



**TEXAS**  
Health and Human  
Services

Texas Department of State  
Health Services

## REGION 7 EPIDEMIOLOGY AND SURVEILLANCE QUARTERLY NEWSLETTER (MARCH 2018) E54-12596

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<http://www.visitthereach.org/event/little-explorers-spring/>

## **Case Study and Descriptive Analysis: Meningococcal Season?!**

Sophia Anyatonwu, Epidemiologist II at DSHS Public Health Region 7 (Case Study)  
Allison Sierocki, Epidemiologist II at DSHS Central Office - Vaccine Preventable Disease Team (Descriptive Analysis)

On 1/26/2018, our DSHS Public Health Region 7 (PHR 7) Epidemiology office was notified about a blood culture that was positive for *Neisseria meningitidis*. The specimen was collected from a 34-yr-old woman residing in Washington County on 1/24/2018. The Infection Preventionist who called to report the case also provided the medical record number needed to obtain additional information for the epi investigation (from their electronic health records database). The DSHS PHR 7 Epidemiology office called the case, who was at the hospital, to obtain additional information about her exposures and household contacts. During the investigation, we discovered that the case went to the emergency room on 1/24/2018 with symptoms such as fever, sensitivity to light, stiff neck, nausea, chills, fatigue, muscle pain, abdominal pain, chest pain, and cough. She had also recently learned that she was pregnant. The case worked at a local fast food restaurant and lived with her boyfriend. She had not traveled outside of Washington or Burleson counties (adjacent counties). At the time of the interview, she had received three different antibiotics (Azithromycin, Rocephin, and Vancomycin) and would not be discharged from the hospital for a few more days. She did not develop severe complications.

### Challenges and Surprises

We recommended prophylaxis for her boyfriend, who was with her at the hospital, but encountered some challenges since he did not have a primary care provider. There was back and forth between the healthcare provider on the floor, employee health, and the Epi office about who could provide the prophylaxis but he finally received it before leaving the facility and within the recommended timeframe. It took 3-4 days of follow-up to ensure this.

Another interesting challenge was realizing that the Infection Preventionist could not provide us information on employees that were offered or had received prophylaxis. We had to reach out to employee health separately for that information. Although some Infection Preventionists cover employee health duties as well, it was a nice reminder to be flexible because roles and job duties may look different based on the facility.

A surprise occurred after reaching out to the DSHS Vaccine Preventable Disease Team on 1/26/2018 to notify them about our case and coordinate getting an isolate sent to the DSHS Lab. After speaking, again, with the Infection Preventionist and reaching out to the facility's lab, it was discovered that not one but TWO isolates were being shipped to the DSHS Lab. Further investigation revealed that another county in our jurisdiction had a lab test that was positive for *Neisseria meningitidis*! We reached out to the local health department (LHD) epidemiologist who was able to contact the hospital and complete an epi investigation. The case lived alone and had not traveled within the 2 weeks prior to illness onset. The LHD recommended prophylaxis for two family members and two coworkers that played a role in transporting him to the hospital and/or spent time in his home around the time he was infectious. The case did not develop severe complications.

On 3/6/2018, we were notified by the DSHS Vaccine Preventable Disease Team that the PFGE pattern from a case in Region 6/5 South matched our Washington County case. On 3/8/2018, the DSHS PHR 7 Epi office and the epidemiology investigator that worked on the Region 6/5 South investigation spoke on the phone to discuss possible exposures and overlapping locations. The case from Region 6/5 South had developed severe complications and was intubated at the time of the call (a proxy had been interviewed in order to complete the initial investigation). We were not able to identify any overlapping exposures or locations that both cases would have been at based on information gathered during the individual investigations. At this time, we do not know if the case in Region 6/5 South has recovered and/or completed a follow-up interview.

## Meningococcal Invasive Disease Trends in Texas

Over the last two decades, the number of invasive meningococcal disease cases reached a high of 203 (1.0 cases per 100,000 population) in 2001. Overall, the number of invasive meningococcal disease cases continues to decline in Texas and a record low number of cases (22 cases) was reported in 2014. Only 23 cases (0.1 cases per 100,000 population) were reported in 2016. Serogroups B, C, and Y are most common, causing the majority of cases in Texas and the US overall. However, there has been a recent emergence of the W serogroup in the US overall with one reported case in 2015 in Texas and two in 2016. Vaccines are available to provide protection against all of these serogroups and are generally recommended for teens and preteens. In Texas, the age-specific incidence rate for invasive meningococcal disease is highest in infants.

Meningococcal Invasive Disease Case Counts and Incidence Rates <sup>a</sup> in Texas, 2006-2016												
Disease		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Meningococcal Invasive Disease	Cases	45	55	70	53	59	30	37	30	22	30	23
	Incidence Rate	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1

<sup>a</sup>Incidence rates calculated per 100,000 population. Estimated population used for 2006-2008 and projected used for 2009-2016.

Table 1. Meningococcal Invasive Disease Case Counts and in Incidence Rates in Texas, 2006-20016

Meningococcal Invasive Disease Cases and Incidence Rates <sup>a</sup> in Texas by Age Group, 2007-2016																				
Age Group (Yrs)	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016	
	Cases	IR	Cases	IR	Cases	IR	Cases	IR	Cases	IR	Cases	IR	Cases	IR	Cases	IR	Cases	IR	Cases	IR
<1	10	2.5	9	2.3	5	1.3	9	2.4	4	1.0	3	0.7	3	0.7	1	0.2	7	1.7	2	0.5
1-4	3	0.2	10	0.7	5	0.3	3	0.2	2	0.1	6	0.4	2	0.1	1	0.1	2	0.1	2	0.1
5-9	3	0.2	1	0.1	3	0.2	1	0.1	3	0.2	1	0.1	0	0.0	1	0.1	1	0.1	2	0.1
10-14	3	0.2	2	0.1	4	0.2	2	0.1	1	0.1	1	0.1	1	0.1	0	0.0	3	0.1	0	0.0
15-19	8	0.4	6	0.3	3	0.2	7	0.4	2	0.1	1	0.1	3	0.2	1	0.1	0	0.0	0	0.0
20-29	13	0.4	13	0.3	7	0.2	7	0.2	7	0.2	3	0.1	3	0.1	1	0.0	3	0.1	4	0.1
30-39	5	0.1	5	0.1	3	0.1	10	0.3	3	0.1	4	0.1	5	0.1	3	0.1	3	0.1	4	0.1
40-49	1	0.0	5	0.1	6	0.2	8	0.2	4	0.1	4	0.1	3	0.1	5	0.1	3	0.1	1	0.0
50-59	5	0.2	3	0.1	8	0.3	2	0.1	1	0.0	7	0.2	4	0.1	4	0.1	2	0.1	2	0.1
60 and Up	4	0.1	16	0.5	9	0.3	10	0.3	3	0.1	7	0.2	6	0.1	5	0.1	6	0.1	6	0.1
Unknown	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
a)Incidence rates (IR) calculated per 100,000 population. Estimated population used for 2007-2008 and projected used for 2009-2016.																				

<sup>a</sup>Incidence rates (IR) calculated per 100,000 population. Estimated population used for 2007-2008 and projected used for 2009-2016.

Table 2. Meningococcal Invasive Disease Cases and Incidence Rates in Texas by Age Group, 2007-2016



## Number of *N. meningitidis* Cases by Serogroup, Texas, 2012-2016

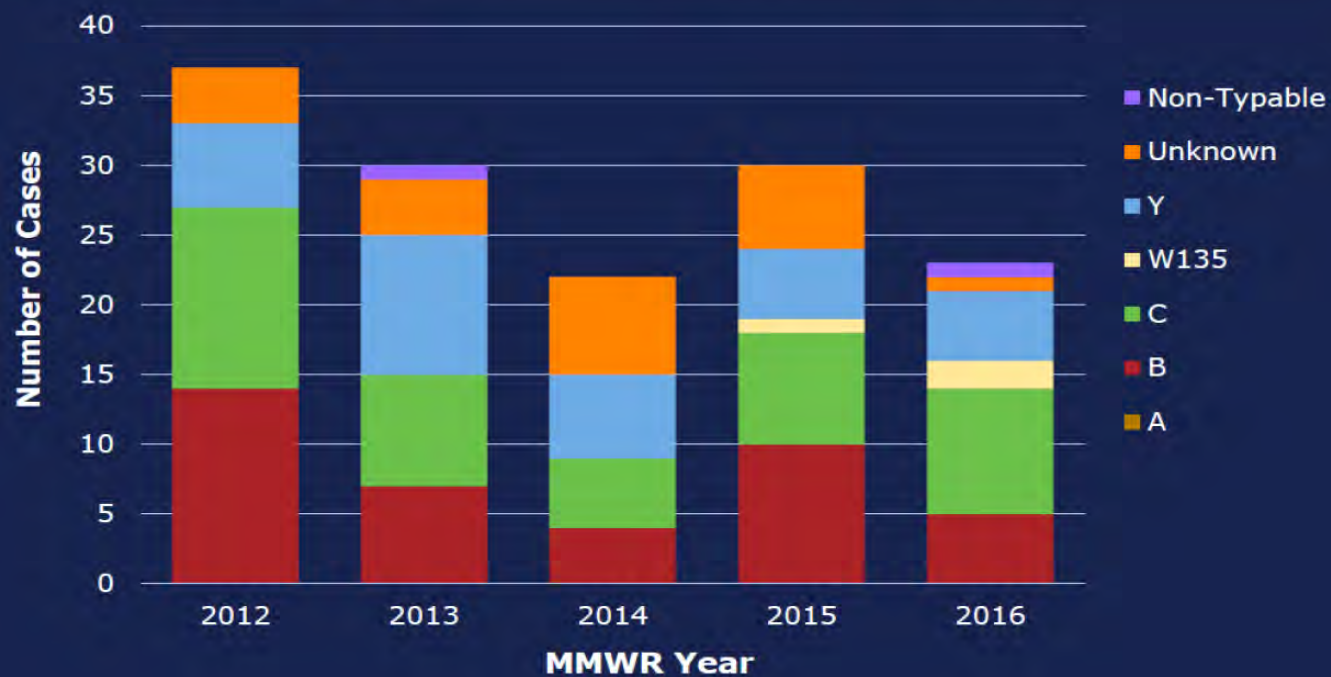


Figure 1. Number of *N. meningitidis* cases by serogroup in Texas (2012-2016)

[Click here for more information about \*Neisseria meningitidis\*](#)

## 2017-2018 Flu Surveillance Trends and Epidemiology + Preparedness Activities

Weekly flu reports were submitted directly to the DSHS PHR 7 Flu Surveillance Coordinator by various local health department, school, hospital, and clinic reporters distributed throughout the 30 counties within the region. Overall, the percentage of counties represented weekly in the surveillance data (as a result of weekly flu reports that were provided to DSHS PHR 7) from October to March ranged between 83 -100%, with an average of ~94%. Over the past 6 months, the number of counties reporting flu activity has been increasing while the number of counties only reporting influenza-like illness (ILI) activity has been decreasing. 107 flu outbreaks or clusters were reported to DSHS PHR 7. This number represents outbreaks/clusters reported by 25 counties. The majority of outbreaks were caused by flu A viruses. Although, flu A viruses were most prevalent in DSHS PHR 7 between the end of November and early February, flu B viruses have been dominating since the end of February.

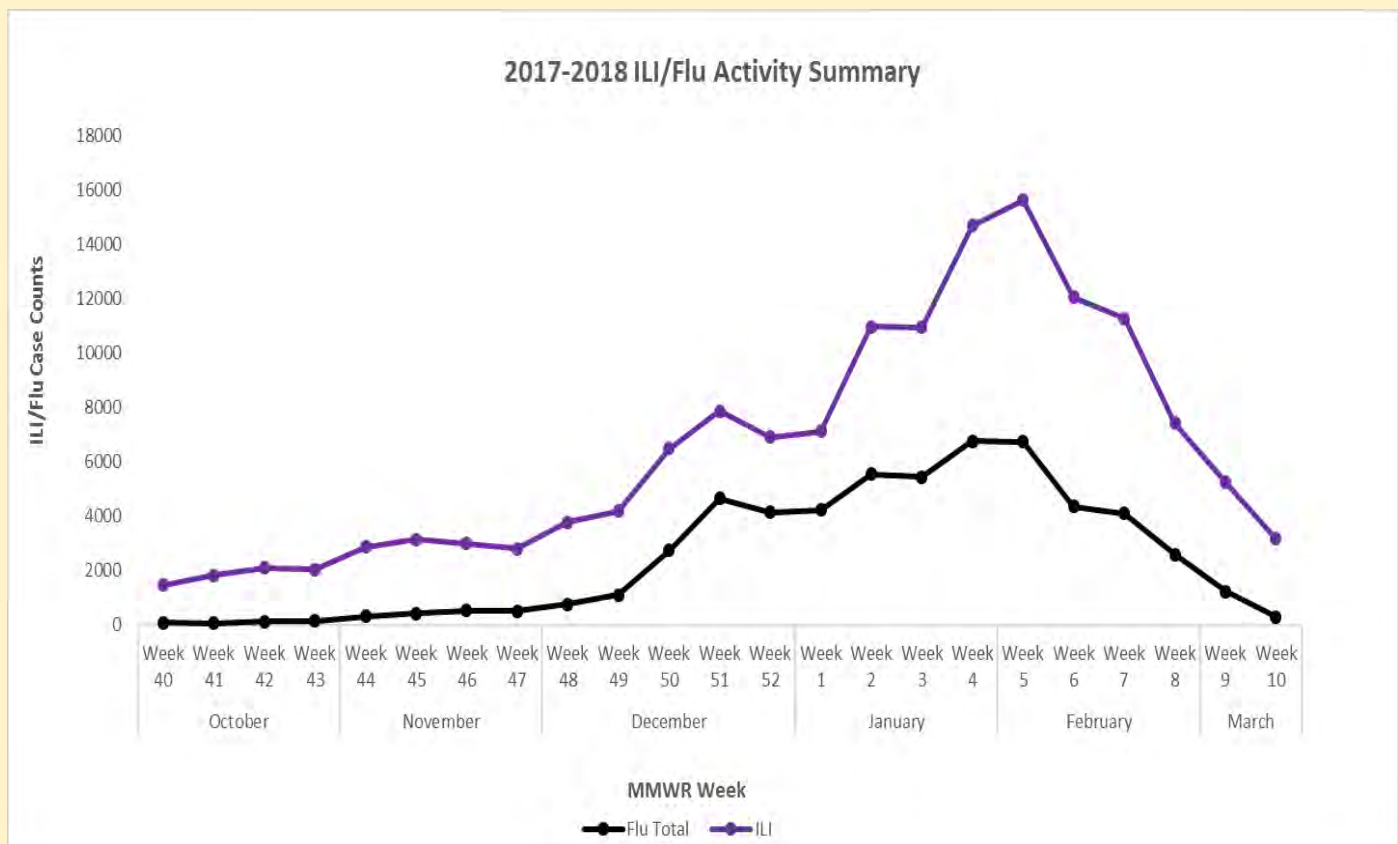


Figure 6. 2017-2018 ILI/Flu Activity Summary

Month	Date	Table1. Description of Epi & Preparedness Activities during the 2017-2018 Influenza Surveillance Season
Sept.	9/18/2017	DSHS PHR 7 Flu Surveillance Coordinator sends email notifying regional flu reporters that the season is about to start/provides updates on reporting
Oct.	10/12/2017	DSHS PHR 7 Flu Surveillance Coordinator submits 1st weekly flu report for 2017-2018 flu surveillance season to DSHS Flu Team at Central Office
	10/24/2017	The first flu outbreak/respiratory illness cluster is reported to DSHS PHR 7 (school)
Nov.	11/27/2017	DSHS PHR 7 Flu Surveillance Coordinator sends out first flu season summary to regional flu reporters and preparedness partners (covering the month of October)
Dec.	12/11/2017	Epi Situational Awareness: EPI X Media Tracking Report notification about widespread flu activity in the U.S.
	12/11/2017-12/13/2017	A flu season message is developed by the DSHS PHR Flu Surveillance Coordinator and sent out to preparedness partners as well as flu reporters based on concerns about vaccine effectiveness
	12/21/2017-12/29/2017	16 flu outbreaks are reported to DSHS (mostly at LTCFs). More outbreaks are reported in this one week, than the prior 3 months.
	12/27/2017	DSHS PHR 7 Flu Surveillance coordinator sends out CDC Health Advisory: Seasonal Influenza A(H3N2) Activity and Antiviral Treatment of Patients with Influenza to partners
Jan.	1/5/2018	DSHS PHR 7 Preparedness Lead coordinates conference call on Influenza & Bed Availability Situational Awareness within TSAs L, M, N, and O
	1/6/2018-1/8/2018	CATRAC staff conducts daily hospital bed polls at 10:00 AM on January 6-8, 2018
	1/8/2018	DSHS PHR 7 Preparedness Lead coordinates LHD and HPP Planners Conference Call to gain situational awareness on any issues with hospital surge, staffing/supplies shortages, outbreaks, etc.
	1/9/2018	DSHS PHR 7 Flu Surveillance Coordinator starts to send out flu outbreak follow-up emails to LHDs in order to better assess the extent of flu outbreaks in DSHS PHR 7
	1/10/2018	DSHS PHR 7 Epidemiology Lead asks DSHS PHR 7 Flu Surveillance Coordinator to investigate reports about a possible Tamiflu shortage. DSHS Flu Team + CDC confirm that there is enough Tamiflu in circulation but there are a few spot shortages due to high demand
	1/12/2018	DSHS PHR 7 Flu Surveillance Coordinator develops county flu summaries to share with stakeholders and answers calls about county-specific flu activity
	1/25/2018	DSHS PHR 7 Flu Surveillance Coordinator gives flu surveillance activity presentation at CATRAC meeting
	1/29/2018	DSHS PHR 7 Flu Surveillance Coordinator sends out updated flu surveillance report to flu reporters and stakeholders
Feb.	2/2/2018	Flu activity is steeply climbing and widespread in the U.S.
	2/3/2018	Flu season peak is reached the week ending February 3 <sup>rd</sup> , 2018; drop off in the number of LTCF flu outbreaks being reported to DSHS PHR 7; a few schools start to report outbreaks/closures; Vaccine clinic in Bosque County
	2/5/2018	DSHS PHR 7 Flu Surveillance Coordinator sends updated flu outbreak numbers to internal leadership
	2/6/2018	DSHS PHR 7 Flu Surveillance Coordinator listens to CDC COCA Flu for situational awareness of flu activity in the U.S.
	2/8/2018	DSHS PHR 7 Flu Surveillance Coordinator sends another flu outbreak follow up email to each LHD in order to coordinate submitting flu outbreak reporting forms
	2/14/2018	DSHS PHR 7 Flu Surveillance Coordinator sends updated flu outbreak summary to internal leadership
	2/15/2018	DSHS PHR 7 Flu Surveillance Coordinator creates county flu trends "2-pager"
	2/20/2018	Local Health Authority Conference Call: U.S. vaccine effectiveness data is shared by DRD and RMD.
	2/21/2018	Quarterly LHD and HPP Provider Meeting: Syndromic Surveillance demonstration; side discussion about how syndromic can be utilized to look at hospitalization trends in PHR 7 and fill gaps in influenza surveillance
Mar.	3/16/2018	DSHS PHR 7 Flu Surveillance Coordinator distributed updated flu surveillance report with vaccine effectiveness estimates internally to DSHS PHR 7 staff

## **2017-2018 Flu Surveillance Trends and Epidemiology + Preparedness Activities (cont.)**

### Acronyms

Department of State Health Services DSHS Public Health Region 7 (DSHS PHR 7)

Capital Area Trauma Regional Advisory Council (CATRAC)

Hospital Preparedness Partners (HPP)

Local Health Department (LHD)

Trauma Service Area (TSA)

Centers for Disease Control and Prevention (CDC)

Clinician Outreach and Communication Activity (COCA)

Deputy Regional Director (DRD)

Regional Medical Director (RMD)

### **DSHS Public Health Region 7 : Bosque County Flu Clinic**

Debbie Shelton, Manager at DSHS Public Health Region 7

Bonnie Morehead, Manager at DSHS Public Health Region 7

Debra Seamans, Manager at DSHS Public Health Region 7

Sharon Melville, Region Medical Director at DSHS Public Health Region 7

Sophia Anyatonwu, Epidemiologist II at DSHS Public Health Region 7

The local school district in Bosque County closed all schools from 1/30/18-2/2/18 due to a 25% absentee rate related to flu. DSHS PHR 7 staff coordinated with county emergency management and the school district to set-up and notify residents about a flu vaccine clinic. Based on the quick response and expertise of DSHS PHR 7 staff, 132-134 residents received flu shots.

The DSHS PHR 7 Influenza Vaccination Clinic was held in Clifton, Bosque County on Sat. February 3, 2018. Ten staff persons worked from 10:00 a.m. – 3:00 p.m. The staff members participating were: Johnny Hernandez, Debbie Shelton, Laurie Munoz, Liz Mojica, Sophia Anyatonwu, Marita Astle, Barbara Blake, Martha Payne, Maria Montes and Mary Stewardson. The immunization clinic was very successful and much appreciated by the community. Thanks to our dedicated public health team who made it happen.



## DSHS Public Health Region 7 2017 –2018 Influenza Outbreak Summary

Sophia Anyatonwu, Epidemiologist II at DSHS Public Health Region 7

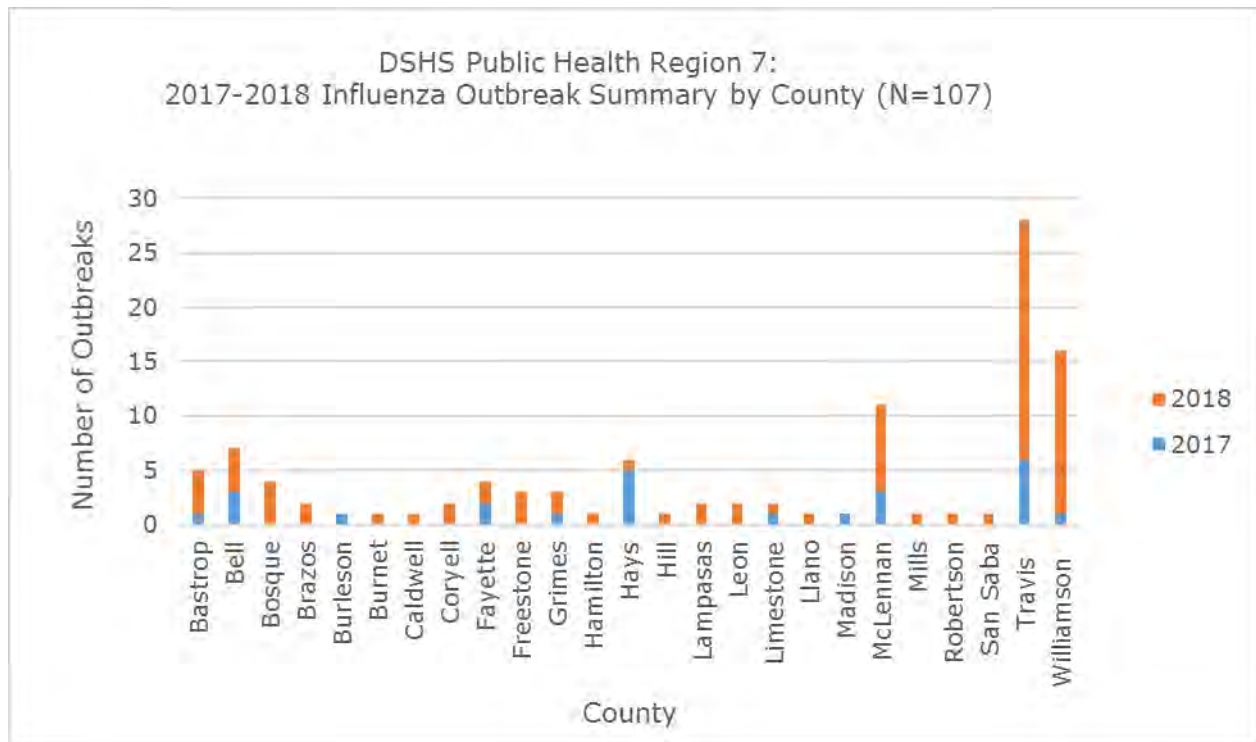


Figure 2. Data collected between 10/1/2017-4/1/2018

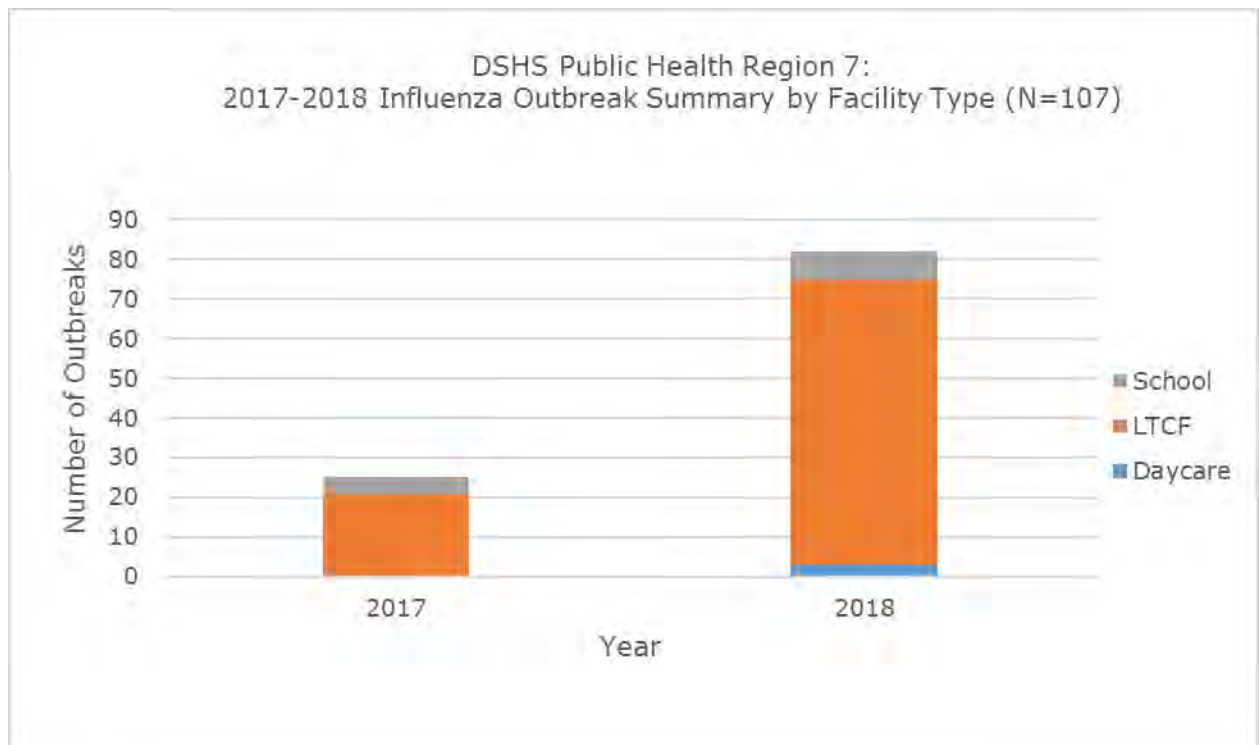


Figure 3. Data collected between 10/1/2017-4/1/2018



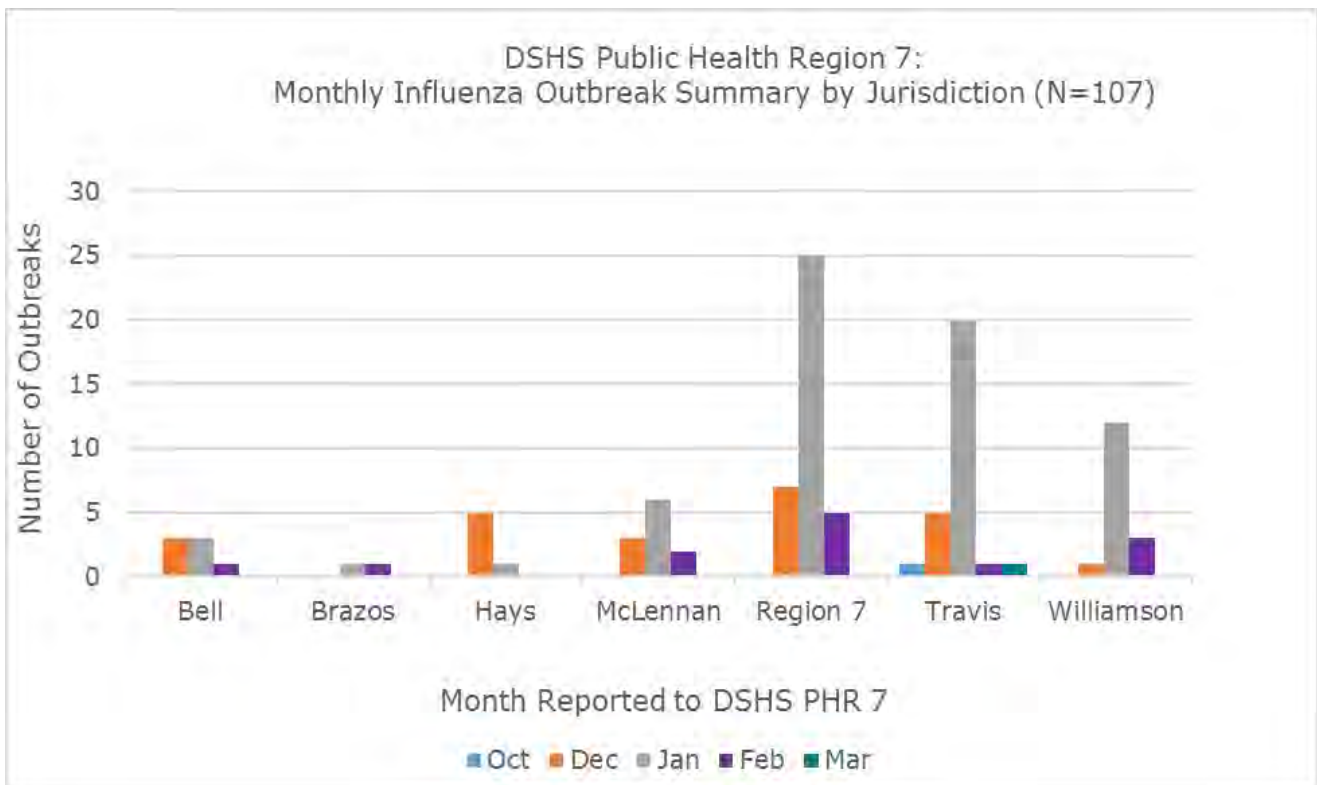


Figure 4. Data collected between 10/1/2017-4/1/2018

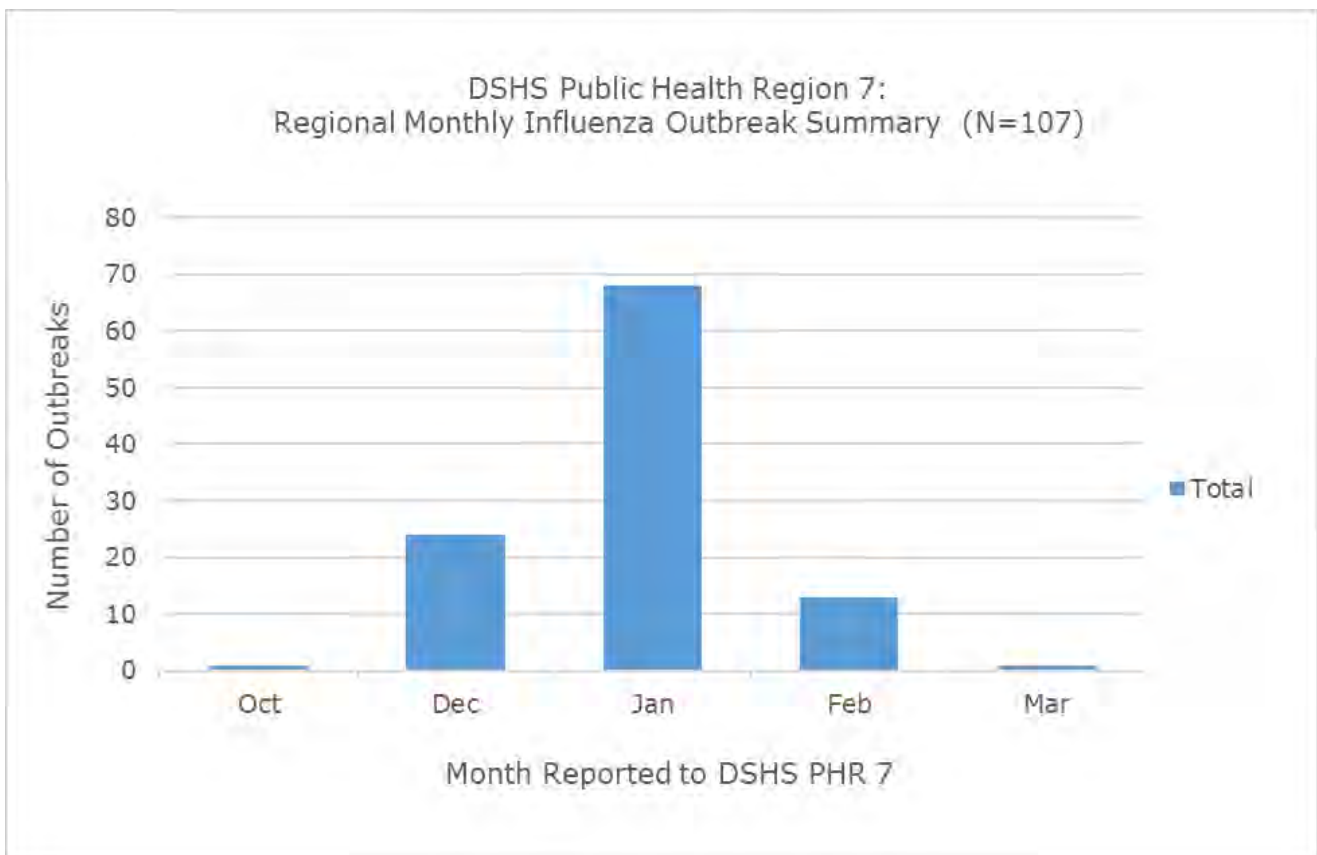


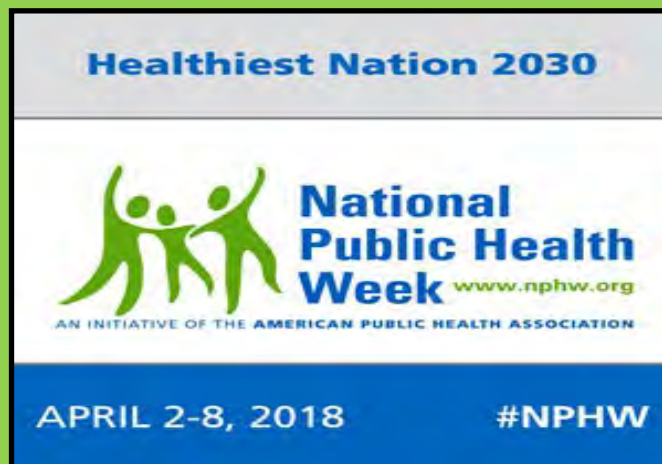
Figure 5. Data collected between 10/1/2017-4/1/2018

## **NPHW 2018: Healthiest Nation Poem/Song**

Sophia Anyatonwu, Epidemiologist II DSHS Public Health Region 7

*We want to be the healthiest nation  
in one generation  
for communities to have a solid foundation  
where safety is the norm and we can all be free  
to live life to the fullest and pursue our dreams  
as we breathe clean air while we sleep, work, and play  
our youth go to school and graduate  
our jobs lead to wealth, health, and have meaning  
but there are services in place "for the time being"  
when we reach those moments that we fall through the cracks  
or fall on hard times and it's hard to come back  
our nation truly practices justice for all  
communities are well informed to sound the call  
for various needs like fresh water and meals  
or access to sidewalks for bicycle wheels  
healthcare and prevention go hand in hand  
so that unhealthy practices have low demand  
yes, the healthiest nation  
is what we aim to be  
in one generation is when we hope to see  
public health infrastructure and improved capacity  
to truly serve our nation and support communities*

Listen here: <https://soundcloud.com/sophianytonwu/nphw-healthiest-nation>



Dates	Upcoming Meetings and Events
5/23-5/25	Diseases in Nature Conference
6/10-6/14	Council of State and Territorial Epidemiologists
6/13-6/15	Association of Professionals in Infection Control and Epidemiology (APIC) National Conference

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Remember to report the [required notifiable conditions](#) to the DSHS Region 7 Epidemiology office!  
\*Beginning September 1st, 2017, we will no longer be called Health Service Regions. We will be called Public Health Regions.