prevention* (DOH & OSPI) dated January 13, 2005. These guidelines were jointly released by Washington State Department of Health (DOH) and the Office of the Superintendent of Public Instruction (OSPI). Three of the primary purposes of these voluntary guidelines were to enhance and strengthen sex education, describe effective sex education and its outcomes, and provide a tool for evaluating existing curricula. They were used to provide context for key findings and will be referred to as *WA Guidelines* hereafter.

Interview responses were summarized for each school district at the elementary, middle school, and high school levels. Responses were aggregated so that individual school district responses were not identifiable. The following is a summary of key findings.

KEY FINDINGS:

- **ABSTINENCE FOCUS:** *WA Guidelines* recommend that sexual health information and disease prevention stress that abstinence from sexual activity is the only certain way to avoid pregnancy and reduce the risk of sexually transmitted disease (STDs), including HIV. All seven school districts teach these guidelines but three of the seven districts stated that abstinence is the main focus of the district's overall K-12 sexual education curriculum. Two districts stated that they provide a separate "abstinence only" track for some components of their sex education instruction.
- **HIV/AIDS INSTRUCTION:** All districts provide HIV/AIDS education as mandated by RCW 28A.230.070. KNOW, a HIV/AIDS curriculum endorsed by OSPI, was mentioned by name most often. It is common for a district to send a principal or teacher to HIV/AIDS trainings who then returns to teach or update others involved in HIV/AIDS education.

Elementary: Generally, HIV/AIDS instruction is focused at the 5th grade level, although some schools provide 1 classroom session per year at several grade levels. The intensity of 5th grade instruction varies widely from one 55-minute session up to 6 hours over a six-week period.

Middle School: HIV/AIDS is universally taught in all middle school grades 6th-8th. Instruction was generally described as "more extensive" than at the elementary level. Provision of one or two class periods per year per grade was typical.

High School: There was less uniformity in HIV/AIDS education at the high school level. Some districts provide minimal yearly instruction at all grade levels (1 class period per year) while other districts focus HIV/AIDS at the 9th and/or 10th grade level with 2-3 hours of instruction provided per year. The high school component of KNOW has recently been updated and teacher training will be offered by OSPI in 2007. Therefore, it is likely that high school HIV/AIDS instruction will change in the coming years as school staffs receive curriculum updates.

- **OTHER SEXUAL HEALTH INFORMATION AND DISEASE PREVENTION INSTRUCTION:** Aside from HIV/AIDS instruction, Whatcom Schools use a variety of curricula to teach other aspects of sex education-related topics. Most schools provide a combination of pre-packaged curricula, teacher-added materials and presentations. Districts assign this type of instruction to teachers with expertise in various subject areas, health being the most common and science being the next most common, followed by physical education. The following curriculums and presentations were named by various districts:

- ✦ Glencoe *Teen Health* text published in 1999 by McGraw Hill (several levels available).
- ✦ *The Great Body Shop*
- ✦ *Family Life and Sexual Health [FLASH]* curriculum from Seattle/King County published in 1988.
- ✦ *From Bacteria to Plants* published in 2002 by Prentice Hall (the unit on bacteria and viruses)
- ✦ *Science Explorer—Human Biology and Health* by Prentice Hall
- ✦ Various curricula provided by the local Education Service District (ESD).

- ✦ *RELATE*: Speakers come into the school and talk about relationships, family, love, life and abstinence
- ✦ Sexual harassment presentation by Domestic Violence and Sexual Assault Services of Whatcom County

Elementary: Five districts provide either *The Great Body Shop* (K-5) or some type of puberty curriculum, such as *FLASH* or a district-generated curriculum. The most intensive instruction is usually provided in 5th grade within the Health curriculum or physical education. School nurses often deliver curriculum in elementary schools. Typically, boys and girls are taught separately when subjects such as hygiene and body changes are covered.

Middle School: Only one school district did not provide sexual education curriculum at the middle school level. Generally, districts provided additional instruction (in either health, science, or physical education) at both the 7th and 8th grades levels with a great deal of variance as to the specific curriculum used. Three districts provided RELATE speakers, although one district stated that additional funding will be needed to continue bringing these speakers to the school. The intensity of sexual education curriculum at the middle school level varied from a minimum of 90 minutes per year to a maximum of approximately 10 days.

High School: Generally, sex education is focused at either the 9th or 10th grade levels and is usually taught within the health curriculum. It is common for districts to develop their own curricula at the high school level, often adapting a “canned” curriculum through the addition of materials chosen by those doing the teaching. In one district 25 percent of the physical education curriculum is devoted to sex ed-related instruction. Most districts provide at least 6-12 days of instruction. Subjects addressed include reproduction, healthy relationships, and the consequences of sexual behaviors. Some schools also provide assemblies for school-wide instruction.

- **PARTICIPATION OPTIONS & PARENT CONSENT:** All seven school districts use passive parent permission for participation in both HIV/AIDS and other sex education instruction. By law, parents can opt their student out of participation in the HIV/AIDS curriculum at all grades levels. Districts either provide an evening event where parents can become familiar with the HIV/AIDS curriculum and/or a letter is sent home informing parents that the curriculum is available for review at the school. Parents can opt out only after reviewing the curriculum and if they choose to opt out they agree to provide HIV/AIDS instruction for their student. Although parent-delivered HIV/AIDS instruction is a legal requirement for students opted out of school instruction, no documentation is required of the parent or student. Parents in some districts can also opt their student out of sex education instruction. However, all students are required to participate in the health curriculum by state mandate and can only be opted out of sensitive materials, such as units on contraception, etc. Generally, in all school districts it was reported that very few parents (typically 1-2 parents per year) choose to opt out and this has become less common in recent years. As stated previously, two school districts provide separated “abstinence” tracks for some portion of their sexual education instruction.
- **STAFF ASSIGNMENTS:** Generally, teaching HIV/AIDS or sexual education curricula is a mandatory staff assignment made by the district. Assignments usually flow from the subject area assigned to these curricula. Thus, if the curricula are taught in health

classes, then health teachers are assigned to teach it. However, at the elementary level and sometimes the middle school level school nurses may be given this assignment. Principals and other staff may step in to teach sections where boys and girls are separated for instruction. Although assignments are generally mandatory, all teachers who were interviewed stated that they enjoy this assignment because it is their area of interest.

- **STAFF TRAINING:** Teacher training varied widely across districts. In some districts it was reported that extensive periodic training is provided, sometimes via district in-service and sometimes by sending teachers to OSPI or EDS training events. Often, one or two individuals are sent to these trainings and they return to provide instruction to other teachers. One district reported that there is no teacher training—“we don’t know where to look.” At least one district reported no special training in the area of HIV/AIDS and sex education.
- **CURRICULUM PLANNING:** Two of the seven school districts were in the process of formally reviewing their HIV/AIDS and sex education curriculum. One of the districts has a six-year curriculum adoption cycle which they are in hopes of shortening so that curriculum in all subject areas will be reviewed more frequently. Two districts had restructured their program which then provided additional funding support (see below).
- **RESOURCES:** At least two districts stated the need for additional funding to provide resource support for their sex education instruction. Needed resources included money for presentations and for up-to-date videos and classroom equipment, such as standard projectors and ELMO™ projectors, which allow a teacher to place a textbook on the device to project the text image. As mentioned under curriculum planning, two of the districts had restructured their programs at least in part to enhance funding for their programs. This involved placing the high school health curriculum under the umbrella of Family Consumer Sciences (formerly known as Home Economics) within the Career & Technical Education academy (formerly known as Vocation Education). This restructuring provided these districts with additional Perkins⁴ dollars for every student participating in these health classes. This funding source requires Health teachers obtain a vocational certificate in addition to their certification to teach health.

In conclusion, there are similarities in HIV/AIDS and sex education across Whatcom County public schools. There are, however, important differences in curricula resources, the intensity of instruction, and the level of resource support available to programs.



⁴ Funding available through the federal government under the Carl D. Perkins Vocational and Technical Education Act.

CHAPTER 5: CONCLUSIONS



Based on the information contained in this report, the following are conclusions regarding the state of STDs in Whatcom County, Washington.

- ❖ Chlamydia is the most commonly reported STD in Whatcom County, as is the case in Washington and the United States. While rates of chlamydia are rising in Whatcom County, rates are still lower than in Washington State as a whole and Washington's rates are lower than those of the United States.
- ❖ Whatcom rates of first episodes of genital herpes are generally higher than Washington rates.
- ❖ Whatcom County gonorrhea rates increased from 2001 through 2005 but have been consistently lower than Washington rates with the exception of 2005. State rates are generally less than half United States rates.
- ❖ Rates of acute hepatitis B generally paralleled Washington rates.
- ❖ STD rates are generally highest among those ages 15-24 in Whatcom County, Washington and the United States. Gonorrhea rates are also particularly high in the 25-29 age group.
- ❖ Very few cases of either HIV/AIDS or syphilis are reported in Whatcom County.
- ❖ Based on key stakeholder opinion, one of the main contributors to rising Whatcom County STD rates is a lack of free access (other than Planned Parenthood) to education, testing, and treatment resources for one target population (ages 15-24). Key stakeholders feel that despite the availability of sex education in the public schools, more needs to be done to provide scientifically accurate and comprehensive education.
- ❖ All Whatcom County school districts provide abstinence information to students and three of seven districts have an abstinence focus. This is in alignment with the *Guidelines for Sexual Health Information and Disease Prevention* released by the Washington Superintendent of Public Instruction and State Department of Health in January, 2005.
- ❖ While some public schools provide education regarding condom use, this type of education is not universally available.
- ❖ Some school districts need additional resources to deliver the desired STD-related education.

While this report documents increased rates for certain STDs in our county, it does not provide an explanation as to why these rates have increased. More study is needed to answer additional questions raised by this report, such as:

- Have STD rates increased because of improved surveillance OR because of an actual increase in the burden of sexually transmitted diseases?
- What information is available regarding the geographic distribution of STDs in Whatcom County, particularly the distribution of cases ages 15-24 (those most likely to be receiving STD-related education and services)?

- What are the practices of community clinics, particularly regarding follow-up measures such as partner notification and testing?
- Are there segments of the population who need testing but are not receiving testing services?

Whatcom County Health Department plans to develop and implement data gathering protocols in order to answer these questions and additional ones that may arise during this course of study. It is estimated that findings from this follow-up study will be reported in spring of 2008.