



Epidemiology & Surveillance Quarterly Newsletter



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Salmonella Saintpaul found in peppers

The strain of *Salmonella* bacteria responsible for the nationwide outbreak of salmonellosis has been found in laboratory tests of serrano and jalapeno peppers. Earlier this month, a jalapeno pepper collected from a distributor in Texas tested positive for the outbreak strain. The jalapeno was grown in Mexico. This week, serrano peppers and irrigation water from a farm in Mexico also tested positive for the outbreak strain.

These are the first confirmed laboratory tests for the outbreak strain of *Salmonella* Saintpaul identified from produce since the outbreak began this past April. Epidemiologic investigation over the last few months had identified tomatoes, various spicy peppers and other ingredients commonly found in salsas as potential sources of the outbreak. Investigation is ongoing to confirm if serranos and jalapenos or possibly cross contamination of several types of produce are the culprits of this outbreak.



Update on the national Salmonella Saintpaul investigation

Since April, 495 people have been reported to the Texas Department of State Health Services with a *Salmonella* Saintpaul infection that matches the same genetic fingerprint as the ongoing national outbreak. Of these cases, 76 are from counties in Health Services Region 7.

From the Centers for Disease Control and Prevention website: (<http://www.cdc.gov/salmonella/saintpaul/> as of 07/28/08)

Since April, 1304 persons infected with *Salmonella* Saintpaul with the same genetic fingerprint have been identified in 43 states, the District of Columbia and Canada. These were identified because clinical laboratories in all states send *Salmonella* strains from ill persons to their State public health laboratory for characterization. The number of ill persons identified in each state is as follows: Alabama (3 persons), Arkansas (19), Arizona (56), California (11), Colorado (16), Connecticut (5), Florida (3), Georgia (40), Idaho (6), Illinois (115), Indiana (20), Iowa (2), Kansas (21), Kentucky (2), Louisiana (2), Maine (1), Maryland (38), Massachusetts (29), Michigan (25), Minnesota (22), Mississippi (2), Missouri (20), Montana (1), New Hampshire (5), Nevada (13), New Jersey (14), New Mexico (106), New York (39), North Carolina (28), Ohio (10), Oklahoma (25), Oregon (11), Pennsylvania (13), Rhode Island (3), South Carolina (2), Tennessee (9), Texas (495), Utah (2), Virginia (31), Vermont (2), Washington (17), West Virginia (1), Wisconsin (13), and the District of Columbia (1). Five ill persons are reported from Canada; four appear to have been infected while traveling in the United States, and one illness remains under investigation.

Among the 1261 persons with information available, illnesses began between April 10 and July 13, 2008, including 37 who became ill on July 1 or later. Patients range in age from <1 to 99 years; 50% are female. The rate of illness is highest among persons 20 to 29 years old; the rate of illness is lowest in children 10 to 19 years old and in persons greater than 80 years old. At least 252 persons have been hospitalized. A man in his eighties who died in Texas from cardiopulmonary failure had an infection with the outbreak strain at the time of his death; the infection may have contributed to his death. A man in his sixties who died in Texas from cancer had an infection with the outbreak strain at the time of his death; the infection may have contributed to his death.

This information is updated frequently on the Centers for Disease Control website.

Salmonellosis in Region 7

Salmonellosis is a fairly common gastrointestinal illness. Health Services Region 7 receives an average of 334 reports of Salmonellosis each year. Symptoms of Salmonellosis include diarrhea, fever and abdominal cramps. These symptoms usually start anywhere from 12 to 72 hours after a person is exposed to the bacteria and can last from 4 to 7 days.

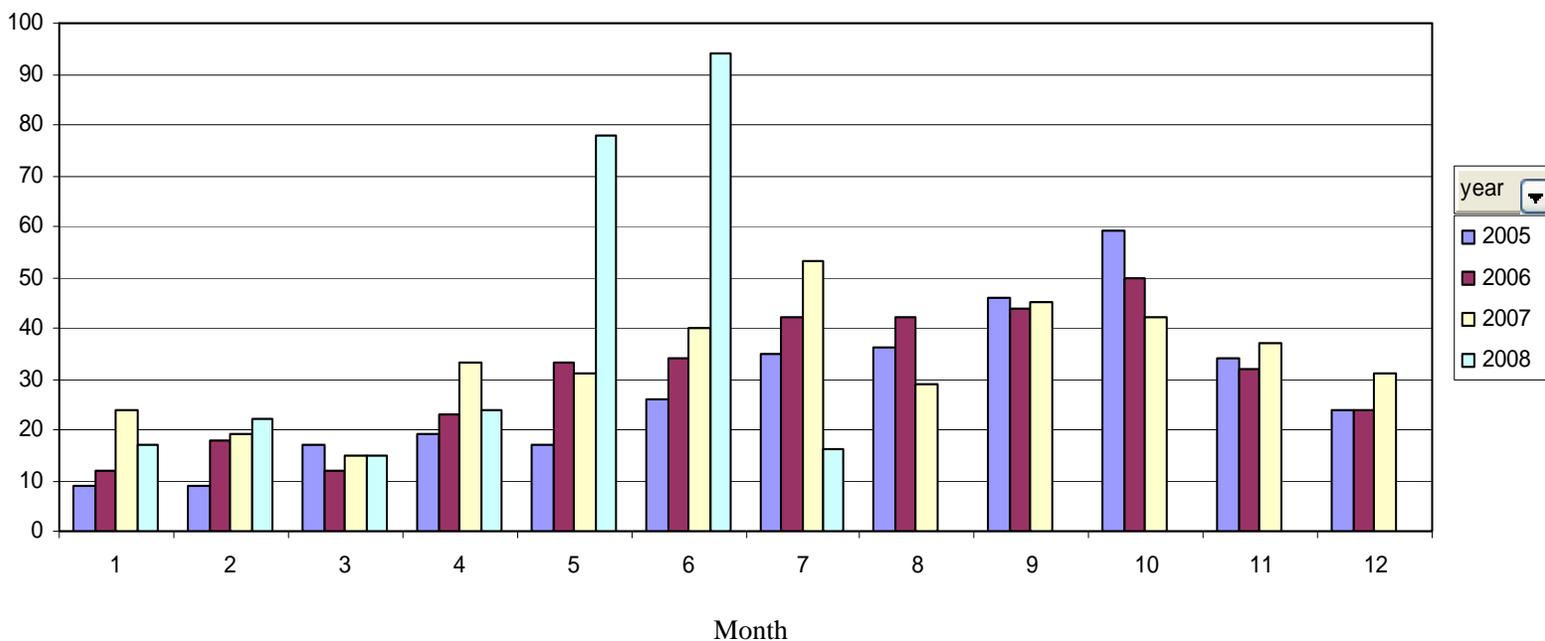
Salmonella is frequently associated with animals, animal products (eggs, meat, etc) and produce. Past outbreaks of Salmonellosis have been associated with a variety of food and animals:

- Chicken
- Tomatoes
- Reptiles (turtles and snakes)
- Mice
- Milk
- Eggs
- Beef jerky
- Ice cream
- Cantaloupe
- Dry dog food
- Peanut butter

The graph below shows the number of Salmonellosis reports in Health Services Region 7 by month from 2005 through 2008. A large increase in reports is seen in May and June of 2008. This increase is in part because of cases linked to the *Salmonella* Saint-paul outbreak (44% of reports received in May and June) as well as from increased testing for and reporting of *Salmonella* cases due to awareness of the outbreak.

National outbreaks and/or related clusters of Salmonellosis can be identified using PulseNet. PulseNet is a network of public health and food regulatory agencies designed to detect clusters of foodborne illness. PulseNet does this by identifying subtypes of enteric bacteria. Hospital and commercial laboratories can forward isolates of *Salmonella* (and select other enteric pathogens) to state labs for molecular subtyping by pulse-field gel electrophoresis (PFGE). The PFGE patterns are then sent to an electronic database maintained by the Centers for Disease Control and Prevention. States can search this database to find other patterns that match their pattern. Epidemiologists then work to find out what the people with matching patterns have in common.

Count per Month of Salmonellosis Cases Reported
to Health Services Region 7; January 1, 2005 - July 21, 2008



Additional information on Salmonellosis and outbreaks of Salmonellosis can be found at:

- <http://www.cdc.gov/salmonella/>
- <http://www.cfsan.fda.gov/~mow/chap1.html>

Rabies in Health Services Region 7

There were **184 laboratory-confirmed animal rabies cases** reported from the 30-county area of Health Service Region 7 (Central Texas) during the first six months of 2008. Region 7 staff investigated an additional 84 non-negative rabies test results. The number of positive rabies cases in 2008 is 68 more than mid-year last year, and the region is on a course to surpass the prior two years' total positive animal rabies cases (2007 - N = 297; 2006 - N = 255).

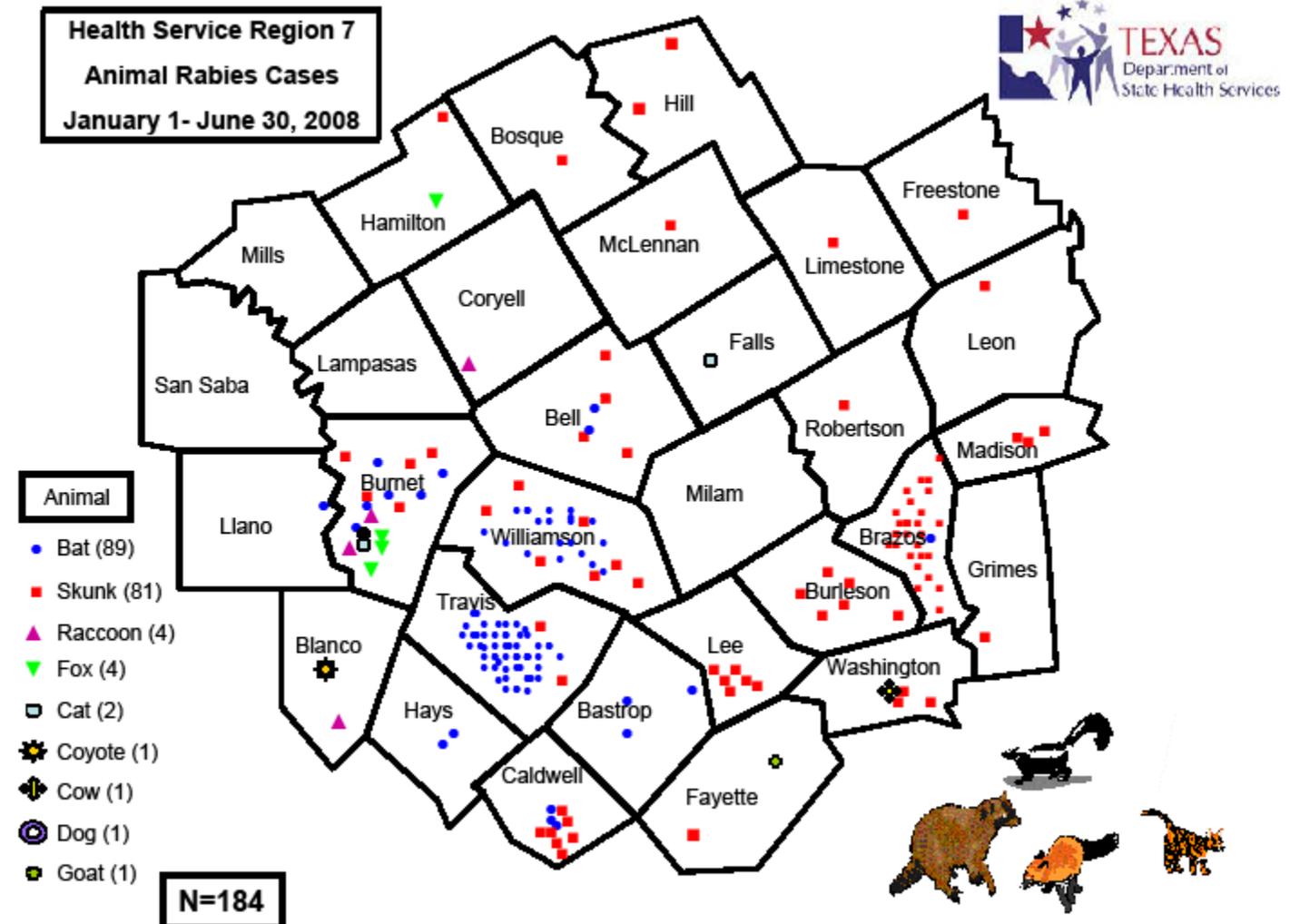
Thus far in 2008, rabies was confirmed in 89 bats, 81 skunks, 4 raccoons, 4 foxes, 2 cats, 1 dog, 1 coyote, 1 cow, and 1 goat.

Counties with laboratory-confirmed rabies cases include: Bastrop (3), Bell (6), Blanco (2), Bosque (1), Brazos (27), Burleson (6), Burnet (18), Caldwell (10), Coryell (1), Falls (1), Fayette (2), Freestone (1), Grimes (1), Hamilton (2), Hays (2), Hill (2), Lee (6), Leon (1), Limestone (1), Llano (1), Madison (3), McLennan (1), Robertson (1), Travis (55), Washington (4), and Williamson (26).

Rabies data is obtained through a passive reporting system. The data is based **only** on the results of animals submitted for rabies testing. There are many more animals (particularly wildlife) that die of rabies but are never submitted for rabies testing. Rabies is endemic in Central Texas, and ALL counties have rabies risk.

The supply of human rabies vaccine has been disrupted this summer by unforeseen manufacturing limitations. Vaccine is available on a patient-by-patient basis from the manufacturers for those persons who meet the exposure criteria and for whom the exposing animal cannot be proven negative for rabies. Rumors that rabies vaccine is unavailable are incorrect. Information on obtaining rabies vaccine is on page 4 of this newsletter.

During this supply disruption, it is critical more than ever that veterinarians, animal control officers, Local Rabies Control Authorities, educators, health care providers, community leaders and the media promote animal bite avoidance, animal bite reporting, domestic animal rabies vaccinations, and rabies quarantine and testing of potentially rabid animals.



Obtaining Rabies Vaccine and Human Rabies Immune Globulin (HRIG)

Obtaining Rabies Vaccine and HRIG from DSHS for Post-Exposure Prophylaxis Use

- 1. Consult with the appropriate regional Zoonosis Control office for the provider's area on each potential rabies exposure to determine if the patient's exposure situation warrants PEP.** Requests for consultations made after-hours or on holidays should be directed to the Texas Department of State Health Services (DSHS) On-Call physician at 1-888-963-7111.
 - a. If regional Zoonosis Control staff determines that the exposure situation warrants PEP, the provider may obtain rabies biologicals via process 2 (if patient qualifies) or 3, below.
 - b. If regional Zoonosis Control staff determines that the exposure situation **does not** warrant PEP, they will not release HRIG or vaccine from DSHS inventory or place an order for rabies biologicals with Sanofi Pasteur on the patient's behalf. If the provider still wishes to obtain rabies biologicals for their patient, they must do so via process 2 (if patient qualifies) or 4, below.

- 2. Medical providers with qualifying medically indigent patients who require rabies PEP should request rabies biologicals at no cost directly from the Sanofi Pasteur Patient Assistance Program (PAP), which may be accessed via an automated phone system at 866-801-5655.** To qualify, patients must be a resident of the United States; be under the care of a licensed healthcare provider; cannot be enrolled in, or qualify for, any form of medication reimbursement program or private insurance plan; and must be at or below 200% of the federal poverty level for their household size, as specified in the PAP program application instructions. A one-page application form, along with one page of instructions, can be automatically faxed to the provider by following the instructions provided by the automated phone system. The patient and provider each complete a portion of the application and the application is then faxed to the PAP at 866-734-7371. The PAP makes the financial eligibility determination based upon the information provided by the patient on the application. No additional documentation of the patient's qualifications is required. The provider is not required to establish an account with Sanofi Pasteur and does not incur any costs under this program. Product is usually shipped within 24 hours (see item 5 below for shipping information). The provider will be apprised promptly in writing of any denied requests. Patients denied rabies biologicals under the PAP and who Zoonosis Control staff has determined have a valid rabies exposure can obtain rabies biologicals from DSHS utilizing process 3, below.

- 3. Patients with valid rabies exposures and who do not qualify to receive rabies biologicals from the Sanofi Pasteur PAP may obtain rabies biologicals at a cost from DSHS.** Zoonosis Control staff will provide the medical provider with a copy of the DSHS "Human Rabies Biologicals Payment Agreement and Surveillance Report" form (**available from regional Zoonosis Control offices**). The provider must fill out the form as instructed and submit it and a prescription for rabies biologicals back to the regional Zoonosis Control office. Regional Zoonosis Control staff will order the requested rabies biologicals from Sanofi Pasteur utilizing DSHS billing accounts. Product will be shipped within 24 hours to the regional Zoonosis Control office or the regional depot that is most convenient for patient pickup (see item 5 below for shipping information). The patient must bring the original copies of the prescription and the "Human Rabies Biologicals Payment Agreement and Surveillance Report" form with them when they pick up their biologicals. The patient or the patient's 3rd party payer (if applicable) will be billed by DSHS at a later date for the cost of the products. The provider incurs no financial responsibility for rabies biological products ordered through DSHS.
 - a. **If the patient has a history of severe allergic reaction to Imovax[®] vaccine**, regional Zoonosis Control staff will place an order for RabAvert[®], in lieu of Imovax[®].

- 4. Providers may order HRIG and rabies vaccine directly from Sanofi Pasteur** by filling out the "Rabies Post-Exposure Vaccine Order Form" (**available from regional Zoonosis Control offices**) and faxing it directly to Sanofi Pasteur at the number provided at the bottom of the form. A Sanofi Pasteur representative will contact the provider within one business day regarding the order. Orders typically will be shipped within 24 hours (see item 5 below for shipping information). If the provider does not have an existing billing account with Sanofi Pasteur, they will be required to establish one before the rabies biologicals order will be processed. Accounts may be set up when the provider is contacted by customer service or, preferably, may be set up in advance by calling Sanofi Pasteur Customer Service at 800-822-2463. Payment for HRIG and vaccine

Obtaining Rabies Vaccine and HRIG, cont.

orders placed directly with Sanofi Pasteur is the responsibility of the provider placing the order. HRIG may also be ordered from Talecris Biotherapeutics (maker of HyperRAB[®] human rabies immune globulin) at 800-243-4153.

5. Sanofi Pasteur Shipping Schedule:

Product is usually shipped within 24 hours of Sanofi Pasteur receiving an order in keeping with the following schedule:

Shipments are routinely made Monday through Thursday for overnight delivery. They do not routinely ship for Saturday delivery, but will do so if the office is open and staffed to receive the product. Sanofi will not be responsible for the vaccine loss if product is requested to be delivered on Saturday and is not properly received and stored. Sanofi will not schedule vaccine to be delivered on Sunday, since they do not have couriers to provide this service. The provider's request for vaccine will be scheduled to ship the following business day.

If the timeframe for receipt of rabies biologicals is problematic, the provider may contact the appropriate regional Zoonosis Control office for the provider's area (<http://www.dshs.state.tx.us/idcu/health/zoonosis/contact/>) to determine if DSHS may be of assistance pending receipt of product from Sanofi Pasteur.

Requesting Rabies Vaccine for Pre-Exposure Use

1. Providers should fill out the "Rabies Vaccine Request Form for Pre-exposure Prophylaxis (PreP) Use in Workers at Higher Occupational Risk for Rabies Exposure" (**available from regional Zoonosis Control offices**) and fax it to the appropriate regional Zoonosis Control office for the provider's area.

2. Requests meeting the requirements for approval will be forwarded by Zoonosis Control staff to Centers for Disease Control and Prevention (CDC) for additional review and approval. Requests approved by CDC will be placed on a wait list and will be filled as supplies are deemed sufficient to release product for PreP use. Sanofi Pasteur will contact the provider directly when vaccine is available. Payment for vaccine orders placed for PreP purposes is the responsibility of the provider making the request.

Need More Information

For more information about rabies or the information contained in this article, please contact the Health Services Region 7 Regional Veterinarian:

Beverlee E. Nix, DVM, MPH
Department of State Health Services Region 7
Zoonosis Control Veterinarian
2408 S. 37th St.
Temple, TX 76504
P: (254) 778-6744
F: (254) 773-9358
Email: beverlee.nix@dshs.state.tx.us
Program Website: <http://www.dshs.state.tx.us/region7/ZoonosisControlProgram.shtm>

To locate the regional veterinarian for a county outside of Health Services Region 7, visit the following website: <http://www.dshs.state.tx.us/idcu/health/zoonosis/contact/>



Haff Disease

Haff Disease is a rare condition associated with eating certain types of freshwater fish. Only 23 other cases have been reported in the United States since 1984. It appears to be caused by a heat stable toxin so through cooking of the fish will not negate its effects. A case of Haff disease was reported to Health Services Region 7 this past June. The individual bought a Buffalo Fish from a local seafood market, prepared it and ate the fish the same day. No other family members consumed any of the fish. Early the next morning, the individual woke with severe muscle pain across the chest and along the shoulders. The pain soon spread down their arms, torso, abdomen, hips, thighs and calves. The initial concern was heart attack though this quickly changed to unexplained rhabdomyolysis. Haff Disease should be considered with any unexplained rhabdomyolysis that has markedly elevated Creatine Kinase level with an MB fraction of less than 5% when there is a history of fish consumption.

Because the physician reported the case so quickly to Health Services Region 7, we were able to work with several agencies to assess the threat to public health in our region. A health alert was sent to healthcare providers in Bell and Coryell counties. Representatives from Bell County Public Health District visited the seafood market and determined that no other Buffalo Fish had been sold from that market. Additional follow-up by the Texas Department of State Health Services demonstrated that the fish originated from one of two locations in Louisiana and arrived in Central Texas after being purchased from a seafood market in south east Texas.



According to the Centers for Disease Control and Prevention, Haff disease typically presents as a paroxysm of rhabdomyolysis, with accompanying muscle tenderness, rigidity, and dark brown urine. However, milder presentations also occur. The incubation period ranges from 6 to 21 hours, with symptoms generally appearing approximately 18 hours after eating fish.

Treatment is supportive and consists of administering large volumes of fluid early in the course of illness to prevent myoglobin toxicity to the renal tubules. Possible complications include electrolyte disturbances, renal failure, and disseminated intravascular coagulation. Symptoms usually resolve within 2-3 days. Historically, the case-fatality rate is approximately 1%.

Cases of Haff Disease are reportable in Texas under the “any outbreak, exotic disease, or unusual group expression of disease that may be of public health concern” clause.

For additional information on Haff Disease visit the Centers for Disease Control and Prevention MMWR website at <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056038.htm>. The picture is from the Texas parks and Wildlife website at <http://www.tpwd.state.tx.us/huntwild/wild/species/sucker/>

Measles Update

The Centers for Disease Control and Prevention (CDC) has received reports of 64 cases of measles between January and April this year. This is the highest number of measles cases reported during this timeframe since 2001. The CDC has been working with nine different states to investigate these cases. Four of the states (Arizona, New York, Michigan, and Wisconsin), have ongoing outbreaks where 3 or more cases are linked by time or place. Of the 64 cases, at least 10 acquired the disease abroad (United Kingdom). Only one of the 64 had a history of measles vaccination. Fourteen were too young to vaccinate.

These measles investigations serve as a reminder of the importance of vaccination. Even though measles is not commonly acquired in the United States, unvaccinated populations are still at risk. Approximately twenty million cases occur each year through out the world. The ease of global travel can facilitate the importation of measles into almost any community in the United States.

For additional information on measles visit the Centers for Disease Control and Prevention website at <http://www.cdc.gov/Features/MeaslesUpdate/>

Making the Case for Case Investigation & Response

Health Services Region 7 Epidemiology program will be offering a course on case investigation this coming September. This course will cover the basics of public health surveillance, disease reporting, case investigation and outbreak prevention. This is an introductory level course that will provide background on why and how health departments investigate infectious diseases. The target audience is anyone who may assist a health department with infectious disease surveillance, investigations or outbreak response. CEs will be offered.

What: **Making the Case for Case Investigation and Response**

When: Tuesday, September 30
8:30 am to 4:00pm

Where: Health Services Region 7
2408 South 37th St
Temple, TX 76504

Cost: Free

Topics covered:

- Principles of Public Health Surveillance
- Notifiable Disease Reporting in Texas
- Case Study on Surveillance
- Case Study on Disease Investigation
- Disease Control Measures
- Case Study on Disease Control
- Basics of Bioterrorism
- Syndromic Surveillance
- Exercise in Syndromic Surveillance



Registration Information:

Space is limited to 25 participants.

Email Carol Davis (carol.davis@dshs.state.tx.us) to register.

For additional information about the course, please contact Carol Davis or Russ Jones at 254-778-6744.

Select Notifiable Conditions Reported in 2006 , 2007 and January to June 2008

Notifiable Condition	2006 Count	2007 Count*	2008 YTD Count*
Amebiasis	30	61	40
Aseptic meningitis	270	278	133
Bacterial meningitis, other	18	24	14
Brucellosis	2	5	1
Campylobacteriosis	146	275	109
Cruetzfeldt-Jakob Disease	2	0	0
Cryptosporidiosis	109	37	3
Cyclosporiasis	1	0	0
Cysticercosis-	~	0	2
Enterohemorrhagic <i>E.coli</i> O157:H7	9	0	0
Enterohemorrhagic <i>E.coli</i> , shiga + (not serogrouped or non-O15:H7 serogroup)	10	11	4
Group A Streptococcus, invasive	57	44	28
Group B Streptococcus, invasive	76	52	38
<i>Haemophilus influenzae</i> , invasive	1	0	0
Hepatitis, unspecified	75	10	22
Hepatitis A, acute	23	28	16
Hepatitis B virus infection, Chronic [^]	241	227	194
Hepatitis B, acute	55	68	23
Hepatitis C Virus Infection, chronic or resolved [^]	2025	1271	1146
Hepatitis C, acute	3	13	6
Hepatitis E, acute	0	2	0
Legionellosis	8	6	3
Leishmaniasis-	~	2	0
Listeriosis	1	3	3
Lyme disease	5	11	5
Malaria	9	20	1
Mumps	15	2	1
<i>Neisseria meningitidis</i> , invasive (Meningococcal disease)	7	9	6
Pertussis	337	272	86
Plague	1	0	0
Q fever	3	8	3
Rocky Mountain spotted fever	2	2	0
Salmonellosis	366	390	250
Shigellosis	388	252	102
<i>Streptococcus pneumoniae</i> , invasive	129	224	134
Streptococcus, other, invasive, beta-hem (non-A nonB) [^]	15	12	2
Typhoid fever (<i>Salmonella typhi</i>)	0	2	1
Typhus fever	0	2	4
Vancomycin-Resistant Enterococcus	5	5	0
Varicella (Chickenpox)	1728	1230	734
Vibriosis	12	3	3
Yersiniosis	3	5	1
Grand Total	6190	4866	3118

Includes confirmed and probable notifiable conditions reported to the Texas Department of State Health Services Region 7 that are tracked in the NEDSS database. Year to Date (YTD) for 2008 includes cases reported and entered from January 2008 through June 2008.

* Data is provisional and may change as investigations are completed or updated.

[^] Disease is not reportable. Note: Newly reported chronic Hepatitis C was taken off of the notifiable conditions list as of June 5, 2007.

~ Disease was added to the notifiable conditions list in 2007.

Public Health Information Network (PHIN)

Between April and June, 5 PHIN messages were sent out to physicians, nurses and area hospitals in Region 7 counties. These messages contained information from the Centers for Disease Control and Prevention and/or the Texas Department of State Health Services regarding ongoing health investigations with the potential to impact Texans. The PHIN provides a secure format for sharing critical health information that may contain sensitive health information. PHIN messages are sent by email, phone or fax depending on the importance or time sensitive nature of the message.

Didn't get the alerts?

Healthcare providers, school officials, emergency medical services and emergency management coordinators are eligible for PHIN access. Go to <https://texphin.dshs.state.tx.us/> to sign up to use the PHIN. In addition to getting critical health information from the Department of State Health Services, PHIN users can also access the New England Journal of Medicine through the PHIN web portal. If you have any questions about the PHIN, call 254-778-6744 and ask to speak with Carol Davis, Jacquie Hagerty or Russ Jones.

Region 7 Outbreaks, Clusters and Other Large Investigations; Apr — June 2008

Health Services Region 7 and our local health departments have been actively involved with the national *Salmonella* Saintpaul outbreak for the past few months. A description of the outbreak can be found on page 1 of this newsletter.

Health Services Region 7 investigated a case of Haff Disease in June. A summary of the investigation can be found on page 6 of this newsletter.

Health Services Region 7 investigated a case of meningococemia in a 5 month old. Prophylaxis was recommended for 4 close contacts. In one day, the child was seen at 3 separate hospitals for respiratory symptoms, poor weight gain, failure to thrive and fever. The child did not have a rash. The child was diagnosed with pneumonia, reactive airway disease and cystic fibrosis. Sputum grew *Staph aureus*. Blood grew *Neisseria meningitidis*. The infectious disease physician at the diagnosing hospital felt the *Neisseria* result may be incidental.

In April, Health Services Region 7 assisted a long-term residential facility that had a cluster of respiratory illness in 6 residents, two of which died. All of the residents were in the same building with 5 of the 6 in one section of the building. Additionally there were staff members that had similar, although milder, symptoms. Clinical and environmental testing was done at the facility. Though the etiology was not identified, several causes such as Legionellosis were ruled out.

Department of State Health Services Health Services Region 7

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Questions about, comments on or ideas for this quarterly newsletter should be submitted to Carol Davis by email at carol.davis@dshs.state.tx.us or by phone at 254-778-6744.

Past editions can be found at <http://www.dshs.state.tx.us/region7/Epidemiology.shtm>
