

McLennan County Quarterly Report: Epidemiology & Public Health

Waco-McLennan County Public Health District

March—May 2015



June 2015

Quarterly Disease Statistics

The Waco-McLennan County Public Health District (WMCPHD) received 64 reports of communicable disease from March 1, 2015 through May 31, 2015. Reported diseases for this time period are listed in Table 1. Forty six (46) reports of communicable diseases were received in the previous quarter (December 2014—February 2015). Eleven (11) animal rabies cases were identified from McLennan County this quarter by the Department of State Health Services - Zoonosis Control Department.

The majority of reports consisted of gastrointestinal illnesses (33). There were 20 vaccine-preventable diseases that were reported during this quarter.

Table 1.

Condition Investigated	Sep14- Nov14	Dec14- Feb15	Mar15- May15
Anaplasmosis	0	0	1
Campylobacteriosis	5	6	5
Cryptosporidiosis	5	2	2
Encephalitis, West Nile	1	0	0
Legionellosis	0	0	1
Listeriosis	0	0	2
Lyme Disease	1	0	1
Pertussis	0	1	3
Salmonellosis	45	22	21
Shiga toxin-producing Esche- richia coli (STEC)	2	1	0
Shigellosis	26	11	5
Streptococcus Invasive	1	2	16
Varicella (Chickenpox)	8	1	7

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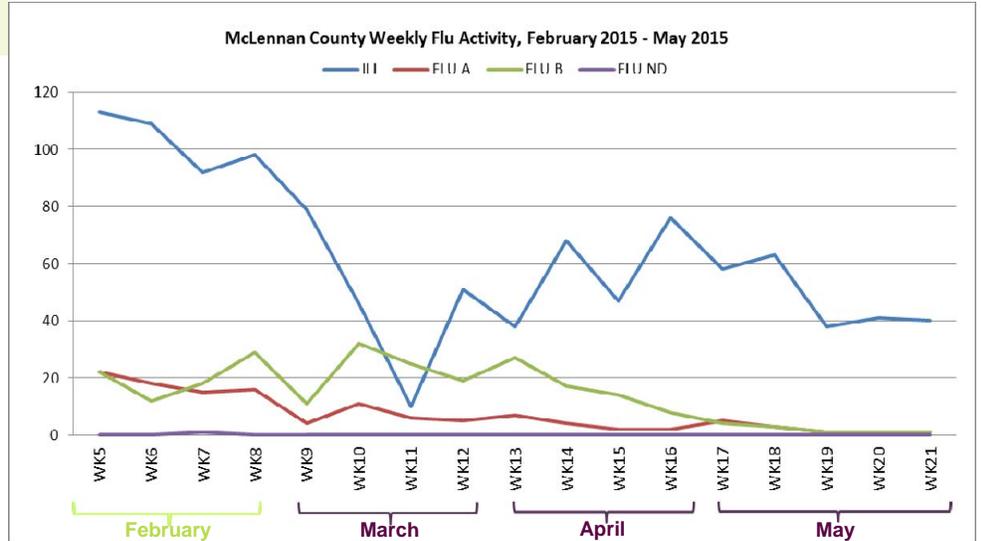
Outbreaks

Although norovirus is not a notifiable condition, known or suspect outbreaks of norovirus are. There was (1) reported norovirus outbreak in a long-term care facility.

WMCPHD investigated a cluster of (6) salmonellosis cases but was not able to identify it as an outbreak or what the common exposure of this cluster was.

Flu Surveillance

The Waco-McLennan County Public Health District (WMCPHD) implements year-round surveillance of influenza and influenza-like illness (ILI). WMCPHD commonly receives decreased number of Influenza Like Illnesses (ILI), Flu A, Flu B and Flu Non-Differentiated (ND) during the months of March, April, and May and through the summer. Flu and flu like activity counts and trends are shown in the picture to the right.



Disease Reporting & Timelines

Disease reporting is an essential function of surveillance and control of diseases within our community. The WMCPHD depends on you and your staff to report certain conditions and diseases in a timely manner. Providers are required by law to report certain diseases and conditions to the Health District within certain timeframes. Timely reporting ensures effective prevention and response measures will be implemented to control the spread of communicable diseases. Tables 2 & 3 show the list of urgently reportable diseases (Immediately and within 1 work day). Other diseases with their reporting time line requirements are included along with this report. This information can also be found at: www.wacomclennanphd.org

Tables 2 & 3: Urgently Notifiable Conditions

Within 1 work Day Reportable Diseases	Incubation Period	Immediately Reportable Diseases	Incubation Period
Brucellosis	3-60 days	Anthrax	1-7 Days (varies)
Hepatitis A (acute)	15 to 50 days	Botulism	18-36 hours, Range: 2 hrs - 8 days
Hepatitis B (Perinatal)	90 days (range: 60–150 days)	Diphtheria	2-5 days (range 1-10 days)
Influenza Associated Pediatric Mortality	Influenza Virus : 4 days (average: 2 days)	H- Influenza B invasive/ Meningococcal	2-4 days
Pertussis	7 to 10 days, with a range of 4 –21 days	Lead Poisoning	
Q Fever	9–40 days	Measles	10-12 days, range 7-18 days
Rubella	14 to 21 days	Human Rabies	Days to years, typically 1-3 months
Tuberculosis	Weeks to years	Plague	1 to 3 days
Vibrio inf. /Cholera	2 hours to 5 days (Cholera)	SARS	Max incubation period is 10 days.
		Small Pox	7 to 17 days
		Tularemia	3 to 5 days, range: 1 to 14 days.
		Viral Hemorrhagic Fevers, Ebola	2-21 days, Yellow fever : 3-6 days

Public Health Preparedness: West Nile Virus and Chikungunya Virus

As summer begins and temperatures start to rise, conditions develop to create a good habitat for mosquitoes. These circumstances increase the potential for West Nile Virus (WNV) and Chikungunya Virus (CHKV). Birds are the reservoir for West Nile Virus. These viruses are both spread through mosquitoes. The main carrier of WNV in Texas is the Culex mosquito, while the main carrier of Chikungunya is the Aedes mosquito. West Nile Virus is commonly spread from birds to humans. The Health District is working with McLennan County and the cities within the County to eliminate mosquito breeding sites by monitoring municipal properties for stagnant water and other potential mosquito habitats. Larvicide, debris removal and landscaping are all methods that can be used by cities to eliminate breeding sites. The Health District's model ordinance is available on the Health District website: www.wacomclennanphd.org. Chikungunya Virus is mostly associated with travelers to other countries, especially the Caribbean islands. Preventing mosquito bites is recommended for all foreign travelers. More information can be found at <http://www.cdc.gov/chikungunya>. The WNV spreading Culex mosquitoes most often bite during dusk and dawn, while the Chikungunya spreading Aedes mosquitoes bite during the daytime. For this reason, people should take precautionary measures at all times.

Precautionary steps include:

- Check for clogged rain gutters and clean them out.
- Remove discarded tires and other items that could collect water.
- Check for containers or trash in places that may be hard to see, such as under bushes or under your home.
- At least once or twice per week, empty water from flower pots, pet food and water dishes, birdbaths, swimming pool covers, buckets, barrels, and cans
- The Culex mosquito is a weak flyer and typically travels less than 150 feet from where it emerges. Talk with your neighbors about removing breeding sites on their property too. Offer to help neighbors who may need it.

The Health District urges people to monitor their property for any standing water because mosquitoes need only a small amount of water to develop their eggs into adult mosquitoes. A female mosquito lays up to 200 eggs at one time. It only takes 7 -14 days for an egg to hatch and become another flying mosquito. Elimination of potential mosquito breeding habitats is a critical key for controlling WNV in McLennan County.

Signs and symptoms for WNV:

About 1 in 5 people who are infected will develop a fever with other symptoms such as headache, body aches, joint pains, vomiting, diarrhea, or rash. Most people with this type of West Nile Virus disease recover completely, but fatigue and weakness can last for weeks or months. *Less than 1% of people who are infected will develop a serious neurologic illness such as encephalitis or meningitis.*

4 Ds OF PROTECTION

The best way to protect you and yourself from mosquitoes is to follow the 4Ds:

1. **DEET: Use mosquito repellent with the ingredient DEET**
2. **Dawn/Dusk: Avoid the outside at dawn and dusk**
3. **Drain: Drain any standing or stagnant water**
4. **Dress: Wear long sleeves and pants to protect your skin**

Signs and symptoms for CHKV: Symptoms usually begin 3–7 days after being bitten by an infected mosquito. The most common symptoms are fever and joint pain. Other symptoms may include headache, muscle pain, joint swelling, or rash. Chikungunya disease does not often result in death, but the symptoms can be severe and disabling. Most patients feel better within a week. In some people, the joint pain may persist for months.

Public Health Preparedness: Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

South Korea (Republic of Korea) has an active outbreak of MERS-CoV with 172 confirmed cases reported and 27 deaths as of June 22, 2015 (source: World Health Organization [WHO]). This is the largest outbreak of the disease in a country not in or neighboring the Arabian Peninsula. The first case returned to South Korea from a trip to the Middle East on May 4th and became symptomatic on May 11th. He subsequently sought care at two clinics and two hospitals where most of the secondary cases to date have occurred in other patients and healthcare workers. The index case was confirmed on May 20th.

MERS-CoV infection was first reported in humans from Saudi Arabia in 2012. Most known cases of infection with the virus have had severe acute respiratory illness with fever, cough, and shortness of breath. Some people have also had nausea, vomiting, and diarrhea. Severe complications include pneumonia and kidney failure. The case-fatality rate for hospitalized cases has been reported to vary between 30% and 40%. The incubation period after exposure to a known case is estimated to be 2-14 days (median of 5-6 days).

To date only two cases of MERS-CoV have been reported in the U.S. The cases occurred in 2014 in Indiana and Florida. Those two cases resulted in contact exposure on air flights, in the community, and in healthcare facilities. Over 500 contacts were tested with no subsequent infection detected and no secondary cases.

Providers should appropriately isolate and report to Waco-McLennan County Public Health District any patients with MERS-CoV-compatible symptoms who report travel to South Korea and exposure to a healthcare setting in South Korea in the 14 days prior to symptom onset. We will work with providers to evaluate clinical information and exposure history and decide if testing for MERS-CoV is warranted. Isolation and infection control recommendations can be found in CDC's Interim Infection Prevention and Control Recommendations for Hospitalized Patients with Middle East Respiratory Syndrome Coronavirus (MERS-CoV) (<http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html>).

The Republic of Korea is currently listed as Watch Level 1 according to the CDC Travel Advisory website which can be found at: <http://wwwnc.cdc.gov/travel/notices>. Liberia has been downgraded to Alert Level 2 after successfully eliminating Ebola from the country. Frequently checking for travel advisories is recommended.

Testing:

Testing must be coordinated through Waco-McLennan County Public Health District and DSHS. To increase the likelihood of detecting MERS-CoV infection, CDC recommends collecting multiple specimens from different sites at different times after symptom onset. The specific sites and specimens can be found at CDC.gov. Contact the Waco-McLennan County Public Health District if there are any questions regarding specimen collection.

24/7 Disease Reporting

The Waco-McLennan County Public Health District has a 24-hour a day/ 7 days a week number that can be utilized to report any cases of disease.

The 24/7 disease reporting number is:

(254) 750-5411

On a daily basis the epidemiology department reviews, investigates, and reports all cases of communicable disease recognized as Notifiable Diseases in Texas. This allows for monitoring of disease trends and detection of outbreaks.

Reporting may also be done directly to Epidemiology at (254) 750-5775 or fax reports to (254) 750-5405