

Public Health Emergency Preparedness

BRAZORIA COUNTY HEALTH DEPARTMENT

PUBLIC HEALTH MATTERS

SEPTEMBER 2010



MISSION STATEMENT

BRAZORIA COUNTY WILL BE PREPARED FOR AND READY TO RESPOND TO A HEALTH AND MEDICAL EVENT DUE TO EITHER A MAN-MADE OR NATURAL DISASTER

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SEPTEMBER IS NATIONAL PREPAREDNESS MONTH

PHEP Staff Makes Presentations at Statewide Conference

Chasey Reed-Boston, PHEP CBRNE Analyst, and Tamara Tisdale, PHEP Assets Controller, presented a session entitled, "Software Used for Surveillance," on July 22 at the I² Public Health Symposium in Austin, Texas. The audience was composed predominantly of Department of State Health Services SNS staff. Chasey spoke about the Real-Opt software program. Pros and cons were highlighted, and there was a discussion of limitations and real-life versus academic modeling.

Tamara addressed the PHEP use of

Survey Monkey on a weekly basis for school nurses, hospitals and physicians to report cases of influenza-like illness. PHEP had a much better response rate this past flu season using this tool. Tamara also demonstrated how the program could be used in planning for mass vaccination clinics.

Chasey demonstrated using the RAND Tool as a way of measuring effectiveness in different areas related to establishing a POD (i.e. staff call down,

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PHEP Staff Assigned New Responsibilities

STEPHANIE SMITH

Stephanie Smith, formerly the Public Health Emergency Response Facilitator, has been reassigned to the position of Public Health Planner/SNS Coordinator for PHEP. Her responsibilities include developing procedures for implementing public health preparedness plans or programs and for measuring progress for the Strategic National Stockpile procedures. These plans and programs address bioterrorism, infectious disease, and natural disasters. In addition to internal planning, Stephanie will work with local, state, and federal departments in matters concerning the coordination of plans and programs for the Strategic National Stockpile and other public health preparedness activities. Stephanie will also coordinate plans for the Cities Readiness Initiative. Stephanie has a Bachelors of Science from Notre Dame and a Masters in Public Health from the University of Minnesota.

CHASEY REED-BOSTON

Chasey Reed-Boston, who has been working as the Public Health Emergency Response Project Manager, has been reassigned as the CBRNE Analyst for PHEP. Her responsibilities include all aspects of chemical, biological, radiological, nuclear and explosive event preparedness and response plans specific to the role of public health and identified target capabilities. She will also coordinate with Matagorda County for nuclear and radiological event planning specific to the South Texas Project. In addition, Chasey will work with key community stakeholders to identify special needs groups and develop plans to address the needs of those groups in the event of an emergency. Chasey has a Bachelor of Science and a Master of Arts in Human Services from Liberty University. She is finishing on her dissertation for a Doctorate of Public Health in Epidemiology.

Food Safety

STEPS TO FOLLOW TO PREPARE FOR A POSSIBLE WEATHER EMERGENCY

Keep an appliance thermometer in the refrigerator and freezer. An appliance thermometer will indicate the temperature in the refrigerator and freezer in case of a power outage and help determine the safety of the food. Make sure the freezer is at 0°F (Fahrenheit) or below and the refrigerator is at 40 °F or below.

- ▶ Freeze containers of water for ice to help keep food cold in the freezer, refrigerator, or coolers after the power is out.
- ▶ Freeze refrigerated items such as leftovers, milk, and fresh meat and poultry that you may not need immediately—this helps keep them at a safe temperature longer.
- ▶ Plan ahead and know where dry ice and block ice can be purchased.
- ▶ Store food on shelves that will be safely out of the way of contaminated water in case of flooding.
- ▶ Have coolers on hand to keep refrigerator food cold if the power will be out for more than 4 hours. Purchase or make ice cubes and store in the freezer for use in the refrigerator or in a cooler. Freeze gel packs ahead of time for use in coolers.
- ▶ Group food together in the freezer—this helps the food stay cold longer.

STEPS TO FOLLOW DURING AND AFTER THE WEATHER EMERGENCY

- ▶ Never taste a food to determine its safety!
- ▶ Keep the refrigerator and freezer doors closed as much as possible to maintain the cold temperature.
- ▶ The refrigerator will keep food safely cold for about 4 hours if it is unopened. A full freezer will hold the temperature for approximately 48 hours (24 hours if it is half full and the door remains closed).
- ▶ Food may be safely refrozen if it still contains ice crystals or is at 40 °F or below.
- ▶ Obtain block ice or dry ice to keep your refrigerator and freezer as cold as possible if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should hold an 18-cubic-foot full freezer for 2 days.
- ▶ If the power has been out for several days, then check the temperature of the freezer with an appliance thermometer or food thermometer. If the food still contains ice crystals or is at 40 °F or below, the food is safe.
- ▶ If a thermometer has not been kept in the freezer, then check each package of food to determine its safety. If the food still contains ice crystals, the food is safe.
- ▶ Discard refrigerated perishable food such as meat, poultry, fish, soft cheeses, milk, eggs, leftovers, and deli items after 4 hours without power.
- ▶ Drink only bottled water if flooding has occurred.

When in Doubt, Throw it Out!

The Strategic National Stockpile

Helping State and Local Jurisdictions Prepare for a National Emergency

An act of terrorism (or a large scale natural disaster) targeting the U.S. civilian population will require rapid access to large quantities of pharmaceuticals and medical supplies. Such quantities may not be readily available unless special stockpiles are created. No one can anticipate exactly where a terrorist will strike and few state or local governments have the resources to create sufficient stockpiles on their own. Therefore, a national stockpile has been created as a resource for all.

CDC's Strategic National Stockpile (SNS) has large quantities of medicine and medical supplies to protect the American public if there is a public health emergency (terrorist attack, flu outbreak, earthquake) severe enough to cause local supplies to run out. Once Federal and local authorities agree that the SNS is needed, medicines will be delivered to any state in the U.S. within 12 hours. Each state has plans to receive and distribute SNS medicine and medical supplies to local communities as quickly as possible.

The SNS has stockpiled enough medicine to protect people in several large cities at the same time. Federal, state and local community planners are working together to ensure that the SNS medicines will be delivered to the affected area to protect you and your family if there is a terrorist attack.



The SNS is a national repository of antibiotics, chemical antidotes, anti-toxins, life-support medications, IV administration, airway maintenance supplies, and medical/surgical items. The SNS is designed to supplement and re-supply state and local public health agencies in the event of a national emergency anywhere and at anytime within the U.S. or its territories.

The SNS is organized for flexible response. The first line of support lies within the immediate response 12-hour Push Packages. These are caches of pharmaceuticals, antidotes, and medical supplies designed to provide rapid delivery of a broad spectrum of assets for an ill defined threat in the early hours of an event. These Push Packages are positioned in strategically located, secure warehouses ready for immediate deployment to a designated site within 12 hours of the federal decision to deploy SNS assets.

If the incident requires additional pharmaceuticals and/or medical supplies, follow-on vendor managed inventory (VMI) supplies will be shipped to arrive within 24 to 36 hours. If the agent is well defined, VMI can be tailored to provide pharmaceuticals, supplies and/or products specific to the suspected or confirmed agent(s). In this case, the VMI could act as the first option for immediate response from the SNS Program.

During a national emergency, state, local, and private stocks of medical materiel will be depleted quickly. State and local first responders and health officials can use the SNS to bolster their response to a national emergency, with a 12-hour Push Package, VMI, or a combination of both, depending on the situation. The SNS is not a first response tool.



The SNS Program is committed to have 12-hour Push Packages delivered anywhere in the U.S. or its territories within 12 hours of a federal decision to deploy. The 12-hour Push Packages have been configured to be immediately loaded onto either trucks or commercial cargo aircraft for the most rapid transportation.

Local communities are prepared to receive SNS medicine and medical supplies from the state to provide to everyone in the community who needs them. Find out about how to get medicine to protect you and your family by watching TV, listening to the radio, reading the newspaper, checking the Brazoria County Website (www.brazoria-county.com) or the PHEP website (www.PublicHealthMatters.net) or learning from trusted community leaders.

DISEASES REPORTED TO BRAZORIA COUNTY HEALTH DEPARTMENT BY MONTH FOR 2010

Reportable Diseases	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Bacterial Meningitis													0
Campylobacteriosis	1	4	2		1	1	1						10
Chlamydia	19	10	7	6	22	5	10	15					94
Clostridium difficile		1											1
Cryptosporidiosis													0
Dengue													0
Gonorrhea	6	3	1	2	8		2	6					28
Group A Strep-invasive						1							1
Group B Strep			2	1		1	3						7
Guardiasis													0
Haemophilus Influenza		1	1										2
Hantavirus				1									1
Hepatitis A, acute	2		2	2				1					7
Hepatitis B, acute	2	2		1	5	2	1	2					15
Hepatitis C, acute	11	4	1		7		7	20					50
HIV infection, Adult					1		1						2
Invasive Group A Strep			1										1
Invasive Group B Strep			2										2
Legionellosis													0
Lyme Disease													0
Malaria													0
Meningitis (Viral)	1					3	3	5					12
Pertussis				2	1	1	1	1					6
Salmonellosis	4	5	3	2	1	3	4	8					30
Shigellosis								6					6
Streptococcus pneumo- niae, invasive	5	3	2	3	2	1	1						17
Syphilis	2					3	2	3					10
Tuberculosis	1	1						1					3
Varicella -Chicken Pox	11	1	1	2	3		1	1					20
Vibrio						4	2	1					7
West Nile Virus													0

“No health department, state or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.”

—Public Health Reports, 1946

Specified diseases and conditions are mandated by State laws and regulations to be reported to the local health department. Report by email (info@brazoria-county.com), fax (979-864-1501) or phone (979-864-1166).

PHEP TEAM

Jo Mapel, RN, BSN, MPH	Team Leader
Jan Prejean, RN	Disease Surveillance
Barbara Perkins, BA, MED	Facilitator
Stephanie Smith, MPH, RD	SNS Coordinator
Tamara Tisdale	Assets Controller
Chasey Reed-Boston, BS, MA	CBRNE Analyst

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WE'RE ON THE WEB

www.PublicHealthMatters.net

terrorism:

Explosions

Conventional explosives can cause damage through blast and heat, but are exponentially less severe than nuclear weapons and dirty bombs. Conventional explosives do not release radiation or electromagnetic pulse. If a nuclear bomb is detonated high above a city, the blast effects are more than if it were detonated at ground level, according to some experts. Here's a really cool simulator website where you select the location and the weapon to see the effects: <http://www.carloslabs.com/projects/200712B/GroundZero.html>

Ten percent (10%) of the total energy of a nuclear explosion occurs as fallout that eventually settles back to the earth's surface. These particles can be caught in low-altitude wind currents, therefore contamination can be widespread. Radiation from a nuclear explosion gives air molecules an electric charge, and this charge creates a surge of electromagnetic energy as a result of charged air molecules reacts with the earth's magnetic field. This surge is like an electrical surge from lightning, and is powerful enough to shut down power grids, destroy unprotected electronics, including computer memory, and shut down essential communications networks. Some experts also feel that underground electrical lines could cause the electromagnetic pulse to radiate out even further away from ground zero. CRB

Hantavirus Case in Brazoria County

Hantavirus (Hantavirus pulmonary syndrome and Hemorrhagic fever with renal syndrome)

Situation: Recently, a 33 year-old male residing in Brazoria County tested positive for hantavirus antibodies and subsequently tested positive for the Seoul virus, which is an old world strain of hantavirus. This case is the first time Seoul virus has been reported in Texas.

The majority of North American hantavirus cases have been the new world hantaviruses (Sin Nombre, Bayou, and others). In addition, the case patient presented with acute respiratory distress syndrome (ARDS) which is typical of the new world hantaviruses rather than the hemorrhagic fever with renal syndrome (HFRS) which is a clinical manifestation of Seoul virus and other old world hantaviruses.

Since 1993, 37 cases of Hantavirus have been reported in Texas. Six cases were Bayou strain, 29 cases were Sin Nombre, and 2 cases were unknown (but most likely Sin Nombre or Bayou). The majority of the Sin Nombre cases have been identified in the panhandle and the Bayou cases have been identified in Jefferson, Harris, and Orange counties.

Public Health Measures: A major objective in the prevention of this disease is to limit or eliminate rodent-human contact. Wear rubber gloves while trapping and cleaning up after rodents. Disinfect affected areas and then clean up rodent nests and droppings. Rodent proofing is essential and removal of rodents without rodent proofing may not be effective.



Norway rats are common in urban areas

The BUZZ

A cooperative effort by the Brazoria County Mosquito Control
and Brazoria County Public Health Emergency Preparedness



ENCEPHALITIS

St. Louis—Western Equine—Eastern Equine—West Nile

What Is Encephalitis?

Encephalitis is an inflammation of the brain. It can have many different causes, the most common being viral infections. This pamphlet covers mosquito-borne encephalitis, also known as arbovirus [arthropod-borne virus] encephalitis. The following are some of the arboviruses that cause encephalitis in the United States, including Texas: eastern equine encephalitis (EEE), western equine encephalitis (WEE), St. Louis encephalitis (SLE), and West Nile virus (WNV). The most serious type is EEE, and it affects all age groups. With SLE and WNV, adults are primarily affected; WEE usually affects young adults and children less than one year of age.

How Do People Contract Arbovirus Encephalitis?

Any person can become infected when a mosquito carrying one of these viruses bites them. Mosquitoes obtain the virus when feeding on infected birds and other wild animals, which are the natural carriers of these viruses. Human infections occur most commonly between late spring and early fall. There is no evidence that the diseases are spread directly from one person to another.

What Are Sources for the Viruses?

The common carriers or reservoirs for these viruses are birds and wild animals. Many species of birds may carry the various viruses without becoming ill. West Nile virus, however, may cause serious disease in some birds, such as crows, jays, and hawks. These birds may die in large numbers when infected with WNV.

What Are the Symptoms in People?

Fortunately, only a small number of people bitten by infected mosquitoes will become sick. People who are mildly affected may have intense headache, drowsiness, and fever. They usually will fully recover within a couple of weeks. Those with severe disease may have intense headache, high fever, nausea, muscle tenderness, shivering, and mental confusion. Although unlikely, convulsions, coma, and even death may follow.

What Are the Clinical Signs in Horses?

Various animals may be infected with the viruses; however, equines, such as horses, are the domesticated animals most commonly affected by EEE, WEE, and WNV. The first sign of infection in a horse is usually fever. The animal may become uncoordinated or restless and walk in circles, lean on objects, or stand with its legs spread wide or with its front legs crossed. It may have facial paralysis (drooping lower lip) and be unable to swallow. Convulsions, coma, and death may result. The death rate varies from 25-90% in horses, depending on the type of infection. The virus that produces the most severe disease in horses is EEE. Horses also can be severely affected by WNV; however, they are not affected by SLE. Vaccinations against EEE, WEE, and WNV are available for horses. There is also vaccine available for horses against Venezuelan equine encephalitis (VEE); this virus is not currently found in the United States. These diseases do not spread directly from horses to humans.

How Can I Protect Myself?

Some preventive measures are:

1. Drain sources of standing water where mosquitoes may breed, such as cans, tires, roof drains, tree holes, puddles below outdoor water taps, saucers under flower pots, infrequently used hot tubs, etc.
2. Keep water fresh (change the water often so it does not stagnate) in pet bowls, birdbaths, and wading pools.
3. Make sure screens on windows and doors are in good repair.
4. Dress in protective clothing (long-sleeve shirts and pants) when outside.
5. Limit outdoor activities between dusk and dawn.
6. When outside, use insect repellent containing DEET or picaridin on uncovered skin.

What Is the Treatment for Arbovirus Encephalitis?

There is no specific treatment available for mosquito-borne encephalitis. Most patients fully recover with rest and supportive care from a physician.



VOLUNTEER AND TRAINING OPPORTUNITIES



Brazoria County has two Citizen Corps groups:

Pearland Area Citizen Corps

<http://www.PearlandCC.org>

281-997-9777

Brazoria County Citizens Corps

<http://homelandpreparedness.org/>

281-844-3653

**For training opportunities,
call or visit their website**

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site set up, pick list, dispensing, decision-making). She also did a Depiction software presentation, which generated a lot of excitement because Depiction offers a new and more interactive option for disease surveillance. An inhalational anthrax example was used to demonstrate current limitations in surveillance where plumes are involved versus the capabilities of Depiction. Chasey has been asked to present a webinar on Depiction on September 23.

Ready. ✓

Plan Now. Work Together. Be Ready.

National Preparedness Month
September 2010

Get A Kit Make A Plan Be Informed Get Involved