



Division of Acute Disease
Epidemiology (DADE)

CHES Club

for providers

Jan/Feb 2012

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Is disease reporting in South Carolina required?

South Carolina Law (44-29-10) and Regulations (61-20) require reporting of specified contagious and infectious diseases and conditions to the local health department: "...in the form and manner as prescribed by DHEC in regulations concerning infectious diseases. The reports must be made to the Bureau of Disease Control in the manner required in the regulations. When available, clinical information supporting the diagnoses, including results of specific diagnostic tests, must be included." In South Carolina, these diseases and conditions are specified in the List of Reportable Conditions, published annually by the DHEC Bureau of Disease Control. In addition to diseases, the List also specifies that outbreaks of disease or unusual clusters of illness, events such as animal (mammal) bites and pesticide poisoning, and findings suggestive of disease (e.g., hemolytic uremic syndrome) must be reported to DHEC. Diseases do not have to be confirmed to be reported - actions to prevent further spread of disease may be necessary while confirmatory tests are pending.

Do not enter LEAD or TB in CHES

CHES Password Changes
www.scdhec.gov/citrix

CHES DHEC site
<https://chessweb.dhec.sc.gov/>

CHES User Resources (websites, newsletters, updates)
www.dhec.sc.gov/health/disease/chess/clubhouse.htm

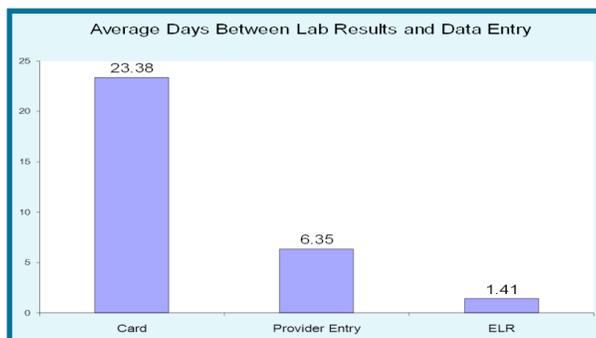
S.C. DHEC A-Z Disease Resources
www.dhec.sc.gov/health/disease/acute/diseases.htm

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Why is electronic reporting requested by DHEC?

Electronic reporting allows the patient information to reach the DHEC region and program much more quickly. It takes, on average, about three weeks from diagnosis for cards to be received and entered at DHEC. When providers use CHES to report directly, the average time drops to just over six days from diagnosis. Faster reporting means that case investigation and follow-up often starts days ahead of the mailed card. Electronic reporting also allows a provider to more strongly protect patient privacy because fewer people handle the report - computer entry by a single user in the facility and receipt by authorized DHEC staff. In addition, secure electronic storage of this data allows immediate access to patient files by subject matter experts at DHEC without printing patient information.



Improved reporting time of a notifiable condition protects both the patient and the community as public health officials are more able to interrupt disease transmission with appropriate treatment, post-exposure prophylaxis, school or work exclusion, or vaccination. Analysis of electronic data also shows that providers who enter data directly into the system, provide more complete information on the patient, such as treatment given, diagnosis and onset dates, and lab collection dates.

Additional benefits are gained by more complete data for analysis resulting in accurate and timely characterization of disease burden which assists public health officials in assessing risk and making decisions that may impact the broader community.

There are 105 hospitals certified in SC and hundreds more physicians in the state. CHES (Carolina Health Electronic Surveillance System) is the SC electronic system. Across SC, 190 providers have allowed their staff to become CHES users. *Thank you to our active CHES providers for your part in making public health more efficient and responsive.*

Reporting Positive Hepatitis B in Pregnancy

Hepatitis B is a reportable condition in SC. Please refer to the List of Reportable Conditions.

When reporting Hepatitis B, it is very important to give us a complete report.

For instance, select *Yes, No, or Unknown* for pregnancy status on all females. If you do this for all females, then a pregnant patient who seemed too

young or too old for pregnancy won't be missed in follow up. Hepatitis B virus can pass from the pregnant woman to her fetus or newborn at birth. When she is identified as pregnant and hepatitis B positive she can be monitored and treated during pregnancy, and her baby treated immediately after delivery. This will help her baby avoid chronic hepatitis B infection.

Additionally, report all hepatitis test results, even negatives, that were performed as part of a panel. This information can be entered in CHES in the *Result Comments* field below the positive hepatitis B result. Although this is important for all hepatitis tests that are part of a panel with a positive, it most often occurs with pregnancy panels.

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Rabies - Dr. Eric Brenner, MD, Stephanie Cox, DVM MPH & Alysa Sampson

This past December, South Carolina experienced its first case of human rabies since 1959. There are typically only 1-3 cases of human rabies in United States per year, though worldwide there are approximately 55,000 cases per year. Human rabies almost always results in death.

What is Rabies?

Rabies is a viral disease transmitted to humans by a rabid animal. Initial symptoms may be non-specific (e.g. general weakness or discomfort, headache, a sense of apprehension); but then, rapidly progress and may include sensory changes at the site of the animal bite, anxiety, confusion and symptoms of cerebral dysfunction. Further progression can result in insomnia, fear of water (hydrophobia), delirium, abnormal behavior, paralysis (in some patients), and hallucinations. Once these clinical signs appear, rabies is nearly always fatal; although, in recent years a very small number (~3) patients have survived in our country through the use of an experimental treatment protocol.

Diagnosis of rabies is made by means of a variety of tests performed at CDC on saliva, serum, spinal fluid, and skin biopsies of hair follicles at the nape of the neck.

Rabies exposures:

Only mammals are susceptible to and can transmit rabies. In different geographic areas of the United States, different strains of rabies virus circulate among various species including: raccoons, skunks, foxes and bats. The transmission of the virus from is almost always from a bite which injects infectious saliva from the rabid animal into the bite wound of the victim. Non-bite exposures to rabid animals rarely result in rabies but must nevertheless be carefully evaluated.

Post exposure prophylaxis:

Thorough cleansing of a bite wound with soap and water is not only a simple common-sense measure, but is actually very efficacious at disrupting rabies virus particles and so markedly reduces the risk of transmission. Post-exposure

prophylaxis (PEP) consists of injection of rabies immune globulin (RIG), as well as a 4-dose series of vaccines given over the course of two weeks, and is essentially 100% effective at preventing clinical disease even following a significant bite exposure. Decisions as to whether or not PEP is required are made by a physician, often in consultation with rabies consultants from the local or state health department.

Some facets of rabies prevention:

- Vaccinating pets (as is required by law) and ensuring that their vaccinations remain up-to-date will provide protection to pets when they encounter rabid animals, which in turn protects humans.
- Spaying or neutering pets reduces the number of stray animals. Since, strays do not usually receive rabies vaccinations, neutering can decrease the overall number of animals who may become infected with rabies.
- Education of animal owners and the public about rabies, including the need to avoid contact with wild terrestrial animals, bats, and stray animals, especially if they are acting abnormally or appear ill
- Maintaining statewide surveillance for animal rabies (The DHEC Bureau of Laboratories typically tests about 1800-2000 animals per year for presence of rabies virus.)

Reporting exposure:

South Carolina law states that all mammal bites be reported to the Health Department within 24 hours. The healthcare provider attending to the wound will report the bite. If no medical attention was sought, the adult bitten or parent or guardian of the minor bitten shall report the bite.

How to report rabies:

Human rabies is listed on the South Carolina List of Reportable Conditions as an immediately reportable disease. Fortunately, the disease, though relatively common in animals, has been rare in humans in this country.

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Interview with Dr. Eric Brenner, MD

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You are a man who wears many hats in the professional world. Can you tell us about your work with DHEC, USC Arnold School of Public Health, and outside of the United States?

My work with DHEC's Disease Control programs has been the cornerstone of my activities for the past several decades. However, I have been fortunate in being able to maintain part-time activities in other areas as well. For the past 10 years, I have been teaching courses in Infectious Disease Epidemiology at the USC School of Public Health, and for 20 years or so I also traveled to Geneva (Switzerland) several times a year to teach in the MPH program in their medical school. Most generally think that teaching is for the benefit of the students. But my experience has been that teaching has benefited me tremendously because the process of conceptualizing something to make it clear to others inevitably leads to deeper levels of clarification and understanding for me as well. So, in a sense my time away from DHEC has also helped me refine the quality of the disease control work I do. I have also been fortunate over the years in being able to consult with, and teach for, various other international organizations, including WHO, UNICEF, USAID and the ICRC. Terrific experiences every time!

With your work at USC, you have introduced GA's (graduate assistants) into DADE (Division of Acute Disease Epidemiology) to learn on the job. What makes this a successful relationship for the GA's and DADE?

Having GAs has been a real boon for all parties. That is, GAs often help us (in the Bureau of Disease Control) do important things which we don't actually have time to do ourselves. That's "win-one". On the other side GAs acquire real-life public health, disease control and epidemiology experience which they could never get just from attending class. That's "win-two". So, "win-one" + "win-two" = A "win-win" outcome for sure!



Dr. Eric Brenner, MD
DHEC Division of Acute Disease Epidemiology

With your many years of experience in public health, what do you see as some of the big events that occurred in the US or abroad in the past 35 years? How has the field of public health changed?

Yes...so many big events! It is so hard to pick just some as being more important than others. Probably No. 1 would be the global eradication of smallpox which was accomplished between 1967 and 1977. This showed what we could do in public health on a planetary scale if we (mankind) set our minds to it. This then opened the door to the now nearly complete global eradication of polio, as well as to the elimination of measles in the USA.

The measles story is actually so remarkable. Just a few years ago essentially (or nearly) every child would get measles and though only perhaps 1 in a 1000 would die from the disease, the fact that we have birth cohorts of ~ 4 million children in the USA every year, meant that over the years we had several thousand measles deaths per year in the country. Now essentially no child gets measles since domestic transmission of the virus has now been interrupted for a number of years. Of course despite domestic measles elimination a small

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Interview with Dr. Eric Brenner, MD...cont'd

number of cases do occur every year, but these are all due to importations of the virus from other countries where transmission remains ongoing.

The AIDS story of course is also very big. What progress has been made, especially with antiretroviral therapy, since the virus first appeared in the 1980s!

The successful work of TB control programs since the early 1990s has also been very gratifying. In 2011 for example we only had about 10,500 cases in the whole country. This is truly remarkable given the technical difficulties of fighting a disease which takes such a long time to treat, for which contact investigation is such a long technically complex process, and for which we do not have a good vaccine. Most Americans have no idea that we still have thousands of TB cases every year and that it is only because of public health efforts that the disease has gradually come under relative control.

On the operational side of public health the main change in recent years has come with the advent of the electronic revolution. Collection and analysis epidemiologic data has been totally revolutionized and email and the internet now allow us to transmit information nearly instantly to those who need to know. We can now often do more in an hour with PC and internet tools than we used to be able to do in a day!

What advice would you give to anyone who is thinking about moving from private healthcare into public health? Is a background in healthcare needed to work in public health?

Certainly in public health we do need people with strong backgrounds in healthcare on the team. By virtue of their training doctors and nurses inevitably have a better understanding of the clinical context relating either to a "case" of an exotic, normally rare, but perhaps potentially dangerous disease (e.g. typhoid

fever, malaria...) or also of course regarding an outbreak situation in which an entire school class or assisted care facility may be affected by a rapidly spreading virus. On the other hand public health is not just about clinical matters per se. We also need epidemiologists, biostatisticians, IT specialists, communication experts as well then as "managers" who can keep the whole disease control operation working so that all the complex things which need to be done do get done. In other words, public health is definitely a "team sport", and a lot of different medical and non-medical skills are needed to make the team work as it should.... and for the public good!

Do you have hobbies or special interests that keep you busy during your time off?

For the past 10 years I have usually ridden a bicycle to and from work. Zooming on downhill stretches is as much fun now as when I was a kid. And as for the uphill parts....well that takes some work indeed but certainly beats riding a stationary cycle at home or in a gym. I also play the piano when I can and have fantasies of making a concert debut in 2020 in an all Beethoven sonata recital. In a way, since great art puts us in touch with some of the best of ourselves, it could then perhaps be argued that the real goal of medicine and public health is to help keep people healthy so as to enjoy their favorite art!

Learn More About Rabies

Additional information about rabies can be found from a variety of reliable sources including:

SC DHEC

www.scdhec.gov/rabies

CDC

www.cdc.gov/rabies

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Interview with Alysa Sampson

What is your status at USC School of Public Health and DHEC Division of Acute Disease Epidemiology?

Currently, I am finishing my final year of the MSPH in Epidemiology program at USC. My position at DHEC is a graduate assistant in the Division of Acute Disease Epidemiology working mostly in surveillance of diseases.

What can you tell us about the programs at the USC School of Public Health that would help others consider furthering their education or making a career change?

USC offers a variety of graduate level public health degrees taught by excellent faculty and staff, some of which I consider the best in the industry. The professionalism they offer has been unmatched from any faculty and staff I have worked with in the past.

What was your background before starting the program at USC?

Before beginning my MSPH in Epidemiology, I received my BA in Women's and Gender Studies at the University of South Florida. I did not take any time off between my degrees as I had already decided pairing my women's and gender studies degree with an epidemiology would prove to be most fulfilling for my interests and goals.

In the future, what areas of public health would you like to explore?

I would like to continue studying and working in infectious disease epidemiology. One day I would like to explore the relationship between infectious disease and chronic diseases especially autoimmune disorders. I also am very interested in conducting research in women and children's infectious disease because it pairs the foundations of both my undergraduate and graduate studies.



Alysa Sampson - Graduate Assistant
DHEC Division of Acute Disease Epidemiology
& Epidemiology Graduate Student
Arnold School of Public Health
University of South Carolina

Since coming to DHEC, has there been a moment when public health came to life for you?

My first week of work as a graduate assistant at DHEC was an amazing experience, in that it was my first infectious disease professional experience. After taking part in the everyday procedures associated with infections disease, I have reinforced my longing to work in this area of public health.

Do you have hobbies or special interests that keep you busy during your time off?

I grew up dancing (ballet and modern) and doing gymnastics, so I have a special interest in these performance arts. A lot of my closest friends continued on to study dance and now perform professionally. For this reason, I try and stay current with what's going on in the dance world.

Physician Guide to Rabies Post-Exposure Prophylaxis

[www.scdhec.gov/environment/
envhealth/rabies/rabies-pep.htm](http://www.scdhec.gov/environment/envhealth/rabies/rabies-pep.htm)

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Providers Trained in 2012

Life Center – Summerville

CareSouth Carolina locations:
Hartsville, Cheraw,
Chesterfield, Bishopville



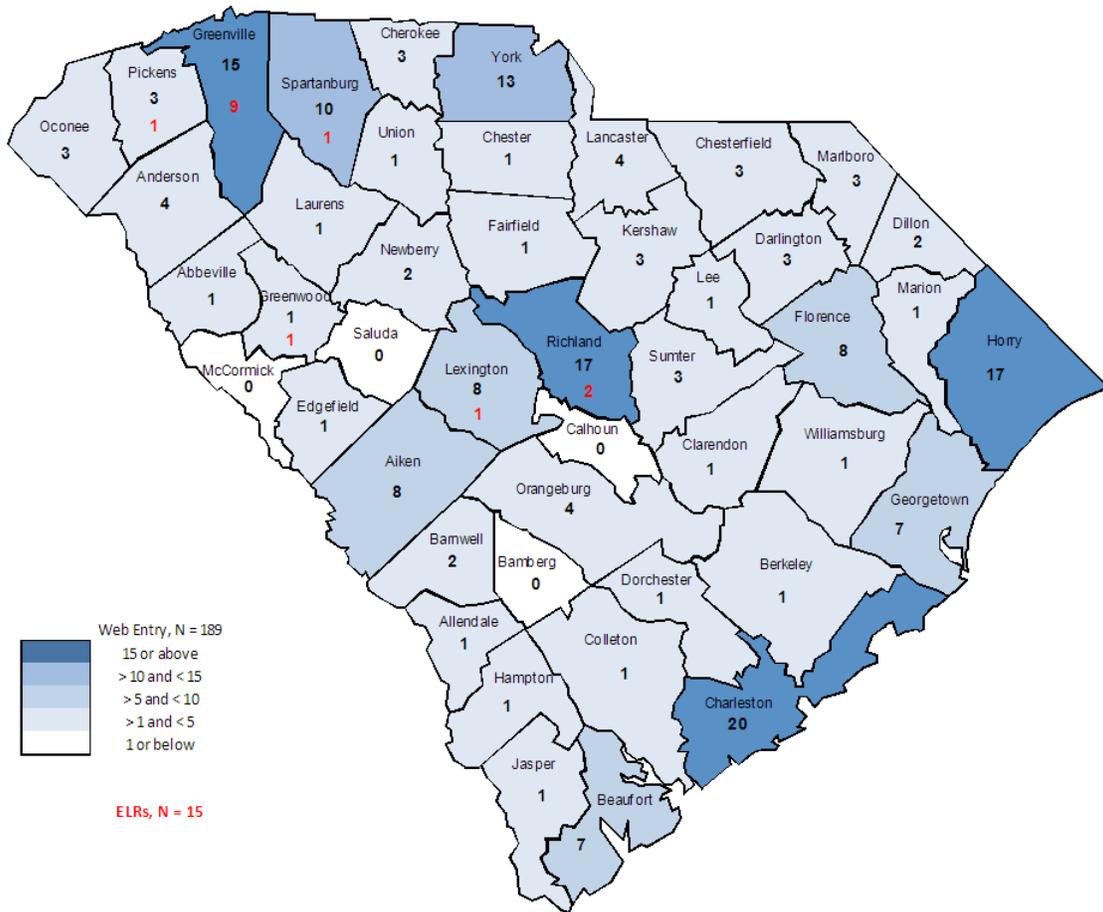
Doctors Express
Charleston



Newberry County
Memorial Hospital

CHESS Deployments

By County



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By The Numbers

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2012 Disease/Condition (as of March 19, 2012)

	Confirmed	Probable
Aseptic meningitis	21	0
Campylobacteriosis	33	0
Cryptosporidiosis	2	11
Giardiasis	14	0
Group A Streptococcus, invasive	12	0
Group B Streptococcus, invasive	10	0
Haemophilus influenzae, invasive	16	0
Hemolytic uremic synd, postdiarrheal	1	0
Hepatitis	0	2
Hepatitis A, acute	1	0
Hepatitis B virus infection, Chronic	8	88
Hepatitis B, acute	8	0
Hepatitis C Virus Infection, past or present	581	1
Influenza, human isolates	27	0
Legionellosis	3	0
Listeriosis	1	0
Lyme disease	1	1
Malaria	2	0
Pertussis	12	1
Q fever	0	1
Salmonellosis	88	0
Shiga toxin-producing Escherichia coli (STEC)	5	0
Shigellosis	2	0
Spotted Fever Rickettsiosis	0	2
Strep pneumoniae, invasive	105	0
Tuberculosis	1	0
Typhoid fever (Salmonella typhi)	1	0
Vibrio spp., non-toxigenic, other or unspecified	1	0