



2009



**COMMUNICABLE DISEASE
SURVEILLANCE SUMMARY**

**Office of Communicable Disease Control and
Public Health Preparedness**
707 N. Armstrong Pl.
Boise, ID 8370
208-327-8625
<http://cdhd.idaho.gov/>

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*Published by Central District Health Department's
Communicable Disease Control and Public Health Preparedness
December 2010*

Available in alternate formats

INTRODUCTION

The Communicable Disease Surveillance Summary is a compilation of reportable infectious disease trends in Health District 4. Central District Health Department (CDHD) is the local health department for Health District 4, which encompasses the Ada, Boise, Elmore and Valley Counties. These four counties have a total population of approximately 430,000. The living environment of the population is very diverse, comprised of urban, rural and frontier areas. Ada County with an estimated 371,649 people includes the city of Boise, which is the primary urban center of the State of Idaho. The median age of Ada County residents is 34.5 years. An estimated 92.3% are White, 6.5% Hispanic or Latino and 1.1% Black. The second largest county by population is Elmore County. Elmore County is primarily rural with a total population of about 29,130 persons. The median age of Elmore County residents is 29.1 years. The racial breakdown of the population is 85.4% White, 12% Hispanic or Latino and 3.2% Black. Valley County is also a rural area and has an estimated 7,651 residents. The median age is 43.5 years and the racial breakdown is 96.4% White, 2% Hispanic or Latino and 0.1% Black. The least populated is Boise County, which consists of both rural and frontier communities. The population totals approximately 6,670 and the median age is 40.4 years. The county is 97.2% White, 3.4% Hispanic or Latino and 0.2% Black.

A primary mission of CDHD is to protect Health District 4 residents from infectious diseases of public health significance. This is accomplished by:

- Identifying and promoting the most effective prevention measures (i.e., vaccination)
- Aggressive monitoring of disease occurrence in the community
- Preventive measures and taking action to stop the spread of infections through contaminated food or surface areas, environmental sources, or contact with ill persons
- Assisting those exposed to infectious agents in an effort to minimize their risk of getting sick and/or spreading infection to others through education and interventions

Many infections require prompt intervention to reduce the severity and spread of illness in the community. In certain cases, giving specific treatment to a patient can be lifesaving. One example would be providing rabies vaccination and appropriate immune globulin therapy to a person bitten by a rabid bat. In other instances, giving timely preventive treatment for close contacts of a person can reduce their risk of disease. This would be the case when prescribing antibiotics for family members of a child with meningococcal meningitis or administering preventive vaccination after exposure to hepatitis A or B. Sometimes bacteria such as *E. coli* O157:H7 or *Salmonella* contaminate food, making rapid identification of the source critical in preventing illness. CDHD works tirelessly with the general public, health care providers, and others to protect Health District 4 residents from infectious diseases.

The term “surveillance” in public health means the systematic collection and analysis of data of a specific disease or symptom. The purpose is to identify and describe health risks and patterns of disease in the community as well as to interpret the data to guide disease prevention and control activities.

This summary report includes incidence and prevalence data from 2005 through 2009. Over these past five years, there were four significant disease outbreaks. In 2006, West Nile virus resulted in over 300 reported cases of West Nile fever, encephalitis, meningitis and meningoencephalitis. In 2007, more than 200 individuals reported being ill with cryptosporidiosis from exposures at local water parks, water features and swimming pools. In 2008 and 2009, over 50 cases of pertussis were reported, primarily in middle and high school students in Ada and Elmore Counties. One notable disease outbreak occurred in 2009, the novel H1N1 influenza virus, which resulted in over 270 reported cases. Of these H1N1 cases, 124 resulted in hospitalization and five deaths occurred.

This report is intended to be informative and give the public a better understanding of communicable diseases and public health in general.

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DEFINITIONS OF TERMS USED IN THIS REPORT

CDC: Centers for Disease Control and Prevention.

Endemic: Prevalent in a particular geographic area or people.

Enteric infection: An infection of the gastrointestinal tract.

Exposure period: The time period during which a person was likely exposed to the infectious agent causing the illness. This is calculated using the typical range of the incubation period for the agent (see below).

Fecal-oral transmission: A means of disease transmission in which microscopic viruses, bacteria, or parasites in the stool of one person are swallowed by another person, causing infection. Usually this occurs when food, water, utensils, hands or other body parts are contaminated by small amounts of stool. The risk of fecal-oral transmission is increased by inadequate hand washing before preparing food or after activities such as using the toilet, assisting incontinent children or adults with toileting, diaper changing, and certain sexual practices.

Incidence rate: The number of new cases of a disease in a specified population divided by the person-time at risk during a specified time period.

Incubation period: The time between exposure to an infectious agent and the onset of symptoms of disease due to that agent.

Nosocomial: A disease contracted as a result of being hospitalized; hospital-acquired.

Prevalence: The number of individuals with a disease divided by the total number of people at risk for that disease at a specific time interval.

Prophylaxis: Treatment given before illness develops to prevent the subsequent occurrence of disease. Prophylactic treatment includes administration of antibiotics (e.g., to prevent certain bacterial infections such as pertussis or meningococcal disease), antivirals (e.g., influenza), anti-parasitics (e.g., malaria), immune-globulin (e.g., hepatitis B, tetanus, and rabies), or vaccine (e.g., hepatitis A, measles, and rabies).

Zoonotic disease: Any infectious disease that can be transmitted from non-human animals, both wild and domestic, to humans or from humans to non-human animals.

NOTIFIABLE COMMUNICABLE DISEASE REPORTS – HEALTH DISTRICT 4 2005-2009

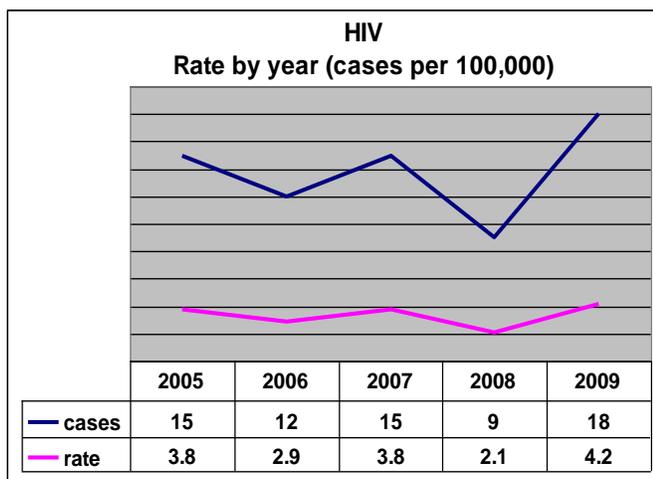
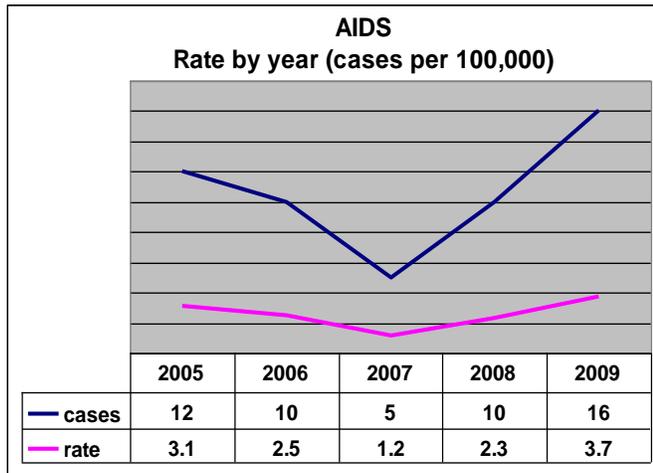
Disease	2005	2006	2007	2008	2009
AIDS	12	10	5	10	16
Amebiasis	1	0	5	4	7
Blood lead poisoning	17	10	15	16	13
Campylobacteriosis	50	75	56	89	93
Chlamydia	1,057	1,264	1,389	1,528	1247
Cryptosporidiosis	3	16	237	6	15
<i>E. Coli</i> O157:H7	5	13	15	11	NR
<i>E. Coli</i> non O157:H7	0	0	2	5	NR
Encephalitis, viral or aseptic	0	0	1	0	NR
Giardiasis	62	78	97	97	91
Gonorrhoea	53	107	109	55	32
Haemophilus Influenzae, invasive	2	1	2	2	0
Hantavirus Pulmonary Syndrome	0	0	1	0	NR
Hepatitis A	4	2	3	3	1
Hepatitis B, acute	5	5	3	6	3
Hepatitis B, chronic	47	64	50	173	75
Hepatitis C, chronic or resolved	188	65	79	133	341
HIV	15	12	15	9	18
HTLV I	0	3	0	0	1
HTLV II	0	4	NR	1	1
Legionellosis	1	5	3	1	3
Lyme Disease	0	3	0	3	7
Malaria	0	0	6	0	1
Meningitis, viral or aseptic	5	4	6	4	0
Mumps	0	1	4	0	0
Neisseria meningitis	2	0	2	2	1
Norovirus	NR	3	1	8	18
Pertussis	0	12	8	16	40
Pneumocystis Carinii Pneumonia (PCP)	1	0	5	5	0
Rocky Mountain Spotted Fever	0	4	1	0	0
Salmonellosis	44	51	48	57	55
Shiga-toxin producing <i>E. Coli</i>	NR	2	9	1	15
Shigellosis	7	4	5	3	2
Streptococcus pneumoniae, <18 yrs	NR	1	0	3	NR
Streptococcus pyogenes (Group A), invasive	2	4	3	2	NR
Syphilis	7	0	4	11	16
Tuberculosis	9	3	3	2	6
West Nile Virus	4	333	27	11	12
Yersiniosis	0	1	1	0	0

NR= Not Reportable

Note 1: The surveillance data provided on the following pages does not include diseases that have not been reported in Health District 4 in the past 5 years.

Note 2: Since the incidence of these diseases vary widely, the graphs on pages 8 – 36 have different scales and should not be directly compared to one another.

AIDS/HIV



Following a dip in reported cases observed in 2007, AIDS cases steadily increased to 16 last year. In 2009, HIV cases were twice as high as they were in 2008. In 2009, 85% of HIV/AIDS cases were male. A major contributor to this is the fact that 62% of cases were bisexual men or men who have sex with men (MSM). The average age of infected individuals was 37 years, with the youngest case being a 6 year old and the oldest case being age 63. A reported 80% of infected individuals were white, with the second most prevalent race being African American at 12%.

Purpose of Surveillance:

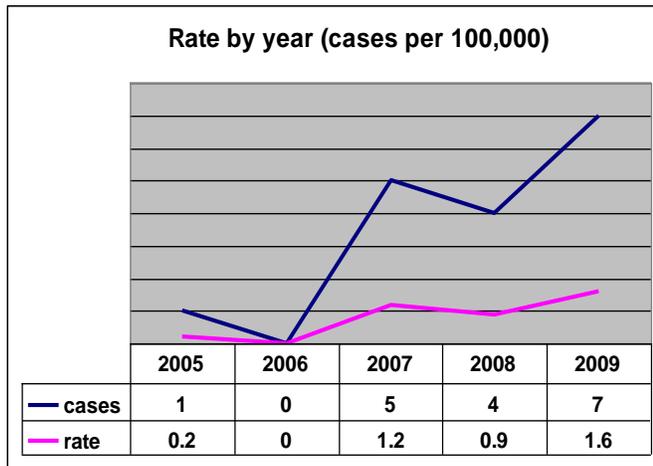
- Target prevention efforts to specific populations where infections are occurring
- Reduce spread of infection through identification and screening of partners
- Facilitate referral to appropriate care and other services

Epidemiology: Human immunodeficiency virus (HIV) is the virus that causes acquired immunodeficiency syndrome (AIDS). HIV can be spread through bodily fluids. The fluids include semen, vaginal secretions, and blood. Infection may occur by sexual contact with an infected person, by shared drug injection needles, or through an accidental needle stick with a needle contaminated with infected blood. Women with HIV infection can transmit the virus to their babies during pregnancy, delivery, or through their breast milk.

Clinical Aspects: Individuals with HIV infection may be completely symptom free for years. When symptoms are present, they are often varied depending on how long a person has been infected or if they are in the AIDS phase of the disease. Symptoms may include: swollen lymph nodes, fevers, chills, and night sweats, diarrhea, weight loss, coughing/shortness of breath, persistent tiredness, skin sores, blurred vision and headaches. HIV/AIDS infection can be treated with medications to alleviate or minimize the severity of the symptoms and to prolong life. However, there is no cure for HIV infection or AIDS.

Prevention: Do not have sexual contact with any persons (opposite or same-sex partners) unless you are sure they are free of HIV infection. This includes oral, anal, or vaginal contact of any type. Use a new latex condom each and every time you have any sexual contact, unless you are certain that your partner has had a negative HIV test result. If you inject drugs, seek treatment for it and do not ever share needles with others. Use only a new, clean needle each time you inject.

AMEBIASIS



Local surveillance indicates an upward trend since 2005, with the exception of the dips in cases in 2006 and 2008. This trend likely mirrors the increase of foreign-born refugees resettling in Ada County. During the spike in reported cases in 2007, 60% were due to immigrants, with 100% of these cases being female. In 2009, 80% of the reported cases were of indeterminate transmission. Consequently, it is not known whether the majority of the cases this year were foreign-born refugees. In 2009, 100% of the cases were once again female. The average age of the individuals was 27 years with the youngest case being 3 and oldest case being 75.

Purpose of Surveillance:

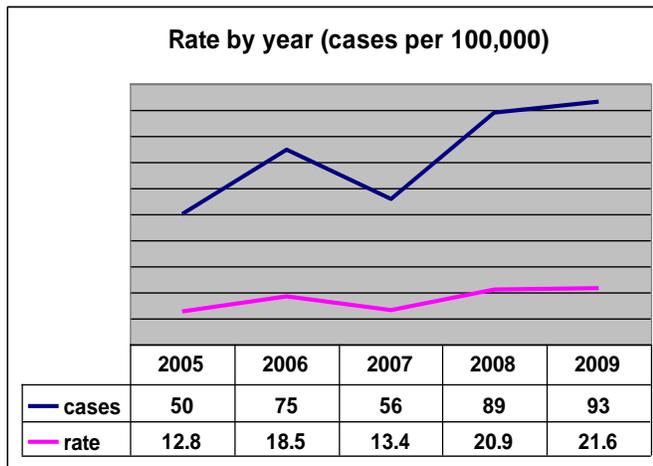
- To identify risk factors for amebiasis among residents of Health District 4.
- To guide in prevention measures

Epidemiology: Amebiasis is a disease caused by *Entamoeba histolytica* a one-celled parasite. In the United States, amebiasis is most often found in immigrants from or travelers to developing countries. It is also found in people who live in institutions that have poor sanitary conditions. Men who have sex with men can also be infected and can get sick from the infection even if they are often asymptomatic.

Clinical Aspects: On average, about one in 10 people who are infected with *E. histolytica* becomes sick from the infection. The symptoms often are quite mild and can include loose stools, stomach pain, and stomach cramping. Amebic dysentery is a severe form of amebiasis associated with stomach pain, bloody stools, and fever. Rarely, *E. histolytica* invades the liver and forms an abscess. Even less common, it can spread to other parts of the body to include the lungs and brain. Several antibiotics are available to treat amebiasis and require a prescription from a physician. Treatment regimen includes the use of one antibiotic if diagnosed with the infection but remain asymptomatic. A two antibiotic regimen (first one and then the other) is possible if the infection has caused illness.

Prevention: The risk of spreading infection is low if the infected person is treated with antibiotics and practices good personal hygiene. This includes thorough hand washing with soap and water after using the toilet, after changing diapers, and before handling food.

CAMPYLOBACTERIOSIS



Rates of campylobacteriosis increased significantly from 2007 to 2008 and remained high in 2009. Of the cases reported in 2009, 56% were female. The average age was 40 years old, with the youngest case being 1 and the oldest case being 87. Outbreaks of campylobacteriosis are rarely identified. This may account for no outbreaks being reported between 2005 and 2009. Due to increased prevalence of this disease in 2008 and 2009, the Idaho Bureau of Laboratories has implemented additional testing for campylobacter, called Pulse Field Gel Electrophoresis (PFGE). The goal is to determine whether the campylobacteriosis cases are genetically linked or if they are occurring as separate incidents.

Purpose of Surveillance:

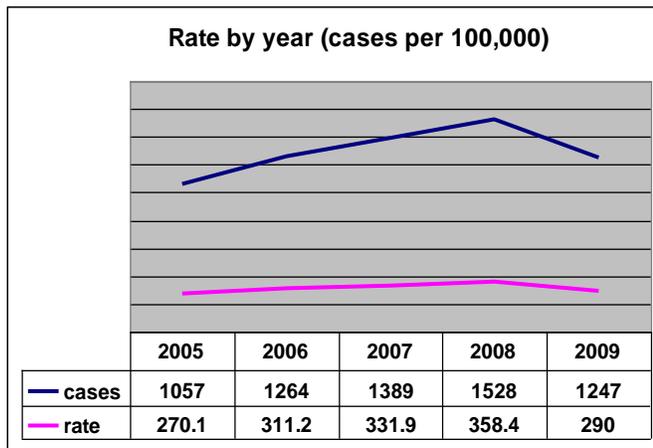
- To identify common source outbreaks
- To identify and eliminate sources of transmission including contaminated food and water

Epidemiology: Campylobacter are bacteria which can cause an infection of the intestines. It can be spread by eating contaminated food, especially improperly cooked poultry (chicken or turkey), or meat (beef, pork, lamb). It is also spread by uncooked food contaminated by cutting boards or knives which have been in contact with raw poultry or meat. Drinking unpasteurized milk or water contaminated with the bacteria, or contact with infected animals (especially pets such as puppies or kittens) is another source of infection.

Clinical Aspects: Common symptoms are diarrhea (which may contain blood or pus), abdominal pain, fever, nausea, and vomiting. Treatment includes fluid replacement and may require prescription antibiotics.

Prevention: Practice of good hand washing is the most important action. This is especially true after using the toilet or after changing dirty diapers. It is also important to wash after contact with animals, and after handling raw poultry and meat. Wash cutting boards and utensils with soap and hot water after contact with raw poultry and meat. Drink only pasteurized milk.

CHLAMYDIA



Data illustrates a steady increase in chlamydia reports from 2005 through 2008, where the case number peaks at 1528. Surveillance in 2009 indicated a slight decrease in chlamydia reports. This does not necessarily reflect a decrease in incidence. Chlamydia infections are one of the most commonly unreported diseases due to the absence of symptoms in most individuals. Even with this slight decrease in cases, chlamydia was still the number one most reported disease to CDHD in 2009.

Purpose of Surveillance:

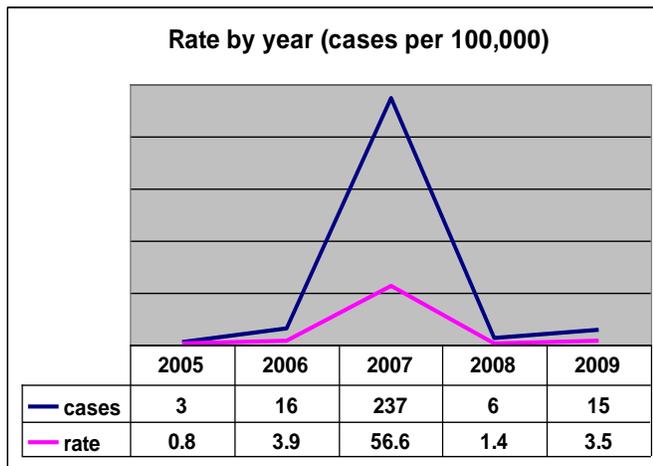
- To identify high risk populations for prevention activities
- To monitor trends in infection over time

Epidemiology: Chlamydia is the most common sexually transmitted disease (STD). It is caused by the bacterium, *Chlamydia trachomatis*, which can damage a woman's reproductive organs. Chlamydia can be transmitted during vaginal, anal, or oral sex. Chlamydia can also be passed from an infected mother to her baby during vaginal childbirth. Any sexually active person can be infected with chlamydia. The greater the number of sex partners, the greater the risk of infection.

Clinical Aspects: Chlamydia is known as a "silent" disease because approximately three quarters of infected women and about half of infected men have remain symptom free. If symptoms do occur, they usually appear 1 to 3 weeks after exposure. Women who have symptoms might have an abnormal vaginal discharge or a burning sensation when urinating. Men with signs or symptoms might have a discharge from their penis or a burning sensation when urinating. Chlamydia can be easily treated and cured with antibiotics. All sex partners of an infected person should be evaluated, tested, and treated.

Prevention: There is only two sure ways to avoid transmission of sexually transmitted diseases. The first is to abstain from sexual contact and the second is to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected. Latex male condoms, when used consistently and correctly, can reduce the risk of transmission of chlamydia.

CRYPTOSPORIDIOSIS



Local surveillance last year indicated a return to the endemic mean. A large outbreak in 2007 was associated with water exposures at local water parks, zero-depth water features and public swimming pools. Engineering controls were recommended by CDHD and implemented at many of the implicated locations, which resulted in a dramatic drop-off in new cases and subsequent return to “normal” incidence. Of the cases reported during the 2007 outbreak, 57% were female. The average age of cases reported in 2007 was 18 years of age with the youngest age being 1 year and the oldest age was 70. There were no fatalities reported during this outbreak. The 2007 outbreak involved a younger population than is typically seen with cryptosporidiosis. In 2006, the average age of cases reported was 27 years, and in 2009, the average age of cases reported was 34 years.

Purpose of Surveillance:

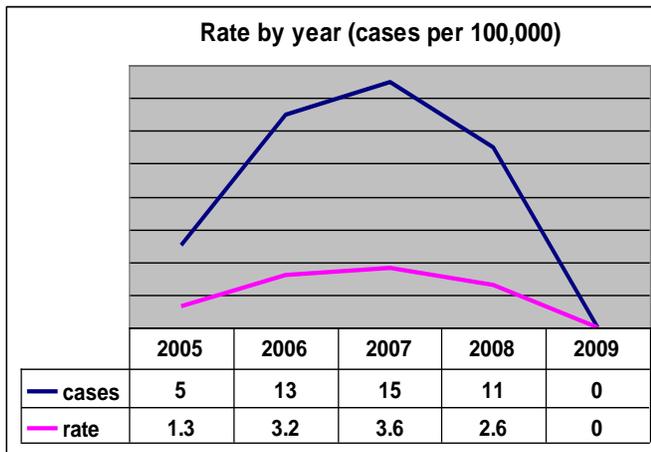
- To identify outbreaks
- To identify and eliminate sources of transmission including contaminated food and water

Epidemiology: Cryptosporidiosis ("Crypto") is a diarrheal illness caused by *Cryptosporidium parvum*, a microscopic parasite that lives in the intestines of infected humans and animals. A person can become infected by swallowing water from a contaminated source (rivers, lakes, swimming pool, etc.) Infection can also occur from eating uncooked food, especially unwashed vegetables or fruit, contaminated by *Cryptosporidium*. Additionally, oral/anal sexual contact with an infected person, or by coming in contact with contaminated surfaces (toys, bathroom fixtures, diaper changing tables, etc.) can cause infection.

Clinical Aspects: The most common symptoms are diarrhea (loose, watery stools), stomach cramps, nausea, vomiting, and fever. Symptoms may come and go. Many people may not develop symptoms at all. In healthy people symptoms usually last about 2 weeks. However, Cryptosporidiosis can be life threatening for infants and for persons with compromised immune systems. If severe or if the individual is compromised, treatment may require prescription medication from a physician such as Nitazoxanide (Alinia) the treatment of choice for Crypto.

Prevention: Handwashing with soap and water after using the toilet, changing diapers, or handling animals. Important to note that alcohol based hand sanitizers do not kill Crypto! Avoid swallowing water from lakes, rivers, streams, springs, irrigation canals, ponds, swimming pools, etc.,. Abstain from oral/anal sexual contact or use a latex barrier.

E. COLI O157:H7



It is interesting to note that no cases of *E. Coli* O157:H7 were reported in 2009. It might be that this is simply due to a failure in reporting the disease. From 2005 to 2008, 48% of reported cases were female and the average age of reported cases was 15 years. The youngest age was one and the oldest age was 55 years.

There was one national multi-state outbreak of *E. Coli* O157 identified in 2008, but none of those cases were in Idaho. Forty-nine confirmed infections were linked to this outbreak. As a result of this investigation, 531,707 pounds of ground beef and beef trimmings were recalled.

Purpose of Surveillance:

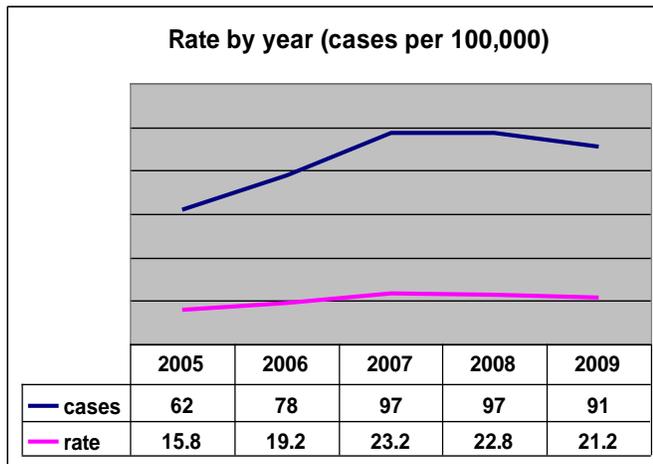
- To identify outbreaks
- To implement disease control measures to prevent spread of the infection
- To identify and eliminate sources of transmission including contaminated food and water

Epidemiology: A person can become infected with *E. coli* O157:H7 if they eat raw or undercooked beef (especially ground beef), by drinking unpasteurized (raw) milk. Contamination can also occur through eating unwashed fresh vegetables and fruits, unpasteurized fruit juices, or any food product eaten raw which may be contaminated by feces or manure used for fertilizer. *E. coli* O157:H7 bacterium is also found in the intestines of an infected person. They can in turn spread the infection if they do not wash their hands thoroughly after using the bathroom.

Clinical Aspects: Symptoms can range from mild, non-bloody diarrhea to severe diarrhea which is virtually all blood. Diarrhea is often accompanied by abdominal cramps (typically severe), nausea and vomiting. Less than 1/3 of patients have a fever. Complications such as kidney damage may occur. The first signs and symptoms can occur 2-8 days after being infected. Antibiotics are generally not recommended for uncomplicated cases of *E. coli* O157:H7 infection. It is important that symptomatic people drink fluids frequently to avoid dehydration.

Prevention: Infection can be prevented by practicing good cooking techniques and good hygiene. Thoroughly cook meats (especially ground beef) and thoroughly wash fresh fruits and vegetables in potable (clean) water. Ensure you wash your hands thoroughly with soap and water after having a bowel movement, diapering children, and before eating or preparing food. Do not swallow water from streams, lakes, irrigation ditches or swimming pools. Finally, remember to wash your hands after contact with pets, birds or livestock.

GIARDIASIS



Rates of giardiasis have remained relatively stable since 2007. There was a very slight decrease in cases reported in 2009. Over the last five years, approximately 50% of reported cases have been female and the average age of reported cases was 25 years. The oldest reported case was age 88 years and the youngest reported case was age 1 year.

Giardiasis was the fifth most reported disease in Health District 4 in 2009.

Purpose of Surveillance:

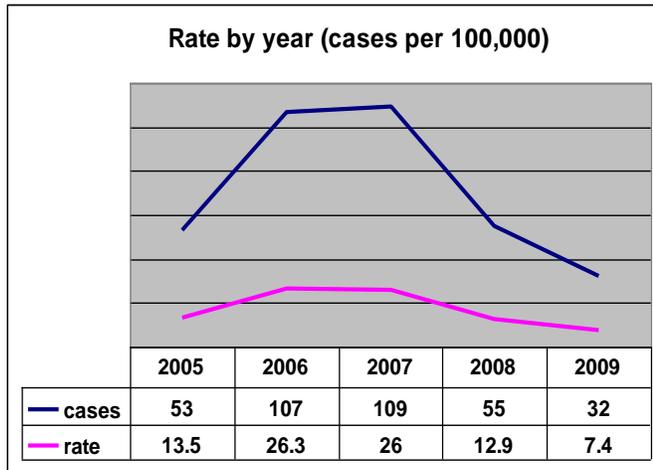
- To identify outbreaks
- To identify and eliminate sources of transmission including contaminated food and water

Epidemiology: Giardia is a parasite which causes an infection of the intestines. It can be spread by contact with the feces of an infected source. For example, a person may become contaminated while changing an infected baby's diapers. If they fail to wash thoroughly they can infect themselves by either placing their fingers or hands in their mouth. They may also spread the disease by handling objects or food with their contaminated hands. When the contaminated food or objects comes into contact with someone's mouth they can become infected. Another method of infection is through contact with contaminated drinking water. Water can be contaminated by human or animal feces (e.g., lakes, streams, irrigation ditches).

Clinical Aspects: Symptoms of giardia include abdominal cramps, diarrhea, gas, bloating, loss of appetite, and tiredness. Sometimes symptoms come and go. Often people don't have any symptoms. A person may become sick 3-25 days after infection. An appropriate medication prescribed by a physician can treat giardia.

Prevention: Giardia can be prevented through hand washing after using the toilet, before handling or eating food, and after handling soiled diapers. Prevention may also be accomplished by disinfecting objects in the environment which may have been soiled with feces (e.g., toilets, diaper changing tables, faucets, door knobs), and by boiling, chemically treating (iodine), or filtering drinking water when camping.

GONORRHEA



A drop-off in reported cases can be noted beginning in 2008 after relatively identical trends in 2006 and 2007. There are several reasons that may contribute to this decline such as, decrease in testing, decrease in reporting or a true decrease in incidence. Interestingly, trends show that gonorrhea tends to occur in waves with increases in incidence occurring every 8-10 years. Gonorrhea cases in 2009 continued with the decreasing trend, reaching their lowest point in the last 5 years. Even with the decreasing trend, it was still one of the top 10 most reported diseases to CDHD during 2009.

Purpose of Surveillance:

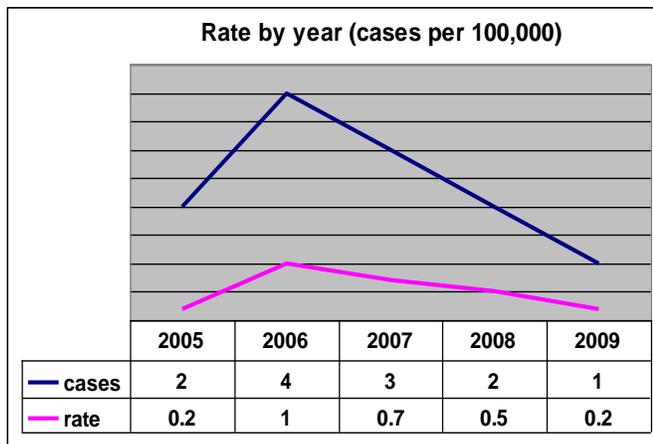
- To identify high risk populations for prevention activities
- To monitor trends in infection over time

Epidemiology: Gonorrhea is a sexually transmitted disease (STD). Gonorrhea is caused by *Neisseria gonorrhoeae*, a bacterium that can grow and multiply easily in the warm, moist areas of the reproductive tract. This includes the cervix (opening to the womb), uterus (womb), and fallopian tubes (egg canals) in women, and in the urethra (urine canal) in women and men. The bacterium can also grow in the mouth, throat, eyes, and anus. Gonorrhea is spread through direct contact with the penis, vagina, mouth, or anus. Ejaculation does not have to occur for gonorrhea to be transmitted or acquired. Gonorrhea can also be spread from mother to baby during delivery. Any sexually active person can be infected with gonorrhea. In the United States, the highest reported rates of infection are among sexually active teenagers, young adults, and African Americans.

Clinical Aspects: Although many men with gonorrhea may have no symptoms at all, some men have some signs or symptoms that appear two to five days after infection. Symptoms can take as long as 30 days to appear. Signs and symptoms in men include a burning sensation when urinating, or a white, yellow, or green discharge from the penis. Initial signs and symptoms in women may include a painful or burning sensation when urinating, increased vaginal discharge, or vaginal bleeding between periods. Symptoms on a woman may be so non-specific as to be mistaken for a bladder or vaginal infection. Several antibiotics can be used to successfully cure gonorrhea in adolescents and adults. However, drug-resistant strains of gonorrhea are increasing in many areas of the world, including the United States.

Prevention: The surest way to avoid transmission of sexually transmitted diseases is to abstain from sexual intercourse, or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected. Latex condoms, when used consistently and correctly, can reduce the risk of transmission of gonorrhea.

STREPTOCOCCUS (GROUP A), INVASIVE



Local surveillance revealed a steady decrease in the number of reported cases beginning in 2007. A spike in reported cases occurred in 2006, where 75% of the reported cases were hospitalized. Of the four cases reported in 2006, 75% were male. The average age of reported cases over this five-year period was 45 years. The youngest reported age was 21 years and the oldest reported age was 94. No fatalities have been reported for this disease in the last five years.

Purpose of Surveillance:

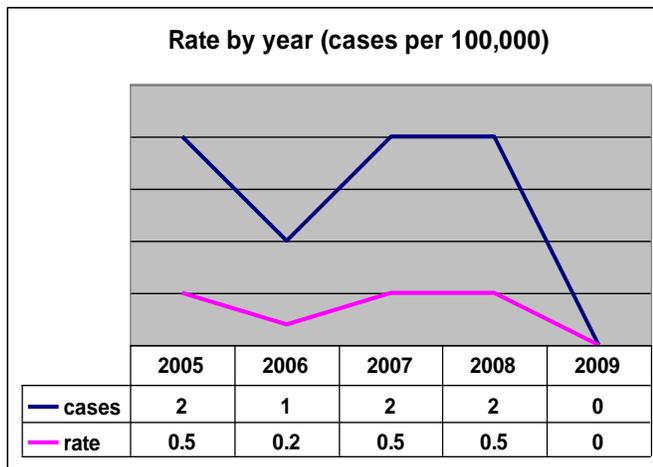
- To identify cases for investigation
- To identify contacts of persons with group A streptococcus for preventative measures

Epidemiology: *Streptococcus pyogenes* (group A streptococcus) is a bacterium often found in the throat and on the skin. These bacteria are spread through direct contact with mucus from the nose or throat of persons who are infected or through contact with infected wounds or sores on the skin. Infected persons are most likely source to spread the infection. Persons who carry the bacteria (carriers) but have no symptoms are much less contagious. Treating an infected person with an antibiotic for 72 hours or longer generally eliminates their ability to spread the bacteria.

Clinical Aspects: Infection can result in a wide degree of illness with a varied range of consequences. These can vary from no illness, to mild illness (strep throat or a skin infection such as impetigo), and even to severe illness (necrotizing fasciitis, or streptococcal toxic shock syndrome (STSS)). Early signs and symptoms of STSS include fever, dizziness, confusion, and a flat red rash over large areas of the body. Severe, sometimes life-threatening disease may occur when bacteria get into parts of the body where bacteria usually are not found, such as the blood, muscle, or the lungs. These infections are termed "invasive disease." Infections can be treated with many different antibiotics. Early treatment may reduce the risk of death from invasive group A streptococcal disease.

Prevention: The spread of all types of streptococcus group A infection can be reduced by good hand washing, especially after coughing and sneezing and before preparing foods or eating. Persons with sore throats should be seen by a doctor who can perform tests to find out whether the illness is strep throat. If the test result shows strep throat, the person should stay home from work, school, or day care until 24 hours after taking an antibiotic.

HAEMOPHILUS INFLUENZAE (Hib)



Cases of Hib have remained relatively low over the past 5 years despite a vaccine shortage from December 2008 to August 2009. Once the Hib vaccine became available in 2009, the number of reported cases fell to zero. The administration of the Hib vaccine is the best way to prevent infection. Between 2005 and 2008, 71% of cases were male. The average age of those infected was 28 years. The youngest age case was a newborn and the oldest case was 86 years. No fatalities have been reported over the last five years.

Purpose of Surveillance:

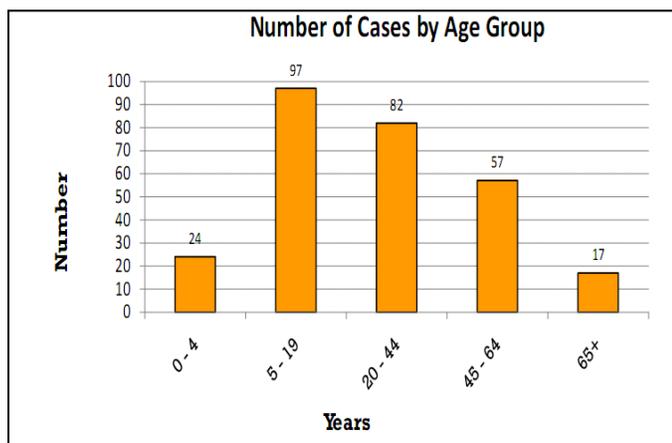
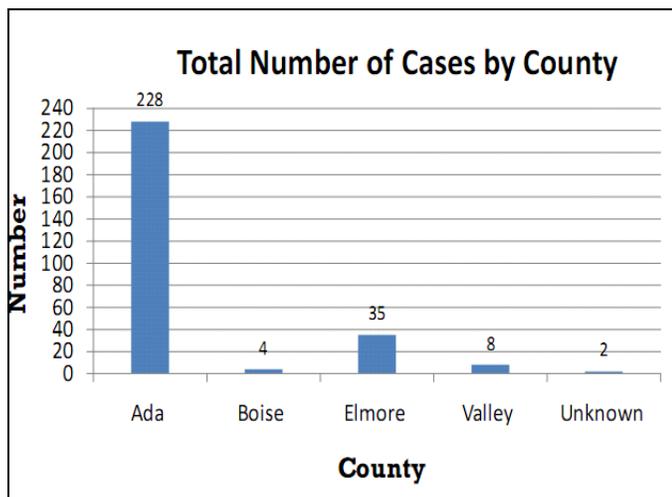
- To identify cases for investigation
- To identify contacts of persons with Hib infection, and assure administration of post-exposure prophylaxis

Epidemiology: *Haemophilus influenzae* type b disease, also called Hib disease, is an illness that can cause a potentially fatal brain infection in young children. Until recently, Hib disease was an important cause of serious, often deadly, infections in children under age 5. However, with the development and widespread use of vaccines against Hib, very few cases are now diagnosed. Hib disease is spread through contact with discharges or droplets from the nose or throat of an infected person. Hib disease can spread from person to person through sneezing, coughing, or speaking closely with an infected person. A person does not have to have symptoms to spread the bacterium.

Clinical Aspects: The most common and severe manifestation of Hib disease is meningitis (inflammation and swelling in the coverings of the brain and spinal cord). Symptoms of meningitis include fever, weakness, vomiting, and a stiff/painful neck. Hib can also cause infection of the lungs, blood, joints, bones, throat, and lining of the heart. Symptoms depend on the body part affected. Treatment with antibiotics should be started immediately to stop the infection from causing severe damage or death.

Prevention: Hib disease is preventable by immunizing all children under age 5 years with an approved Hib vaccine. Infants and young children who are exposed to a child with Hib disease can be given an antibiotic called rifampin to counter any possible contamination and prevent getting or spreading Hib.

H1N1 NOVEL INFLUENZA



In June of 2009, H1N1 was declared a pandemic by the World Health Organization. In Health District 4, over 270 cases H1N1 influenza were confirmed by laboratory testing through the end of 2009. The majority of cases in this outbreak occurred in October and early November 2009. Most cases (>30%) occurred in children 5 to 19 years of age. Of the confirmed cases, 124 were hospitalized with five deaths were attributed to H1N1 influenza infection. Through June 2010, 831 laboratory-confirmed H1N1 cases have been reported in Idaho; 57% were female and the median age of all case reports was 22 years (range: 1 month–96 years).

Purpose of Surveillance:

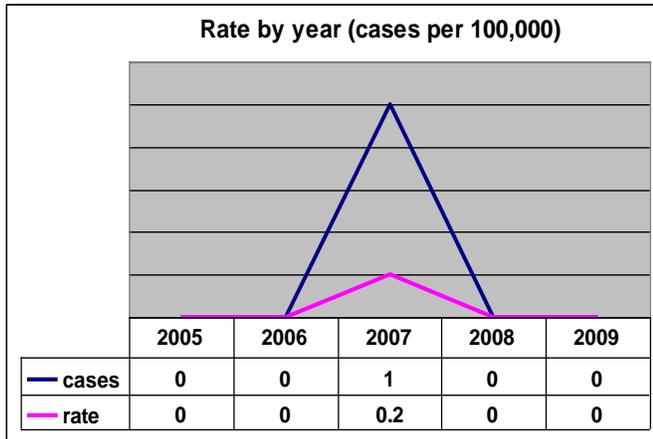
- To identify common source outbreaks
- To identify and eliminate sources of transmission

Epidemiology: H1N1 (sometimes called “swine flu”) is a new influenza virus causing illness in people. This new virus was first detected in people in the United States in April 2009 and is spreading from person-to-person worldwide. Spread of the 2009 H1N1 virus is thought to occur in the same way that seasonal flu spreads. Flu viruses are spread mainly from person to person through coughing, sneezing or talking by people with influenza.

Clinical Aspects: People who have the flu often feel some or all of these symptoms: fever, cough, sore throat, runny nose, muscle or body aches, headaches, fatigue, vomiting, and diarrhea. People with flu-like illness should stay at home (self isolate) except to get medical care or other necessities. This isolation should remain until at least 24 hours after they are free of a fever without having taken any medicines that lower fever. People in high risk groups should talk to their health care provider as soon as possible if they think they may have the flu. This high risk groups have a greater chance of getting serious flu complications that may be life threatening. Flu antiviral drugs can relieve symptoms, shorten the illness cycle, and prevent serious flu complications. This is especially the case if treatment is begun within 2 days of getting ill.

Prevention: For the upcoming season, there is a seasonal flu vaccine to protect against seasonal flu viruses and a 2009 H1N1 vaccine to protect against the 2009 H1N1 influenza virus. A flu vaccine is by far the most important step in protecting against flu infection.

HANTAVIRUS PULMONARY SYNDROME (HPS)



Hantavirus Pulmonary Syndrome is a relatively rare disease, with only one reported case in the last five years. This 2007 case was a 21-year-old male who was hospitalized for the illness, but survived.

Purpose of Surveillance:

- To identify sources of infection
- To facilitate diagnostic testing of suspected cases
- To facilitate environmental cleanup of rodent-infested areas where cases have occurred

Epidemiology:

Hantavirus Pulmonary Syndrome (HPS) is an often fatal respiratory illness caused by the hantavirus. Wild rodents, such as deer mice, are the main carriers of this deadly virus. A person can be exposed to hantavirus by coming in contact with the droppings or with things that have come in contact with, lived in, or eaten by a contaminated rodent. The virus can get into the air as mist from urine and saliva or dust from the droppings. Disturbing nests of rodents or sweeping up dry droppings can spread the virus through the air. Breathing in the virus is the most common way of becoming infected.

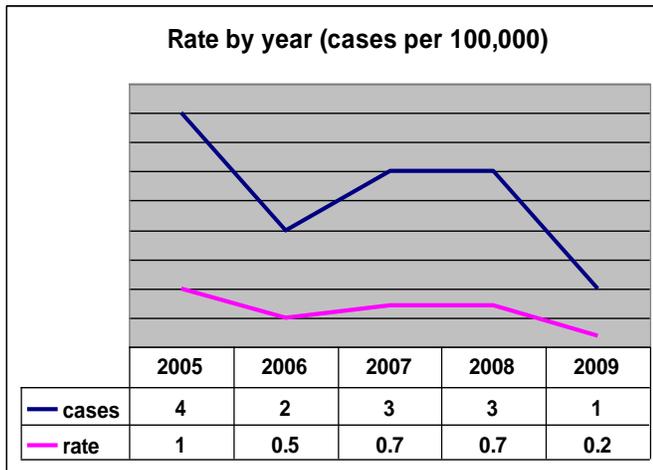
Clinical Aspects:

The first symptoms can be flu-like including: fatigue, a fever (101°-104° F); and muscle aches, especially the large muscle groups - thighs, hips, back, and sometimes shoulders (these symptoms are universal). There may also be headache; abdominal pain; sometimes nausea and vomiting. The most severe consequence of this disease is the effect on the respiratory system. Individual will experience difficulty breathing, which is caused by fluid build-up in the lungs and quickly progresses to an inability to breathe and may result in death. No vaccine against the virus is available. Treatment is geared towards the symptoms and providing respiratory support. The sooner after infection medical treatment is sought, the better the chance of recovery.

Prevention:

Avoid contact with rodents. Take steps to keep rodents away from your home and workplace. Remove food that attracts them and remove their nesting places. Be careful when cleaning places where mice have fed or nested. Take precautions when camping or staying outdoors.

HEPATITIS A



Reported cases of hepatitis A have remained relatively stable over the past five years. There was a decrease seen in the number of cases reported in 2009. Between 2005 and 2009, 62% of cases were male. The average age of infected individuals over this time span was 34 years of age. The youngest case was 7 years and the oldest was 78.

Purpose of Surveillance:

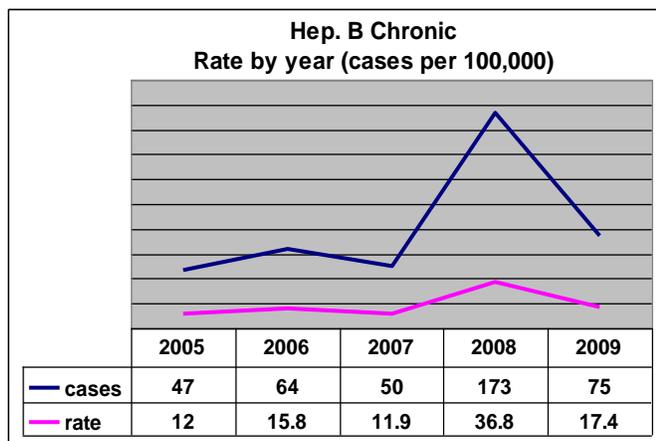
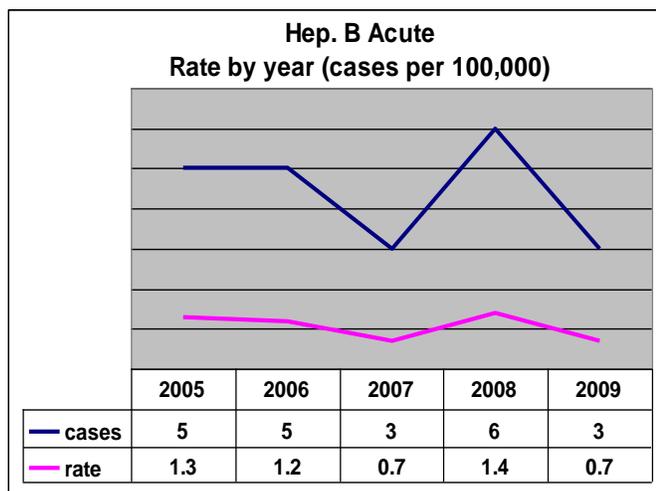
- To identify common source outbreaks
- To identify and eliminate sources of transmission including contaminated food and water

Epidemiology: Hepatitis A is an infection of the liver caused by Hepatitis A viruses. Hepatitis A viruses are found in the intestines of persons who are infected. The viruses leave the body in an infected person's feces. The virus can be spread if the infected person does not wash his/her hands after a bowel movement and their hands get contaminated. They can in turn contaminate anything else they touch. Hepatitis A can also be spread by having unprotected oral/anal sexual contact with an infected person. An individual with hepatitis A is contagious and can spread the virus from one to two weeks before any symptoms appear through one week after jaundice appears (or two weeks after first symptoms occurred).

Clinical Aspects: Hepatitis A can range from a mild illness with symptoms lasting one to two weeks to a serious illness that can require hospitalization. Some people may not get sick at all. Early symptoms can include tiredness, loss of appetite, nausea, vomiting, abdominal pain and aching. Later symptoms can include dark-colored urine, light-colored stool and jaundice (when the white of ones eyes or skin turn yellow). There is no specific treatment for Hepatitis A other then the treatment of symptoms and may require rehydration (fluid replacement).

Prevention: Use soap and warm water for thorough hand washing after toilet use or diapering children. Practice safe sex methods by using a barrier during oral/anal sexual contact. Food handlers, childcare workers, health care workers and residential care workers who provide personal care should not work until they are no longer contagious if they contract Hepatitis A. Idaho children 2 years of age and older should be immunized against hepatitis A.

HEPATITIS B



There were a greater number of reported cases of chronic hepatitis B than acute hepatitis B during this period of surveillance. Both types experienced a spike in cases in 2008. In 2009, even after a substantial decrease in reported cases compared to the previous year, chronic hepatitis B was still the sixth most common reported disease for the year. In 2009, 62% of cases of chronic hepatitis B were male. There were 53 infected individuals between the ages 31-40 years, making it the age group with the highest prevalence in 2009.

Purpose of Surveillance:

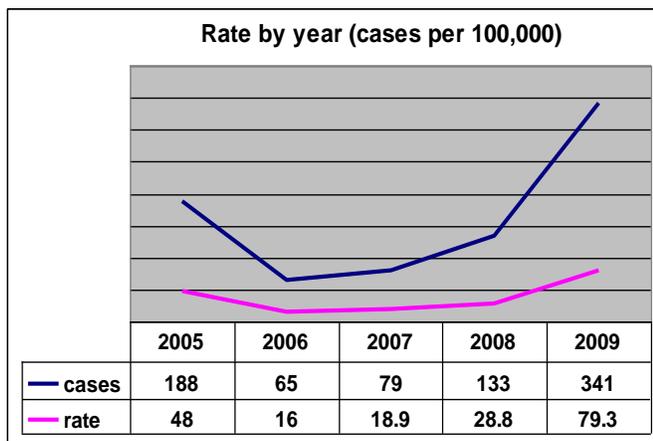
- To identify risk factors for hepatitis B infection
- To provide education to cases in order to minimize risk of transmission
- To identify contacts of cases for post-exposure prophylactic measures

Epidemiology: Hepatitis B is an infection of the liver caused by hepatitis B viruses. Nine out of ten people who get hepatitis B clear their infection and recover. However, the one out of the ten remain infected for life. This is what is referred to as "Chronic Hepatitis B" and usually results in them becoming "carriers." People who are hepatitis B carriers are at risk of cirrhosis (a hardening of the liver), liver failure, and liver cancer. Hepatitis B is spread through sexual contact and contact with blood of an infected person. This means that drug users sharing needles and/or drug injection equipment, having unprotected sex, or coming in contact with an infected person's open sore, blood or other body fluid are all methods of spreading the disease. Hepatitis B can also be spread to an infant by an infected mother.

Clinical Aspects: Individuals who are infected may have no symptoms. If symptoms do occur, they can range from mild to severe. Symptoms may include nausea, vomiting, loss of appetite, abdominal discomfort, fatigue, dark urine, and jaundice (yellow skin and eyes). An infected person typically becomes ill six weeks to six months (average is 8-12 weeks) after being infected.

Prevention: Hepatitis B can be prevented by receiving the hepatitis B vaccine which is given in a series of three shots. Practicing safe sex and using a condom consistently and correctly during sexual intercourse is also a good prevention practice. Preventive treatment at birth will protect almost all infants (95%) born to infected mothers.

HEPATITIS C, CHRONIC



Following a dip in reported cases in 2006 and 2007, rates began to increase, reaching the highest point in the last five years in 2009. Chronic hepatitis C was the third most commonly reported disease in 2009. Of the infected individuals in 2009, 73% of the cases were male. Of the 341 cases reported in 2009, 162 cases were between ages 41-50, making this the age group with the highest prevalence of infection.

Purpose of Surveillance:

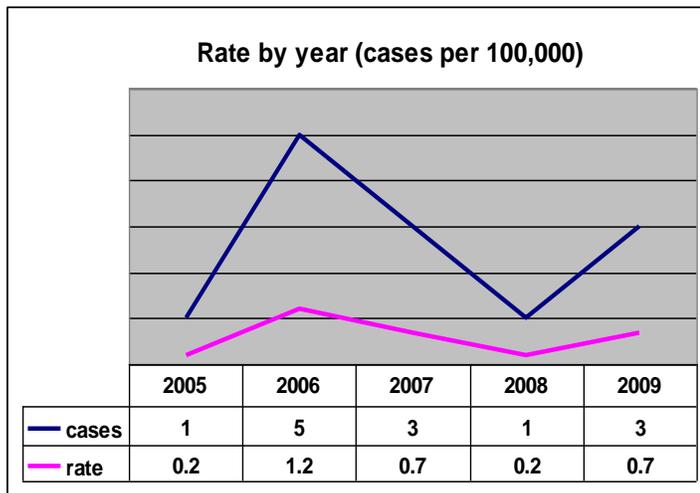
- To identify risk factors for Hepatitis C virus infection
- To identify and eliminate sources of transmission
- To provide education to cases in order to minimize risk of transmission

Epidemiology: Hepatitis C is an infection of the liver caused by hepatitis C viruses. Some people with hepatitis C are infected for a short time (acute phase) and are able to clear the infection. However, most people infected with hepatitis C remain infected for life (chronic). Long-term hepatitis C infection can lead to serious liver damage and even death. Hepatitis C viruses are primarily spread through contact with body fluids or blood.

Clinical Aspects: The majority of people have no symptoms when infected with hepatitis C. If a person does become ill, the symptoms can include nausea, vomiting, loss of appetite, abdominal discomfort, fatigue, dark urine, and jaundice (yellow skin and eyes). If illness does occur, the symptoms will appear two weeks to six months (average is 6-9 weeks) after being infected. Ribavirin and pegylated interferon are the drugs of choice for treatment of hepatitis C.

Prevention: Persons diagnosed with hepatitis C should not donate blood, blood products, organs, tissue, or semen. Do not share needles or drug injection equipment (including cocaine snorting implements), razors, toothbrushes, nail clippers, or other items that can become contaminated with body fluids. For persons with more than one sex partner, using a condom correctly and every time significantly reduces the spread of sexually transmitted diseases including hepatitis C.

LEGIONNAIRES' DISEASE



Three cases of legionellosis were reported in 2009. All cases were female and ranged in age from 45 to 73 years. All of these cases required hospitalization, but did not result in death. In general, most cases of legionellosis are sporadic, with no source identified.

Purpose of Surveillance:

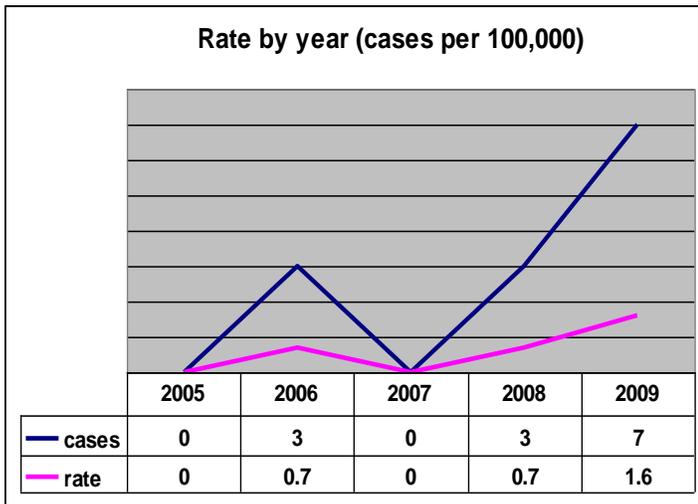
- To identify common source outbreaks
- To identify and eliminate preventable sources of transmission.

Epidemiology: The Legionella bacteria live naturally in the environment and usually in water. The bacteria grow best in warm water, so it can thrive in areas such as those found in hot tubs, cooling towers, hot water tanks, large plumbing systems, or in the air-conditioning systems of large buildings. People get Legionnaires' disease when they breathe in a mist or vapor (small droplets of water in the air) that has been contaminated with the bacteria.

Clinical Aspects: Signs of the disease can include a high fever, chills, and a cough. Some people may also suffer from muscle aches and headaches. Chest X-rays are needed to identify the pneumonia caused by the bacteria. Confirmatory laboratory testing can be done on sputum (phlegm), as well as blood or urine to find evidence of the bacteria in the body. Symptoms usually begin 2 to 14 days after being exposed to the bacteria. Most cases can be treated successfully with antibiotics.

Prevention: Since the bacteria thrive in warm stagnant water, regularly disinfecting ductwork, pipes, and other areas that may serve as breeding areas is the best method for preventing outbreaks. Extra precaution should be taken by people who have weak immune systems from diseases like cancer, diabetes, or kidney failure. People who take drugs to suppress the immune system (like after a transplant operation or chemotherapy) are also at higher risk.

LYME DISEASE



Since 1990, there have been fewer than 3 cases per year (on average) of Lyme disease reported in the entire State. Of these, less than 1 case a year was reported in Health District 4 (Ada, Boise, Elmore and Valley counties). This average was significantly surpassed in 2009 with seven cases reported in the district alone. This is well above the recent historical average. Of the cases in 2009, 57% were male with the average age reported being 43 years. The range was from 27 to 69 years old.

Purpose of Surveillance:

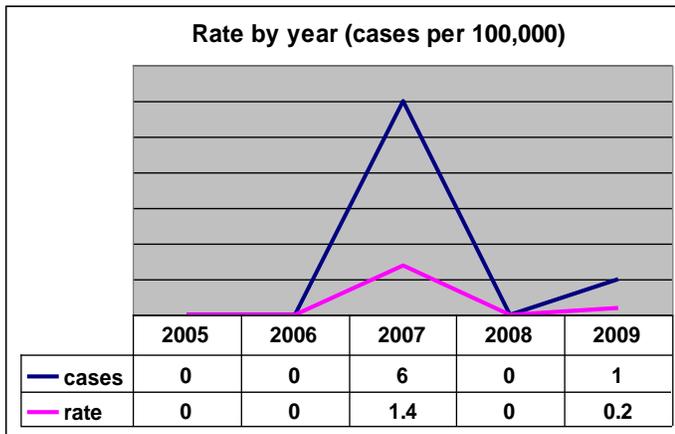
- To detect an increase in cases and investigate associated environmental risk factors
- To facilitate appropriate diagnostic testing and treatment for infected persons

Epidemiology: Lyme disease is an infection caused by *Borrelia burgdorferi* bacteria and can be spread by the bite of infected ticks of the genus *Ixodes*. The *Ixodes* tick is much smaller than common dog and cattle ticks. Ticks can attach to any part of the human body, but often go undetected in the more hidden and hairy areas such as the groin, armpits, and scalp.

Clinical Aspects: The early stage of Lyme disease is usually marked by one or more of the following symptoms and signs: fatigue, chills and fever, headache, muscle and joint pain, swollen lymph nodes, and a characteristic skin rash, called erythema migrans. This rash can be one of the first symptoms to appear and is described as a red circular patch at the site of the bite. Symptoms can appear within a few days to several weeks after infection. A physician may prescribe antibiotics to treat Lyme infection. Usually, patients treated in the early stages of Lyme disease recover rapidly and completely.

Prevention: Avoid tick-infested areas, especially in the spring and summer months. Wear long-sleeved shirts. Tuck pant legs into socks or boots and shirt into pants. Tape the area where pants and socks meet so that ticks cannot crawl under clothing. Spray insect repellent containing DEET on clothes and on exposed skin other than the face. Wear a hat for added protection.

MALARIA



All the cases of malaria in the district have been associated with travel outside the United States. There were six cases reported in 2007, with 50% requiring hospitalization. One case of malaria was reported in 2009. No fatalities were reported due to malarial illness. The average age of infected individuals in these two years was 27 years. The youngest case was 5 years of age and the oldest case was 73 years old.

Purpose of Surveillance:

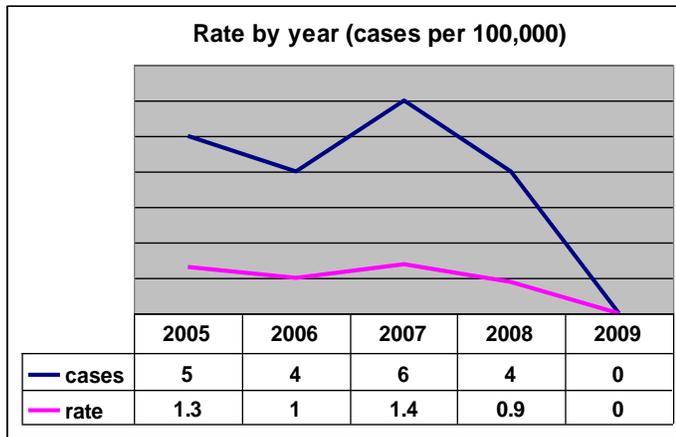
- To identify risk factors for malaria among residents of Health District 4.
- To guide in malaria prevention measures for travelers to malaria-endemic regions

Epidemiology: Malaria typically is found in the warmer tropical and subtropical regions of the world. Infection usually occurs from a bite from an infected female Anopheles mosquito. Since the malaria parasite is found in red blood cells, malaria can also be transmitted through blood transfusion, organ transplant, or the shared use of needles or syringes contaminated with blood. Malaria may also be transmitted from a mother to her fetus before or during delivery.

Clinical Aspects: Symptoms of malaria include fever and flu-like illness that may include shaking chills, headache, muscle aches, and tiredness. Nausea, vomiting, and diarrhea may also occur. There are several types of malaria with *Plasmodium falciparum* being of particular concern. If not promptly treated, this type may cause kidney failure, seizures, mental confusion, coma, and death. In most cases, symptoms begin 10 days to 4 weeks after infection, although illness may occur as early as 7 days or as late as 1 year later. Administration of antimalarial drugs during early stages of the disease has the best opportunity to minimize the severity and reduces the risk to a person's life.

Prevention: Visit your health care provider 4-6 weeks before foreign travel for any necessary vaccinations or needed prescriptions for an antimalarial drug. Take antimalarial drug exactly on schedule without missing doses. Wear long pants and long-sleeved clothing. Ensure the wear of insect repellent out of doors especially between dusk and dawn when the mosquito is most active. Insect repellent should contain DEET as its active ingredient.

MENINGITIS- VIRAL



There were no cases of viral meningitis in 2009 and only sporadic cases reported from 2005 to 2008.

Purpose of Surveillance:

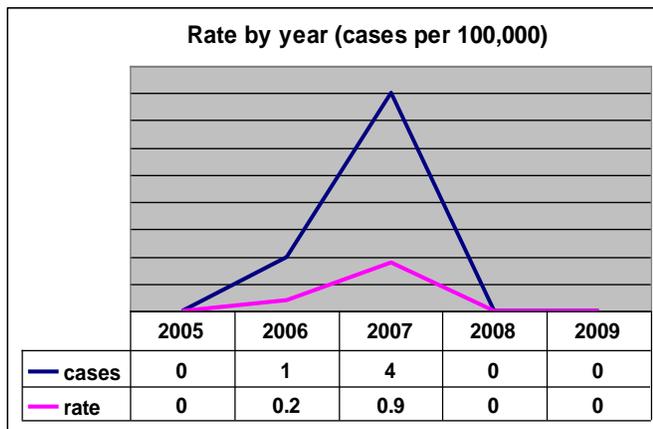
- To identify outbreaks and implement appropriate disease control measures
- To identify exposed persons for post-exposure prophylaxis to prevent the spread of infection

Epidemiology: Viral meningitis is an infection which results in swelling of the tissues covering the brain and spinal cord. Viral meningitis may be caused by several different viruses. The viruses are often spread through direct contact with respiratory secretions (e.g., saliva, sputum, or nasal mucus) which can be distributed through the air when an infected person coughs or sneezes. Viruses can also be found in the intestines of an infected person and can be shed in the stool (feces) when a person has a bowel movement. The viruses can then be spread by the infected person if the hands are contaminated when they use the toilet or after changing an infected baby's dirty diapers.

Clinical Aspects: Symptoms of meningitis may vary from person to person. Common symptoms include: sudden onset of fever, stiff neck, severe headache, loss of appetite, nausea, vomiting, diarrhea, sore throat, upper respiratory infection and aching muscles. Other symptoms may include photophobia (bright light hurts the eyes), drowsiness or confusion. In babies, the symptoms are more difficult to identify and may include fever, fretfulness or irritability, difficulty in awakening the baby or the baby refuses to eat. The first signs of illness usually occur 3 to 7 days after being infected. There is no specific curative treatment for viral meningitis.

Prevention: Cover the mouth and nose with disposable tissues when coughing or sneezing. Wash hands thoroughly after using the toilet or changing diapers. Don't share food, drinks, or eating utensils.

MUMPS



Mumps has become a rare disease as a result of the use of the Measles, Mumps, and Rubella (MMR) vaccine. However, in 2007, there was a spike with four cases reported. Of the four cases, 75% were male and the average age was 3 years. The cases ranged from ages 1 to 5 years. None of the cases required hospitalization, and no fatalities were reported.

Purpose of Surveillance:

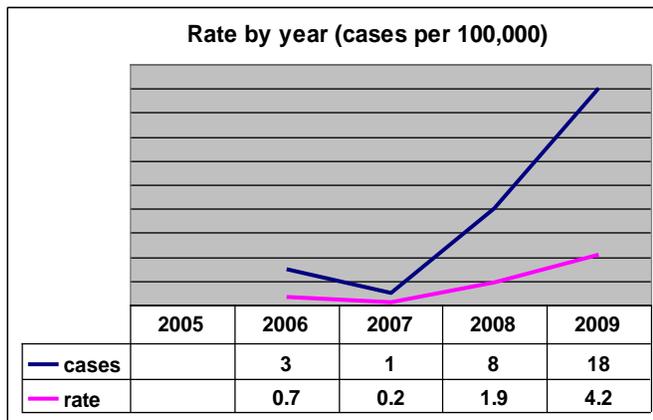
- To facilitate diagnostic testing for mumps
- To identify susceptible persons exposed to mumps in order to implement disease control measures
- To detect outbreaks

Epidemiology: Before the routine vaccination program was introduced in the United States, mumps was a common illness in infants, children and young adults. Vaccination has significantly reduced the incidence of mumps and it is now considered a rare disease in the United States. Mumps is usually spread when a person coughs or sneezes in the mucus or droplets from the nose or throat of an infected person.

Clinical Aspects: The most common symptoms are fever, headache, muscle aches, tiredness and loss of appetite. These symptoms are followed by onset of swollen and tender salivary glands under the ears-on one or both sides. Symptoms typically appear 16-18 days after infection, but can range from 12-25 after infection.

Prevention: Vaccination (MMR)), is the best way to prevent mumps. Other things people can do to prevent mumps and other infections are to practice and also teach children good hand washing with soap and water. Eating utensils should not be shared, and surfaces that are frequently touched (toys, doorknobs, tables, counters, etc) should be regularly cleaned with soap and water, or with cleaning wipes.

NOROVIRUSES



Local surveillance revealed a sharp increase in the number of norovirus cases in 2009. Of the 18 cases reported, 1 was classified a nosocomial infection, 4 were foodborne infections, and the remaining 13 were of unknown origin. Hospitalization was required for 17% of the reported cases, but no fatalities were reported. During this outbreak, 78% of cases were male. The average age was 55 years and the age range was from age 22 to 91 years. Noroviruses were the 10th most commonly reported disease in Heath District 4 in 2009.

Purpose of Surveillance:

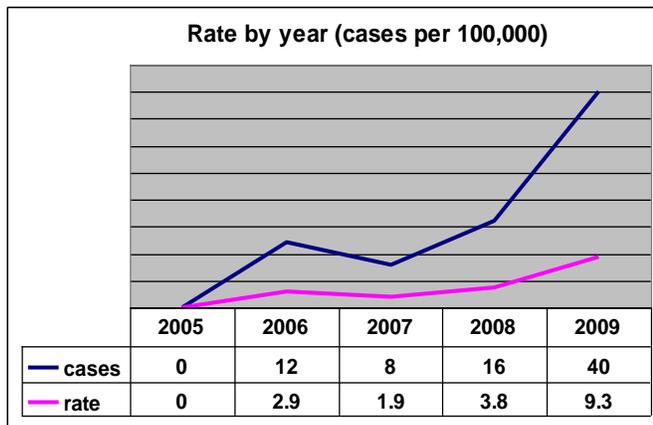
- To identify outbreaks
- To identify and eliminate sources of transmission

Epidemiology: Noroviruses are a group of viruses that cause gastro-intestinal illness in children and adults. Noroviruses are very contagious and can spread easily from person to person. People infected with norovirus are considered contagious from the moment they begin feeling ill to at least 3 days after recovery. Persons working in day-care centers or nursing homes should pay special attention to children or residents who have norovirus illness.

Clinical Aspects: Symptoms of norovirus illness usually begin about 24 to 48 hours after ingestion of the virus, but they can appear as early as 12 hours after exposure. Symptoms of norovirus illness usually include nausea, vomiting, diarrhea, and some stomach cramping. Additionally a low-grade fever, chills, headache, muscle aches, and a general sense of tiredness may be present. Currently, there is no antiviral medication that works against norovirus and there is no vaccine to prevent infection.

Prevention: Frequent hand washing, especially after toilet visits, changing diapers and before eating or preparing food is the best prevention. Persons who are infected with norovirus should not prepare food while they have symptoms and for 3 days after they recover from their illness. Food that may have been contaminated by an infected person should be disposed of properly.

PERTUSSIS (WHOOPING COUGH)



Rates of pertussis have been on the rise since 2005. In 2008 and 2009, over 50 cases of pertussis were reported. These cases were primarily in middle and high school students in Ada and Elmore Counties. Of the 40 cases reported in 2009, 58% of these were female and the average age of reported cases was 22 years. The youngest case was 1 year old and the oldest case was 80 years. There were no pertussis fatalities reported during the 2008-2009 outbreak. Pertussis was the eighth most commonly reported disease in Health District 4 in 2009.

Purpose of Surveillance:

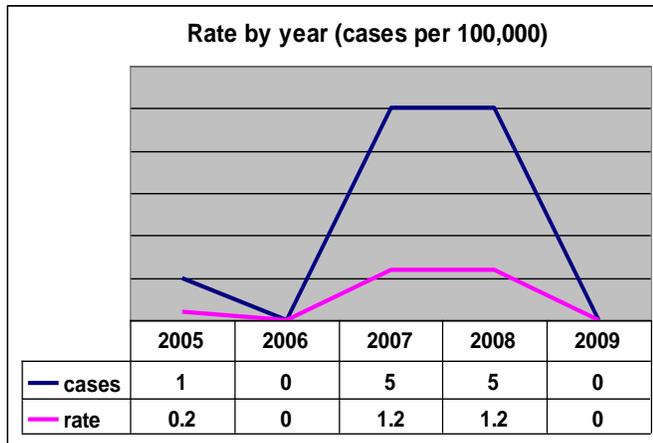
- To identify outbreaks and implement disease control measures
- To prevent transmission of pertussis to persons at high risk

Epidemiology: Pertussis is a highly contagious respiratory disease caused by bacteria found in the nose and throat. Pertussis bacteria are spread from person-to-person through the air by coughing or sneezing, sharing food, sharing eating utensils, sharing drinks, or kissing.

Clinical Aspects: Pertussis usually begins with cold-like symptoms that include sneezing, runny nose, a mild cough and low-grade fever. The cough will steadily increase and become severe. Often a person has attacks or spasms of coughing. The coughing may cause a person to vomit, cough up mucous, or lose his/her breath. Coughing may continue for weeks or months. On occasion, the cough is described as a crowing sound (whoop) when drawing a breath after severely coughing. Antibiotics, usually erythromycin, azithromycin or clarithromycin are effective in treating pertussis.

Prevention: Vaccination is the most effective way preventing the disease. Ensure children are appropriately immunized. Wash your hands frequently and thoroughly.

PNEUMOCYSTIS CARINII PNEUMONIA (PCP)



PCP used to be called *Pneumocystis carinii* but scientists renamed it *Pneumocystis jiroveci*. Local surveillance in 2007 and 2008 revealed an increase in PCP reported cases. During this two-year period, 70% of reported cases were male. The average age of those infected with PCP was 60 years and ranged from age 28 to age 78 years.

Purpose of Surveillance:

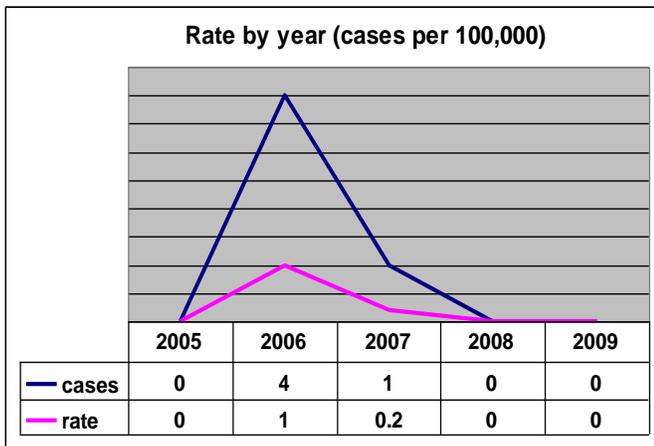
- To identify cases of infection
- To facilitate treatment of PCP

Epidemiology: Pneumocystis pneumonia (PCP or pneumocystis) is caused by a fungus. A healthy immune system can control the fungus. However, PCP causes illness in children and in adults with a weakened immune system. This type of pneumonia is the most common opportunistic infection in people with HIV. Without treatment, over 85% of people with HIV would eventually develop PCP.

Clinical Aspects: Pneumocystis affects the lungs, causing a form of pneumonia. The first signs of PCP are difficulty breathing, fever, and a dry cough. TMP/SMX (Bactrim® or Septra®) is the most effective anti-PCP drug. It's a combination of two antibiotics: trimethoprim (TMP) and sulfamethoxazole (SMX).

Prevention: The best way to prevent PCP is to use strong antiretroviral therapy (ART). People who have less than 200 CD4 cells can prevent PCP by taking the same medications used for PCP treatment.

ROCKY MOUNTAIN SPOTTED FEVER (RMSF)



Cases of Rocky Mountain Spotted Fever (RMSF) are quite rare in Health District 4. There have only been five cases reported in the last five years, four of which were reported in 2006. No fatalities were reported.

Purpose of Surveillance:

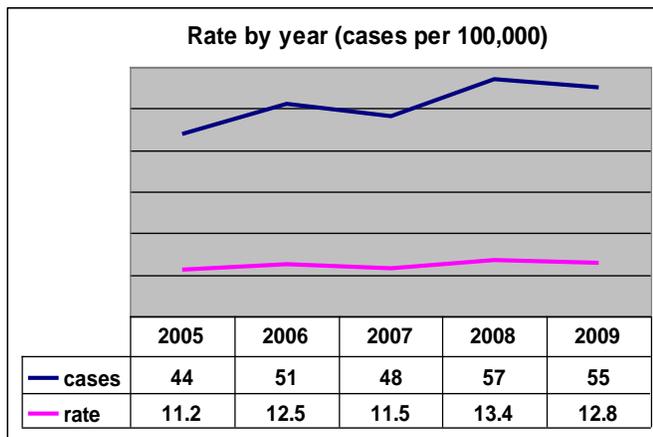
- To identify risk factors for infection
- To identify locally occurring cases

Epidemiology: Rocky Mountain spotted fever (RMSF) is the most severe tick-borne rickettsial illness in the United States. This disease is caused by infection with the bacterial organism *Rickettsia rickettsii*. The organism is transmitted by the bite of an infected tick. The American dog tick and Rocky Mountain wood tick are the primary arthropods (vectors) which transmit RMSF bacteria in the United States. RMSF is a seasonal disease and occurs throughout the United States during the months of April through September. Over half of the cases occur in the South-Atlantic region of the United States.

Clinical Aspects: The early symptoms are often nonspecific and may resemble many other infectious and non-infectious diseases. Initial symptoms may include fever, nausea, vomiting, muscle pain, lack of appetite and severe headache. Later signs and symptoms include rash, abdominal pain, joint pain, and diarrhea. Rocky Mountain spotted fever is usually treated with doxycycline. Patients are treated for at least 3 days after the fever subsides and until there is unequivocal evidence of improved health. Standard duration of treatment is 5 to 10 days.

Prevention: Limiting exposure to ticks reduces the likelihood of infection with Rocky Mountain spotted fever. In persons exposed to tick-infested habitats, prompt careful inspection and removal of crawling or attached ticks is an important method of preventing disease.

SALMONELLA



Rates of salmonella have remained relatively consistent over the past five years, with an average of 51 cases reported each year. In 2009, 60% of reported cases were female. The average age of infected individual was 31 years with the youngest case being 1 year old and the oldest 84 years old. No fatalities due to salmonella were reported in the last five years. Salmonella was the seventh most commonly reported disease in Health District 4 in 2009.

Purpose of Surveillance:

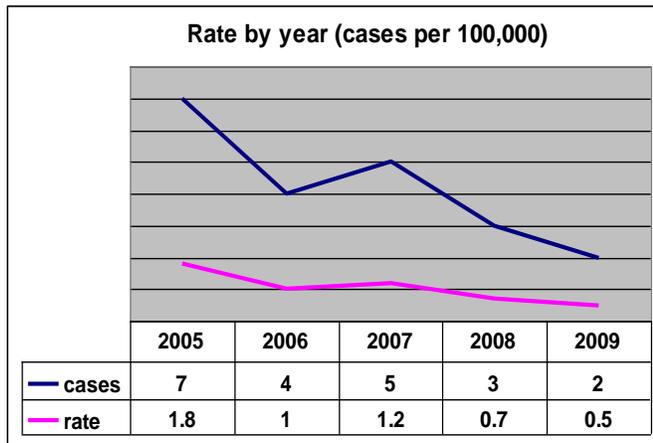
- To identify common source outbreaks
- To identify and eliminate sources of transmission including contaminated food and water

Epidemiology: Salmonella bacteria are found in the intestines of infected persons or animals. The illness can be spread through contact with the feces of contaminated sources. If a person does not wash their hands well after a bowel movement, after changing diapers or handling infected pets, their hands may be contaminated with bacteria. This in turn can contaminate food, toys, or other objects which may lead to infection in others. Raw and undercooked eggs, undercooked poultry, beef or pork, and unpasteurized (raw) milk are all sources of salmonella.

Clinical Aspects: Salmonella infection may produce headache, diarrhea, abdominal cramps, nausea and vomiting. Fever is usually present. Dehydration (loss of body fluids) may be severe, especially among infants or the elderly. As a rule, antibiotics are not prescribed if Salmonella is laboratory confirmed.

Prevention: Thorough hand washing with soap and water. Do not eat raw or undercooked eggs or consume unpasteurized (raw) dairy products. Thoroughly cook all meat and poultry products. Thoroughly rinse/wash all fruits and vegetables in potable (clean) water. Use a vegetable brush to completely clean unpeeled vegetables. Avoid cross-contamination of utensils and food preparation surfaces. Do not use the same knives or cutting boards for raw meats and vegetables. Thoroughly clean all utensils and preparation surfaces.

SHIGELLA



Local surveillance revealed a steady decline in the number of cases of shigella reported over the last five years with a slight spike noted in 2007. Over the past five years, the average age of reported cases was 28 years of age. The age ranged from age 1 to age 71, and 62% were male. No fatalities have been reported during this surveillance period.

Purpose of Surveillance:

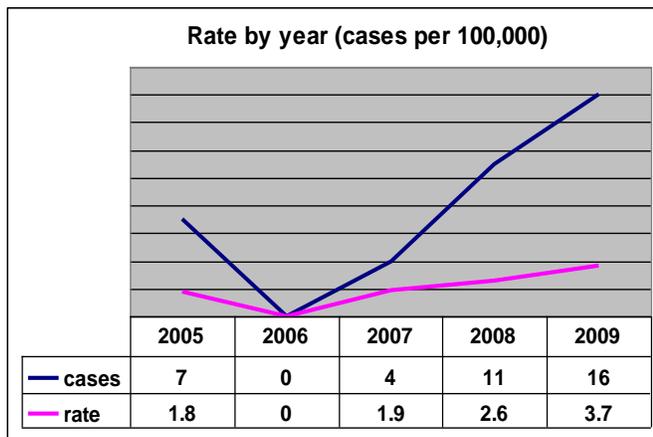
- To identify common source outbreaks
- To identify and eliminate sources of transmission including contaminated food and water

Epidemiology: Shigella is found in the intestines of infected persons. The illness can be spread through contact with the feces of contaminated person if they fail to wash their hands well after a bowel movement. An infected person is able to spread shigella from the time they first get sick until about one month after the symptoms began.

Clinical Aspects: Symptoms of shigella include diarrhea (sometimes with blood or mucus), fever, nausea, abdominal cramps, sometimes vomiting, and dehydration. Illness usually occurs from 1/2 - 7 days after infection. Antibiotics are used in the treatment of shigella.

Prevention: Thorough hand washing with soap and water. Disinfect things which may have been contaminated with feces such as the toilet, diaper changing table, faucets, door knobs, refrigerator door handle, toys, etc.

SYPHILIS



Local surveillance revealed five cases of syphilis reported in 2005 followed by no cases the following year. This drastic dip could be the result of a decrease in reporting during 2006. There has been a substantial increase in syphilis rates following 2006. In 2009, 16 cases of syphilis were reported, making it the highest incidence of syphilis in the last 5 years.

Purpose of Surveillance:

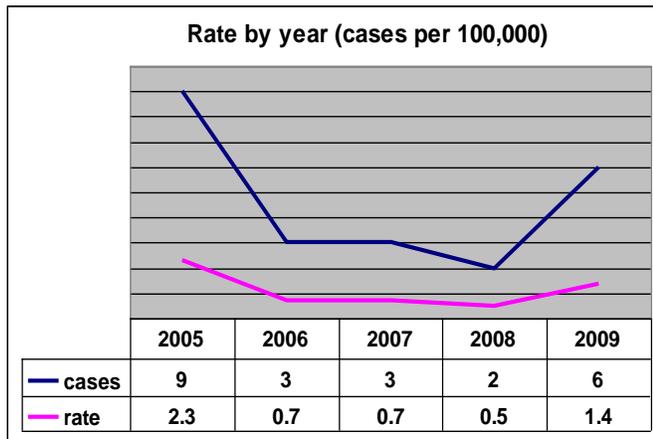
- To identify high risk populations for prevention activities
- To monitor trends in infection over time

Epidemiology: Syphilis is a sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. Syphilis is passed from person to person through direct contact with a syphilis sore. Sores occur mainly on the external genitals, vagina, anus, or in the rectum. Lesions may also occur on the lips and in the mouth. Transmission of the organism usually occurs during vaginal, anal, or oral sex.

Clinical Aspects: Many people infected with syphilis do not have any symptoms for years, yet remain at risk for late complications if they are not treated. The primary stage of syphilis is usually marked by the appearance of a single sore (called a chancre), but there may be multiple sores. The time between infection with syphilis and the start of the first symptom can range from 10 to 90 days. The secondary stage typically starts with the development of a rash on one or more areas of the body. In the late stages of syphilis, it may subsequently damage the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. This internal damage may show up many years after initial infection. Signs and symptoms of the late stage of syphilis include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, and dementia. This damage may be serious enough to cause death. Syphilis is easy to cure in its early stages. A single intramuscular injection of penicillin, an antibiotic, will cure a person who has had syphilis for less than a year. Additional doses are needed to treat someone who has had syphilis for longer than a year.

Prevention: The surest way to avoid transmission of sexually transmitted diseases, including syphilis, is to abstain from sexual contact or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected. Correct and consistent use of latex condoms can reduce the risk of syphilis.

TUBERCULOSIS (TB)



The number of reported cases of tuberculosis (TB) has risen slightly following a relatively steady three-year dip in cases from 2006-2008. In 2009, the incidence of TB was 65% in males and approximately 50% of the cases were foreign born. The average age of reported cases was 54 years, ranging from age 13 to age 79. TB data from 1995-2009 indicate that approximately 21.1% of TB cases have a history of substance abuse, 7.9% have a history of incarceration, and 21.1% have a history of homelessness.

Purpose of Surveillance:

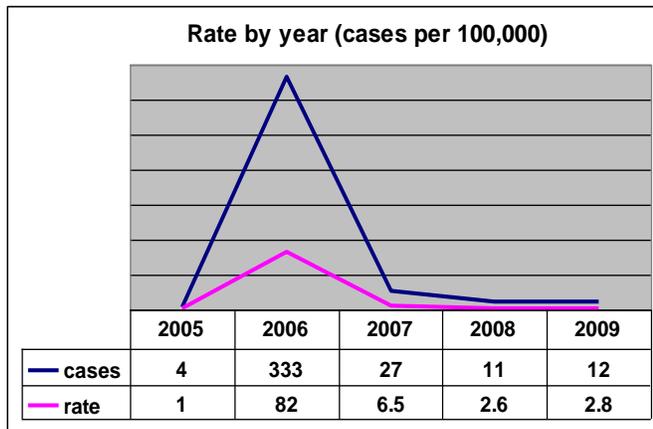
- To ensure that persons with active TB are identified and fully treated
- To ensure that contacts of persons with infectious TB are screened and offered appropriate preventative therapy
- To monitor the trend of TB in Health District 4.

Epidemiology: Tuberculosis (TB) is an infection, usually of the lungs, by bacteria called *Mycobacterium tuberculosis*. TB bacteria spread through the air when a person with active TB disease coughs, sneezes, shouts, or even sings. When other people breathe these bacteria into their lungs, they become infected.

Clinical Aspects: Most people infected with TB have no symptoms. This is considered a latent TB disease. About 1 in every 10 infected people become ill and their symptoms include a cough (often with blood), fever, fatigue, night sweats, and weight loss. This is known as an active TB disease. Individual with latent TB may develop some symptoms within the first year or two after infection, although people may become sick decades after being infected. People with active TB disease will take a 6-12 month course of up to four different antibiotics.

Prevention: The risk of being infected is low and usually requires close contact, indoors, for a prolonged time to become infected. Those who have experienced close and prolonged contact should have a TB skin test. If the initial test is negative, exposed persons should repeat the TB skin test 3 months after the last time they were exposed.

WEST NILE VIRUS (WNV)



In 2006, over 300 cases of West Nile Virus (WNV) infection were reported. The outbreak resulted in a variety of illnesses that included West Nile fever, encephalitis, meningitis and meningoencephalitis. A reported 56% of cases were female and the average age of those infected was 48 years. Four fatalities were confirmed during this outbreak. While the number of reported cases dropped significantly after the 2006 outbreak, there were two fatalities reported during 2009. The first fatality was an 82-year-old male and the other being a 92-year-old male.

Purpose of Surveillance:

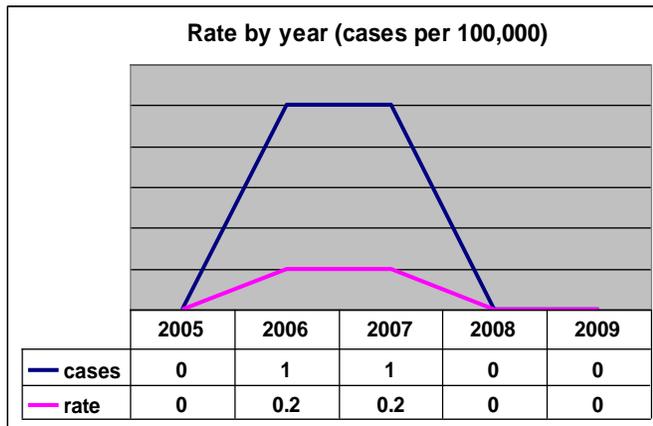
- To detect an increase in cases and investigate associated environmental risk factors

Epidemiology: The WNV lives in infected birds and is spread by mosquitoes. Mosquitoes become infected when they feed on infected birds. The mosquito can then transmit the virus to humans and other animals through their bite. Once in the bloodstream, the virus may multiply and cause illness. There is some evidence that WNV infection can be transmitted from an infected person to another person during a blood transfusion or from an infected mother to her baby during pregnancy.

Clinical Aspects: Approximately 80% of WNV infections are mild and may go undetected. Approximately 20% of WNV infections will result in West Nile fever, an illness characterized by fever, headache, body aches, and occasionally skin rash and swollen lymph glands. Serious complications of WNV infection include encephalitis or other neuroinvasive disease. Symptoms can include severe headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death. There is no specific treatment for WNV infection other than supportive therapy.

Prevention: Avoid mosquito bites to prevent infection. Be extra vigilant between dusk and dawn when mosquitoes primarily feed. Wear long-sleeved shirts and long pants whenever you are outdoors and mosquitoes are around. Spray clothing with repellents containing permethrin or DEET to avoid mosquitoes biting through thin clothing. Apply insect repellent sparingly to exposed skin. An effective repellent for adults should contain 30% to 35% DEET. DEET in concentrations higher than 35% does not provide additional protection. Eliminate standing or stagnant water in discarded tires, tubs, etc. where mosquitoes breed.

YERSINIOSIS



Yersiniosis is a rare disease with only two reported cases in Health District 4 in the last five years. The 2006 case was a 19-year-old male whose source of infection was not determined. The 2007 case involved a 27-year-old female who was infected via contaminated food. Neither of the two cases required hospitalization.

Purpose of Surveillance:

- To identify common source outbreaks
- To identify and eliminate sources of transmission

Epidemiology: Yersiniosis is an infectious disease caused by a bacterium of the genus *Yersinia*. Infection with *Y. enterocolitica* occurs most often in young children. Infection usually occurs after eating or drinking contaminated items. Sources include raw or undercooked pork products, unpasteurized milk or untreated water. Occasionally *Y. enterocolitica* infection occurs after contact with infected animals.

Clinical Aspects: Common symptoms in children are fever, abdominal pain, and diarrhea, which is often bloody. Symptoms typically develop 4 to 7 days after exposure and may last 1 to 3 weeks or even longer. In older children and adults, right-sided abdominal pain and fever may be the predominant symptoms, and may be misdiagnosed as appendicitis. In a small proportion of cases, complications such as skin rash, joint pains, or spread of bacteria to the bloodstream can occur. Uncomplicated cases of diarrhea due to *Y. enterocolitica* usually resolve on their own without antibiotic treatment. However, in more severe or complicated infections, antibiotics may be required.

Prevention: Avoid eating raw or undercooked pork. Consume only pasteurized milk or milk products. Wash hands with soap and water before eating and preparing food, after contact with animals, and after handling raw meat. After handling raw chitterlings, clean hands and fingernails scrupulously with soap and water before touching infants or their toys, bottles, or pacifiers. In fact, someone other than the food handler should care for children while chitterlings are being prepared. Prevent cross-contamination in the kitchen: use separate cutting boards for meat and other foods and carefully clean all cutting boards, counter-tops, and utensils with soap and hot water after preparing raw meat.

REQUIREMENTS FOR REPORTABLE AND RESTRICTABLE DISEASES AND CONDITIONS

Reportable or Restrictable Diseases and Conditions	Reporting Timeframe	Restrictable for DC = Day Care FS = Food Service HC = Health Care Facility S = School	Which Facilities Must Report in Addition to Health Care Providers, Laboratory Directors, & Hospital Administrators
Acquired Immunodeficiency Syndrome (AIDS)	Within 3 work days	None	
Amebiasis	Within 3 work days	DC, FS, HC	
Botulism	Immediately	None	
Brucellosis (Brucella species)	Within 1 work day	None	
Campylobacteriosis	Within 3 work days	DC, FS, HC	Food Service Facility
Cancer	Report to Cancer Data Registry of Idaho within 180 days of diagnosis or recurrence	None	
Chancroid	Within 3 work days	None	
<i>Chlamydia trachomatis</i> infection	Within 3 work days	HC	
Cholera	Within 1 work day	DC, FS, HC	Food Service Facility
Cryptosporidiosis	Within 3 work days	DC, FS, HC	
Diphtheria	Immediately	DC, FS, HC, S	School
Disease of Suspected Bioterrorism Origin:			
 Anthrax	Immediately	None	
 Smallpox	Immediately	DC, HC, S	School
Encephalitis, Viral or Aseptic	Within 3 work days	None	
Enterohemorrhagic <i>E. coli</i>, including <i>E. coli</i> O157:H7 infection	Within 1 work day	DC, FS, HC	Food Service Facility School
Extraordinary Occurrence of illness, including Clusters	Within 1 work day	None	
Food Poisoning, Foodborne Illness, and Waterborne Illness	Within 1 work day	None	
Giardiasis	Within 3 work days	DC, FS, HC	Food Service Facility
Gonorrhea	Within 3 work days		
<i>Haemophilus influenzae</i> invasive disease	Within 1 work day	DC, S	School
Hantavirus Pulmonary Syndrome	Within 1 work day	None	
Hemolytic Uremic Syndrome	Within 1 work day	None	
Hepatitis A	Within 1 work day	DC, FS, HC	Food Service Facility
Hepatitis B	Within 1 work day	None	
Hepatitis C (acute and chronic)	Within 3 work days	None	
Human immunodeficiency virus (HIV) infection	Within 3 work days	None	

REQUIREMENTS FOR REPORTABLE AND RESTRICTABLE DISEASES AND CONDITIONS, continued			
Reportable or Restrictable Diseases and Conditions	Reporting Timeframe	Restrictable for DC = Day Care FS = Food Service HC = Health Care Facility S = School	Which Facilities Must Report in Addition to Health Care Providers, Laboratory Directors, & Hospital Administrators
Human T-Lymphotropic Virus	Within 3 work days	None	
Lead Levels of Ten Micrograms or more per Deciliter of whole blood	Within 3 work days	None	
Legionellosis	Within 3 work days	None	
Leprosy	Within 3 work days	None	
Leptospirosis	Within 3 work days	None	
Listeriosis	Within 3 work days	None	
Lyme Disease	Within 3 work days	None	
Malaria	Within 3 work days	None	
Measles	Within 1 work day	DC, HC, S	School
Meningococcal disease	Within 3 work days	None	
Mumps	Within 3 work days	DC, HC, S	School
Myocarditis, Viral	Within 3 work days	None	
Norovirus	Within 1 work day	DC, FS, HC, S	
Pertussis	Within 1 work day	DC, HC, S	School
Plague	Immediately	HC, S	School
Poliomyelitis	Within 1 work day	DC	School
Psittacosis	Within 3 work days	None	
Q Fever	Within 1 work day	None	
Rabies	Immediately	None	
Relapsing Fever	Within 3 work days	None	
Respiratory Syncytial Virus (RSV)	Within 1 work day	None	Note: Only Laboratory Directors need to report.
Reye's Syndrome	Within 3 work days	None	
Rocky Mountain Spotted Fever	Within 3 work days	None	
Rubella	Within 1 work day	DC, HC, S	School
Salmonellosis	Within 1 work day	DC, FS, HC	Food Service Facility
Severe Reaction to Any Immunization	Within 1 work day	None	
Shigellosis	Within 1 work day	DC, FS, HC, S	Food Service Facility School
<i>Streptococcus pyogenes</i> (Group A Strep), Invasive or Resulting in Rheumatic Fever	Within 3 work days	DC, HC, S	Day Care Facility School
Syphilis	Within 3 work days	None	
Tetanus	Within 3 work days	None	

REQUIREMENTS FOR REPORTABLE AND RESTRICTABLE DISEASES AND CONDITIONS, continued			
Reportable or Restrictable Diseases and Conditions	Reporting Timeframe	Restrictable for DC = Day Care FS = Food Service HC = Health Care Facility S = School	Which Facilities Must Report in Addition to Health Care Providers, Laboratory Directors, & Hospital Administrators
Toxic Shock Syndrome (TSS)	Within 3 work days	None	
Trichinosis	Within 3 work days	None	
Tuberculosis	Within 3 work days	DC, FS, HC, S	Food Service Facility School
Tularemia	Immediately	None	
West Nile Virus	Within 3 work days	None	
Yersiniosis	Within 3 work days	FS	

PUBLIC HEALTH CONTACT NUMBERS

Boise	Phone	Fax
Immediate reports/Emergency notifications (Normal Hours): After hours:	(208) 327-8625 1-800-632-8000	(208) 327-7100
To report all other notifiable communicable diseases (daytime and after-hours)	(208) 327-8625	(208) 327-7100
24-Hour Communicable Disease Hotline	1-800-632-8000	
Public Health Laboratory	(208) 334-2235	(208) 334-2382
Sexually Transmitted Diseases Reporting Inquiries	(208) 327-8625	
Sexually Transmitted Disease (STD) Clinic	(208) 327-7400	
Immunizations Clinic	(208) 327-7450	
Tuberculosis Clinic	(208) 327-8601	

McCall	Phone	Fax
Immediate reports/Emergency notifications (Normal Hours): After hours:	(208) 327-8625 1-800-632-8000	(208) 327-7100
To report all other notifiable communicable diseases (daytime and after-hours)	(208) 327-8625	(208) 327-7100
24-Hour Communicable Disease Hotline	1-800-632-8000	
Public Health Laboratory	(208) 334-2235	(208) 334-2382
Sexually Transmitted Diseases Reporting Inquiries	(208) 327-8625	
Sexually Transmitted Disease (STD) Clinic	(208) 634-7194	
Immunizations Clinic	(208) 634-7194	
Tuberculosis Clinic	(208) 327-8601	

Mountain Home	Phone	Fax
Immediate reports/Emergency notifications (Normal Hours): After hours:	(208) 327-8625 1-800-632-8000	(208) 327-7100
To report all other notifiable communicable diseases (daytime and after-hours)	(208) 327-8625	(208) 327-7100
24-Hour Communicable Disease Hotline	1-800-632-8000	
Public Health Laboratory	(208) 334-2235	(208) 334-2382
Sexually Transmitted Diseases Reporting Inquiries	(208) 327-8625	
Sexually Transmitted Disease (STD) Clinic	(208) 587-4407	
Immunizations Clinic	(208) 587-4407	
Tuberculosis Clinic	(208) 327-8601	