

EpiNotes

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Acute Retroviral Syndrome

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Primary human immunodeficiency virus (HIV) infection refers to the period from initial infection with the human immunodeficiency virus to complete seroconversion. After infection, there is a rapid rise in plasma viremia, with the virus being disseminated widely in the body. This high concentration of the virus has important public health implications because it is a period of extreme infectiousness, and routine tests for the HIV antibody fail to detect the new infection. There is a marked decrease from the peak viremia after the initial rise, then a new viral set-point is established. Individuals with the highest set-point viral load have the most rapid rates of disease progression and death.

Because of their nonspecific nature, the signs and symptoms of acute retroviral syndrome (ARS) require a high index of suspicion in order to be associated with new HIV-infection. The signs and symptoms usually present within days to weeks after initial exposure. They may last from a few days to more than 10 weeks, but the duration is usually less than two weeks. Patients with the syndrome may have fever, fatigue, rash, and pharyngitis as the most common symptoms. Other protean symptoms include lymphadenopathy, myalgia, headache, arthralgia, aseptic meningitis, weight loss, depression, night sweats, gastrointestinal distress, and oral or genital ulcers. The occurrence and severity of symptoms during primary HIV infection correlate with the rapidity of clinical and immunologic decline. The nonspecific nature of these symptoms pose a major challenge to health care workers; this emphasizes the need to obtain an accurate history of exposure. Primary HIV infection should be considered in any patient with possible HIV exposure who presents with fever of unknown cause. The differential diagnosis for these nonspecific signs and symptoms are HIV, infectious mononucleosis, secondary syphilis, acute hepatitis A or B, roseola or other viral exanthems, and toxoplasmosis.

Although laboratory studies may reveal thrombocytopenia and lymphopenia, atypical lymphocytes are infrequent, and

(Continued on Page 2)

Leptospirosis

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Synonyms:

Weil's Disease, Swineherder's Disease, Rice Field Fever, Cane Cutter Fever, Swamp Fever, Mud Fever, Stuttgart Disease, Canicola

Etiology:

Leptospira interrogans (180 Serovars In 18 Serogroups)

Leptospirosis is a bacterial disease that affects humans and animals. It is caused by bacteria of the genus *Leptospira*. In humans it causes a wide range of symptoms, and some infected persons may have no symptoms at all. Symptoms of leptospirosis can include high fever, severe headache, chills, muscle aches, and vomiting, and may include jaundice, red eyes, abdominal pain, diarrhea, or a rash. If the disease is not treated, the patient could develop kidney damage, liver failure, and respiratory distress. In rare cases (generally those with concurrent illnesses), death occurs.

Many of these symptoms can be mistaken for other diseases. Leptospirosis is confirmed by laboratory testing of a blood or urine sample.

Leptospirosis is a zoonotic disease; it can be transmitted from animals to humans. Outbreaks of leptospirosis are usually caused by exposure to water contaminated with the urine of infected animals, which can get into water or soil and can survive there for

INSIDE THIS ISSUE

Acute Retroviral Syndrome	Page 1
Leptospirosis	Page 1
2005 Annual Report on Notifiable Conditions in South Carolina	Page 3
Merck Vaccine Patient Assistance Program	Page 3
CDC Annual Report "Annual Assessment of Progress Toward Goals to Prevent Perinatal HBV Transmission	Page 4
Changes in the School and Child Care Exclusion Lists for the 2007-2008 School Year	Page 5
Year-to-Date Summary of Selected Reportable Conditions	Page 7

(Continued on Page 2)

(ACUTE RETROVIRAL SYNDROME cont'd from Page 1)

these characteristic laboratory findings are not unique to HIV infection. They may be observed in other acute viral illnesses. Note that the CD4 cell count usually decreases during acute infection but may remain in the normal range.

The diagnosis of ARS is based on a positive HIV-1 RNA level in the absence of a positive enzyme-linked immunosorbent antibody assay (ELISA) and confirmatory Western blot antibody test for HIV. A blood sample should be obtained for both HIV viral load testing and HIV ELISA when a patient presents with the signs and symptoms of ARS along with a compatible history of exposure. If these laboratory tests return negative, an alternative diagnosis should be sought. However, both the HIV ELISA and HIV viral load tests should be repeated two to four weeks after the resolution of symptoms in high-risk persons.

Most persons with ARS do not expect to receive this diagnosis even if they have had high risk sexual or IV drug encounters. Health care workers should therefore be skilled at sexual history taking and comfortable with discussing substance use with their patients. They should anticipate that patients will be angry, anxious, or fearful when this diagnosis is discussed. Primary infection presents a special window of opportunity within which to exert a maximum impact on the spread of HIV. It is essential to address the patient's concerns and to explain planned evaluation. Counseling about the importance of adopting safer practices may instill prevention behaviors at a critical time.

All patients with newly diagnosed HIV infection should be linked to HIV medical care. The South Carolina Department of Health and Environmental Control may be contacted if assistance is needed. However, in order to assure follow-up, it is crucial that the health care worker be able to contact the patient after discharge. In addition to helping the patient access HIV medications upon diagnosis, public health officials can use a network approach to identify persons exposed to those with primary infections. By focusing prevention efforts on the primary HIV infection interval, public health officials could increase their leverage in slowing the HIV epidemic.

(LEPTOSPIROSIS cont'd from Page 1)

weeks to months. Leptospire are ubiquitous in the environment; almost all water sources can be contaminated with leptospire. Infected wild and domestic animals may continue to excrete the bacteria into the environment continuously or every once in a while for a few months up to several years.

Many different kinds of animals carry the bacterium; they may become sick but sometimes have no symptoms. *Leptospira* organisms have been found in cattle, pigs, horses, dogs, rodents, and wild animals. Humans become infected through contact with water, food, or soil containing urine from these infected animals. This may happen by swallowing contaminated food or water or through skin

contact, especially with mucosal surfaces, such as the eyes or nose, or with broken skin. The disease is not known to be spread from person to person. Drinking contaminated water can also cause infection.

If a person's pet has become infected, it most likely came into contact with leptospire in the environment or infected animals. The pet may have been drinking, swimming, or walking through contaminated water. Because of increased building and development into areas that were previously rural, pets may be exposed to more wildlife, such as raccoons, skunks, squirrels, opossums, or deer that are infected with leptospirosis. Dogs also may pass the disease to each other, but this happens very rarely. The clinical signs of leptospirosis vary and are nonspecific in animals; again, sometimes they do not have any symptoms, just like with humans. Common clinical signs reported in dogs include fever, vomiting, abdominal pain, diarrhea, refusal to eat, severe weakness and depression, stiffness, severe muscle pain, or inability to have puppies. Generally younger animals are more seriously affected than older animals. If a person feels that his or her pet may be infected, contact the pet's veterinarian immediately, who can also order tests to detect the presence of leptospiral antibodies. However, if leptospirosis is detected, confirmatory tests must be done to determine if it is an acute infection.

The time between a person's exposure to a contaminated source and becoming sick is two days to four weeks. Illness usually begins abruptly with fever and other symptoms. Leptospirosis may occur in two phases; after the first phase, with fever, chills, headache, muscle aches, vomiting, or diarrhea, the patient may recover for a time but become ill again. If a second phase occurs, it is more severe; the person may have kidney or liver failure or meningitis. This phase is also called Weil's disease.

The illness lasts from a few days to three weeks or longer. Without treatment, recovery may take several months.

Leptospirosis occurs worldwide but is most common in temperate or tropical climates. It is an occupational hazard for many people who work outdoors or with animals, for example, farmers, sewer workers, veterinarians, fish workers, dairy farmers, or military personnel. It is a recreational hazard for campers or those who participate in outdoor sports in contaminated areas and has been associated with swimming, wading, triathlons, and whitewater rafting in contaminated lakes and rivers. The incidence is also increasing among urban children.

Leptospirosis is treated with antibiotics, such as doxycycline or penicillin, which should be given early in the course of the disease. Intravenous antibiotics may be required for persons with more severe symptoms.

Protective clothing or footwear should be worn by those exposed to contaminated water or soil because of their job or recreational activities.

(Continued on Page 3)

(LEPTOSPIROSIS cont'd from Page 2)

References:

Control of Communicable Diseases Manual
 CDC Healthy People Health Pets: <http://www.cdc.gov/healthypets/>
 The Veterinary Information Network: <http://www.vin.com>

2005 Annual Report on Notifiable Conditions in South Carolina

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The 2005 Annual Report on Notifiable Conditions has been published and is available on the following DHEC Internet Web sites:

- DHEC homepage at <http://www.scdhec.gov/>
- DHEC Health Web page at <http://www.scdhec.gov/health/>
- DHEC Bureau of Disease Control's Web page at <http://www.scdhec.gov/health/disease/index.htm>

The Annual Report is published by the DHEC Bureau of Disease Control and contains a brief narrative and accompanying graphs displaying summary data for the 86 diseases or conditions that were reportable by law in South Carolina in 2005. The report also contains information on select outbreaks and special surveillance projects in 2005 as well as a section on Trends and Commentary Regarding Immunization Coverage for 2-Year Old Children. Useful Web links and bibliographic references have been provided for readers interested in additional information.

The DHEC Bureau of Disease Control hopes this report will contribute to knowledge and understanding of the challenges posed by infectious diseases of public health importance in South Carolina. The Annual Report of Notifiable Conditions which were reportable in South Carolina in 2006 should be available by the end of 2007.

Merck Vaccine Patient Assistance Program - What you need to know

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Vaccine-preventable infections of adults represent a continuing cause of morbidity and mortality. The Centers for Disease Control and Prevention (CDC) estimates the cost of this health burden to society¹ at approximately \$10 billion per year. Merck and Company Inc. makes safe and effective vaccines against the following diseases: human papillomavirus, measles, mumps, rubella, streptococcus

pneumoniae, hepatitis A and B viruses, varicella zoster, and herpes zoster (shingles). Because some people cannot afford to pay for these vaccinations or do not have health insurance, Merck and Company Inc. has introduced a "Vaccine Patient Assistance Program".

How does the program work?

This program is available in the private medical community only and not in public health settings. Patients may qualify if they are residents of the U.S., age 19 years or older, do not have health insurance, and cannot afford to pay for vaccination. The program announcement states, "You may qualify if you have a household income of \$19,600 or less for individuals or \$26,400 or less for couples. Income levels may vary for larger households."

A "Merck Vaccine Patient Assistance Program Application" must be completed and signed by the patient and the doctor, nurse practitioner, or physician assistant. The two-page application is faxed by the health care provider to the Merck program for approval. Merck will grant assistance via a return fax to the health care provider with confirmation that Merck will replace the doses of vaccine administered to approved patients via quarterly shipments to the licensed prescriber.

What vaccines are covered?

GARDASIL® [Quadrivalent Human Papillomavirus (Types 6, 11, 16, 18) Recombinant Vaccine]

M-M-R® II (Measles, Mumps, and Rubella Virus Vaccine Live)

PNEUMOVAX® 23 (Pneumococcal Vaccine Polyvalent)

RECOMBIVAX HB® [Hepatitis B Vaccine (Recombinant)]

VAQTA® (Hepatitis A Vaccine, Inactivated)

VARIVAX® [Varicella Virus Vaccine Live (Oka/Merck)]

ZOSTAVAX® [Zoster Vaccine Live (Oka/Merck)]

For more information contact Merck Vaccine Patient Assistance Program (800) 293-3881 or <http://www.merckhelps.com>

References

1. Executive Summary - Actions to Strengthen Adult and Adolescent Immunization Coverage in the United States: Policy Principles of the Infectious Diseases Society of America. *Clinical Infectious Diseases* 2007; 44:1529-31.
2. MERCK Vaccine Patient Assistance Program patient information brochure.

(Continued on Page 4)

CDC Annual Report “Annual Assessment of Progress Toward Goals to Prevent Perinatal HBV Transmission”

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Each year the South Carolina Department of Health and Environmental Control's (DHEC) Immunization Division completes the required CDC report - “Annual Assessment of Progress Toward Goals to Prevent Perinatal HBV Transmission”. This report was submitted to CDC in March 2007 for infants born in 2005.

The graph below shows DHEC data from 1997 through 2005. The CDC estimates that approximately 200 infants are born to HBsAg positive women in South Carolina each year. These expected births are calculated from state birth data using HBsAg prevalence estimates of specific ethnic categories. The number of infants tracked (case managed) in South Carolina falls below the CDC estimate; however, infants tracked for Perinatal Hepatitis B Case Management in South Carolina dramatically increased in 2005. This increase is believed to be due primarily to DHEC's enhanced disease surveillance – “Carolina's Health Electronic Surveillance System” (CHES), to more prompt and complete reporting to DHEC by health care providers, and to enhanced case finding by DHEC regional staff.

In 2005 DHEC received reports on 88 infants born to HBsAg positive women. Of the 88 infants that were case managed in South Carolina in 2005, only 43 (49%) completed post vaccination serologic testing at the time the CDC report was submitted.

CDC recommendations for management of infants born to women who are HBsAg positive include:

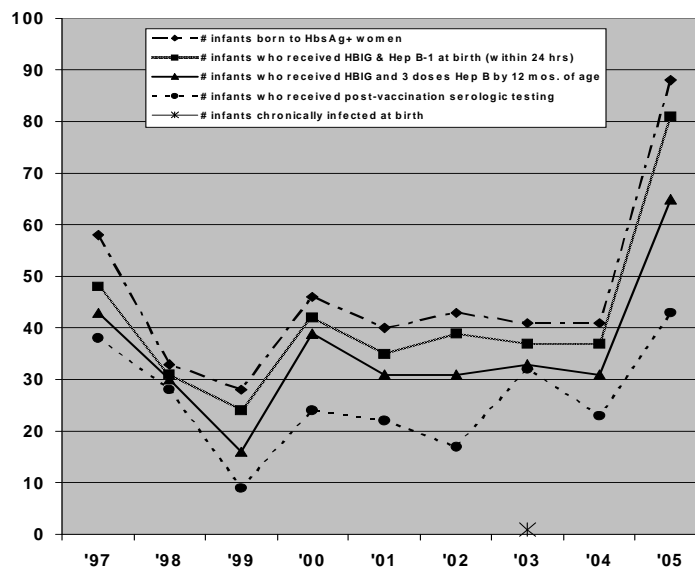
1. Administer single-antigen hepatitis B vaccine and Hepatitis B Immune Globulin (HBIG) by 12 hours of birth.
2. Complete the vaccine series according to recommended schedule.
3. Perform postvaccination testing for anti-HBs and HBsAg after completion of the vaccine series, at age 9-18 months.

All medically stable infants weighing greater than or equal to 2000 grams at birth and born to HBsAg-negative mothers should receive the first dose of hepatitis B vaccine before hospital discharge. According to the 2005 National Immunization Survey, the estimated vaccination coverage for hepatitis B vaccine among children from birth to 2 days of age was 56.8+/-7.3.

Following are data regarding hepatitis B infection during pregnancy:

- Number of women who had Hepatitis B infections present during this pregnancy: **100**
- Number of infants who received the Birth Dose of Hepatitis B vaccine: **37,026**
- Number of infants who received Hepatitis B Immune Globulin (HBIG) within 12 hours of birth: **99**
- Total births in 2005: **55,673** (provisional)

Perinatal Hepatitis B Prevention Program



Changes in the School and Child Care Exclusion Lists for the 2007-2008 School Year

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The **2007-2008 Exclusion Lists** for school and out-of-home child care were posted on the DHEC Web site in March of this year. These lists, which are effective July 1, 2007, reflect a thorough review of exclusion criteria following the publication of the 2006 *Red Book* (AAP). They also reflect changes in epidemiology of some skin infections and nationwide experience with recent outbreaks of vaccine-preventable illnesses.

Before addressing changes in the Exclusion Lists, it may be helpful to review their purpose. The School and Child Care Exclusion Lists were developed by DHEC pursuant to S.C. Regulation #61-20, which requires that DHEC publish each year an "Official School and Child Care Exclusion List of Contagious and Communicable Diseases." Regulation #61-20 further requires that students should be excluded from school attendance if they have one or more of the conditions in the lists. These lists are published on the DHEC Web site and are sent to schools for copying and distribution to parents. In addition to describing exclusion criteria, the lists also indicate which illnesses (as individual cases or outbreaks) are reportable to DHEC.

SC Law: Children with contagious diseases shall not attend school or childcare in out-of-home settings.

No superintendent, principal, teacher of any school or provider of child care in an out-of-home setting, as defined in S.C. Code Ann. Section 20-7-2700, and no parent, master, or guardian of any child or minor shall permit any such child or minor having any contagious or infectious disease or syndrome requiring isolation to attend any private, parochial, church, or Sunday school when the disease or syndrome of the child or minor is on the Official School and Child Care Exclusion List of Contagious or Communicable Diseases. For the purpose of this regulation, the Department of Health and Environmental Control shall publish in January of each year an Official School and Child Care Exclusion List of Contagious or Communicable Diseases, to include specific conditions for duration of school or child care exclusion and criteria for return for a child with any of these excludable diseases. (Regulation 61-20)
<http://www.scstatehouse.net/coderegs/c061a.htm>

To Whom the Lists Apply

The School Exclusion List applies to those students in grades 1-12 who are not medically fragile. The Child Care Exclusion List should be used for students in grades K-3, K-4, and K-5, as well as students in grades 1-12 who are designated as being medically fragile. For the purposes of school exclusion, "medically fragile students" are those with special health care needs or developmental delays who require close assistance with feeding or other personal hygiene activities by which communicable illnesses may easily be spread.

The Exclusion List criteria are aimed at generally healthy children. Immunocompromised children who have an excludable condition or exposure may need longer periods of exclusion, subject to recommendations by their health care provider(s). Nothing in these criteria precludes the exercise of the professional judgment of Local Education Agency medical and/or nursing staff to protect the health of students.

(Continued on Page 6)

(SCHOOL & CHILD CARE EXCLUSION 2007 cont'd from Page 5)**General Principles**

- ◆ Infected children should be excluded from school until they are no longer considered contagious.
- ◆ If a student does not respond to treatment for an excludable condition, the health care provider or public health department may suggest longer periods of exclusion.
- ◆ Exclusion for children *exposed* to certain serious illnesses will vary, depending on the availability of immunization or antibiotic prophylaxis, timing of exposure relative to immunization, and severity of illness.
- ◆ Because mild illness is common among children, most children will not need to be excluded from their usual source of child care for mild respiratory tract illnesses, since transmission is likely to have occurred before symptoms developed in the child.

General Changes for 2007-2008

The School and Child Care Exclusion Lists and simplified Parent Brochures are available at the DHEC Web site (<http://www.dhec.gov/health/disease/exclusion.htm>.) This article will focus only on changes found in the 2007-2008 lists.

- ◆ **Arrangement:** The lists are now arranged alphabetically. However, general symptoms that may indicate severe illness still appear at the beginning of both lists.
- ◆ **Age-Specific Criteria:** For some illnesses, school exclusion criteria are different for children grades 1-5 and for older students. This is based on assumptions about maturity of children, independence and hygiene related to toileting, and differences in patterns of interactions among students in elementary schools as opposed to middle or high school students.

Changes in Specific Illnesses/Conditions:

- ◆ **Abdominal Pain:** Exclusion for persistent abdominal pain (continuing for two or more hours) or intermittent abdominal pain associated with fever, dehydration, or other systemic symptoms, was added to the Child Care Exclusion List.
- ◆ **Diarrheal Illness:**
 - Lab testing and antibiotic therapies for *E. coli*, *Salmonella typhi*, and *Shigella* were clarified for children in child care.
 - Children in child care and school students do not have to be excluded for diarrhea that persists following completion of antimicrobial therapy for an enteric illness. Since symptoms may persist well after antibiotics are completed, some children were being excluded for several weeks following initial illness.
 - Exclusion is required for first- through fifth- graders with *E. coli* and *Salmonella typhi* until 24 hours without a diarrheal stool. School children with *Shigella* are excluded until diarrheal symptoms cease.
 - Exclusion for diarrhea, unless it is caused by *E. coli*, *Salmonella typhi*, or *Shigella* is not mandatory for middle and high schoolers, unless a student is determined to be contributing to the spread of illness in the school setting, or unless the student has uncontrolled diarrhea or stools containing blood or mucus.

The exclusion criterion for *E. coli* in school-age children is less stringent than that described in the *2006 Red Book*. South Carolina's policy is based on epidemiological evidence that suggests that in-school transmission of *E. coli* infection is uncommon among un-diapered children. There may be an academic burden imposed by lengthy exclusions while awaiting multiple negative culture results. DHEC may change this exclusion criterion in the event of an outbreak or cluster of diarrheal illness attributable to *E. coli*.

- ◆ **Mumps:** Children with mumps are excluded for five (not nine) days following onset of parotid gland swelling.
- ◆ **Pertussis:**
 - Children with pertussis are excluded until completion of five days of appropriate antibiotic therapy, unless initially diagnosed with pertussis past the infectious period (21 or more days after cough onset, or six weeks after cough onset for infants).
 - Exclusion of persons exposed to pertussis who now have cough illness should be considered pending evaluation by a physician. If the physician or DHEC recommends exclusion, exclude until (a) completion of five days of appropriate antimicrobial therapy or (b) until 21 days after last contact with an infected person.
- ◆ **Staphylococcal (including MRSA and Impetigo) and Streptococcal Skin Infections**

Recent studies have indicated that up to 50 percent of impetigo lesion may be attributable to MRSA (Methicillin-resistant *Staphylococcus aureus*). Outbreaks of *Staph* and *Strep* skin infections, especially among children sharing equipment or participating in close contact sports, have increased in the past few years in South Carolina. These conditions were added to the Exclusion Lists as follows:

Continued on Page 7)

(SCHOOL & CHILD CARE EXCLUSION 2007 cont'd from Page 6)

- o **Impetigo:** Exclude children with Impetigo, whose lesions cannot be covered, until the student has received 48 hours of effective antimicrobial treatment, lesions are showing signs of healing (decreasing in size), and oozing has stopped.
- o **Other Staphylococcal or Streptococcal Skin Infections (includes MRSA):**
 - Exclude children with draining lesions that cannot be covered with a dressing, or draining lesions that are covered with a dressing but drainage saturates the dressing, until drainage stops and the child has received at least 48 hours of effective antimicrobial treatment.
 - Children who do not have draining lesions may return to school after they have received at least 48 hours of effective antimicrobial treatment and lesions are showing signs of healing (decreasing in size.)
 - Children with lesions on uncovered skin or with lesions that are draining or oozing, even if covered, may not participate in close contact sports or other athletic activities.
 - Contact precautions, including appropriate disposal of infective materials, must be used if/when dressings are changed in the school or child care setting.

DHEC may change these recommendations in the event of outbreaks or clusters of *Staph* or *Strep* skin infections.

- ◆ **Varicella:** Because children with breakthrough Varicella (typically seen in previously immunized children) often do not develop the typical vesicles or crusting of lesions, children with mild or breakthrough Varicella disease should be excluded from school until lesions fade away and no new lesions appear.
- ◆ **Exposure to Vaccine Preventable Illnesses:** Exclusion for exposure and re-admission criteria post-immunization were added for students exposed to **Measles, Mumps, Rubella, and Varicella.**

Exclusion Not Required

Several conditions were added to those for which exclusion is not required:

- ◆ Chronic Hepatitis B
- ◆ Chronic Hepatitis C
- ◆ HIV infection
- ◆ Respiratory Syncytial Virus.

The Exclusion Lists point providers and schools to the DHEC STD/HIV Division (1.800.322.AIDS) for consultation regarding infection control issues raised by the presence of students with blood-borne illnesses (HIV, chronic Hepatitis B, chronic Hepatitis C, etc.) in school or out-of-home child care.

The Division of Acute Disease Epidemiology would appreciate any feedback from health care providers on the School or Child Care Exclusion Lists. These will next be revised at the end of January 2008 for the 2008-2009 school year. Contact us at: Exclusion@dhec.sc.gov or (803) 898-0861 with any questions or comments.

Year-to-Date Summary of Selected Reportable Conditions - January 1, 2007 - June 21, 2007

Condition	Confirmed	Probable	Total
Animal Bite—PEP Recommended	105	*	105
Aseptic meningitis	40	1	41
Brucellosis	2	0	2
Campylobacteriosis	46	1	47
Ciguatera fish poisoning	1	0	1
Cryptosporidiosis	25	*	25
Cyclosporiasis	1	*	1
Dengue Fever	0	1	1
Ehrlichiosis- human granulocytic	1	0	1
Ehrlichiosis- human monocytic	0	0	0
Ehrlichiosis- human- other&unspec	0	0	0
Encephalitis- West Nile	0	0	0
Enterohem. E.coli O157:H7	0	0	0
Enterohem.E.coli shigatox+ ?serogrp	0	0	0
Enterohem.E.coli- shigatox+- non-O157	0	0	0
Giardiasis	36	0	36
Group A Streptococcus- invasive	62	0	62
Group B Streptococcus- invasive	14	0	14
Haemophilus influenzae- invasive	31	0	31
Hemolytic uremic synd- postdiarrheal	1	0	1
Hepatitis A- acute	5	0	5
Hepatitis B- acute	45	3	48
Hepatitis B virus infection- chronic	129	147	276
Hepatitis C- acute	0	0	0
Hepatitis C Virus Infection- past or present	1797	446	2243
Hepatitis Delta co- or super-infection- acute	0	0	0
Hepatitis E- acute	1	0	1
Influenza- human isolates	68	0	68
Legionellosis	8	1	9
Listeriosis	2	0	2
Lyme disease	9	1	10
Malaria	4	0	4
Mumps	0	0	0
Neisseria meningitidis- invasive (Mening. disease)	9	0	9
Pertussis	32	12	44
Rocky Mountain spotted fever	8	12	20
S. aureus- coag+ meth- or oxi- resistant (MRSA)	1	0	1
Salmonellosis	302	3	305
Shiga toxin-producing Escherichia coli (STEC)	0	0	0
Shigellosis	36	0	36
Strep pneumoniae- invasive	194	1	195
Streptococcal disease- invasive- other	7	0	7
Tetanus	0	0	0
Toxic-shock syndrome- staphylococcal	0	0	0
Varicella (Chickenpox)	418	262	680
Vibrio parahaemolyticus	1	0	1
Vibrio spp.- non-toxigenic- other or unspecified	3	0	3
Vibrio vulnificus infection	0	0	0
West Nile Fever	0	0	0
Yersiniosis	6	1	7

* Probable case status is not allowed for this condition.

Epi-Notes

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**Epi-Notes is published by the South Carolina
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FOR DISEASE REPORTING**

For immediately reportable conditions, call your local county health department or, for after-hours, call 1-888-847-0902. Routine reports may be phoned in to your local health department or mailed on a completed DHEC DISEASE REPORTING CARD (DHEC 1129). Local

county health department numbers are listed on the Official List of Reportable Conditions. For a copy of the current Official List of Reportable Conditions, call 803-898-0861 or visit www.scdhec.gov/health/disease/index.htm

THE EPI NOTES NEWSLETTER IS NOW AVAILABLE ON LINE AT

www.scdhec.gov/health/disease/index.htm

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