TEXAS Health and Human Services | Texas Department of State Health Services

Public Health Region 7 Epidemiology Quarterly Newsletter

JULY/AUGUST 2019

IN THIS ISSUE:

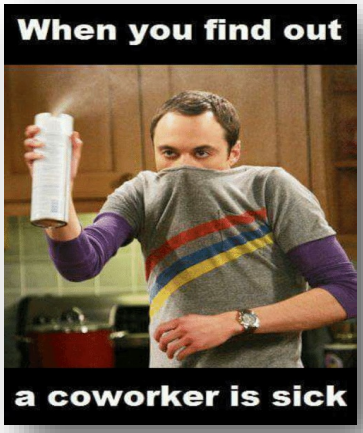
- **Heat and Submersion Surveillance**
- **4th of July Injury Surveillance**
- **Ten Years of Gains: A look back at progress since the 2009 H1N1 Pandemic**
- **Gastrointestinal Illness Trends**
- **Ebola Update**
- **Measles**
- **Milam County CASPER**

Public Health Happenings

Flu Season will be here before you know it!

October 5, 2019 will kick off the 2019—2020 Flu Season.

Click here for more info



Crowne Plaza Austin

6121 North Ih 35, Austin | Texas | 78752

Registration for the Epidemiology and Laboratory Capacity (ELC) Conference 2019 is officially open.

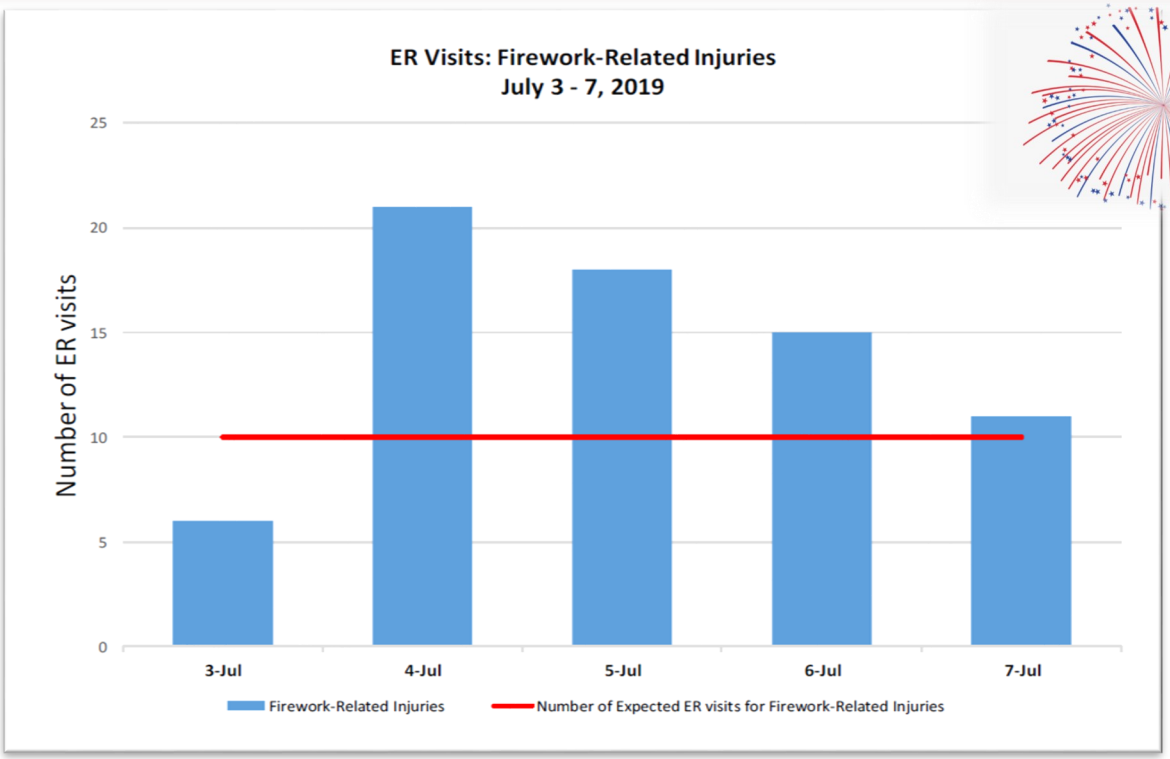
Click here

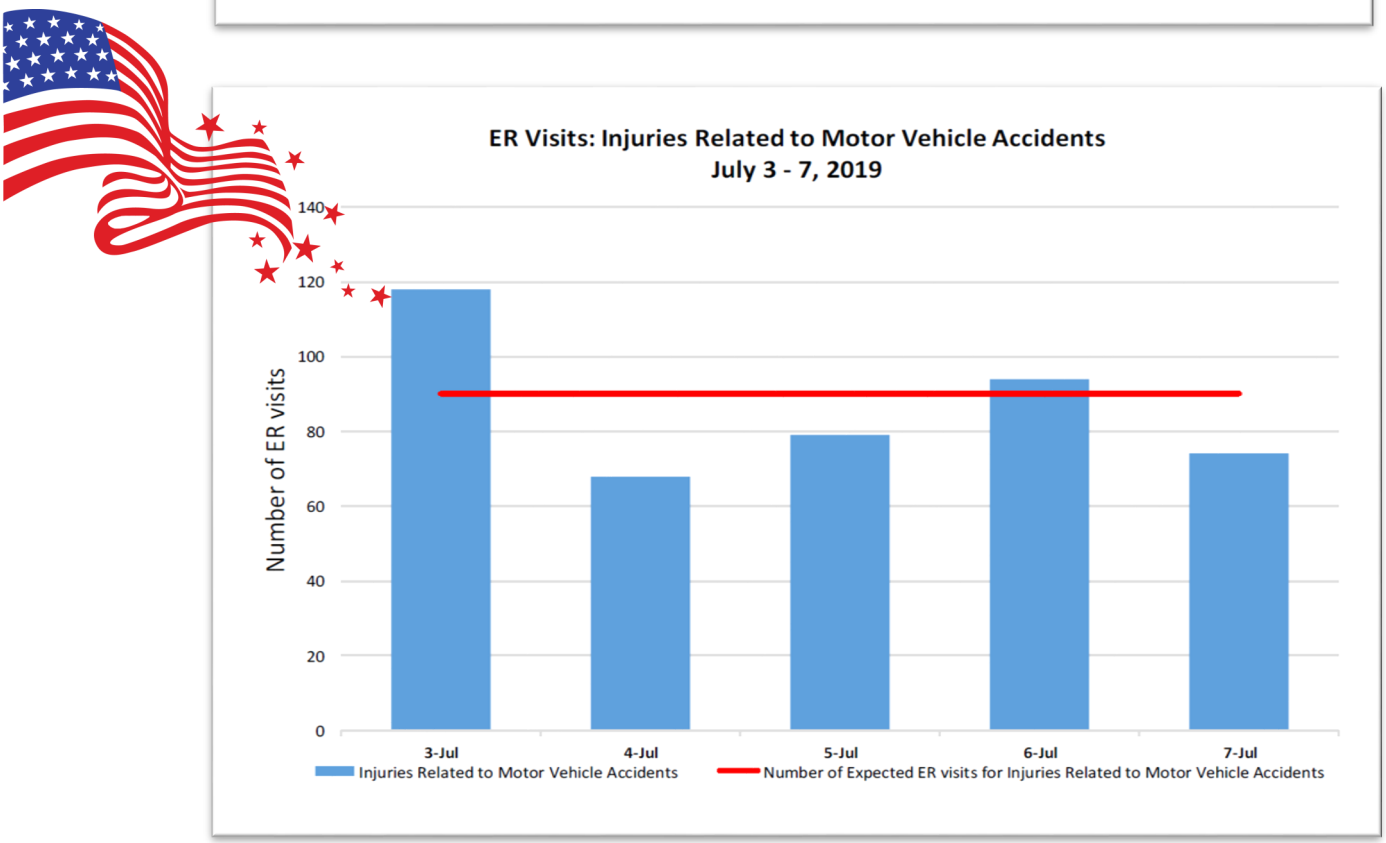
Highly Infectious Disease theme week at the Center for Domestic Preparedness in Anniston, Alabama
August 26-31

For more info and to sign up:

Click here

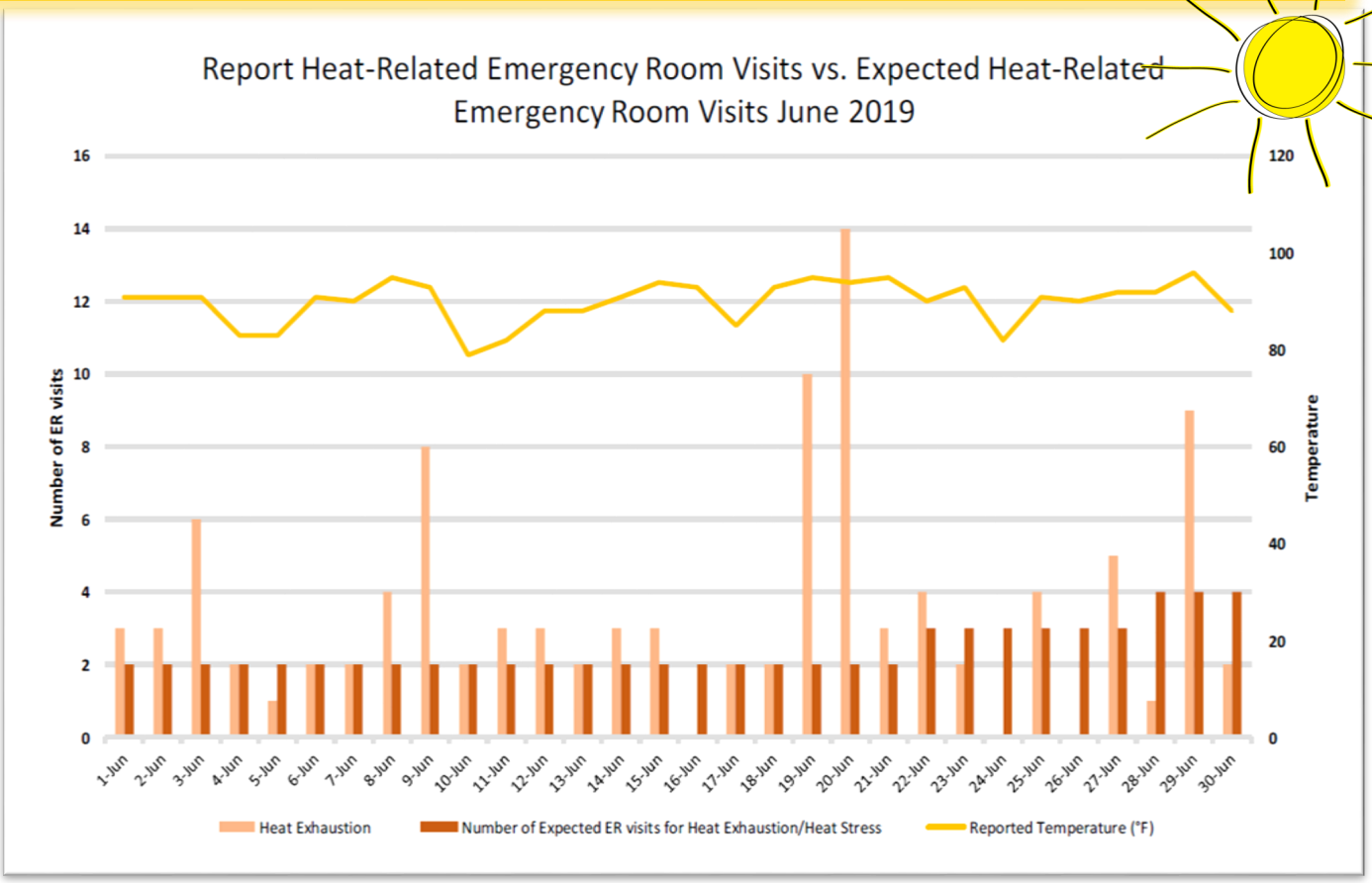
PHR7 conducted Fireworks and Motor Vehicle Accident injury surveillance using ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics). This data reflects July 3-7, 2019.

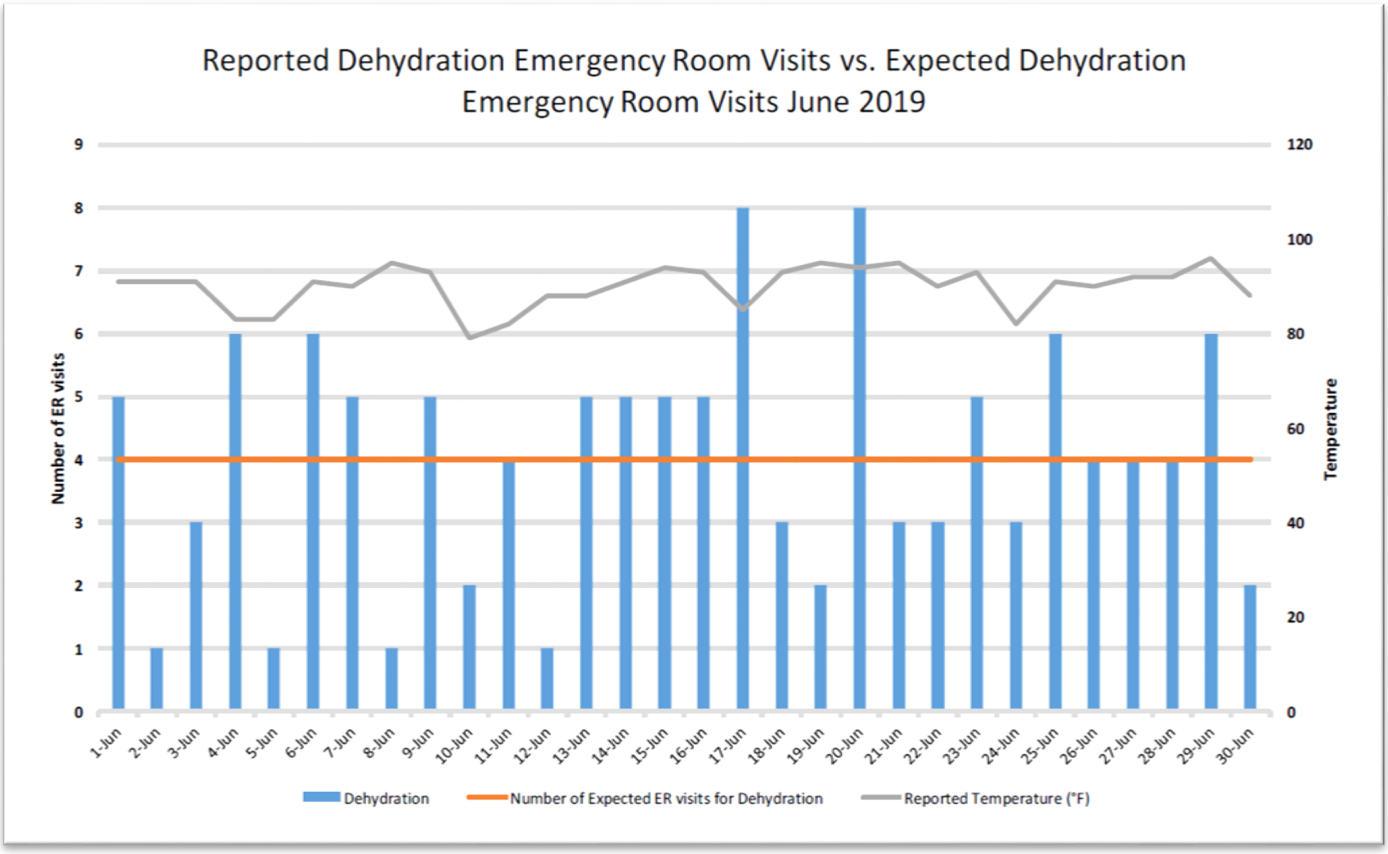




Data Collected and Presented by Lenae Warner, Epidemiologist II, PHR 7
Lenae.warner@dshs.texas.gov

PHR7 conducted Heat and Dehydration illness/injury surveillance using ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics). This report started on June 2019. The data presented in this document are from June 1-30, 2019.





Data Collected and Presented by Lenae Warner, Epidemiologist II, PHR 7
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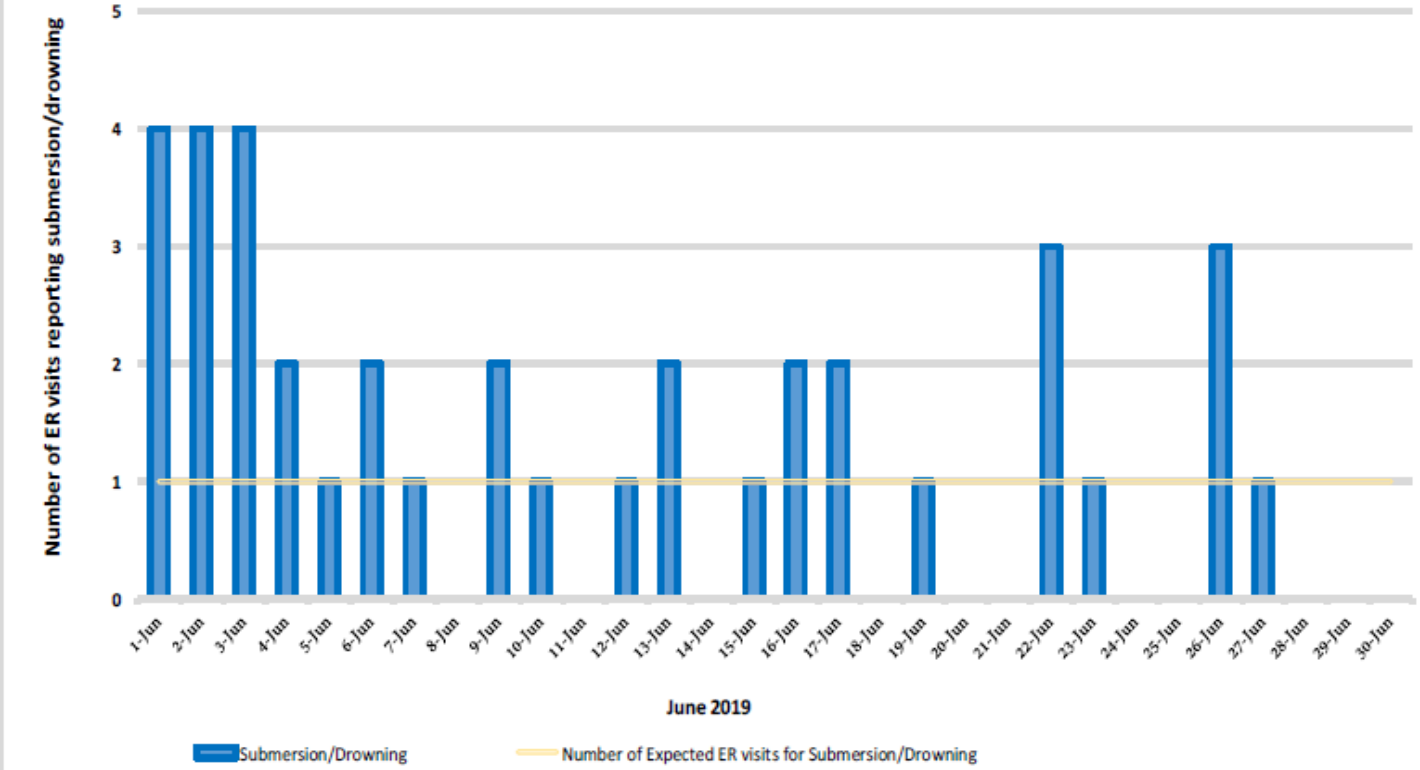
PHR7 conducted Submersion and Drowning illness/injury surveillance using ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics). This report started on June 1, 2019. The data presented in this document are from June 1-30, 2019.



Data Collected and Presented by Lenae Warner, Epidemiologist II, PHR 7
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Ten Years of Gains: A Look Back at Progress Since the 2009 H1N1 Pandemic

Source: www.cdc.gov

Since 2009, the widespread adoption by public health laboratories of the testing technique called "real-time Reverse Transcription-Polymerase Chain Reaction" (rRT-PCR) with CDC's flu rRT-PCR test kits has directly enhanced the nation's pandemic preparedness in a number of ways. For one, widespread use of both has led to standardization of influenza testing across the nation's public health laboratories. Relative to the other diagnostic methods widely used by laboratories to reveal the type and subtype of flu virus in a sample, rRT-PCR produces more-reliable results, and produces those results faster than most other laboratory techniques.

CDC's primary rRT-PCR test for influenza viruses (called the 'CDC Human Influenza Virus Real-Time RT-PCR Diagnostic Panel') is an internationally recognized reference method for detection of influenza. This means the performance of other detection methods is often measured against the performance of CDC's rRT-PCR flu test.

The adaptability of the rRT-PCR test allows laboratories to quickly adjust how specimens are processed in outbreak and pandemic situations to avoid backlogs and unnecessary use of resources. CDC provides algorithms that help to ensure that as more specimens are tested, reagents are conserved, thereby maximizing their public health benefit and further reducing the possibility of supply shortages.

Although laboratories have the option of using other rRT-PCR tests, use of the CDC test in lieu of commercially manufactured rRT-PCR tests takes the pressure off individual laboratories of ensuring their tests are able to detect the newest emerging viruses.

CDC uses gene sequence data to update its influenza diagnostic kits and reagents, which are used around the world by public health laboratories as the gold-standard for detecting influenza, in large part because of CDC's rapid response in updating the kits and reagents each time a novel virus emerges.

For example, in 2012 the U.S. experienced a rapid up-tick in human infections with swine influenza viruses (called variant virus infections) associated with exposure to infected pigs. CDC quickly confirmed the CDC rRT-PCR test kit's ability to detect those swine viruses appearing in people, and then issued guidance to laboratories on how to interpret rRT-PCR test results when testing specimens from patients with known pig exposure. Since then, CDC has monitored how the diagnostic kit has performed in detecting variant infections and has updated guidance and virus-specific assay materials (called reagents) to make sure the tests are able to detect these viruses as they have evolved.

In April 2013, shortly after the first influenza A(H7N9) human infections in China were reported and within days of China CDC sharing gene sequences of the H7N9 virus, U.S. CDC quickly modified and then quality-checked CDC's existing H7 rRT-PCR test and drafted protocols and guidance for its use. On April 22, 2013, the U.S. Food and Drug Administration (FDA) issued an Emergency Use Authorization and the H7 rRT-PCR test with test components and CDC guidance were made available to public health laboratories so they would be able to test for H7N9 viruses too.

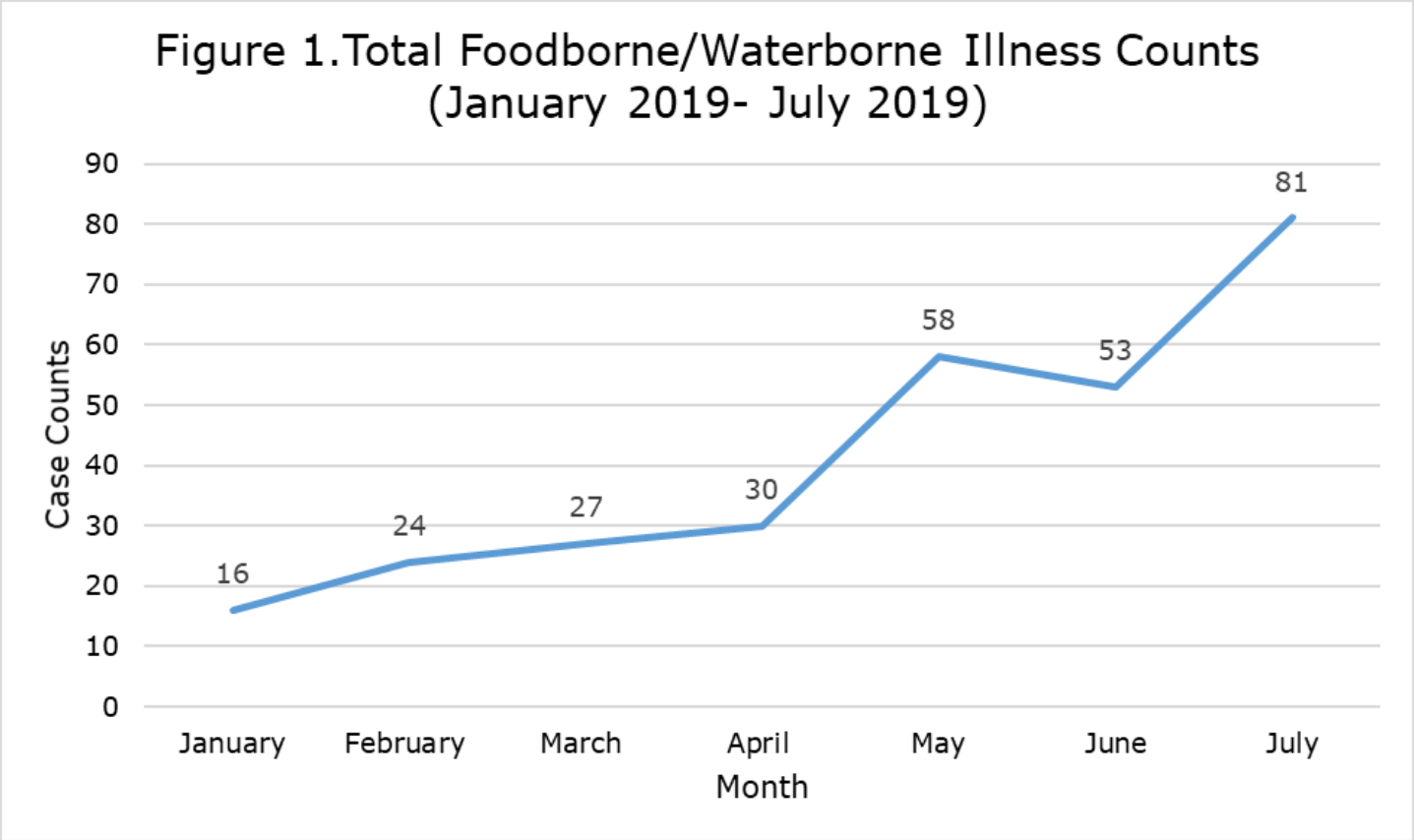
Read this and more here!

Gastrointestinal Illness Trends within DSHS Public Health Region 7 (January 2019- July 2019)

Conner Carlsen, MPH, CPH Epidemiologist II at DSHS Region 7

Overview:

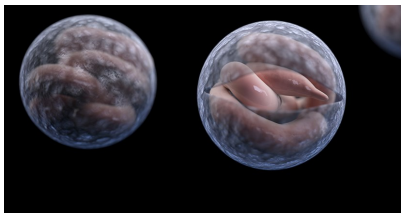
From 1/1/19-7/31/19, there were 289 foodborne/waterborne illness cases investigated by the DSHS Region 7 Epidemiology Team. During this time period, there was a steady increase of cases investigated with a sharp increase of cases in May and then again in July (Figure 1). These spikes reflect the increase of Campylobacteriosis and Salmonellosis cases.



Summer months tend to see larger number of cases because the bacteria replicate faster in warmer weather. People also spend more time outside during the summer. Proper food handling can be difficult when cooking outside such as preparing and serving food at improper temperatures and hand hygiene issues.

The top 5 gastrointestinal illnesses investigated by DSHS Region 7 (in order from greatest to least) are Campylobacteriosis, Salmonellosis, Shigellosis, Shiga toxin-producing Escherichia coli (STEC), and Cryptosporidium.
These top 5 illnesses account for 96% of all foodborne/waterborne cases investigated. Campylobacteriosis cases represent about 46% of all gastrointestinal illnesses investigated by DSHS Region 7.

The foodborne/waterborne case counts for 2019 were then compared to the case counts from 2018 and 2017 (Figure 2). Noticeable differences include the spike in 2018 case counts in March, and the 2019 spikes in May and July. The 2018 spike is due to a Shigellosis outbreak during that month.



1) ***Shigella.*** **Digital Image. Centers for Disease Control.** https://www.cdc.gov/shigella/index.html
2) ***Campylobacter.*** **Digital Image. Hygiene in practice.** https://www.hygiene-in-practice.com/pathogen/campylobacter-jejuni-coli_en/
3) ***Cryptosporidium.*** **Digital Image. Centers for Disease Control.** https://www.cdc.gov/parasites/crypto/index.html
4) ***E.Coli.*** **Digital Image. Varsilty Facility Services.** https://www.varsityfs.com/e-coli-a-good-bacteria-with-a-bad-rap/

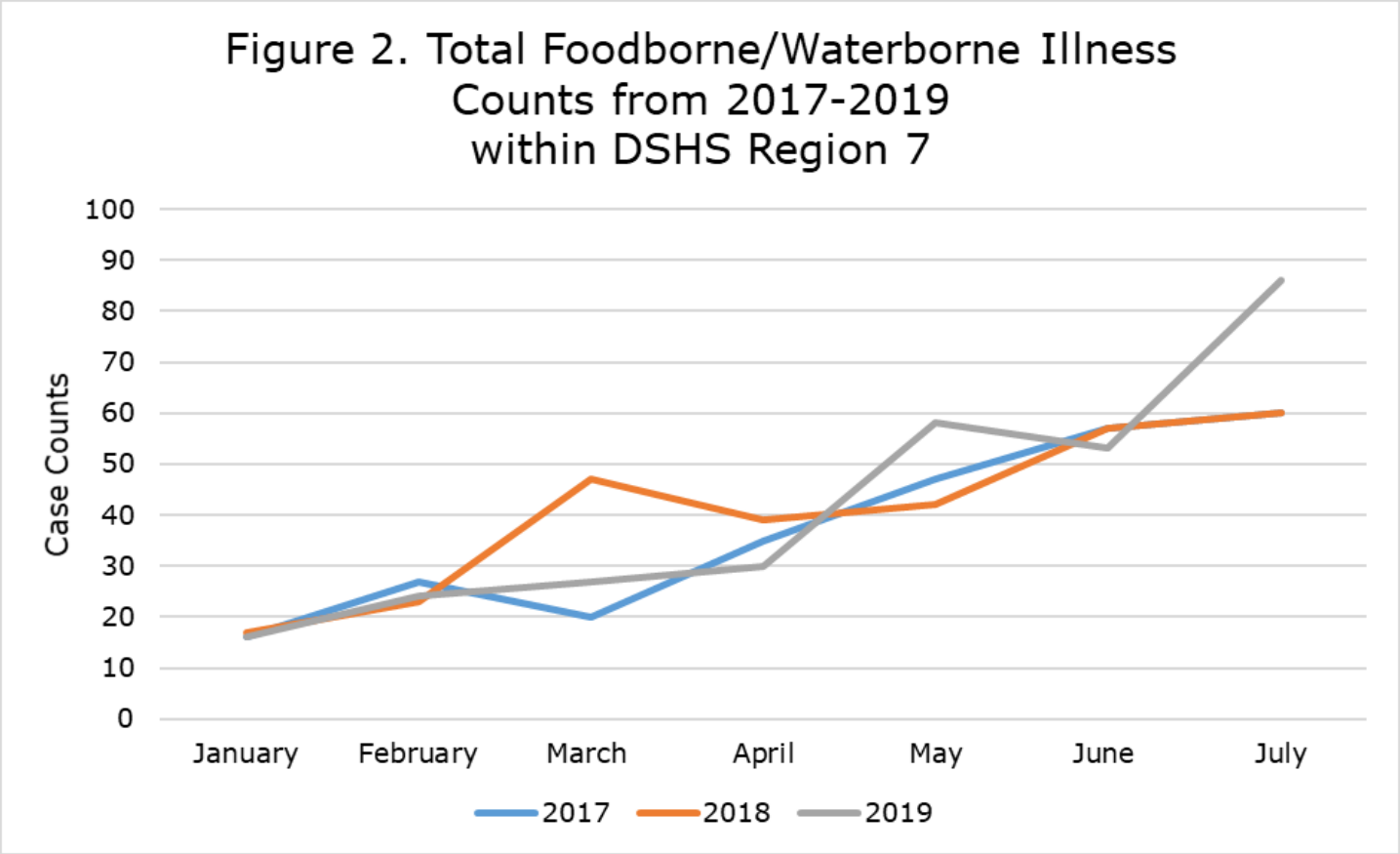


Table 1. Food/Waterborne Illnesses Investigated by DSHS Region 7 (January 2019-July 2019)								
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Grand Total**
Campylobacteriosis	8	8	13	10	29	21	43	**132**
Salmonella, non-Paratyphi/ non-Typhi	5	4	4	3	14	14	28	**72**
Shigellosis		7	4	10	6	6	3	**36**
Shiga toxin-producing Escherichia coli (STEC)	2	2	5	6	4	7	3	**29**
Cryptosporidiosis	1	1		1	1	4	1	**9**
Yersiniosis		2			4	1		**7**
Vibriosis, other or unspecified			1				2	**3**
Listeriosis							1	**1**
Grand Total	**16**	**24**	**27**	**30**	**58**	**53**	**81**	**289**

*Includes confirmed and probable notifiable conditions reported to and investigated by the Texas Department of State Health Services, Region 7 Health Department. Year to Date (YTD) for 2019 includes cases reported and entered from January 2019-June 2019. Additional cases may be entered/updated.

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

*Date used is based off the Investigation Start Date provided by NEDSS.

Shigellosis Outbreak in local school and daycares

Lenae Warner, Epidemiologist II at DSHS Region 7

***Shigella*. Image. Centers for Disease Control. https://www.cdc.gov/shigella/index.html**

Shigellosis Outbreak Mar—April 2019

Ten confirmed cases and 3 epi-linked cases were seen at a local hospital emergency room reporting diarrhea and abdominal cramps. Most cases attended the local elementary school which reported an increase in students reporting diarrhea. The Infection Prevention (IP) nurse at the hospital was in communication with DSHS and the parents on reporting and education. Local daycares were educated on prevention methods, including sending children home who were having diarrhea and/or fever. The source of infection is unknown since Shigellosis is a common cause of diarrhea in daycares and elementary schools.

Cyclosporiasis Outbreak update

Whitney Thomas, MPH, Lead Epidemiologist III at DSHS Region 7

As of August 5, 2019, 180 cases of cyclosporiasis have been reported in Texas. Out of the reported cases, 123 cases are classified as being domestically-acquired in which the cases reported no travel outside of the United States.

From May 1 to August 5, 2019, 899 domestically-acquired cases of cyclosporiasis have been reported in 31 states, including the District of Columbia and New York City. A nationwide-outbreak of *cyclospora* infections has been linked to fresh basil from Siga Logistics de RL de CV of Morelos, Mexico.

According to the Food and Drug Administration (FDA), high-risk foods include raspberries, basil, cilantro, snow peas and mesclun lettuce.

***Cyclosporiasis.* Image. Centers for Disease Control.https://www.cdc.gov/parasites/cyclosporiasis/cyclo_feature.html**

Ebola Update

Whitney Thomas, MPH, Lead Epidemiologist III at DSHS Region 7

CDC Travel Advice to the following area

Democratic Republic of Congo

As of August 29, 2019, the total number of cases has increased to 2,997 with 1,998 deaths. August 1, 2019 marked one year since the Government of the Democratic Republic of the Congo (DRC) declared the Ebola outbreak.

The Ebola virus disease (EVD) outbreak in North Kivu, South Kivu, and Ituri provinces in DRC continued this week with similar transmission intensity to the previous six weeks, with an average of 77 cases per week. Uganda has had a second incursion of Ebola from the neighboring Democratic Republic of the Congo, bringing the total number of cases in Uganda up to two. While the number of new cases continues to ease in former hotspots, such as Butembo, Katwa, and Mandima health zones, there has been an increase in cases in Beni and a high incidence continues in parts of the Mabalako Health Zone. On August 22, 2019, Nyiragongo Health Zone (which includes suburbs of Goma city) passed 21 days without additional confirmed cases detected, and all contacts completed the 21-day follow-up period. However, two additional cases have been reported in South Kivu's Mwenga Health Zone, bringing the total to six cases since August 15, 2019.

Within the North Kivu province, the Alimbongo, Beni, Biena, Butembo, Goma, Kalunguta, Katwa, Kayna, Kyondo, Lubero, Mabalako, Manguredjipa, Masereka, Musienene, Mutwango, Nyiragongo, Oicha, and Vuhovi Health Zones have reported cases of EVD.

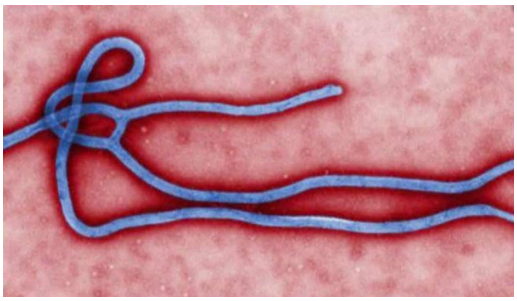
Within the Ituri province, the Ariwara, Bunia, Komanda, Mambasa, Mandima, Nyakunde, Rwampara, and Tchomia Health Zones have reported cases of EVD.

On July 17, 2019, WHO Director-General Dr. Tedros Adhanom Ghebreyesus today declared the Ebola virus disease (EVD) outbreak in the Democratic Republic of the Congo (DRC) a Public Health Emergency of International Concern (PHEIC). This is the tenth reported Ebola outbreak in DRC, and the 28th independent outbreak in Africa since Ebola was discovered in 1976. This outbreak is now the second largest Ebola outbreak in the history of the disease, surpassed only by the 2014-2016 outbreak in West Africa, and is the largest outbreak ever to have occurred in DRC.

Currently, the Texas Department of State Health Services, in conjunction with local and federal partners is conducting 21-day surveillance, including self-monitoring and active monitoring, of healthcare workers employed by non-governmental organizations (NGO) within healthcare facilities in DRC. All healthcare workers are screened using CDC's Predeparture Assessment tool 24-48 hours prior to departure from DRC. Each traveler is assigned a risk level based on the Predeparture Assessment tool, which will help guide local and state public health officials in providing movement and monitoring guidance for each traveler during their 21-day monitoring period.

For more information click here

***Ebola burial*. Image. Science AAAS.** https://www.sciencemag.org/news/2017/05/updated-will-vaccine-help-curb-new-ebola-outbreak-drc



***Ebola Virus.* Image. Healthline.**https://www.healthline.com/health/ebola-hemorrhagic-fever

Measles Update

Whitney Thomas, MPH, Lead Epidemiologist III at DSHS Region 7

Measles

As of August 8, 2019 the City of El Paso Department of Public Health has confirmed 6 people have tested positive for measles (rubeola). The cases are not related and have reported no travel outside the City of El Paso. This highly contagious respiratory disease is caused by a virus that spreads through coughing and sneezing but it is preventable via vaccination. The disease usually begins with fever, cough, runny nose, and red eyes. These symptoms are followed by a rash that spreads from the head down to the hands and feet. Measles can live in an airspace where an infected person was for up to two hours.

From January 1 to August 1, 2019, 1,172 individual cases of measles have been confirmed in 30 states. Out of the reported cases, 124 of the people who got measles this year were hospitalized, and 64 reported having complications, including pneumonia and encephalitis. The majority of cases are among people who were not vaccinated against measles. All measles cases this year have been caused by measles wild-type D8 or B3.

For more information click here

Milam County CASPER Overview

By: Conner Carlsen, MPH, CPH and Whitney Thomas, MPH

Milam County Health Department officials requested assistance in conducting a Community Assessment for Public Health Emergency Response (CASPER). To respond to this request, the Texas Department of State Health Services (DSHS) Public Health Region 7 conducted a community assessment focusing on the residents living in Milam County during the weekend of April 26-27. The objective of the assessment was to determine the needs of the community and to provide local officials with a "snapshot view" of public health issues to assist with response and resource allocation.

The CASPER questionnaire contained 33 questions addressing several areas of interest for public health officials involved in disaster preparedness and health behaviors. Subject areas included emergency preparedness, health behaviors, mental health, and substance use.

DSHS personnel provided just-in-time training to survey teams on April 26. CASPER interviews were conducted on April 26 and 27 by nine two-person teams consisting of volunteers from DSHS, the Milam County Health Department, and a public health student with the Epi Assist program at the Texas A&M University School of Public Health. Each two-person team attempted to complete seven interviews in each of the 30 census blocks for a target of 210 interviews.

Milam County CASPER Overview cont.

There were approximately 962 housing sites within the clusters. The survey teams selected 375 housing sites using the CASPER method, of which 284 were considered accessible and 91 inaccessible. Interviews were attempted if the house was considered accessible and if an adult resident was present and agreed to participate. Of the 156 housing units contacted, 95 interviews were completed making the contact rate 25.3%. The cooperation rate for interviews was 60.9%. With a goal of 210 interviews to be completed, the completion rate was 45.2%. The teams approached nearly 40% of all housing units in the clusters for interviews. About 75% of the housing units were accessible, however 33% of those did not answer.

Of the 95 households interviewed, 69.5% reported having been diagnosed with at least one of the chronic health problems- high blood pressure/heart disease, Asthma/COPD/ Emphysema, Diabetes, or Kidney disease requiring dialysis. High blood pressure/heart disease was determined to be the most prevalent issue within the households interviewed at 55.8%.

Each household was asked which 3 disasters are most likely to affect their household. The top three disasters identified were tornados, flood/flash flood, and outbreak of infectious disease. Tornados were identified as being the top three disaster at 92.6% households interviewed.

Around 89.5% of households said they would evacuate if public authorities announced a mandatory evacuation from their home due to an emergency. When asked where their household would most likely evacuate to, 76.8% said they would go to friends/ family/second home outside their area.

The questionnaire asked about tobacco use within each household and 42.2% of households said that someone within their household smoke or use tobacco products. Of those 78.9% use cigarettes. 35% of the households who smokes or uses tobacco products said they were trying to quit.

The questionnaire asked about drug use within each household and only 6 households said they had tried or used marijuana within the last year. No other drugs listed including methamphetamines, heroin, cocaine, MDMA, mushrooms or inhalants were mentioned as being used by the households. This is interesting because 62.1% of households felt that opioid misuse was a problem in the community and when asked what is the most important health issue in Milam county, many households said drug use within the community (specifically meth and opioids).

While the results above are some of the highlights from the CASPER, the DSHS Region 7 Epidemiology Team is working on a field report to summarize the CASPER and all of its results. This field report will be given to the Milam County Health Department in the hopes that they can use the information to provide data to their stakeholders to provide future services and educational material for those within the community.

TEXAS
Health and Human Services

Texas Department of State Health Services

Department of State Health Services
Public Health Region 7 Epidemiology Office 2408 South 37th St.
Temple, Tx 76504
Phone: 254-778-6744

Remember to report the required notifiable conditions to the DSHS Region 7 Epidemiology office!

Epidemiology Program

Mission Statement:

To develop or enhance regional epidemiology services for the rapid detection and control of disease outbreaks or other adverse health outcomes. This includes evaluating, enhancing and when necessary creating new surveillance and investigation systems, analyzing data, preparing recommendations and working with appropriate programs to implement interventions for desired outcomes.

Questions, comments, or suggestions for this newsletter should be submitted to: Lenae Warner at lenae.warner@dshs.texas.gov