Infectious Disease

"The most important things that can be done to prevent infectious diseases are . . . immunization, hand washing, and sound food handling!"

LaDHH/OPH Infectious Disease Epidemiology Section, 2004

Infectious diseases are the leading cause of death worldwide. They are also among the leading causes of illness and death in the U.S. In addition to the human suffering involved, infectious diseases have a high economic cost to individuals, families, and communities. Infectious diseases are generally spread through direct physical contact, shared air, water, food, and animals, or from insects such as mosquitoes. They are controlled through prevention of transmission from infectious people or animals and effective management of environmental sources of infectious agents. These measures include appropriate treatment of wastewater and drinking water, promotion of sound food handling practices, vector control and personal protection such as vaccinations, hygiene, and disease management.

In many instances there has been an increased occurrence of infectious diseases once thought to be controlled. In addition new diseases have emerged. Some approaches to disease control in medicine and industry have led to misuse and overuse of antibiotics, which have lessened the success of treating infectious diseases. Overuse or misuse of antibiotics has resulted in an increase in antibiotic-resistant bacteria.

The Department of Health and Hospitals, Office of Public Health (DHH/OPH), Infectious Disease Epidemiology Section collects information about infectious disease cases. Recording diseases and cases in a population over time can show trends in infection rate. These rates show how many cases occur and which populations are most affected. The rates can also indicate who might be at risk for exposure. Data can then be used for the following purposes:

- Health planning
- Research
- Provision of preventive therapy
- Outbreak control
- Policy development
- Ensuring appropriate medical treatment
- Identification of outbreaks

The following indicators are presented in this chapter.

- People Living with HIV/AIDS
- New Cases HIV/AIDS
- Hepatitis B & C Incidence Rates
- Sexually Transmitted Diseases Incidence Rates: chlamydia, gonorrhea, and syphilis
- Selected Gastrointestinal and Foodborne Diseases Incidence Rates
- Tuberculosis Incidence Rates
- West Nile Encephalitis Incidence Rates

Bloodborne Diseases

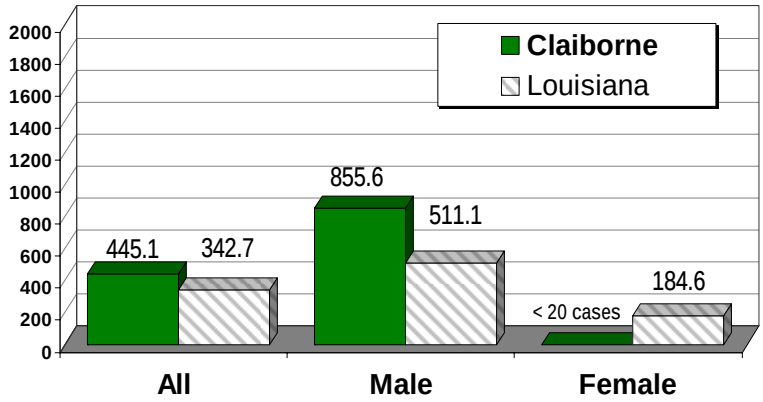
Bloodborne diseases are passed through blood. People can get diseases through sharing a needle or having unprotected sex. They can also be exposed to disease through contact with blood samples or blood transfusion. It is also possible for a pregnant woman to transmit infections to her baby during childbirth. These diseases include syphilis, hepatitis B, hepatitis C, and HIV/AIDS. Complications of these infections can include chronic infections, cirrhosis, and liver cancer.

DID YOU KNOW?

AZT, Azidothymidine, is regularly prescribed to HIV-positive pregnant women because it can reduce HIV transmission to their infants by 70 to 80%.[1]

HIV and AIDS

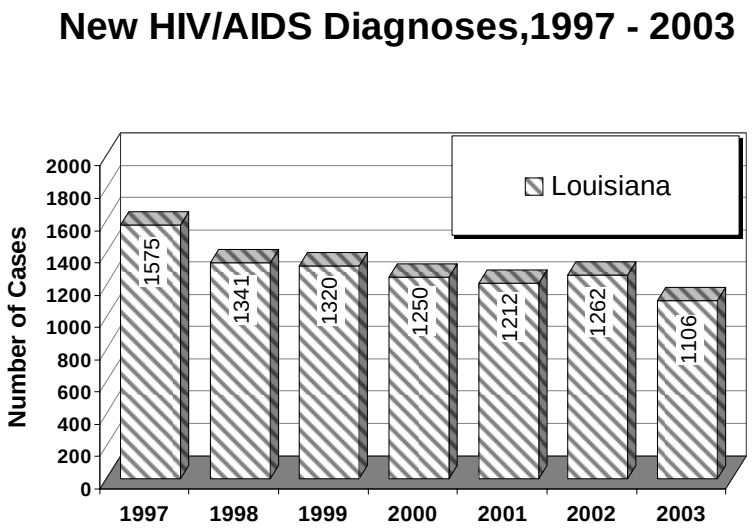
Acquired Immune Deficiency Syndrome (AIDS) is caused by the *human immunodeficiency virus*, (HIV). HIV causes many health problems, including extreme weight loss, severe pneumonia, cancer, and damage to the nervous system. These illnesses signal the onset of AIDS. The time at which symptoms first begin to appear varies from person to person. In some people, these illnesses may develop within a year or two, while others may not have symptoms for 10 years or more. HIV infection can be transmitted through contact with the following bodily fluids: blood, semen, vaginal secretions, and breast milk. HIV does not survive very long outside of living cells. HIV cannot be transmitted through casual contact. The three most common routes of HIV transmission are sexual transmission, contact with infected blood, and mother-to-child transmission.



Source: DHH/OPH HIV/AIDS Program, 2004 Rates not calculated for less than

There has been much progress in treating HIV, and a variety of medications and therapies are now available. However, they cannot remove the virus from the body. The recent advances in treatment have significantly slowed the progression from HIV to AIDS and from AIDS to death. There is still no cure for the disease and every year the number of people affected by this virus continues to grow.

Currently in Louisiana, one in every 200 people aged 15 to 44 is known to be infected with HIV. Overall, there are over 15,000 people living with HIV/AIDS in Louisiana.[2] **In Claiborne Parish at the end of 2003, there were 75 persons living with HIV/AIDS for a prevalence rate of 445 per 100,000. The rate was higher in Claiborne Parish compared to the state as a whole and was higher in males compared to females.**[3]



Source: DHH/OPH HIV/AIDS Program, 2005

Between 1997 and 2003, there has been a slight decline in the number of new HIV infections diagnosed among persons living in Louisiana. In 2003, 1,106 new HIV cases were diagnosed in Louisiana, and less than 5 were diagnosed in Claiborne Parish.[4]

The HIV/AIDS epidemic continues to greatly impact public health in Louisiana and will make growing demands on health and social service systems for many decades to come. The lifetime medical cost of caring for a person with an HIV infection is estimated at $154,402.[5] Most of these expenses are paid by tax dollars. To date, the most effective way to curb the HIV/AIDS epidemic is through the provision of HIV prevention interventions and improved access to treatment and other services for HIV-infected people.[6]

Hepatitis B

In 2002, Louisiana had a rate of 2.9 cases of acute hepatitis B per 100,000 population. This is a decrease from 3.4 per 100,000 in 2000.[9] Hepatitis B is an infection of the liver caused by a virus. Symptoms include loss of appetite and stomach discomfort. Nausea, vomiting, and jaundice are other symptoms. The illness is more severe in adults. Infants and children, however, are more likely to develop a chronic infection. Hepatitis B is spread by exposure to blood or internal body fluids and by sexual contact. In addition, it can be passed from a mother to a child in childbirth. Complications of these infections can include chronic infections due to weakened immunity, cirrhosis of the liver, cancer, and death.

DID YOU KNOW?

- *2 to 10% of the people with hepatitis B will develop chronic hepatitis.*[7]
- *80% of liver cancers in the U.S. are caused by hepatitis B.*[8]
- *Since the blood supply is screened, infected people find out they have hepatitis B when they try to donate blood.*

The DHH/OPH tracks the number of reported cases of newly acquired symptomatic hepatitis B infections. Many factors can influence the number of cases reported. These include the way doctors record and report infections, the number of people using intravenous drugs, and the number of people receiving hepatitis B immunizations. The number of hepatitis B carriers, changes in sexual risk behavior, and people receiving treatment for infection can also influence the number of cases reported.

Hepatitis C

Hepatitis C is also an infection of the liver caused by a different virus from the one that causes hepatitis B. While the symptoms are similar to those seen in hepatitis B, many more people are likely to develop chronic infections with hepatitis C. In 2002, Louisiana had a rate of 2.9 cases of acute hepatitis C per 100,000 population. Although this is a decrease from 10.2 per 100,000 in 2000, there is still much under-reporting of this disease.[10]

Chronic infections can result in long-term serious complications such as cancer or cirrhosis of the liver. It too is spread by way of exposure to blood and/or body fluids containing blood. Current information shows that while there is some risk from sexual contacts and to infants born to hepatitis-C positive mothers, this appears to be much less of a problem with hepatitis C than with hepatitis B.

DID YOU KNOW?

There are an estimated 3.9 million people infected with hepatitis C in the US – 2.7 million are chronically infected and up to 80% have no symptoms.[11]

Prior to July 1992, tests were not routinely available for identifying hepatitis C infections. As a result, there are some people who may have been exposed to this virus through blood transfusions. These individuals may want to check with their physicians to determine if additional blood tests or other actions should be taken. Recent changes in the treatment of chronic infections of hepatitis C have proven much more successful and lasting than previously available treatments. While there is no vaccine available at this time, new medications have been approved for treatment. Ways of preventing hepatitis C include avoiding the use of IV drugs, not sharing needles, practicing safe sex, and screening individuals who are at risk.

Sexually Transmitted Diseases

Sexually transmitted diseases (STDs) have been around for many centuries. Syphilis and gonorrhea are only two of the sexually transmitted diseases in Louisiana which must be reported to DHH/OPH when diagnosed. HIV is considered a sexually transmitted virus, with AIDS being the resulting disease. The bimonthly *Louisiana Morbidity Report* and the *Epidemiology Annual Report* published by the DHH/OPH, Infectious Disease Epidemiology Section presents information and statistics describing the status of reportable diseases in the state. In Louisiana, 286,767 laboratory screening tests for STDs were administered in 2004.[12]

In Louisiana, 286,767 laboratory screening tests for STDs were administered in 2004.

STDs, in addition to causing their own health problems, are red flags for a person's risk of HIV infection. The time from exposure to symptoms is short for most STDs and very long for HIV. The behaviors that transmit an STD are the same for most cases of HIV; therefore, STD trends give a hint of where new HIV infections will appear in the future. Some people do not have a reason to suspect they are infected, because they have no symptoms. They may then, unknowingly, continue to transmit the disease(s). Screening, treatment and elimination

of risky behaviors are all key components for preventing the spread of STDs. To prevent the spread of STDS, including most HIV infections, people can:

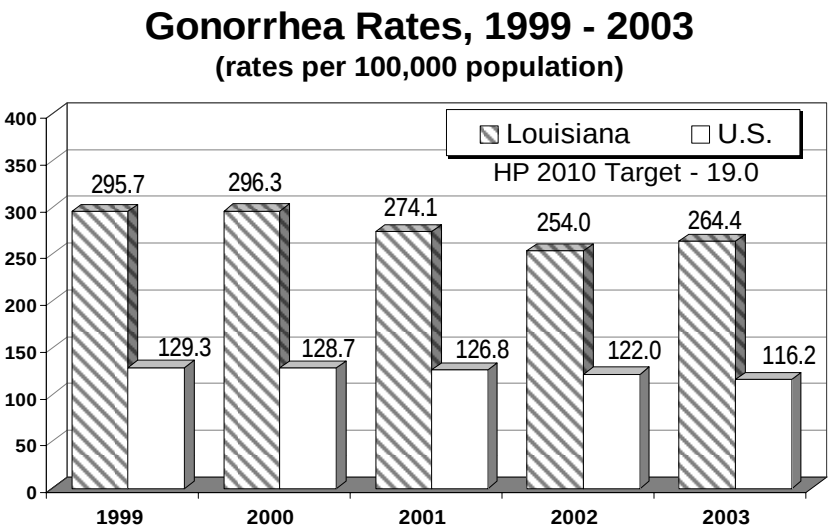
- Promote abstinence among youth;
- Promote safe sex among sexually active people;
- Make available drug treatment for people with drug problems;
- Screen for STDs in clinical and non-clinical settings; and
- Make available clinical services to treat people with STDs.

DID YOU KNOW?

- *Worldwide, an estimated 333 millions curable STDs occur annually.*
- *Each year an estimated 15 million Americans are infected with an STD, including 3 million teenagers*[13].

Chlamydia

Chlamydia, a very common sexually transmitted disease, is also the most frequently reported communicable disease in the United States. **In Claiborne Parish there were 99 cases of chlamydia in 2003 for a rate of 588 per 100,000.**[14] In the U.S., there are four million new infections each year.[15] In Louisiana, the incidence rate for chlamydia was second in the nation in 2003, increasing from 273 per 100,000 in 1997 to 467.8 per 100,000 in 2003. Chlamydia cases in Louisiana are concentrated in the 15 to 24 age group and are almost equally distributed between men and women.[16] Chlamydia counts are on the increase because testing for chlamydia is more common. There is often no symptom of disease, but it can result in pelvic inflammatory disease (PID), infertility and other reproductive health problems. Unfortunately, since it is often asymptomatic and testing is not always done, the reported case rate is still an underestimate of the actual case rate. The increase in 2003 is primarily due to an increase in testing and reporting from private medical providers.[17]

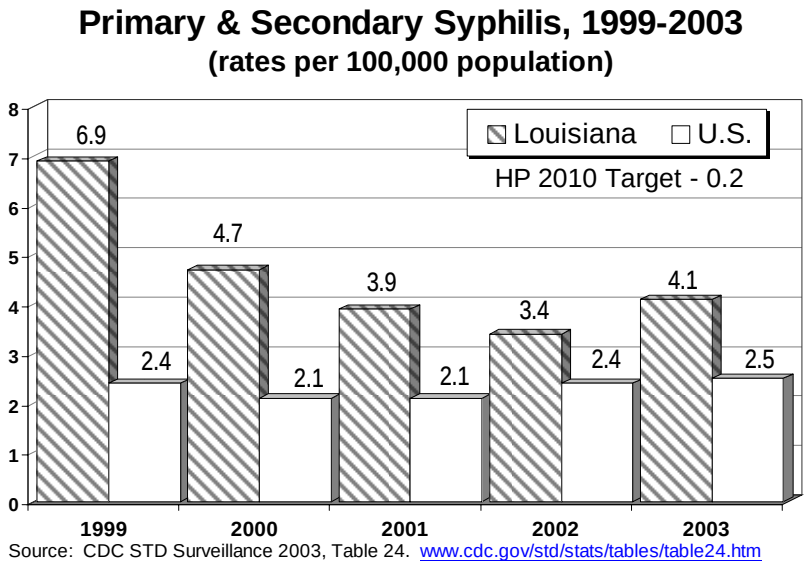


Source: CDC STD Surveillance 2003, Table 13. www.cdc.gov/std/stats/tables/table13.htm

Gonorrhea

Louisiana's incidence rate for gonorrhea was first in the nation in 2003, increasing from 255 per 100,000 in 1997 to 264.4 cases per 100,000 in 2003. There were 11,870 cases in Louisiana in 2003.[18] **In Claiborne Parish, there were 82 cases of gonorrhea in 2003 for a rate of 487 per 100,000.**[19] The incidence rate in the United States for 2003 was 116.2 per 100,000 population; highest for the 20-24 year-old age group, and highest among African-Americans.[20] The rate is almost equal between men and women; If left untreated, it can develop into other serious health threats for women, such as pelvic inflammatory disease and related complications for pregnancy and birth.[21]

Primary and Secondary Syphilis



Source: CDC STD Surveillance 2003, Table 24. www.cdc.gov/std/stats/tables/table24.htm

Syphilis is curable if it is caught in its early stages. Left untreated, it can result in damage to the brain or other organs. Studies show that efforts to reduce syphilis also reduce the transmission of HIV. One of the methods used in some parts of the U.S. is partner notification. Finding the partners of infected people and treating them can reduce the danger that they too will catch or spread the disease. The incidence rates of primary and secondary syphilis have decreased in the U.S. since 1990. Louisiana's incidence rate for primary and secondary syphilis was third in the nation for 2003, declining from 9 per 100,000 in 1997 to 4.1 cases per 100,000 in 2003.[22] Parish data is reported as early syphilis which includes primary, secondary, and early latent syphilis. **In Claiborne Parish, there were no cases of early syphilis in 2003.** The state rate was 8.5 cases per 100,000.[23]

Gastrointestinal and Foodborne Disease

Louisiana Incidence Rates, 2002 (per 100,000 population)

	Campylobacter	Salmonella	Shigella
Infants 0-1	27.0	110.2	151.6
Children 1-4	1.5	43.4	46.5
Overall	2.6	17.8	11.5

Louisiana Department of Health and Hospitals. Office of Public Health, Infectious Disease Epidemiology Section. 2004

Foodborne diseases are diarrheal illnesses caused by eating contaminated food. Food items may be contaminated with chemicals, bacteria or viruses. Parasites or toxins associated with seafood can also contaminate food. In Louisiana, rates of intestinal (enteric) diseases are much higher in infants and children than in adults. The main reason is that it is more frequent for infants and children to receive medical care than adults, and consequently reporting is better in the younger age groups. More than 2,000 food-related complaints are reported every year statewide.[24]

Campylobacteriosis

Campylobacteriosis is an illness caused by bacteria most often found in cattle and poultry that results in symptoms of diarrhea, stomach cramps, tiredness, fever, nausea and vomiting. People can catch this disease by eating or drinking contaminated food or water (or un-pasteurized milk). Thorough cooking of all food items, drinking only pasteurized milk, using good personal hygiene, and proper food handling practices will reduce the chances of someone getting sick. Many cases are mild and are not reported to DHH/OPH making it is difficult to know the real number of cases. Campylobacteriosis and salmonellosis are the most frequently reported foodborne illnesses in the U.S.[25]

Salmonella, Shigella, and Vibrio

Salmonellosis is an illness caused by the salmonella bacteria that is spread through food from infected animals. Food can also be contaminated by the feces of an infected animal or person. Symptoms of salmonellosis include cramping, nausea, diarrhea, and vomiting. Salmonellosis can be prevented by using proper food handling procedures.

Shigellosis is an enteric illness caused by the shigella bacteria, which are spread mainly by direct person-to-person contact. Infection can occur after the ingestion of only a few of the bacteria. The number of cases reported each year is affected by how well physicians report cases and whether people feel sick enough to go to a doctor. Daycare attendance, employment and/or personal hygiene practices can impact the number of new cases.

DID YOU KNOW?

In the United States, transmission of vibrio infection is primarily through the consumption of raw or undercooked shellfish or exposure of wounds to warm seawater.[26]

Vibrios are gram-negative, curved, rod-shaped bacteria that are natural inhabitants of the marine environment. The most common clinical presentation of vibrio infection is self-limited gastroenteritis, but wound infections and primary septicemia also may occur. Patients with underlying conditions such as liver disease, diabetes, or cancer are at a particularly high risk for significant morbidity and mortality associated with these infections. Early detection and initiation of treatment of these infections is very important, particularly for cholera and invasive vibrio infections, because these infections may rapidly progress to death.

Hepatitis A

Community members can help prevent hepatitis A by encouraging hepatitis A immunizations for food handlers, international travelers, child care center employees, and children in their communities. For Louisiana in 2002, the incidence rate of hepatitis A was 2.0 per 100,000 population.[27] Hepatitis A is an infection of the liver caused by a virus. It is spread person-to-person from hands contaminated with the feces of an infected person or through contaminated food and water. Symptoms include fever, fatigue, weight loss, nausea, stomach discomfort, and jaundice. Those who are most at-risk are children enrolled in childcare centers and household contacts of people with hepatitis A. Also at greater risk are people who travel to parts of the world that have many hepatitis A cases, and those who use drugs and/or engage in homosexual activity. About 25 percent of Louisiana's population, if tested, would show some exposure to hepatitis A.[28]

Preventing Gastrointestinal and Foodborne Diseases

Prepare Food Correctly

Thorough cooking and cleaning of food items can prevent transmission of disease. Simple steps, including hand washing and not preparing foods when sick with a diarrheal illness will help. Keeping food preparation and eating areas clean and cooking/storing food at correct temperatures will also prevent illnesses.

Outbreaks of foodborne disease can occur within a few hours to a few weeks of exposure. Single cases of foodborne diseases are difficult to identify. Foodborne diseases may be one of the most common causes of acute illness. Many cases and outbreaks, however, are unrecognized and go unreported.

Practice Personal Hygiene

Regular hand washing before preparing or eating food, after using the bathroom and whenever hands get dirty is the most effective protection from infectious diseases. People should keep unwashed hands away from their eyes, nose and mouth. If family members are sick, everyone should take extra precautions in hygiene.

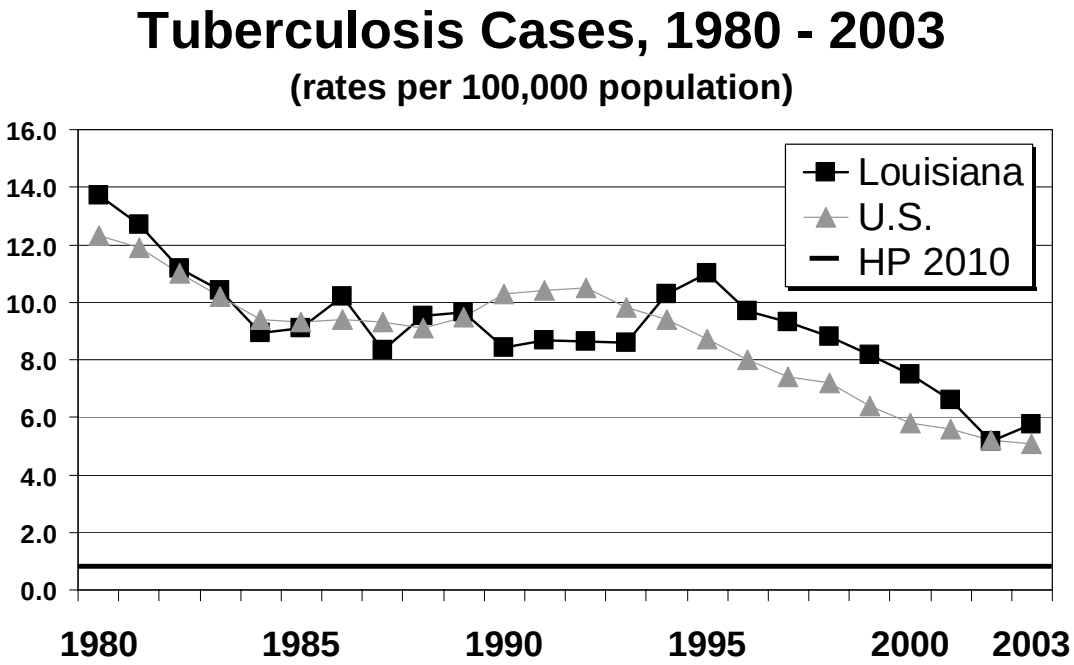
Taking Care – Taking Control
Prevention Pointers

- ✓ Keep your kitchen clean. The place in your kitchen that has the most bacteria is the handle of your refrigerator.
- ✓ Wash your cutting board with warm water and soap after cutting any raw food - including raw vegetables.
- ✓ Don't let hot foods "cool" at room temperature. Put hot foods in the refrigerator immediately after cooking for storage.
- ✓ Good hand washing is the single most important thing you can do to prevent the spread of infectious diseases to others.
- ✓ Obtain all appropriate immunizations. If you don't know where to go, call your local city or parish public health unit for information.

Respiratory Diseases

Respiratory diseases are among the leading types of infectious diseases. They are caused by a large number of viruses, including the common cold, as well as by some types of bacteria. The potential for illness and death from these diseases is especially high in children. Even for adults, acute respiratory diseases are a major health problem worldwide.

Even though most respiratory diseases are not diagnosed, they still account for the largest number of deaths of any infectious disease. Many of these diseases, however, could be prevented through immunization. For example, about 40 percent of elderly people over 65 years of age have received influenza vaccine, but 80 percent of all influenza deaths could be prevented with a flu shot. Diphtheria, *Haemophilus influenza* infection, legionellosis, measles, mumps, *Neisseria meningitis* infection, rubella, *Streptococcus pneumoniae*, tuberculosis and varicella are all respiratory diseases that are monitored at state and local levels.

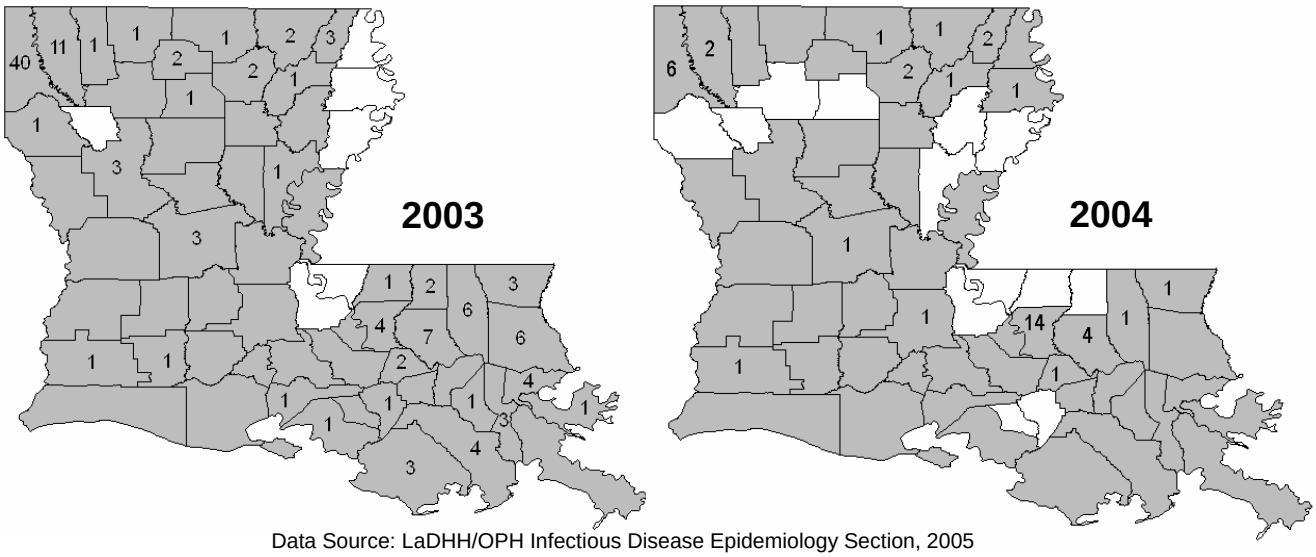


Source: CDCNCHS, National Vital Statistics Report

Vector Borne and Zoonosis

This section will discuss diseases, such as West Nile encephalitis, that are caused by viruses transmitted to humans from an insect – "vector borne" and diseases, such as rabies, which are communicable from animals to humans under natural conditions – "zoonosis."

Human Cases of West Nile Encephalitis and/or West Nile Fever Reported 2003 – 2004
(gray shading indicates bird/animal activity)



Data Source: LaDHH/OPH Infectious Disease Epidemiology Section, 2005

West Nile: Arbo-viral Encephalitis

Human and equine encephalitis caused by arthropod-borne viruses has occurred sporadically in Louisiana for many years, with occasional outbreaks. The viruses which have been identified in these cases are:

- St. Louis Encephalitis (SLE), a Flavivirus
- West Nile Virus (WNV), a Flavivirus
- Eastern Equine Encephalitis (EEE), an Alphavirus
- LaCrosse Encephalitis (LAC), a California-group Bunyavirus

All of these viruses are transmitted to humans and animals by mosquito vectors from reservoir hosts and also by mosquito between reservoir hosts. The reservoir hosts for the first three are wild birds; small wild mammals are the reservoir hosts for LaCrosse. As transmission between humans and horses is not known to occur, horses are considered dead-end hosts.

Susceptibility to clinical disease is usually highest in the elderly for the flavi/viruses and in infants for Lacrosse virus; unapparent or undiagnosed infection is more common at other ages. Susceptibility also varies with each virus; for example, LaCrosse encephalitis is usually seen in children, while the severity of St. Louis encephalitis increases with age.

In 2002, there were 211 total human cases of West Nile Encephalitis and/or West Nile Fever reported for Louisiana. In 2003, 125 human cases were reported statewide. In 2004, total reported cases dropped to 40 statewide.[29] **For Claiborne Parish, there were no human cases of West Nile Encephalitis and/or West Nile Fever reported in 2002, 1 case in 2003, and no cases in 2004.**[30]

Surveillance activities include: laboratory testing of blood from horses and humans showing symptoms of central nervous system infection; maintenance of sentinel chicken flocks and periodic testing of the flocks for acquired infection; collection and laboratory testing of mosquitoes for the presence of arboviruses; investigation of die-offs of wild birds, including laboratory testing for the presence of West Nile virus. Unlike most of the other arboviruses, West Nile Virus is fatal to some bird species, notably crows, blue jays and hawks.

All health care providers are required to immediately report suspected cases of arboviral encephalitis to DHH/OPH. When a suspect case is reported, an epidemiologist evaluates the case and attempts to obtain confirmation. Once confirmed, information about the distribution of new cases is compiled without any identifiers. This information is then widely disseminated to parishes, regional public health staff, hospitals and private practitioners, local health government, and mosquito control programs. This information is the most useful guide for preventive measures against arboviral encephalitis.

Rabies

Rabies virus, a rhabdovirus, causes acute encephalitis in all warm-blooded hosts, including humans. The case fatality rate is generally considered to be 100 percent. All species of mammals are susceptible to rabies, but only a few species are considered important reservoirs, such as bats, skunks, raccoons, foxes and coyotes. Most of these reservoirs harbor specific variants of the virus in distinct geographic locations. 1 or 2 cases of human rabies are reported annually in the United States. And less than 10 percent of reported cases occur in domestic animals.

Louisiana is endemic for the skunk and bat variants of the virus. The cases reported in Louisiana seem to reflect these predominant virus variants (skunk and bat) known to exist in the state. No active surveillance for wildlife rabies is consistently conducted in Louisiana; therefore the number of cases reported does not reflect the actual picture of the virus in the state.

Emerging Pathogens

Emerging and drug-resistant infections are diseases that have become more common over the past two decades. They threaten to increase in the near future. Some of these diseases have become resistant to many of the medications normally used for treatment purposes. These diseases are important, evolving, and complex public health problems. For example:

- *Streptococcus pneumoniae* is the most frequent cause of commonly acquired pneumonia and middle ear infections.
- Methicillin Resistant *Staphylococcus aureus* infections are increasing in frequency.

DID YOU KNOW?

60% of hospital infections due to staphylococcus in Louisiana during 2004, were resistant to at least one antibiotic.[31]

Unfortunately, the overuse of antibiotics and antibacterial products in medicine, industry and around the home, has actually contributed to the development of these new diseases. On a day-to-day basis, it is best to limit the use of these products and use antibiotics only when absolutely necessary. Patients should take all the medication they are prescribed, even if they feel better before the medicine is gone.

Future Trends

It is likely that there will be an increase in the number of food-related infections, including diarrheal diseases. The importation of food into the United States has contributed to this increase. Infectious organisms will continue to adapt and become resistant to the current supply of antibiotics. However, these issues can be lessened by consumers becoming informed and improving personal hygiene and food handling practices. Progress can also be made by improved food handling and storage for food products produced inside and outside the U.S.

DID YOU KNOW?

More than half of the 900 physicians surveyed by the American Academy of Pediatrics believed that parental pressure contributed to most antibiotic use. Seventy-8% of the pediatricians felt that parental education would be the "single most important program for reducing inappropriate antibiotic use."[32]

Prevention of diseases that are transmitted through high-risk behaviors, such as sexual contact or IV drug use, is going to become more and more important. Prevention efforts have been complicated by controversy in the past. However, the ability to provide appropriate and timely prevention messages to individuals is increasing. This is an area where community support and response are very necessary. Many messages need to be supported and shared by communities to be effective. As communities learn about these diseases and spread the word about prevention, the future of the fight against infectious diseases will brighten.

Finally, infectious disease rates may change according to funding for their prevention. For example, after a decrease in tuberculosis program funding, there was a rise in TB rates in Louisiana. Similar developments may happen with other infectious diseases. It is important to provide the funds necessary to implement programs that address infectious diseases.

The Community Can …

Use client reminder/recall systems to increase community demand for vaccinations[33,34]

- Alert members of a target population that vaccinations are due (remind) or late (recall).
- Use telephone calls, letters, or postcards as delivery techniques to reach target population; messages may be specific or general.
- Target outreach efforts to various levels, such as individual medical practices and entire communities.
- Improve vaccination coverage among children and adults in several settings and populations.

Toolkits & Guides:

Guide to Preventive and Community Health Services
www.thecommunityguide.org

Prevention and Control of Influenza - Recommendations of the Advisory Committee on Immunization Practices (ACIP) – Centers for Disease Control and Prevention,
www.cdc.gov/mmwr/preview/mmwrhtml/rr5408a1.htm

Recommend the provision of vaccination services in non-clinical settings, such as WIC settings, senior citizen centers, nutrition sites, or public housing projects[35, 36, 37]

- Educate the public to encourage the vaccination of low-income clients and other at-risk populations.
- Increase vaccination coverage in children utilizing non-traditional settings.
- Educate the public about the provision of vaccinations, and use incentives to accept vaccinations, such as, more frequent WIC visits for children who are not up-to-date with their vaccinations; free vaccinations).

Toolkits & Guides:

Centers for Disease Control and Prevention – National Immunization Program,
www.cdc.gov/nip/default.htm

Attend public hearings

- Explore opportunities to provide input and maximize resources at the federal, state, and local levels.
- Join forces with federal, state, and local organizations to ensure that effective policies and health prevention interventions are being targeted to individuals and communities at high-risk.

Toolkits & Guides:

The *Federal Register* informs citizens of their rights and obligations and provides access to a wide range of Federal benefits and opportunities for funding.
www.archives.gov/federal-register/the-federal-register/about.html

Louisiana State Legislature, www.legis.state.la.us

Health agencies can explore opportunities to maximize resources in communities

- Cross-train staff, including community-based organizations, in STD and HIV prevention.
- Coordinate prevention interventions and message development to address common risk factors.
- Integrate STD and HIV screening opportunities in HIV testing sites, HIV care settings, and other non-clinical settings serving at-risk populations.
- Coordinate efforts to maximize the richness of data that are collected, as well as the use of such data in designing and evaluating prevention activities.
- Continue to integrate STD prevention into HIV community planning efforts.

Toolkits & Guides:

National Alliance of State and Territorial AIDS Directors (NASTAD) - STD / HIV Prevention Integration
www.nastad.org/pdf/2004_04_NASTAD_HIV/STDH.pdf

Best Practices: HIV and STD Prevention for Children and Youth,
www.cdphe.state.co.us/ps/bestpractices/topicsubpages/hiv.html

Finding the Invisible Man: A Best Practices Model for HIV/AIDS-STD Prevention & Services for … Community Collaboration
www.cdc.gov/std/2004STDConf/A-OralSympWorkAbstracts.htm#A08

Reduce the transmission of mosquito-borne infections such as encephalitis and West Nile Virus

- Institute a public information program emphasizing personal responsibility, ways in which people can prevent mosquito breeding, and how they can reduce the risk of being bitten by observing personal protection measures.
- Encourage reporting of unusual events, such as dead birds or sick domestic animals, to local health agencies.
- Institute community cleanup programs to eliminate larval habitats from back yards, commercial sites, and abandoned premises.
- Encourage citizen participation (reporting suspected mosquito larval habitats, reporting dead birds, or other unusual events) which is essential for efficient data gathering.
- Educate and inform the local media.

Toolkits & Guides:

Centers for Disease Control and Prevention – Division of Vector-borne Diseases,
www.cdc.gov/ncidod/dvbid/westnile/

Environmental Protection Agency: Pesticide Environmental Stewardship Program,
www.epa.gov/oppbppd1/PESP/strategies/2005/amca05.htm

Association of State, Territorial and Health Officials Mosquito Control
www.astho.org/pubs/MosquitoControlInterim7804.pdf

References

1. Louisiana Department of Health and Hospitals. Office of Public Health (LaDHH/OPH), Section of Infectious Disease Epidemiology 1998.
2. LaDHH/OPH, HIV/AIDS Program. 2004.
3. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004
4. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004.
5. Wasserman, N. 1999. National Conference of State Legislators. HIV/AIDS Facts to Consider: 1999. National Conference of State Legislators. Washington D.C., p. 41-42.
6. Wasserman, N. 1999. p. 37.
7. Centers for Disease Control and Prevention. 1997. Epidemiology and Prevention of Vaccine-Preventable Disease, The Pink Book, 4th Edition, Centers for Disease and Control, Atlanta.
8. The New York Times, 1999. Liver Cancer Rises Sharply; Control of Hepatitis is Seen as Vital to Lower Rates. 1999. March 11. p.A-18.
9. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004.
10. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004. 2004.
11. "Hepatitis C: Fact Sheet | CDC Viral Hepatitis", Centers for Disease Control and Prevention. Department of Health and Human Services. 1 May 2005 <http://www.cdc.gov/ncidod/diseases/hepatitis/c/fact.htm>.
12. LaDHH/OPH, HIV/AIDS Program. 2004.
13. U.S. Department of Health and Human Services. 1998. Office of Public Health and Science, Healthy People 2010 Objectives: Draft for Public Comment, p.25-12.
14. LaDHH/OPH, Infectious Disease Epidemiology Section, 2004.
15. Centers for Disease Control and Prevention, *STD Surveillance 2003 National Profile Chlamydia.*
16. LaDHH/OPH, HIV/AIDS Program. 2004.
17. LaDHH/OPH, HIV/AIDS Program. 2004.
18. LaDHH/OPH, HIV/AIDS Program. 2004.
19. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004. 2004.
20. Centers for Disease Control and Prevention, *STD Surveillance 2003 National Profile Gonorrhea.*
21. U.S. Department of Health and Human Services. 1998. p.25-14.
22. LaDHH/OPH, HIV/AIDS Program. 2004.
23. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004. 2004.
24. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004. 2004.
25. U.S. Department of Health and Human Services. 1998. p.6-6.
26. Daniels, Nicholas et al. "Emergence of New Vibrio Parahaemolyticus Serotype in Raw Oysters". JAMA. 2000; 284: 1541-1545.
27. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004 2004.
28. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004 2004.
29. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004 Surveillance Data 2002-2003.
30. LaDHH/OPH, Infectious Disease Epidemiology Section. 2004. Surveillance Data 2002-2003.
31. Palmer D, et al. 1997. Parents' and Physicians' Views on Antibiotics. Pediatrics. June 99(6). p.E6.
32. Palmer D, et al. 1997.
33. Guide to Community Preventive Health Services: Systematic Review and Evidence Based Recommendations. 26 December 2002. keyword: physical education. <http://www.thecommunityguide.org/pa/pa-int-school-pe.pdf >.

34. "Vaccine-Preventable Diseases: Improving Vaccination Coverage in Children, Adolescents, and Adults." Morbidity and Mortality Weekly Report. Vol 48 no RR-8. 18 June 1999. Centers for Disease Control and Prevention. <http://www.cdc.gov>.

35. Adult Immunization Programs in Nontraditional Settings: Quality Standards and Guidance for Program Evaluation. Morbidity and Mortality Weekly Review, 49(RR01); 1-13. 24 March 2000 <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4901a1.htm>.

36. Guide to Community Preventive Health Services: Systematic Review and Evidence Based Recommendations. 26 December 2002. keyword: physical education. <http://www.thecommunityguide.org/pa/pa-int-school-pe.pdf>.

37. "Vaccine-Preventable Diseases: Improving Vaccination Coverage in Children, Adolescents, and Adults." Morbidity and Mortality Weekly Report 18 June 1999 vol. 48 No. RR-8. Centers for Disease Control and Prevention. <http://www.cdc.gov/mmwr/>.

2005 Parish Health Profiles – Public Domain

The Profiles are a work-in-progress. These documents are public information written for the benefit of the public. Our request to you, the reader, is to complete and return the evaluation form, included at the end of this document. Let us know what you found useful for your work in communities. Your input will help us improve the next issue.

Please feel free to copy and distribute all or parts of this book as needed.

Thank you.