

Epidemiology Newsletter

Health Service Region 8 (HSR 8)

This newsletter aims to provide valuable information to our stakeholders that aid in notifiable conditions reporting for prevention and control of disease outbreaks. It is a collaboration of DSHS HSR 8, San Antonio Metropolitan Health District, Comal County Health Department, Medina County Health Unit, and Victoria City-County Health Department.



Winter 2014

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Measles

With the increase of measles cases occurring across the US due to low vaccination rates and exposures at an amusement park in California, Texas Department of State Health Services (DSHS), HSR 8 and San Antonio Metropolitan Health District (SAMHD) released a health alert. It has been updated here.

From January 1, 2015, through March 6, 2015, 173 people from 17 states and Washington, DC were reported to have measles. Most of these cases (127 cases (73%)) are part of a large, ongoing outbreak linked to an amusement park in California. To date, there are currently no cases associated with this outbreak in Texas; however, DSHS, HSR 8 and SAMHD urge healthcare professionals to consider measles when evaluating patients with febrile rash and to ask about a patient's recent international travel history and travel to domestic venues frequented by international travelers.

Healthcare providers should consider measles in patients who:

- present with febrile rash illness and clinically compatible measles symptoms (cough, coryza, and conjunctivitis)
- have a history of recent international travel or exposure to someone with recent international travel
- have recently visited a large domestic venue (i.e. amusement parks, conferences, conventions, or airports)
- have not been fully vaccinated (2 doses) against measles

If you suspect measles, do the following immediately:

1. Promptly isolate patients to avoid disease transmission.
2. Immediately report any suspect measles case to the respective health department:

For those in Bexar County: San Antonio Metropolitan Health District (210) 207-8876

For all others: DSHS, HSR 8 at (210) 949-2000 or (210) 949-2121

3. Obtain specimens for testing from patients with suspected measles as soon as possible following rash onset, including a serum specimen **and** a throat swab using a Dacron or Rayon swab. Throat swabs are preferred; however, nasopharyngeal swabs and urine are also acceptable for measles testing.

The primary prevention method for measles is vaccination. Two doses of measles-containing vaccine (MMR vaccine) are more than 99 percent effective in preventing measles. Please educate your patients on the importance of vaccination.

DSHS HSR 8
 7430 Louis Pasteur Drive
 San Antonio, TX 78229-4509
 Phone: 210-949-2000
Public Health Emergencies or Immediately Reportable Diseases: 210-949-2121

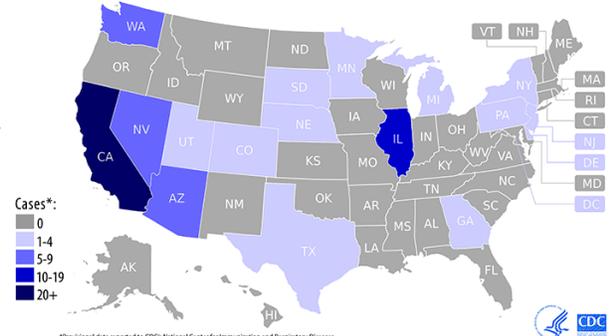
San Antonio Metropolitan Health District
 332 W Commerce Street
 San Antonio, TX 78205
 Phone: 210-207-8731

Comal County Health Department
 178 E Mill Street, Suite 210
 New Braunfels, Texas 78130
 Phone: 830-221-1150

Medina County Health Unit
 3103 Avenue G
 Hondo, Texas 78861
 Phone: 830-741-6191

Victoria City-County Health Department
 2805 N. Navarro
 Victoria, Texas 77901
 Phone: 361-578-6281

2015 Measles Cases in the U.S.
 January 1 to March 6, 2015



*Provisional data reported to CDC's National Center for Immunization and Respiratory Diseases



Influenza and Parotitis

Since December 2014, the Centers for Disease Control and Prevention (CDC) has been notified of diagnosed parotitis with lab-confirmed influenza in multiple states. These particular cases have not been associated with mumps. The Texas Department of State Health Services (DSHS), Health Service Region 8, was the first region in Texas to have a confirmed H3 influenza case in a patient with parotitis. To date, a total of nine cases have been diagnosed in Texas. CDC is currently conducting a case control study to understand the epidemiology of influenza-associated parotitis.

Parotitis is an uncommon complication of influenza. DSHS, HSR 8 and San Antonio Metropolitan Health District (SAMHD) are asking that healthcare providers consider influenza in their differential diagnosis in patients who have a clinical diagnosis of parotitis or clinical signs and symptoms compatible with parotitis (i.e., “swelling of parotid gland or salivary glands”, “blurring of mandibular margin”). In order to explore the occurrence and characteristics of these cases, DSHS, HSR 8 and SAMHD are interested in receiving reports on persons of any age with lab-confirmed influenza who also have a diagnosis of parotitis.

In order to test for both mumps and influenza, a **throat** swab should be collected in those presenting with parotitis. Please remember that rapid influenza diagnostic tests may not be accurate, so a negative rapid test result does not exclude a diagnosis of influenza in a patient with clinical symptoms compatible with influenza.

While CDC has determined that the majority of H3N2 influenza strains circulating this season have drifted (are antigenically different) than the strain contained in 2014-2015 influenza vaccine, annual vaccination is still the best tool for the prevention of influenza, and healthcare providers should continue to recommend that patients be vaccinated.

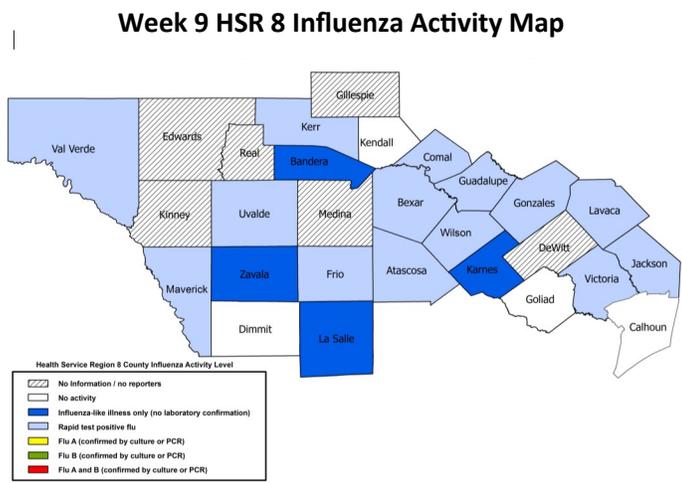
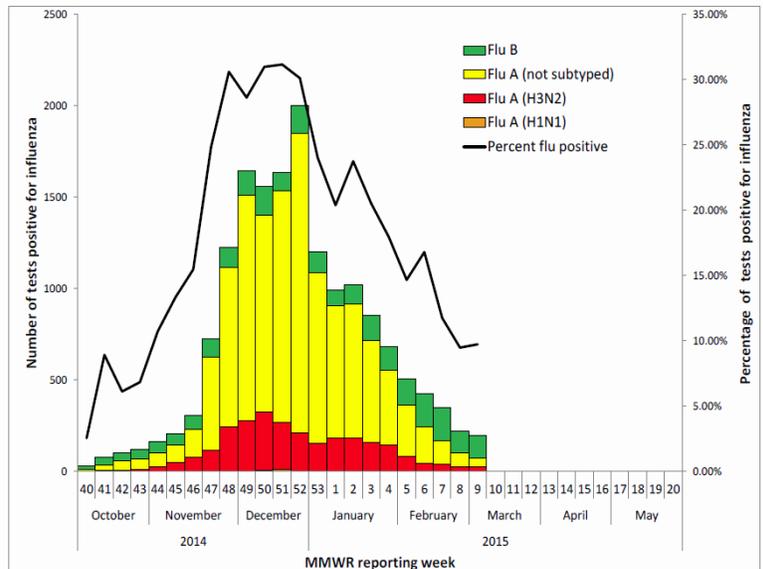
If you have any questions or wish to submit information on patients with lab-confirmed influenza and a diagnosis of parotitis, please call your local health department:

- For those in Bexar County: San Antonio Metropolitan Health District at (210) 207-8876
- For all others: DSHS, Health Service Region 8 at (210) 949-2000 or (210) 949-2121

Influenza Outbreaks

Flu activity in DSHS, HSR 8 remains high. There have been 12 flu A outbreaks reported so far this season. Nine outbreaks occurred in long term care facilities, two outbreaks occurred in schools, and one occurred in a hospital. No pediatric deaths have occurred in HSR 8 this season. Statewide, six influenza-associated pediatric deaths have been reported.

Figure 1: Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas Laboratories, 2014–2015 Season



Highlighted areas indicate the highest level of influenza activity detected by county.

Syphilis Testing Recommendations

Syphilis is a disease caused by the bacterium *Treponema pallidum*, which is usually transmitted from person to person by sexual contact. When untreated, it typically follows a progression of stages that can last for years: primary, secondary, early latent and late latent stages. Early clinical manifestations primarily involve the skin and mucosal surfaces (although it can affect multiple organs) and neurologic manifestations can be found in any stage.

Transmission

Transmission of syphilis occurs during vaginal, anal, or oral sex and can be passed vertically, from a pregnant woman to her unborn child. Syphilis is highly contagious during the primary and secondary stages, when infectious lesions or rash are present. First-time infection provides no immunity; re-infection can occur.

Symptoms

Syphilis has often been called the "great imitator" as many of its signs and symptoms are indistinguishable from other diseases. Upon initial infection, the incubation period is estimated to be between 10 and 90 days (average 21 days). In the primary stage, a painless chancre forms at the infection site, usually the genitals, rectum, tongue or lips. After a latent stage of 2-10 weeks, secondary symptoms appear and persist for weeks to months; these include mucocutaneous lesions, palmar and plantar rashes, headaches, fever, sore throat, and malaise. Latent stages of syphilis can present with relatively few, if any, symptoms. A latent syphilis infection of <1 year duration is called early latent and a latent syphilis infection of ≥ 1 year duration is called late latent. Late manifestations may affect virtually any organ system. Untreated syphilis during pregnancy can lead to stillbirth and infant disorders. Infected babies may be born without obvious signs or symptoms.



Primary Stage Syphilis sore (chancre) on the surface of a tongue. Source: CDC



Secondary Stage Syphilis sores (lesions) on the palms of the hands.. Source: CDC

Screening

Given the unfortunate potential for misdiagnosis, syphilis screening is of the utmost importance. The U.S. Preventive Services Task Force (USPSTF) strongly recommends that persons at increased risk for syphilis and all pregnant women be screened for syphilis (1). Populations at increased risk include: men who have sex with men and engage in high-risk sexual behavior, commercial sex workers, persons who exchange sex for drugs, and those in adult correctional facilities. Partners of known syphilis cases should be screened. However, all sexually active persons should be tested. Persons with syphilis (lesions) have a higher risk of acquiring HIV; thus, screening for HIV should be performed.

As the risk of transmission between an infected pregnant woman and her baby is high but easily preventable, Texas law stipulates that all pregnant women should be tested at the first prenatal visit and at the time of delivery. The Texas Department of State Health Services also recommends providers **test pregnant women during the third trimester (weeks 28-32)**, women who live in areas with high morbidity rates (rates of primary and secondary syphilis of 2.0 per 100,000 or higher), persons who are previously untested, previously had another STD during pregnancy, uninsured, low-income or trade sex for money and/or drugs.

Laboratory Testing

The definitive method for diagnosing early syphilis is visualizing the spirochete via darkfield microscopy. Presumptive diagnoses are made using two serologic tests that detect antibodies in the blood or cerebrospinal fluid: 1) nontreponemal tests and 2) treponemal tests.

- **Nontreponemal tests** (e.g., VDRL and RPR) are highly sensitive for syphilis, yet simple and inexpensive. They are used for screening and monitoring treatment. In primary syphilis, the RPR has a lower sensitivity of 86% (77-99%). As they use non-specific cardiolipin antigens, false-positive results can be reported in certain autoimmune conditions, advanced malignancy, pregnancy, injection-drug use and recent MMR vaccination. Hence, these tests, by themselves, are **insufficient** for diagnosis.
- **Treponemal tests** (e.g., FTA-ABS, TP-PA, various EIAs, and chemiluminescence immunoassays) are highly specific for syphilis, using *T. pallidum* antigens. Once a person infected with syphilis develops these antibodies, they remain in the blood for life.

Persons with a reactive nontreponemal test should receive a treponemal test to confirm a syphilis diagnosis.

When requesting a RPR test (or other nontreponemal test) and suspecting syphilis **also request a reflex TPPA** (or other treponemal test). Ideally, order a quantitative RPR along with a TPPA at the same time. This will expedite the patient's diagnosis and treatment.

Syphilis Testing Continued...

Treatment

Long acting (LA) Benzathine penicillin G is the standard, recommended drug for treating all stages of syphilis. Treatment will kill the syphilis bacterium and prevent further damage, but it will not repair damage already done (e.g.: in late stages, in utero). The CDC recommends a 2.4 million unit single intramuscular (IM) dose of LA Benzathine penicillin G for primary, secondary, and early latent syphilis. For late latent syphilis the Benzathine penicillin G dose is 7.2 million units administered as three doses of 2.4 million units IM each at one-week intervals. For syphilis cases with neural manifestations, IV aqueous crystalline penicillin G is recommended. Pregnant women with syphilis should be treated with penicillin according to the stage of infection. In the event a patient has a penicillin allergy consult the [CDC STD Treatment Guidelines](#). **Congenital syphilis cases** should receive specific treatment, as outlined by DSHS in the flow chart below. Treatment failure can occur, and should be monitored for with follow up nontreponemal testing for up to two years after treatment, depending on the stage.

Summary

Region 8 is an area with **high syphilis morbidity**, with a rate of primary and secondary (P&S) syphilis at 12.0 cases per 100,000 people in 2013. Bexar County alone had a 2013 P&S syphilis rate of 16.6, 3 times both the Texas rate (5.6) and the US rate (5.5). Healthcare professionals and public health workers must continue their efforts to control the disease. Providers should encourage behavior modification and early testing for patients in at-risk categories and adequate treatment to prevent transmission.

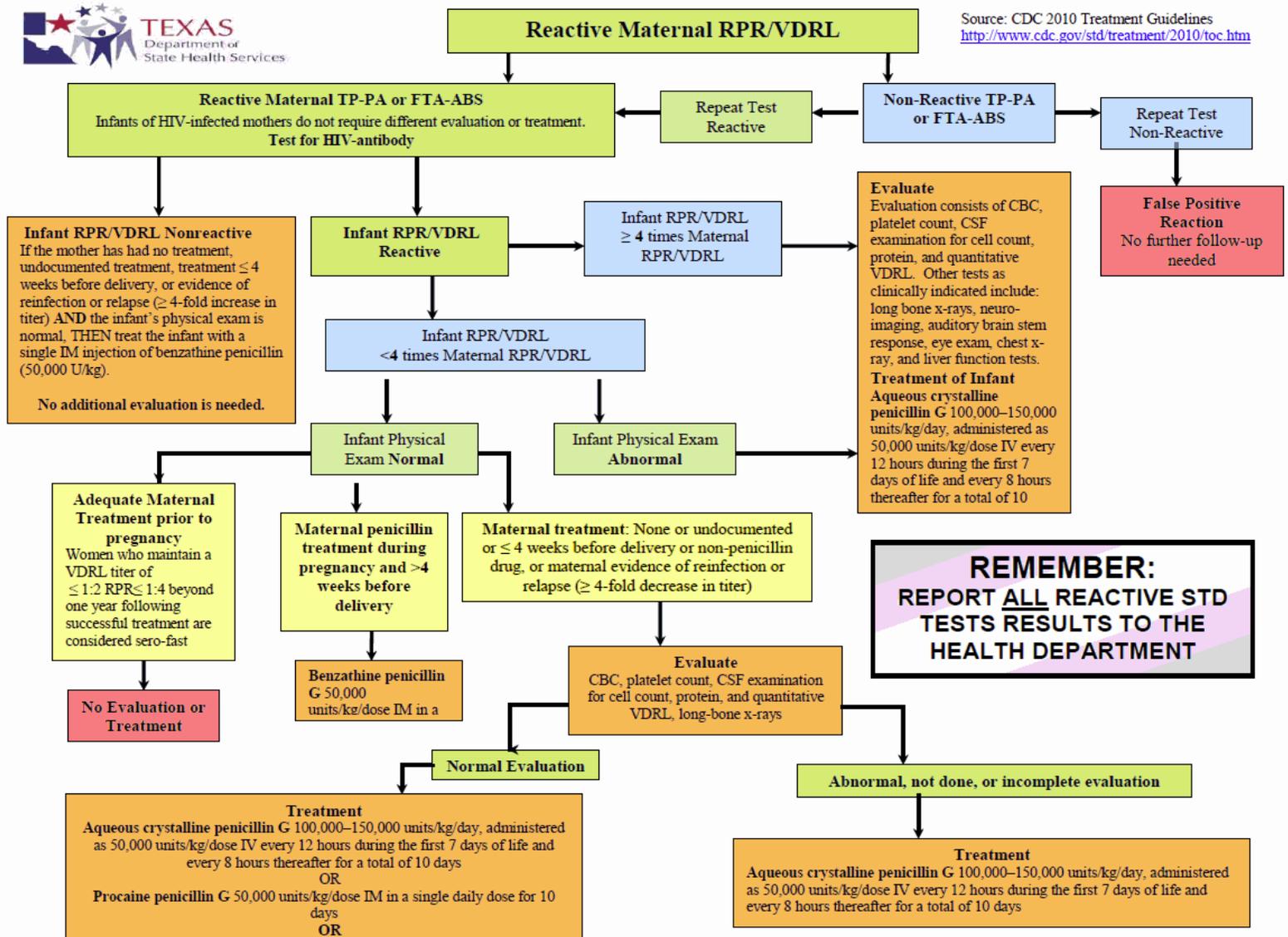
For further guidance, please refer to the [CDC STD Treatment Guidelines](#). There is also a [free application](#) for phone or tablet that combines the CDC's guidelines and MMWR updates with a streamlined access to treatment and diagnostic information.

1. U.S. Preventive Services Task Force (USPSTF) - Recommendation Statement; [Screening for Syphilis Infection: Recommendation Statement](#)

Algorithm for Evaluation and Treatment of Infants Born to Mothers with Reactive Serologic Tests for Syphilis

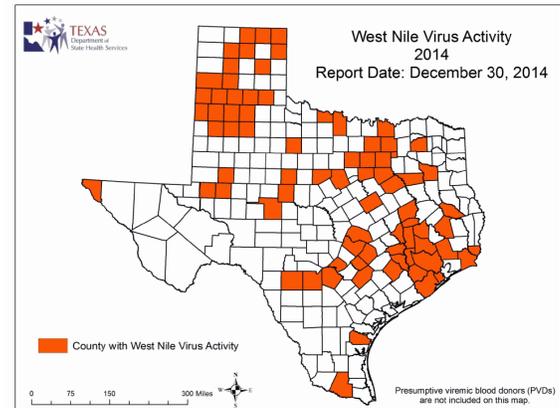
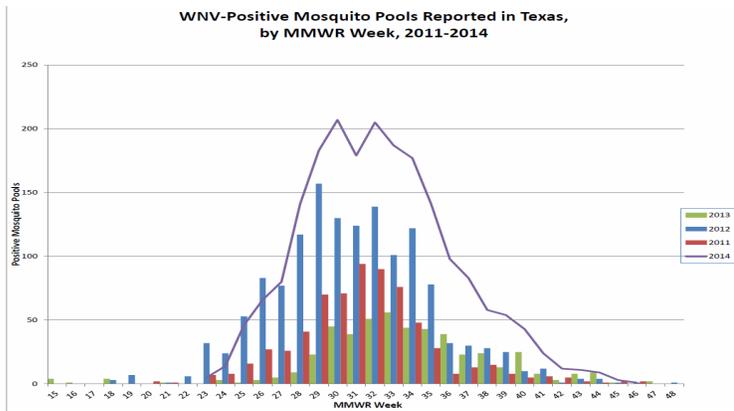


Source: CDC 2010 Treatment Guidelines
<http://www.cdc.gov/std/treatment/2010/toc.htm>



Arboviral Surveillance

Texas Counties Reporting any West Nile Virus Activity, January 1—December 30, 2014



Human Arbovirus Summary, Texas and HSR 8, January 1 - December 26, 2014

Virus	Fever		Neuroinvasive		Hemorrhagic Fever		Total (Human)		Deaths		PVD#	
	State	HSR 8	State	HSR 8	State	HSR 8	State	HSR 8	State	HSR 8	State	HSR 8
Chikungunya*	66	8					66	8				
Dengue*	21				2		23					
Eastern Equine Encephalitis												
Saint Louis Encephalitis	3		1				4					
West Nile	118	2	235	7			353	9	4		59	
Total Reports	208	10	236	7	2	0	446	17	4	0		

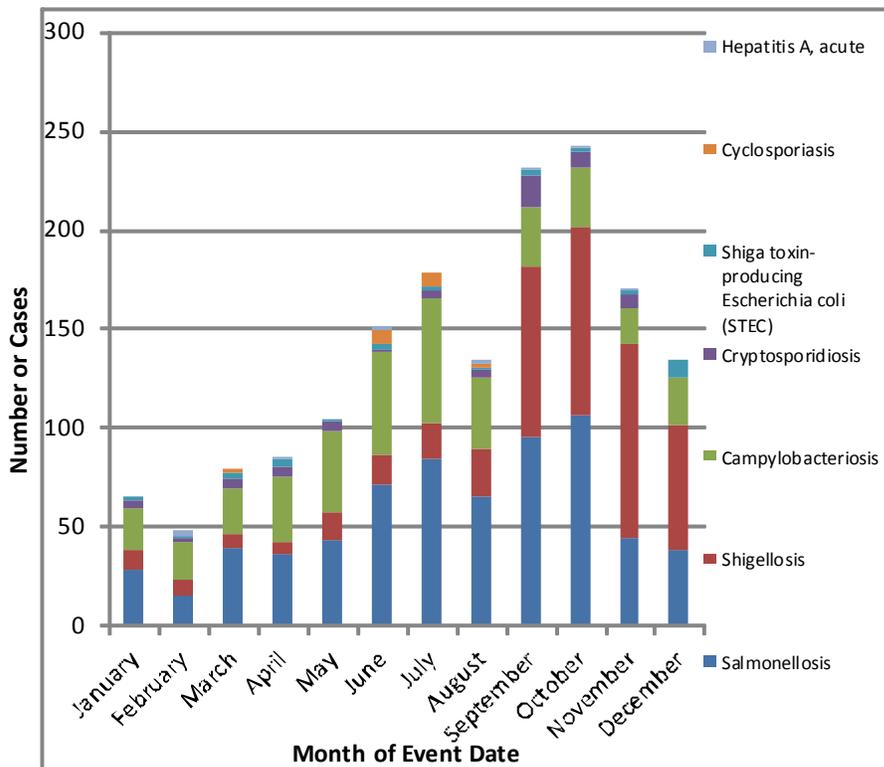
*All reported cases are imported.

‡PVD - Presumptive viremic blood donors are people who had no symptoms at the time of donating blood through a blood collection agency, but whose blood tested positive when screened for the presence of West Nile virus. Unless they meet the case reporting criteria, they are not counted as a case for official reporting purposes and are not included in the "total reports" column.

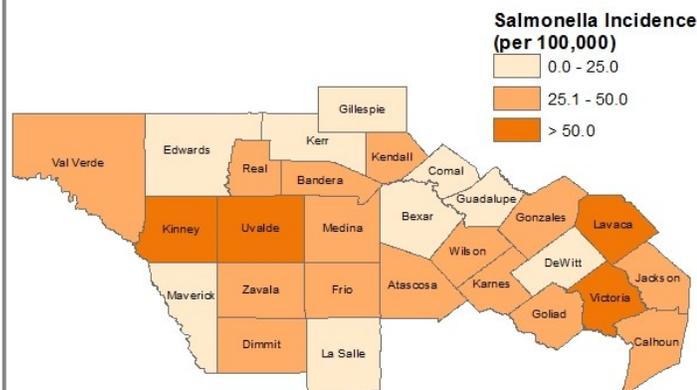
HSR 8 Arboviral Cases by County: Chikungunya: Bexar (5), Comal (1), Gonzales (1), Guadalupe (1); West Nile Fever: Bexar (2); West Nile Neuroinvasive Disease: Bexar (3), Comal (2), Uvalde (2)

Enteric Illnesses

Number of Enteric Illnesses Reported, Health Service Region 8, January—December, 2014



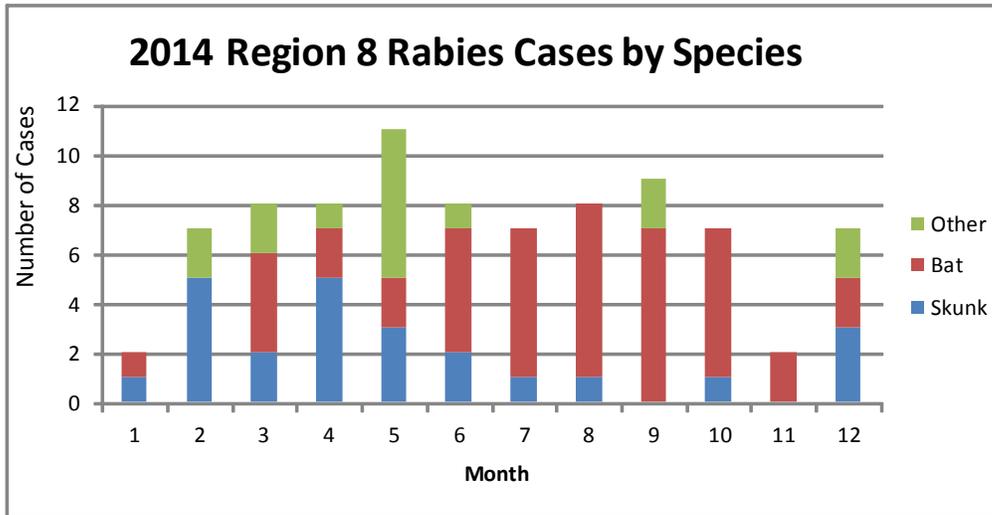
Incidence Rate of Salmonellosis, Health Service Region 8, 2014



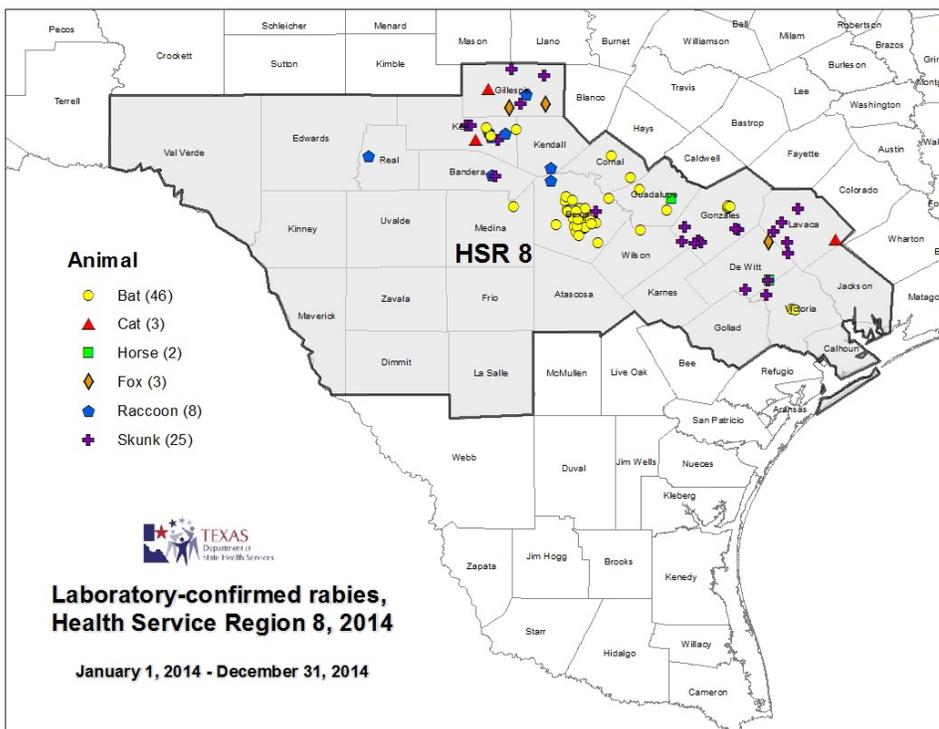
Event Date is defined in hierarchical order onset date, diagnosis date, report to county date, report to state date, date investigation created.

2014 Region 8 Positive Rabies Cases in Animals

2014 had a substantial increase in the number of rabies cases documented in animals attributable to epizootics in bats and skunks. In total, these epizootics resulted in 120 case investigations, with 87 stemming from laboratory-confirmed cases and 33 being related to suspect specimens that had inconclusive laboratory findings. This is up 218 % from the 2013 total (N=40) and is likely due to natural disease cycles. It should be noted that these numbers do not include cases that were treated for injuries inflicted by suspect animals that escaped and could not be found for quarantine or testing.



Collectively, these proven rabid and suspect animals resulted in 47 human exposures and 83 animal exposures that required rabies post-exposure prophylaxis. Of the animal cases, those that resulted in the greatest number of human exposures occurred via domestic animal species. The strains of the rabies virus found in the area were Mexican Free-tailed bat rabies (MFT) and South-central Skunk rabies (SCS). No coyote or fox adapted strains were identified in the 2014 HSR 8 rabies surveillance data. All cases involving domestic animal and those involving atypical wildlife species (raccoons, foxes) were demonstrated to be 'spillover' infections involving the Skunk Central Skunk rabies strain which has remained our primary terrestrial animal rabies strain. Despite the increase in animal cases in 2014, no large scale exposures in schools attributable to rabid bats were documented in 2014. This is likely due, at least in part, to the 'Bats and Schools' seminar put on by DSHS that was hosted



by San Antonio Animal Care Services and the continued effort of San Antonio Metrohealth officials to enforce bat colony removal/exclusion in public buildings.

The map illustrates the distribution of positive animal cases across the region. Most of the bat cases were found in the major metropolitan areas. This likely reflects ongoing surveillance by both the public and animal control authorities. The primary and spillover cases involving the South-Central Skunk rabies Strain were mainly in the eastern and central quadrants of Region 8.

Region 8 Notifiable Conditions Report, October - December

	Atascosa		Bandera		Bexar		Calhoun		Comal		De Witt		Dimmit		Edwards		Frio		Gillespie	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Amebiasis					4	4											1			
Campylobacteriosis	1				41	26	5		1	4	1						1		2	1
Chagas, chronic indeterminate					1	1														
Chagas, chronic symptomatic					1															
Chlamydia	56	48	9	2	2,600	1,886	19	23	121	83	33	29	23	13	1	14	30	19	12	
Cryptosporidiosis				1	12	6	1	3											1	
Cyclosporiasis																				
Dengue					1															
Encephalitis, West Nile						1				1										
Gonorrhea	5	9	1	2	603	601	11	7	20	15	4	6	4	4			7	18		3
Haemophilus influenzae, invasive						1														
Hantavirus pulmonary syndrome (HPS)																				
Hepatitis A, acute					2	1	1													
Hepatitis C, acute																				
Influenza-associated pediatric mortality					1															
Legionellosis					2	4			1											
Listeriosis																				
Multidrug-resistant organisms (MDRO)						18		1						1						
Mumps						1								1						
Neisseria meningitidis, invasive (Mening. disease)																				
Pertussis					17	22	1		4				1						1	7
Salmonellosis	6	3	3	4	70	88	5	1	8	7	2	3	2	2			1	2		
Shiga toxin-producing Escherichia coli (STEC)		8		1	8	3			1								1			
Shigellosis		1			30	136				10		2								
Spotted Fever Rickettsiosis						2														
Streptococcus pneumoniae, invasive disease (IPD)		1			26	23			2	1							1		1	
Streptococcus, invasive Group A					8	11				1										1
Streptococcus, invasive Group B	1				27	44			1	2									2	1
Syphilis	4	3			258	180			1	15			1					2		1
Tuberculosis					19	20	1										2	3		
Typhus fever-fleaborne, murine					2	6														
Vancomycin-intermediate Staph aureus (VISA)																				
Varicella (Chickenpox)			3		13	11			2	2	1						3	1		1
Vibrio vulnificus infection					1															
Vibriosis, other or unspecified																				
West Nile Fever																				
Yersiniosis																				

*All data is provisional and subject to change, spaces indicate no cases reported

**Data not available

Region 8 Notifiable Conditions Report, October - December

	Goliad		Gonzales		Guadalupe		Jackson		Karnes		Kendall		Kerr		Kinney		La Salle		Lavaca	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Amebiasis											2					1				
Campylobacteriosis			3	2	5	5					2	2	1	5	2					3
Chagas, chronic indeterminate																				
Chagas, chronic symptomatic																				
Chlamydia	2	6	31	29	154	107	14	8	12	22	25	29	42	33	5	3	6	4	6	11
Cryptosporidiosis									1	2			1							2
Cyclosporiasis																				
Dengue																				
Encephalitis, West Nile							1													
Gonorrhea	3	1	10	2	26	24	1	3	3	4	4	9	10	6	3		2		1	
Haemophilus influenzae, invasive																				
Hantavirus pulmonary syndrome (HPS)							1													
Hepatitis A, acute																				
Hepatitis C, acute					1															
Influenza-associated pediatric mortality																				
Legionellosis																				
Listeriosis															1					
Multidrug-resistant organisms (MDRO)									1											1
Mumps					1								1							
Neisseria meningitidis, invasive (Mening. disease)			1																	
Pertussis					2	1					2									
Salmonellosis			1		4	6			7	1	4	2	1	4	1	2			8	9
Shiga toxin-producing Escherichia coli (STEC)					2						1	1								
Shigellosis		2			1	4			2				3	1						
Spotted Fever Rickettsiosis																				
Streptococcus pneumoniae, invasive disease (IPD)					2	2					1		3				2		1	1
Streptococcus, invasive Group A					2		1				1									
Streptococcus, invasive Group B					2	1									1					1
Syphilis					4	10	1				2	1	2	1			1	1		
Tuberculosis			1		1		1										1			
Typhus fever-fleaborne, murine			1																	
Vancomycin-intermediate Staph aureus (VISA)															1					
Varicella (Chickenpox)			2		3	3		1			3									
Vibrio vulnificus infection																				
Vibriosis, other or unspecified																				
West Nile Fever																				1
Yersiniosis																				

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Region 8 Notifiable Conditions Report, October - December

	Maverick		Medina		Real		Uvalde		Val Verde		Victoria		Wilson		Zavala		Region 8	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Amebiasis									1	1							6	8
Campylobacteriosis	1	1		3	1				1	6	9	7	1		1		72	72
Chagas, chronic indeterminate																	1	1
Chagas, chronic symptomatic																	1	0
Chlamydia	68	95	35	44	4	3	47	42	55	70	124	135	27	30	26	17	3577	2815
Cryptosporidiosis								1			2	1					20	14
Cyclosporiasis									1								1	0
Dengue									1								2	0
Encephalitis, West Nile								1									1	3
Gonorrhea	12	9	8	5		1	7	10	5	6	52	41	1	2	1	3	802	793
Haemophilus influenzae, invasive																	0	1
Hantavirus pulmonary syndrome (HPS)																	0	1
Hepatitis A, acute		1											1				4	2
Hepatitis C, acute																	1	0
Influenza-associated pediatric mortality																	1	0
Legionellosis		2															3	6
Listeriosis																	1	0
Multidrug-resistant organisms (MDRO)				2						1		1					0	26
Mumps																	1	3
Neisseria meningitidis, invasive (Mening. disease)																	1	0
Pertussis										1			1				28	32
Salmonellosis	8	3	2	5		1	5	4	6	9	13	18	2	8		2	158	185
Shiga toxin-producing Escherichia coli (STEC)										1							14	13
Shigellosis				1	1			1	2		1	93		3			38	256
Spotted Fever Rickettsiosis																	0	2
Streptococcus pneumoniae, invasive disease (IPD)									3	3		2					42	33
Streptococcus, invasive Group A				1					2								11	17
Streptococcus, invasive Group B				3					1	2							34	55
Syphilis		1	3				1	1	1	7	2	10	5	2	1		287	235
Tuberculosis	1						1		2	1		1			1		28	28
Typhus fever-fleaborne, murine																	2	7
Vancomycin-intermediate Staph aureus (VISA)																	0	1
Varicella (Chickenpox)	6	7	1								2						35	30
Vibrio vulnificus infection																	1	0
Vibriosis, other or unspecified				1													1	0
West Nile Fever																	1	0
Yersiniosis				1								1					1	1

*All data is provisional and subject to change, spaces indicate no cases reported

**Data not available

Please email Jessica.Deerin@dshs.state.tx.us to be added to the distribution list for the HSR 8 Quarterly Epidemiology Newsletter.