

Whatcom County Health Department  
FOCUS REPORT ON  
**COMMUNICABLE DISEASES**



**PUBLIC HEALTH**  
ALWAYS WORKING FOR A SAFER AND  
**HEALTHIER WASHINGTON**



## INTRODUCTION

This report provides the most current data on selected<sup>1</sup> communicable disease (CD) rates in Whatcom County. Diseases are listed alphabetically. Some communicable diseases are “reportable” (sometimes also referred to as “notifiable”); meaning the Washington State Department of Health requires health care providers to notify the local health department if they encounter a case. Many communicable diseases do not have a reporting requirement but may be important to the community, and thus are also specifically discussed in this report.

The majority of diseases covered in this report include a data report and a fact sheet. However, fact sheets only are provided for chickenpox (varicella), hepatitis C, influenza, and human papillomavirus. With the exception of hepatitis C, which first became reportable in 2000, the others are non-reportable diseases, so disease rate data is not available.

- ❖ A **FACT SHEET** provides answers to the most commonly asked questions regarding the disease, such as: What is it? Who gets it? How is it spread? What can be done to prevent the spread of the disease?
- ❖ A **DATA REPORT** provides the following information:
  1. Why the disease is important
  2. How Whatcom County is doing, including case rates for the disease compared to Washington State rates
  3. What remains to be done, including what is currently being done to identify and respond to the problems caused by the disease and to reduce the spread of the disease.

Reportable communicable diseases were not selected for this report if there were very few or no cases reported in Whatcom County. Although these diseases are not covered in detail, the number of cases for each disease from 2000 to 2005 is provided in a single table in Appendix A. Appendix A also includes a Glossary that defines some of the terms in this report.

## THE ROLE OF PUBLIC HEALTH

One of the primary roles of public health is to understand and prevent disease. While medicine focuses primarily on individual health, public health looks at the entire community. In its role as protector of the public’s health, the first mission of public health was to understand and control the spread of communicable (infectious) diseases. A communicable disease is one that is transmitted to a person from an infected person, animal, or inanimate source.

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<sup>1</sup> The communicable diseases highlighted in this report have a relatively high rate of occurrence in our community or are of particular concern because of potentially severe health-related impacts.

Control of communicable disease has been a major reason for declining death rates in the nineteenth and twentieth centuries. Advances in medical technology, such as the development of vaccines and antimicrobial drugs, have made this control possible. Also, advances in public health practices, such as the treatment and protection of drinking water, and the proper storage, handling, and preparation of food, have vastly improved the ability to identify, treat and control the spread of many communicable diseases.

Despite great progress in controlling communicable disease, emerging diseases (HIV/AIDS, Lyme disease, hantavirus, West Nile virus, for example) and traditional diseases that can become resistant to drugs (malaria, tuberculosis, bacterial pneumonia, for example) are still of great concern and a potential threat to the health of the public.

The occurrence of communicable diseases is measured by reports from local health care providers and labs, which are required by Washington State law to report over seventy different diseases and conditions to the local county health department. Prompt reporting enables local health department staff to:

- ❖ Identify exposed persons who are at risk of acquiring a disease and recommend preventive measures or treatment
- ❖ Detect outbreaks and recommend interventions to prevent further spread of the disease
- ❖ Follow trends
- ❖ Develop prevention and treatment strategies

Diseases can be categorized in many different ways. In this report, many of the diseases are referred to as enteric diseases, sexually transmitted diseases (STDs), or vaccine-preventable diseases. These categories can overlap. For example, Hepatitis A is an enteric disease and it is also vaccine preventable. A discussion of each of these categories of disease follows.

## ENTERIC DISEASES

***Enteric diseases are those that disrupt the body's digestive system, typically producing nausea, vomiting, diarrhea, or all three symptoms.***

Enteric illnesses are most often acquired through the consumption of food contaminated by an infectious agent. The Washington State Department of Health estimates that there are between 250,000 and 1.5 million acute food-borne illnesses annually in the state. However, most of these are unreported because infected individuals are asymptomatic, they do not seek medical care, or the appropriate lab tests are not completed. Lab testing is sometimes not initiated by the medical provider because enteric symptoms can often be treated effectively without test results. However, when testing is not done, the disease investigation process is disrupted. Thus, the patient recovers but others may be at risk because the source of disease has not been discovered.

An average of 105 food-related investigations is completed by Whatcom County Health Department each year. Over the past three years, there were 90 such investigations in 2003, 119 in 2004, and 105 in 2005.



Prevention is the most important element in controlling food-borne illness and includes education of food handlers, investigation of disease, and inspection of food establishments. The Whatcom County Health Department conducts these prevention activities under the direction of the Divisions of *Environmental Health* and *Disease Response and Control*.

Enteric diseases highlighted in this report include:

- ❖ campylobacteriosis
- ❖ salmonellosis
- ❖ e.coli 0157:H7
- ❖ shigellosis
- ❖ giardiasis

## SEXUALLY TRANSMITTED DISEASES



Sexually transmitted diseases (STDs) are a concern to public health because they are easily transmitted through intimate, sexual contact between individuals and can result in long-term consequences. The most common STDs that are required to be reported are chlamydia, genital herpes, and gonorrhea. The incidence of STDs rises as the frequency of sexual risk-taking behavior increases so the majority of STD diseases are diagnosed in people ages 15–24 years old. The data discussed in this section focuses on that age group. Populations with high rates of STDs are at greater risk for sterility and pelvic inflammatory disease (PID). Also, some STDs can be passed from mother to baby during pregnancy or childbirth.

Another important but non-reportable STD is human papillomavirus (HPV). The United States Centers for Disease Control (CDC) estimate 6.2 million new infections per year in this country and that 20 million Americans are currently infected. They also estimate that 50 percent of sexually active women will be infected at some point in their lives. This makes HPV the most common STD in the U.S and is of concern because cervical cancer is associated with **persistent infections with certain high risk forms**<sup>2</sup> of HPV. Because HPV is not reportable, only a fact sheet has been included in this report. The good news is that a vaccine is now available to prevent two of the high risk forms of HPV

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<sup>2</sup> 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 genital warts are from a low risk type of HPV.

The sensitive nature and social stigma of STDs contribute to problems in diagnosing and reporting. A number of national studies have concluded that STDs are underreported. For confidentiality reasons, a person may travel outside their county of residence to be treated and may not choose to use his/her name and address. In addition, lapses in reporting by health care providers and labs occur leading to incomplete sexual contact tracing and partner notification which then increases the number of undiagnosed and untreated cases.

Adequate sex education, using condoms correctly and consistently and risk reduction counseling have been shown to be effective in encouraging more responsible sexual behavior thus preventing STD transmission. Although there are over 25 diseases that are spread primarily through sexual activity, this report focuses on four of major public health concern:

- ❖ chlamydia
- ❖ gonorrhea
- ❖ genital herpes
- ❖ human papillomavirus



*“Women and infants disproportionately bear the long term consequences of STD’s.”*  
--Centers for Disease Control

## VACCINE-PREVENTABLE DISEASES

The majority of common childhood illnesses—chickenpox, measles, mumps, rubella, polio, and pertussis (whooping cough)—are largely preventable, as there is a vaccine for each disease. When the vaccine is given in the correct dose and in a timely manner by a health care professional, the disease is 80-100% preventable.

Washington State law requires that students have certain recommended immunizations (“shots”) before they enter school. While approximately 95 percent of children entering Whatcom County public schools are fully immunized, immunization rates for children under the age of two are lower. Because this is when children may be most susceptible to communicable diseases, 80% of childhood vaccinations are recommended during a child’s first two years of life.

Some vaccinations do not last as long as others. For example, the protection offered by the pertussis vaccine begins to fade after six to ten years. This failing immunity can create a “reservoir of disease”<sup>3</sup> in adolescent and adult populations that can eventually lead to disease outbreaks, particularly in children who have not been immunized or fully immunized. As Whatcom County has experienced

<sup>3</sup> A communicable disease spreads from a reservoir or source, in this instance, children and adults with waning immunity to pertussis. A reservoir is simply the source of an infecting microorganism.

several outbreaks of pertussis in recent years, this disease is highlighted in this report. In addition, a fact sheet for chickenpox (varicella), a non-reportable condition, is included.

Aside from common childhood illnesses, there are other communicable diseases that are preventable by vaccination. Three covered in this report are: hepatitis A, hepatitis B (both diseases of the liver) and influenza (the flu).

Whatcom County Health Department educates both health care professionals and parents regarding proper immunization schedules and maintains the latest information regarding developments in the prevention of the communicable diseases of childhood and adulthood.