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RSV and Flu during the COVID-19 Pandemic

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Infectious Disease Task Force Meeting
December 2, 2021

Respiratory Syncytial Virus (RSV)



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- RNA virus primarily spread via respiratory droplets when a person coughs or sneezes
- Most common cause of bronchiolitis and pneumonia in children under one year of age in the US
- Infants, young children, and older adults with chronic medical conditions are at risk of severe disease from RSV
- In the US, RSV infections usually occur during the fall and winter cold and flu season

Respiratory Syncytial Virus (RSV)

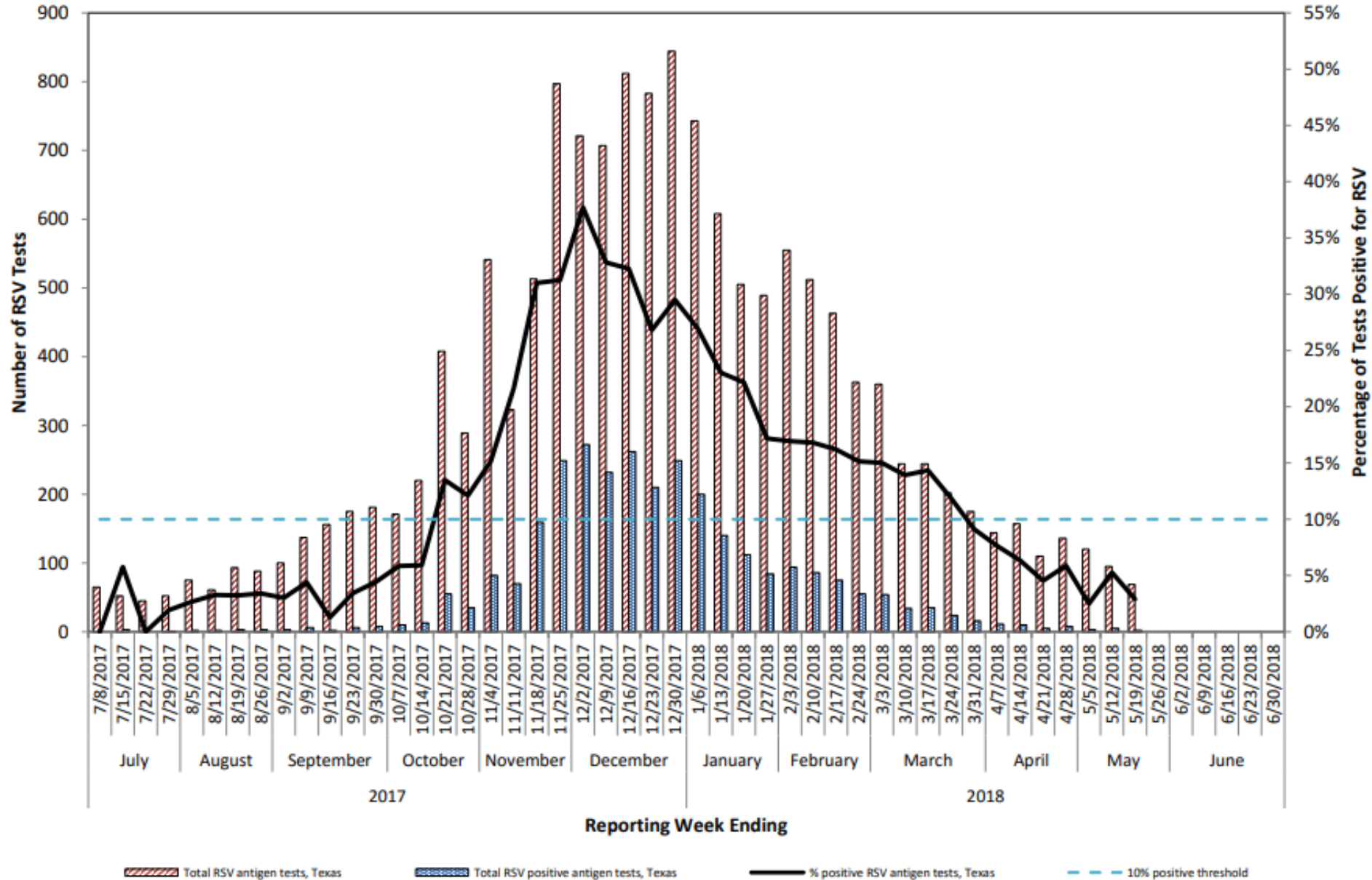


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- RSV season is defined as:
 - Antigen tests are $\geq 10\%$ positivity and/or PCR tests are $\geq 3\%$ positivity for two consecutive weeks
- Palivizumab (Synagis) is a monoclonal antibody infusion that can be used during RSV season to prevent RSV in high-risk children
 - costs about \$2500 a dose
 - High risk children typically require 5 (sometimes 6) doses per RSV season

Number and Percentage of Antigen Tests Positive for Respiratory Syncytial Virus (RSV) All Texas Sites, 2017-2018 Season



The start of RSV season is the first of two consecutive weeks with $\geq 10\%$ of tests positive, and the end is the last of two consecutive weeks with $\geq 10\%$ of tests positive.

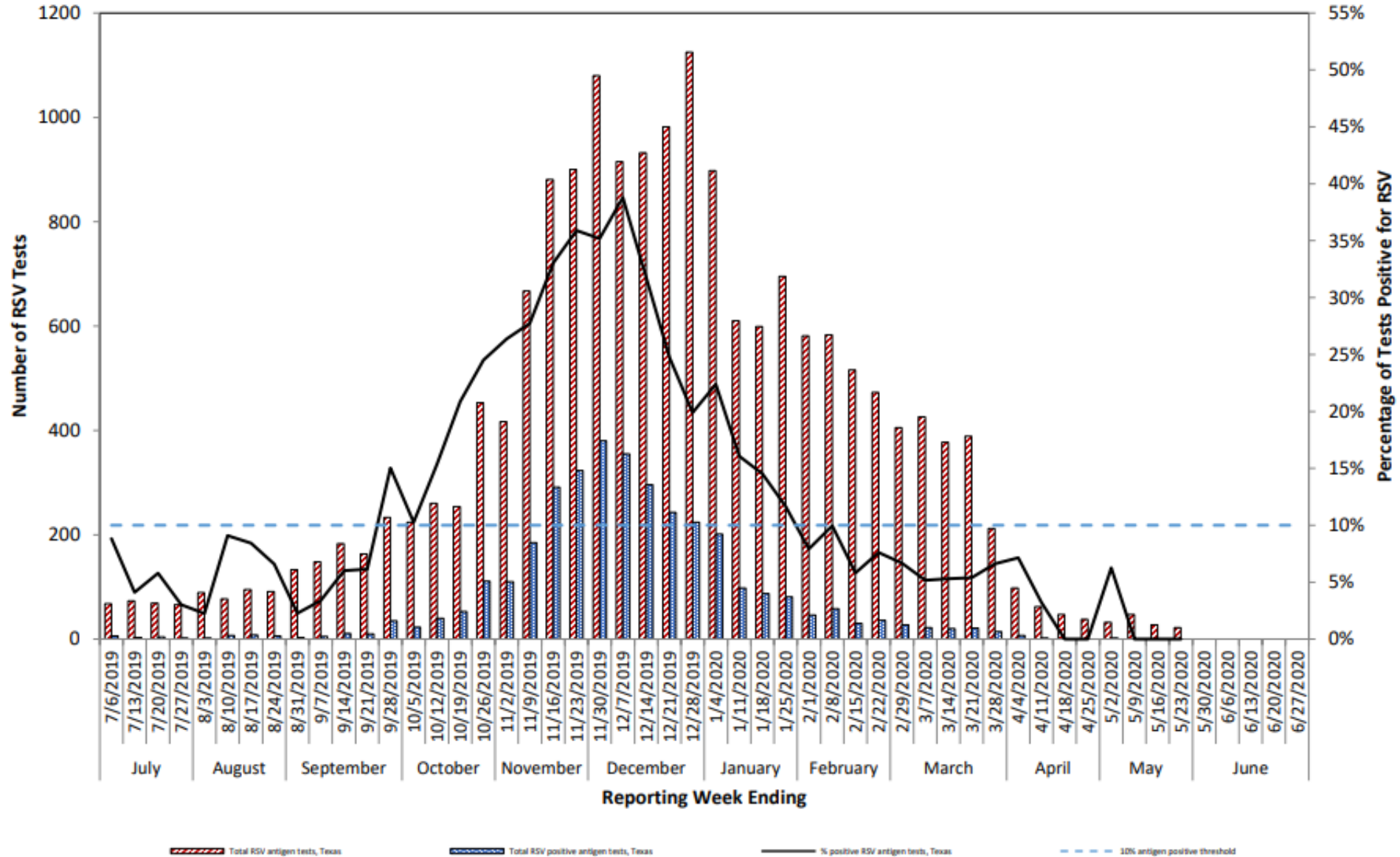


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Number and Percentage of Antigen Tests Positive for Respiratory Syncytial Virus (RSV) All Texas Sites, 2019-2020 Season



The start of RSV season is the first of two consecutive weeks with $\geq 10\%$ of tests positive, and the end is the last of two consecutive weeks with $\geq 10\%$ of tests positive.



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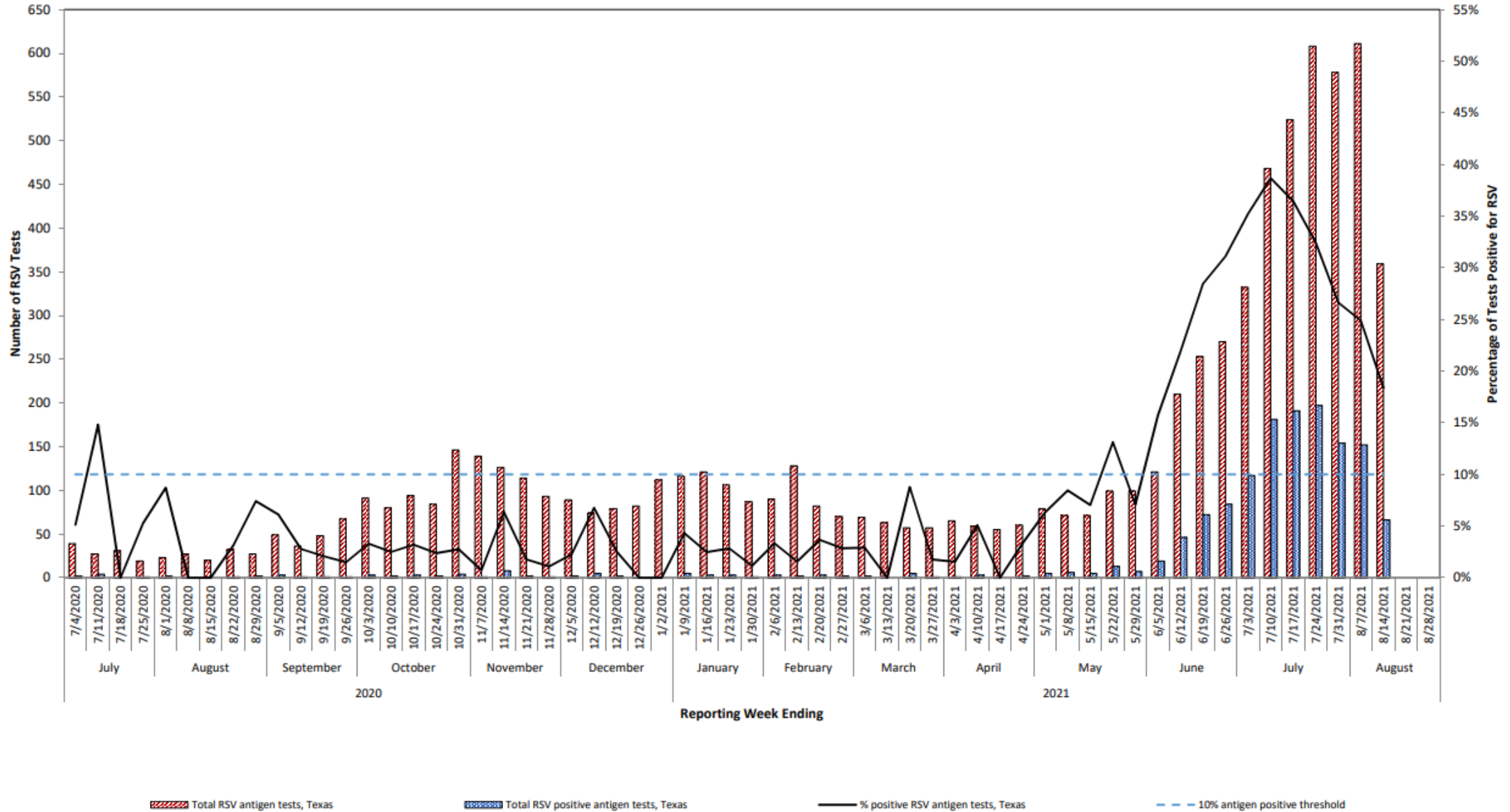
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Number and Percentage of Antigen Tests Positive for Respiratory Syncytial Virus (RSV) All Texas Sites, 2020-2021 Season

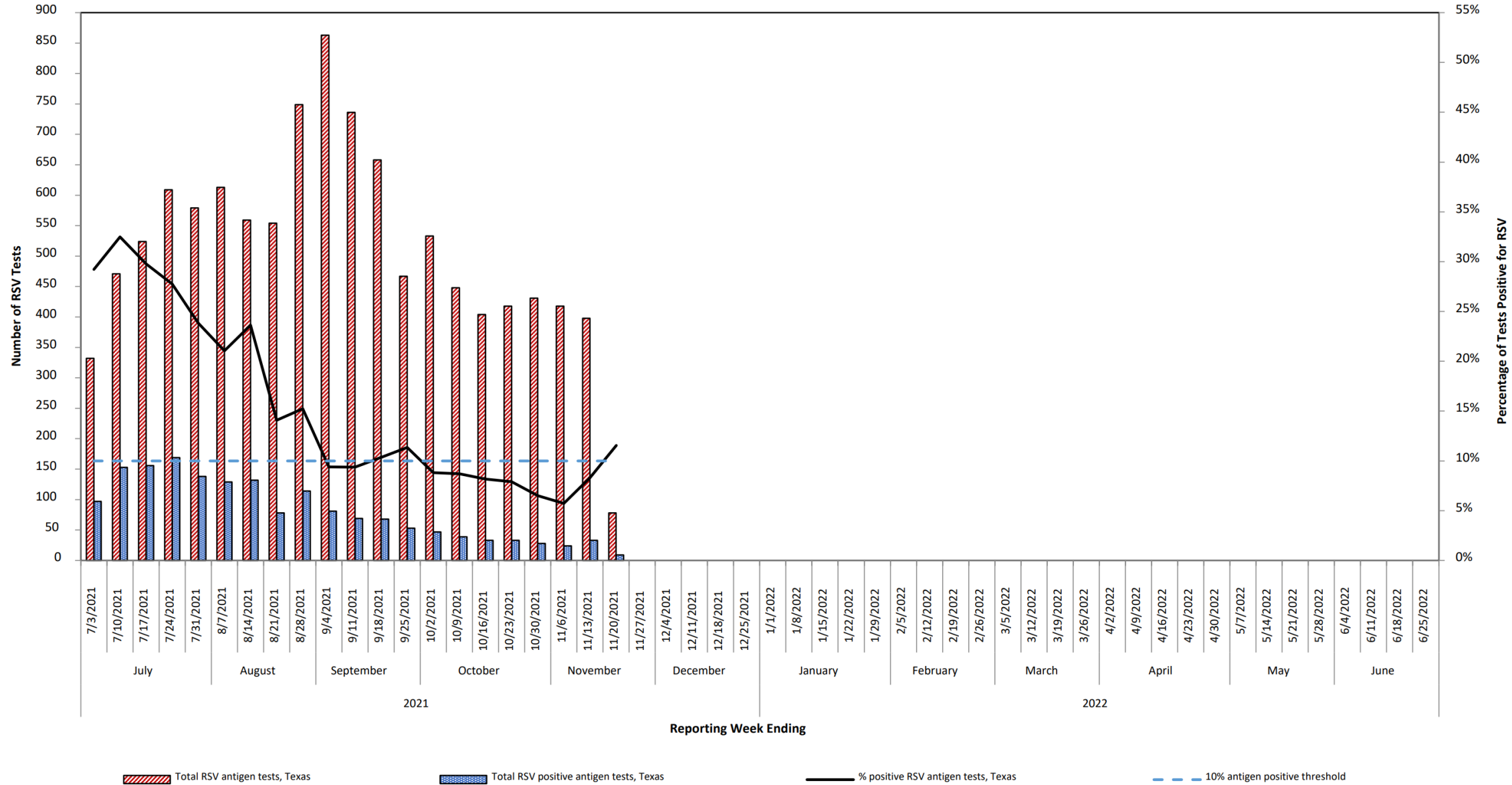


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The start of RSV season is the first of two consecutive weeks with $\geq 10\%$ of tests positive, and the end is the last of two consecutive weeks with $\geq 10\%$ of tests positive.

Number and Percentage of Antigen Tests Positive for Respiratory Syncytial Virus (RSV) All Texas Sites, 2021-2022 Season



The start of RSV season is the first of two consecutive weeks with ≥10% of tests positive, and the end is the last of two consecutive weeks with ≥10% of tests positive.

Health Advisories for RSV: June 2021

Increased Interseasonal Respiratory Syncytial Virus (RSV) Activity in Parts of the Southern United States



Distributed via the CDC Health Alert Network
June 10, 2021, 1:30 PM ET
CDCHAN-00443

Summary

The Centers for Disease Control and Prevention (CDC) is issuing this health advisory to notify clinicians and caregivers about increased interseasonal respiratory syncytial virus (RSV) activity across parts of the Southern United States. Due to this increased activity, CDC encourages broader testing for RSV among patients presenting with acute respiratory illness who test negative for SARS-CoV-2, the virus that causes COVID-19. RSV can be associated with severe disease in young children and older adults. This health advisory also serves as a reminder to healthcare personnel, childcare providers, and staff of long-term care facilities to avoid reporting to work while acutely ill – even if they test negative for SARS-CoV-2.

Background

RSV is an RNA virus of the genus *Orthopneumovirus*, family *Pneumoviridae*, primarily spread via respiratory droplets when a person coughs or sneezes, and through direct contact with a contaminated surface. RSV is the most common cause of bronchiolitis and pneumonia in children under one year of age in the United States. Infants, young children, and older adults with chronic medical conditions are at risk of severe disease from RSV infection. Each year in the United States, RSV leads to on average approximately 58,000 hospitalizations¹ with 100-500 deaths among children younger than 5 years old² and 177,000 hospitalizations with 14,000 deaths among adults aged 65 years or older.³

In the United States, RSV infections occur primarily during the fall and winter cold and flu season. In April 2020, RSV activity decreased rapidly, likely due to the adoption of public health measures to reduce the spread of COVID-19.⁴ Compared with previous years, RSV activity remained relatively low from May 2020 to March 2021. However, since late March, CDC has observed an increase in RSV detections reported to the [National Respiratory and Enteric Virus Surveillance System](#) (NREVSS), a nationwide passive, laboratory-based surveillance network. CDC noted increases in laboratory detections and in the percentages of positive detections for both antigen and PCR testing in parts of HHS Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee) and Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas). Due to limited testing outside of the typical RSV season, data are limited in some jurisdictions and may be incomplete for the most recent weeks. Since this elevated interseasonal activity is a deviation in the typical circulation patterns for RSV, at this time it is not possible to anticipate the likely spread, peak, or duration of activity with any certainty. Health officials also identified increased interseasonal RSV circulation in parts of Australia during late 2020 and in South Africa in early 2021. Still, RSV did not reach seasonal peak levels in most regions or result in widespread circulation.⁵⁻⁷

Due to reduced circulation of RSV during the winter months of 2020–2021, older infants and toddlers might now be at increased risk of severe RSV-associated illness since they have likely not had typical levels of exposure to RSV during the past 15 months. In infants younger than six months, RSV infection may result in symptoms of irritability, poor feeding, lethargy, and/or apnea with or without fever. In older infants and young children, rhinorrhea and decreased appetite may appear one to three days before cough, often followed by sneezing, fever, and sometimes wheezing. Symptoms in adults are typically consistent with upper respiratory tract infections, including rhinorrhea, pharyngitis, cough, headache, fatigue, and fever. There is no specific treatment for RSV infection other than [symptom management](#).



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John Hellerstedt, M.D.
Commissioner

Wednesday, June 16, 2021

Health Advisory: Increased Interseasonal Respiratory Syncytial Virus (RSV) Activity in Texas

Summary

The Texas Department of State Health Services (DSHS) is issuing this health advisory to notify clinicians and caregivers about increased interseasonal respiratory syncytial virus (RSV) activity across Texas. Due to this increased activity, DSHS encourages broader testing for RSV among patients presenting with acute respiratory illness who test negative for SARS-CoV-2, the virus that causes COVID-19. RSV can be associated with severe disease in young children and older adults. This health advisory also serves as a reminder to healthcare personnel, childcare providers, and staff of long-term care facilities to avoid reporting to work while acutely ill – even if they test negative for SARS-CoV-2. Additionally, the Centers for Disease Control and Prevention (CDC) issued a similar RSV health advisory alert on June 10, 2021, for parts of the southern United States.

Background

RSV is an RNA virus of the genus *Orthopneumovirus*, family *Pneumoviridae*, primarily spread via respiratory droplets when a person coughs or sneezes, and through direct contact with a contaminated surface. RSV is the most common cause of bronchiolitis and pneumonia in children under one year of age in the United States. Infants, young children, and older adults with chronic medical conditions are at risk of severe disease from RSV infection.

In Texas, RSV infections occur primarily during the fall and winter cold and flu season. In April 2020, RSV activity decreased rapidly, likely due to the adoption of public health measures to reduce the spread of COVID-19¹. Compared with previous years, RSV activity remained relatively low from May 2020 to March 2021. However, since late March, DSHS has observed an increase in RSV detections reported to the [National Respiratory and Enteric Virus Surveillance System](#) (NREVSS), a nationwide passive, laboratory-based surveillance network. DSHS noted increases in laboratory detections and in the overall percentages of positive detections for both antigen and PCR testing, with antigen tests spiking above the 10% positive threshold in mid-May and nearly

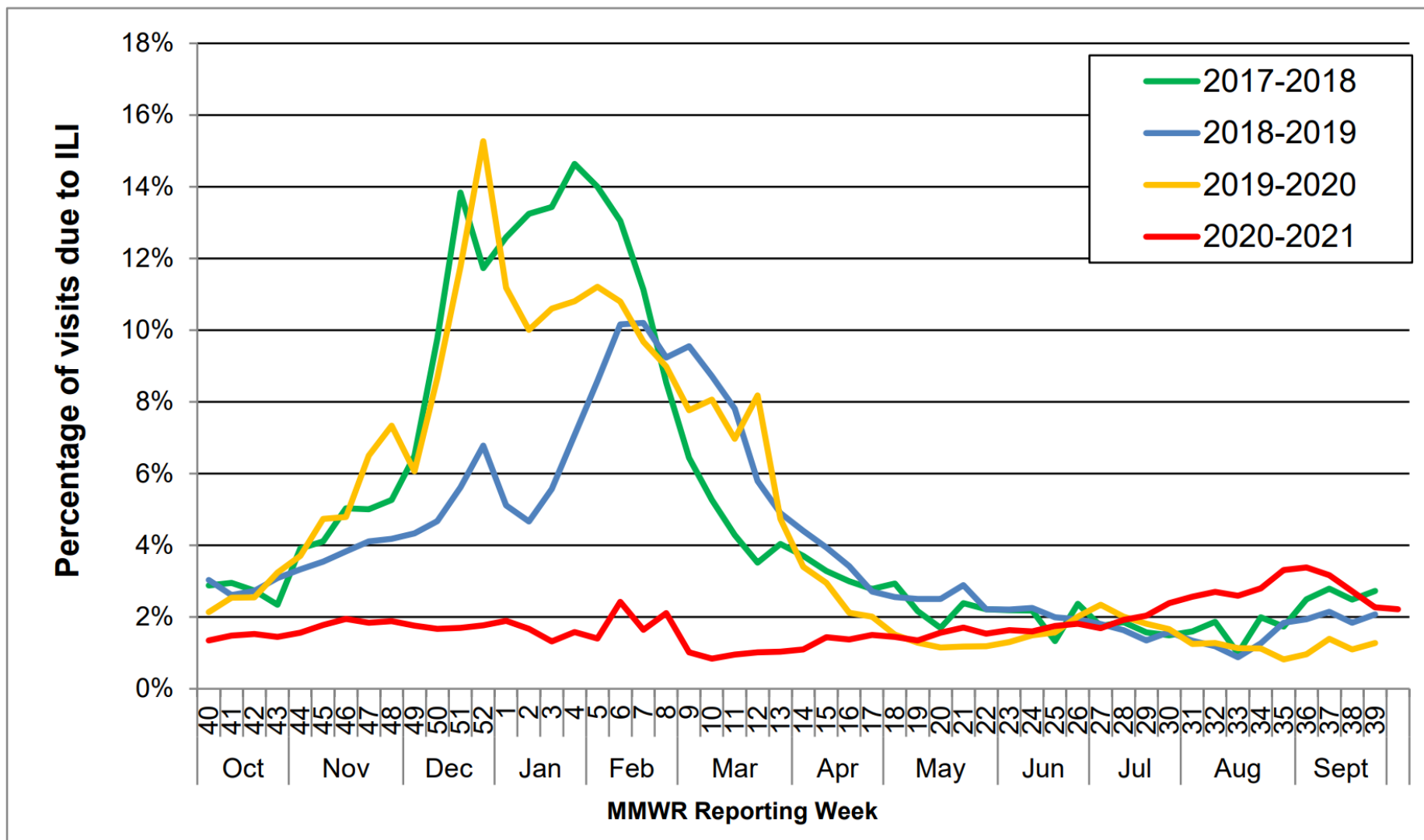


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Texas Influenza-like Illness 2017-2021

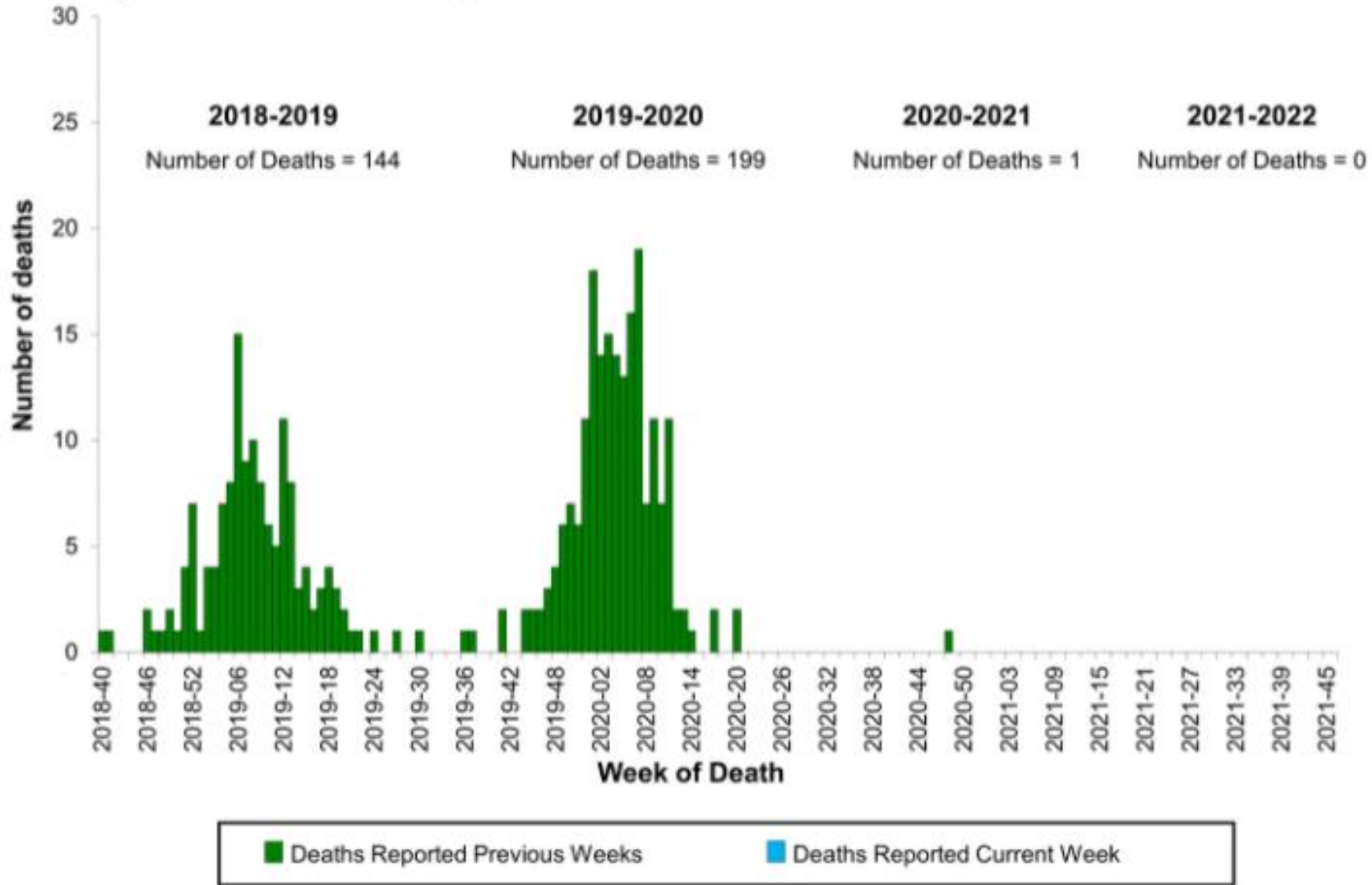
Figure 1: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2017–2021 Seasons



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Influenza-Associated Pediatric Deaths by Week of Death, 2018-2019 season to 2021-2022 season



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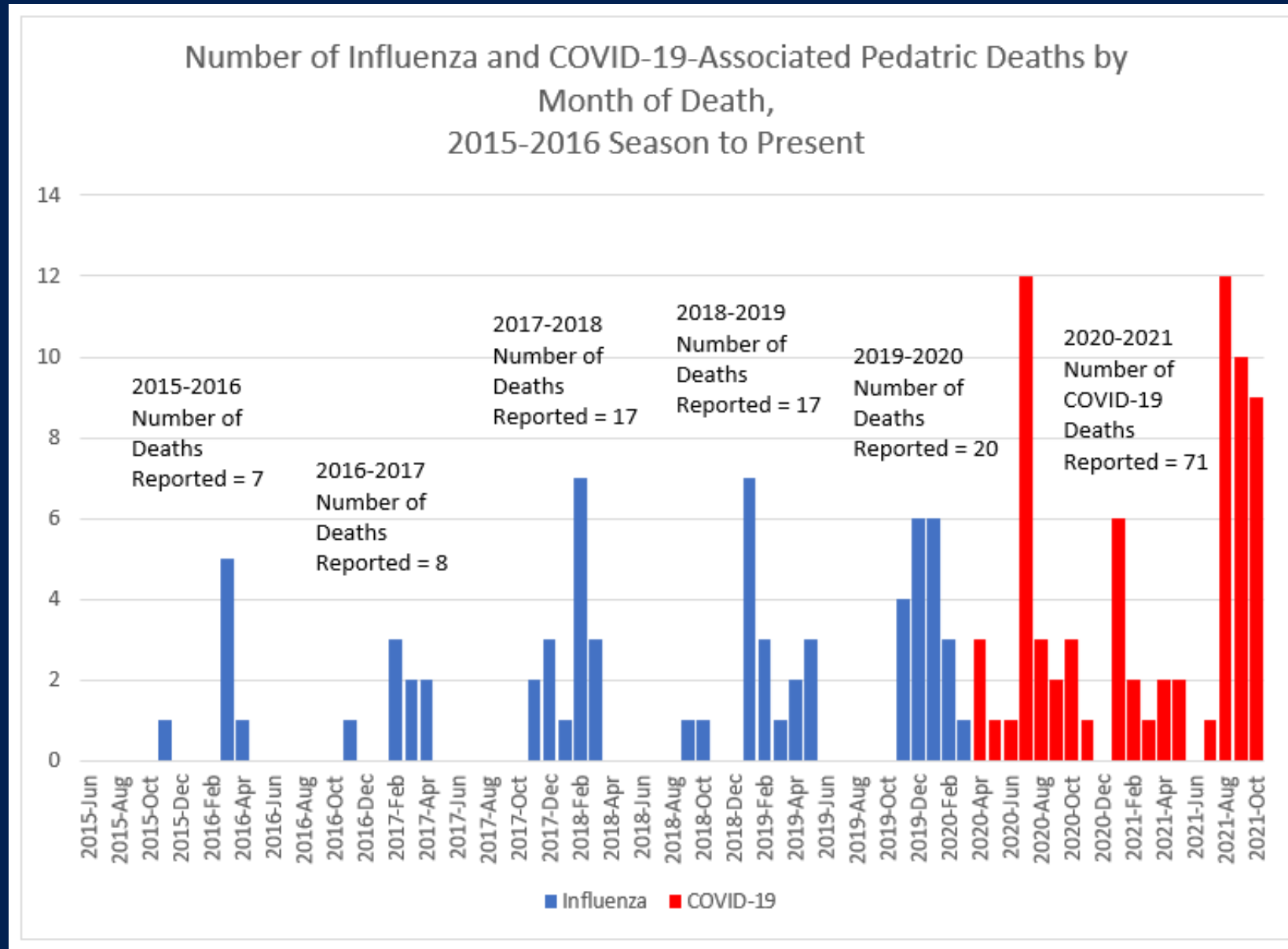
Texas Flu and COVID-19- Associated Pediatric Deaths, 2015-2022



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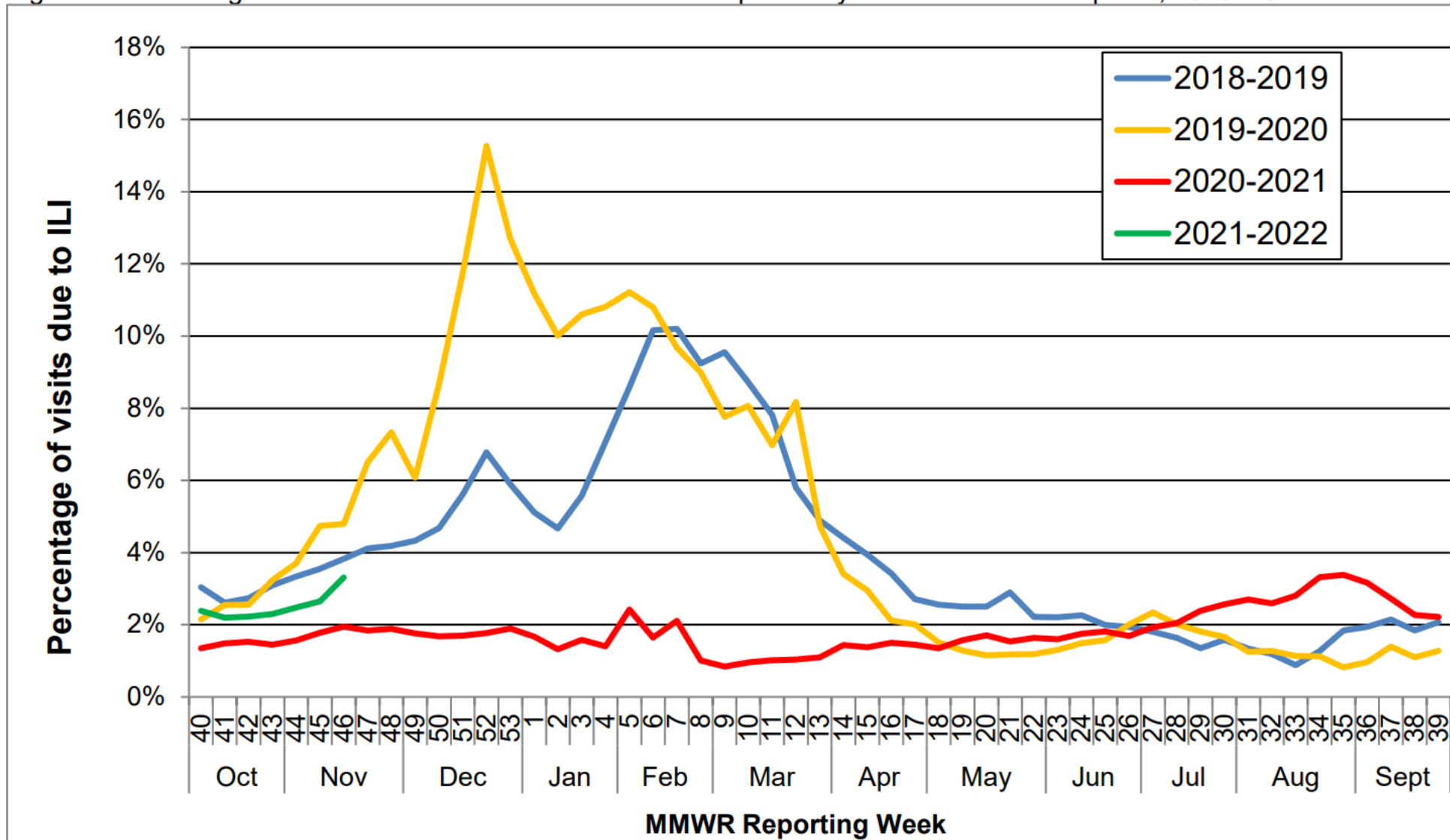
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Texas Influenza-like Illness 2018-2022

Figure 4: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2018–2022 Seasons



Available at: <https://www.dshs.texas.gov/IDCU/disease/influenza/surveillance/2021/2021Wk46Nov24.pdf>. Accessed 11/28/2021.



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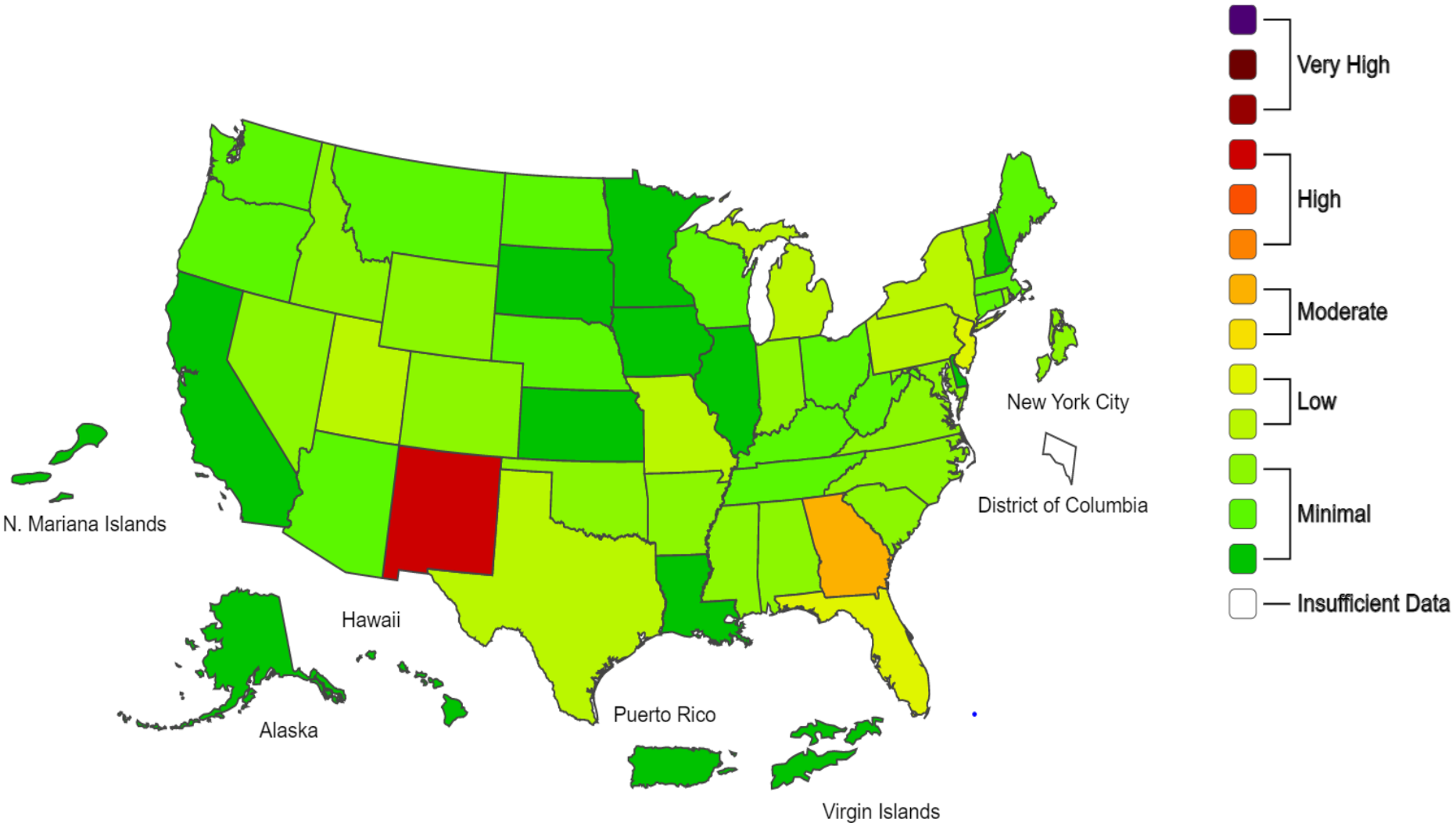
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US Influenza-like Illness- 11/6/21-11/13/21

2021-22 Influenza Season Week 45 ending Nov 13, 2021

ILI Activity Level



Texas Hospital Flu Testing Results- 2021-2022



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Table 2: Influenza Testing Performed by Texas Hospital Laboratories for the Current Week

	Week 46	Season to Date Week Ending: Nov. 20, 2021
Number of labs reporting flu tests	14	
Number of specimens tested	4115	38695
Number of positive specimens (%) [†]	20 (0.49%)	135 (0.35%)
Percentage of total tests that were antigen detection tests	9.67%	
Positive specimens by type/subtype [n (%)]		
Influenza A	14 (70.00%)	84 (62.22%)
Subtyping performed	3 (21.43%)	9 (10.71%)
A (H1N1)	0 (0.00%)	3 (33.33%)
A (H3N2)	3 (100.00%)	6 (67.67%)
.78Subtyping not performed	11 (78.57%)	75 (89.29%)
Influenza B	6 (30.00%)	51 (37.78%)

US Clinical Flu Testing- 2021-2022

Clinical Laboratories

The results of tests performed by clinical laboratories nationwide are summarized below. Data from clinical laboratories (the percentage of specimens tested that are positive for influenza) are used to monitor whether influenza activity is increasing or decreasing.

	Week 46	Data Cumulative since October 3, 2021 (Week 40)
No. of specimens tested	40,167	327,924
No. of positive specimens (%)	415 (1.0%)	1,193 (0.4%)
<i>Positive specimens by type</i>		
Influenza A	389 (93.7%)	977 (81.9%)
Influenza B	26 (6.3%)	216 (18.1%)



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Increasing Seasonal Influenza A (H3N2) Activity, Especially Among Young Adults and in College and University Settings, During SARS-CoV-2 Co-Circulation



Distributed via the CDC Health Alert Network
November 24, 2021, 11:00 AM ET
CDCHAN-00458

Summary

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Advisory about increased influenza A(H3N2) activity that could mark the beginning of the 2021-2022 influenza season. The purpose of this HAN Health Advisory is to

1. Remind public health practitioners and clinicians to recommend and offer the current seasonal influenza vaccine to all eligible persons aged six months and older (Flu vaccine and COVID-19 vaccine can be given at the same visit).
2. Remind clinicians to consider testing for both influenza virus and SARS-CoV-2 in patients with influenza-like illness (ILI).
3. Advise clinicians that antiviral treatment is recommended as early as possible for any patient with confirmed or suspected influenza who is: a) hospitalized; b) at higher risk for influenza complications; or c) developing progressive illness. In patients with suspected influenza, decisions about starting antiviral treatment should not wait for laboratory confirmation of influenza, however COVID-19 should be excluded if a rapid assay is available.
4. Remind public health practitioners and clinicians to consider mitigation measures including antiviral post-exposure prophylaxis during influenza outbreaks in institutions (e.g., long-term care facilities, university dormitories) in the setting of co-circulation of SARS-CoV-2.
5. Remind the public to use non-pharmaceutical interventions (NPI) or everyday preventive actions, in addition to getting a flu vaccine. Everyday preventive actions include staying home when sick, covering coughs and sneezes, and washing hands often.



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Thank you!

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