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Health Services**

Respiratory Viruses Update

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Texas Department of State Health Services

October 2, 2024

Discussion Topics

- 2024-2025 Respiratory Virus Season
- Respiratory Disease Surveillance Tools and Data Sources
- Texas Respiratory Illness Interactive Dashboard
- Additional Respiratory Disease Surveillance Notes
- Respiratory Disease Wastewater Surveillance



2024-2025 Respiratory Virus Season



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2024-2025 Respiratory Disease Season Outlook

- The Centers for Disease Control and Prevention (CDC) expects the upcoming fall and winter respiratory disease will likely have a similar or lower number of combined peak hospitalizations due to COVID-19, influenza, and RSV compared to last season.
- The assessments are based on expert opinion, historical data, and scenario modeling conducted by the Center for Forecasting and Outbreak Analytics for COVID-19, influenza, and RSV.

Upcoming 2024–25 respiratory season peak hospitalization burden likely similar to or lower than last year

Combined peak hospitalization burden of COVID-19, influenza, and RSV

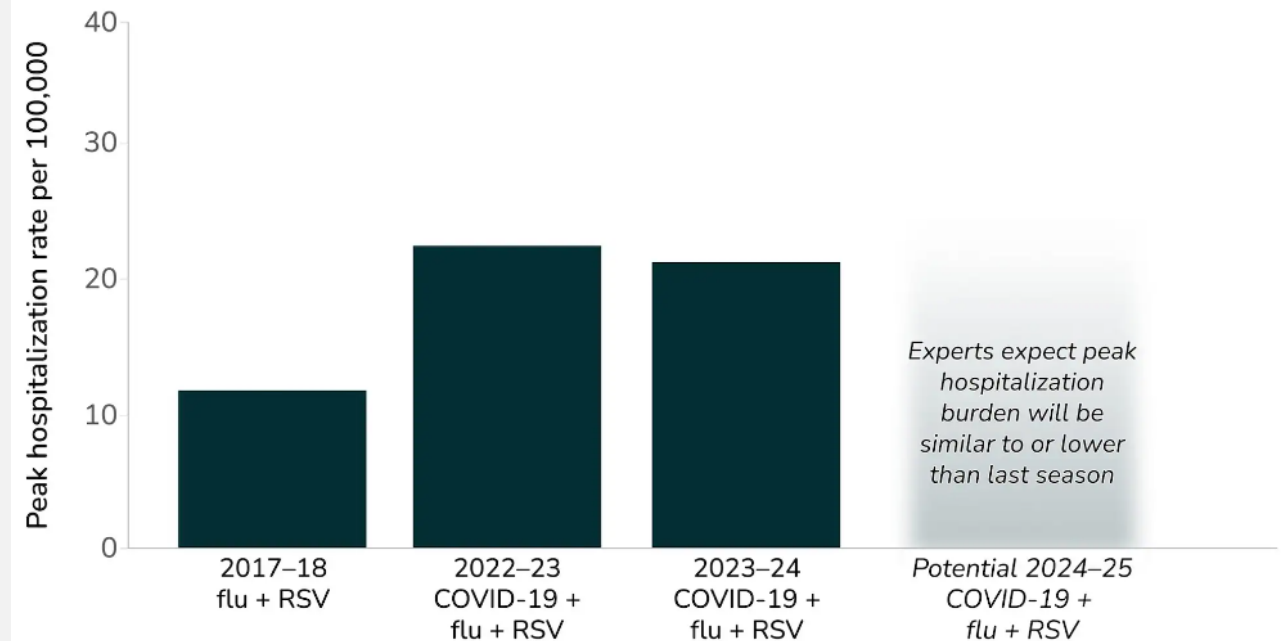
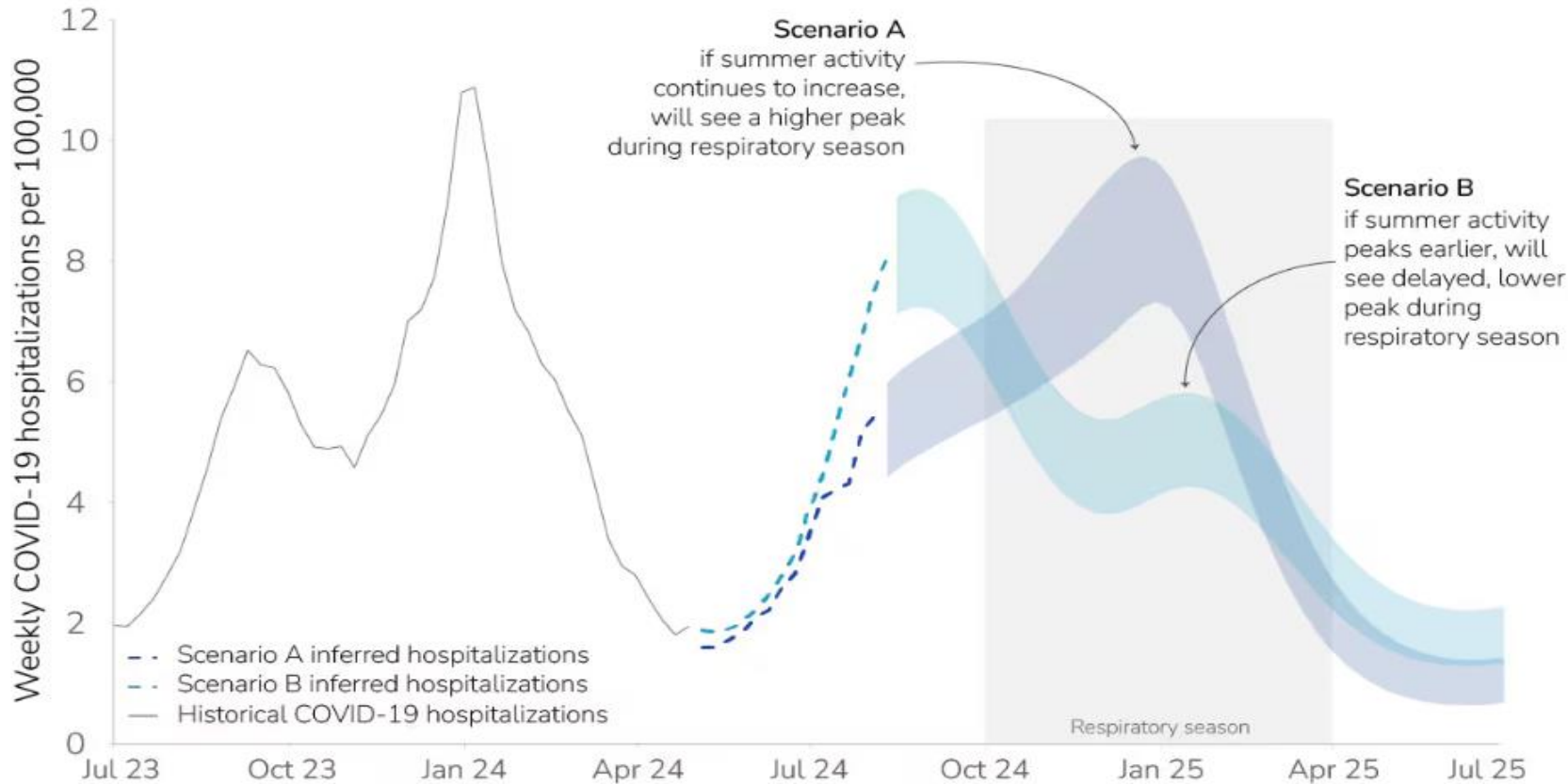


Figure 1: Experts believe there's a roughly 80% chance that the hospitalization burden for COVID-19, influenza, and RSV combined at their peak during the 2024-25 season will be similar to or lower than last season. The 2017-18 bar provides context for a severe season pre-pandemic; 2017-18 RSV data does not include pediatric hospitalizations. Data are from RESP-NET.

2024-2025 Respiratory Disease Season Outlook

Possible scenarios for weekly COVID-19 hospitalizations for 2024-2025 respiratory season



Available at: [2024-2025 Respiratory Disease Season Outlook | CFA: Qualitative Assessments | CDC](#), accessed September 26, 2024

Figure 2. CDC scenario modeling indicates if summer activity peaks later, we will see a higher peak COVID-19 hospitalization burden during the respiratory season. Dashed lines represent inferred COVID-19 hospitalization rates for the summer, using hospitalization data for a relatively small subset of hospitals (Scenario A) or emergency department visit data (Scenario B). Ribbons represent 50% prediction interval range of scenario modeling results. The model is calibrated to NHSN data (historical COVID-19 hospitalizations line in figure).

2024-2025 Respiratory Disease Season Outlook

- The following factors could drive higher peak rate:
 - Emergence of a new COVID-19 variant with an increased ability to evade the body's prior immunity, or a new COVID-19 variant associated with higher clinical severity.
 - Predominance of an influenza subtype with more severe outcomes.
 - Lower vaccine uptake or effectiveness, including:
 - If there is lower than projected uptake of the COVID-19 vaccine, influenza seasonal vaccine, or RSV vaccines and immunizations.
 - If the updated 2024-2025 COVID-19 vaccine effectiveness against hospitalization is lower than that of the 2023-2024 vaccine.
 - If influenza seasonal vaccine effectiveness against hospitalization is lower than projected.

Respiratory Disease Surveillance Tools and Data Sources



Respiratory Disease Surveillance Overview

Surveillance Tools

[Texas Respiratory Illnesses Interactive Dashboard](#)

- Updated year-round on a weekly basis

[Texas Respiratory Virus Surveillance Report](#)

- Published year-round on a weekly basis

Respiratory Disease Wastewater Surveillance

Data Sources

- TxS2 (Texas Syndromic Surveillance System)
- NHSN (National Healthcare Safety Network)
- Texas Vital Statistics (Mortality Data)

- ILINet (Influenza-like Illness Network)
- NREVSS (National Respiratory and Enteric Virus Surveillance System)
- Voluntary reporting from providers

- DSHS
- CDC
- Academic Partners

Texas Respiratory Illness Interactive Dashboard



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Texas Respiratory Illness Interactive Dashboard

Available at: [Texas Respiratory Illnesses Dashboard \(arcgis.com\)](#), accessed September 26, 2024

Respiratory illnesses like COVID-19, influenza, and respiratory syncytial virus (RSV) can lead to serious outcomes including hospitalization, death, and a severe strain on the healthcare system. Respiratory virus season typically happens from October to May, peaking in the winter. However, respiratory viruses circulate year-round, meaning infection is possible at any time. The Texas Department of State Health Services (DSHS) created an interactive respiratory illness dashboard to be a resource for all Texans including healthcare providers, local leaders, and public health jurisdictions to monitor respiratory illness trends.

DSHS updates the dashboard's COVID-19, influenza, and RSV data every Friday. This dashboard uses data from [Texas Syndromic Surveillance](#) on emergency room visits, the federal [National Healthcare Safety Network](#) on hospitalizations, and Texas death certificates on mortality. These data capture some of the most severe respiratory illness outcomes, providing a snapshot of the COVID-19, influenza, and RSV disease burden on Texas communities.

DSHS also publishes a weekly Texas Viral Respiratory Surveillance report with additional information that may be helpful to healthcare providers and others. The weekly surveillance report can be found on this [page](#).

An interactive version of the DSHS COVID-19 variant dashboard, updated weekly, can be viewed at this [page](#).

Navigate to interactive visualizations for [Emergency Room Visits](#), [Hospitalizations](#), and [Viral Respiratory Deaths](#) using the menu on this home page.

Texas Respiratory Illness Interactive Dashboard Emergency Department Data



TX Statewide Emergency Department Visits

COVID-19, Influenza, and Respiratory Syncytial Virus

- Utilizes Texas Syndromic Surveillance Program (TxS2) which is the statewide syndromic surveillance system hosted by the Texas Department of State Health Services (DSHS).
 - Includes data from participating providers around the state including hospitals, free standing emergency centers, and urgent care centers.
- An emergency department visit associated with COVID-19, Influenza (Flu), or Respiratory Syncytial Virus (RSV) is determined by querying the participating providers' data system for the reported discharge diagnosis codes.

Available at: <https://www.dshs.texas.gov/texas-syndromic-surveillance-txs2>; accessed 9/20/2024

Select a Geography:

Select an Age Group:

Select a Date Range:

Statewide

All Ages

09/23/2023

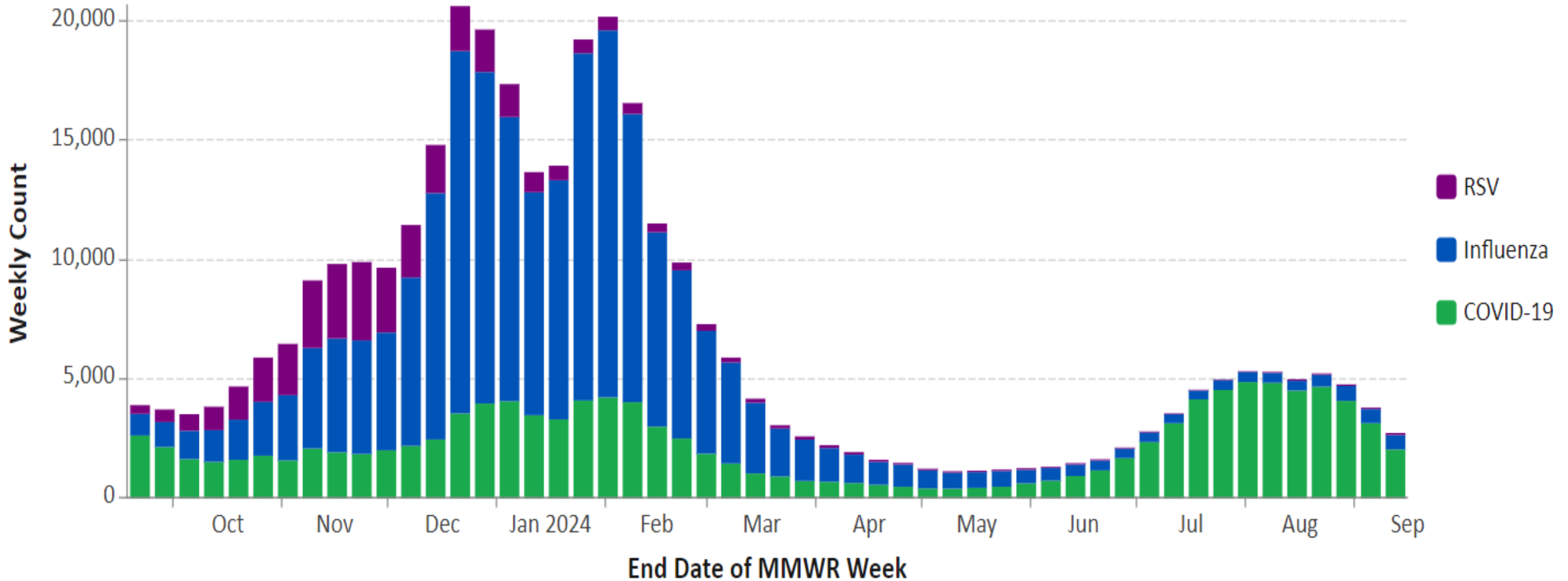
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09/14/2024

Apply

Cancel

Weekly Emergency Department Visits by Age Group



Select a Geography:

Statewide

Select a Respiratory Illness:

Combined

Select a Date Range:

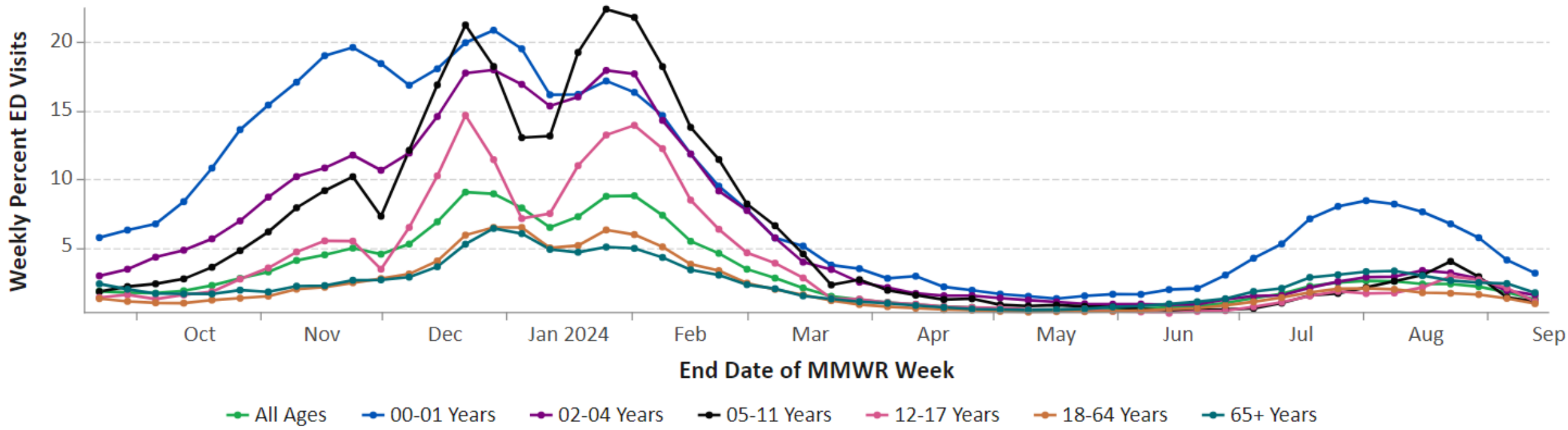
09/23/2023

and 09/14/2024

Apply

Cancel

Weekly Emergency Department Visits by Age Group and Respiratory Illness, as a Percent of All Emergency Department Visits



Download Data

Texas Respiratory Illness Interactive Dashboard

Hospitalization Data



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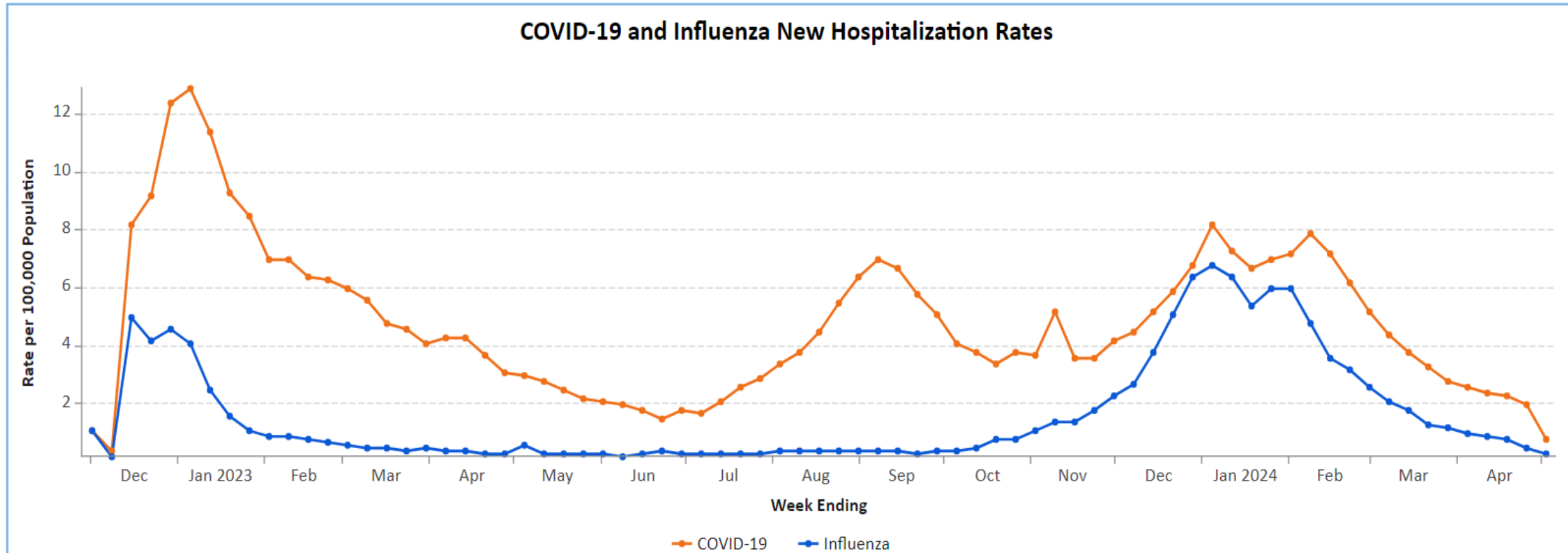
TX Statewide Hospitalization Data

COVID-19 and Influenza

- [Since December 2022](#), hospitals were required to report weekly hospitalization and bed occupancy counts of confirmed COVID-19 and influenza infections directly to the Federal government using the Centers for Disease Control and Prevention (CDC)'s National Healthcare Safety Network (NHSN).
- Since May 1, 2024, the weekly hospitalization and bed occupancy counts reporting became optional.
- Effective November 1, 2024, a new reporting requirement from CMS will start for weekly hospitalizations and bed occupancy of patients with confirmed COVID-19, influenza, and **newly added Respiratory Syncytial Virus (RSV)** infections.

TX Statewide COVID-19 and Influenza New Hospitalization Rates

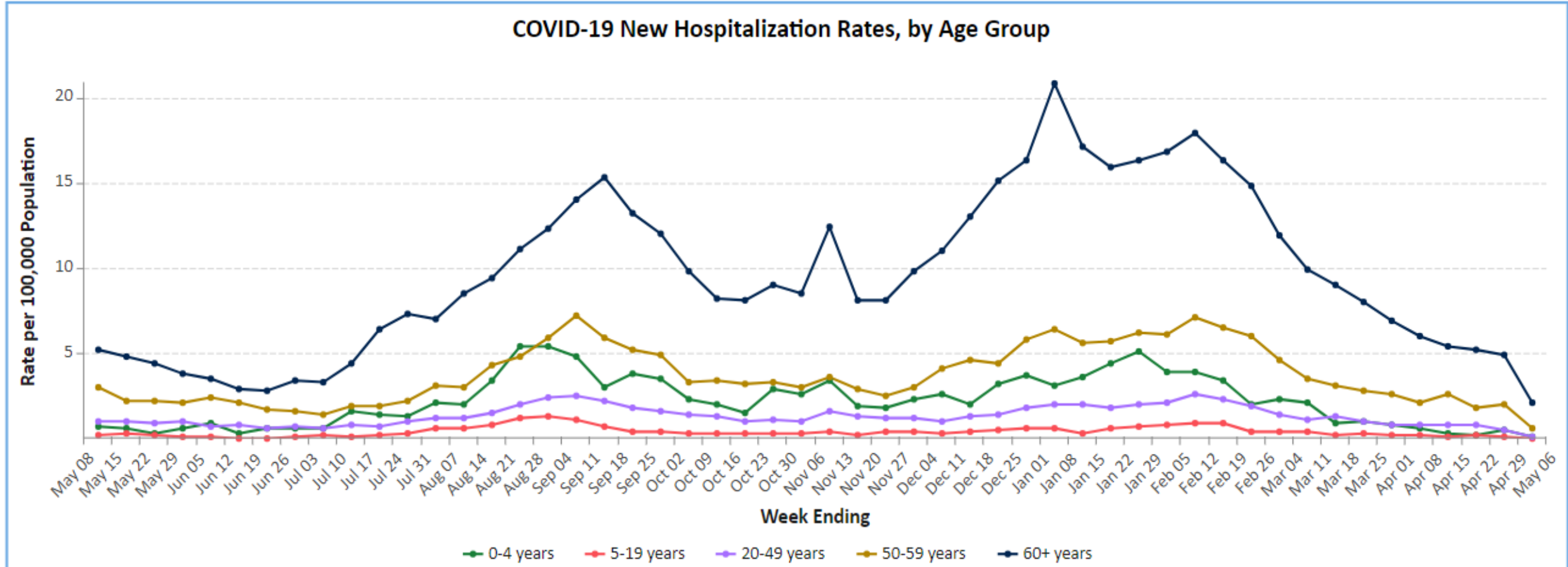
Select a Geography: Statewide and



TX Statewide COVID-19 New Hospitalization Rates, by Age Group

Select a Date Range:

05/13/2023 and 05/4/2024

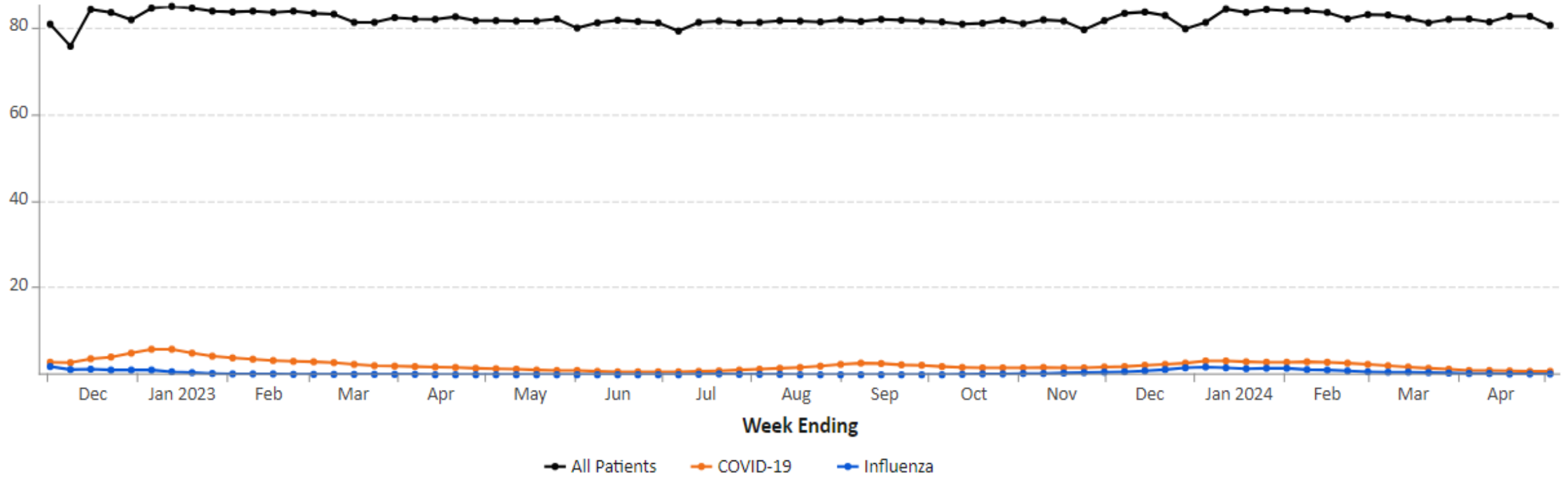


TX Statewide COVID-19 & Influenza Bed Occupancy

Select a Geography: Select a Bed Type: Select a Date Range: and

Hospital Bed Occupancy

Percent of Beds Occupied (7-Day Average)



Texas Respiratory Illness Interactive Dashboard

Viral Respiratory Deaths



TX Statewide Trends in Viral Respiratory Deaths

COVID-19, Influenza, and Respiratory Syncytial Virus

- [Vital Statistics Services](#) manages the registration of all vital events in Texas and the [Center for Health Statistics](#) (CHS) manages and disseminates the data.
- Death data are based on a subset of variables collected on the Texas Certificate of Death.
- A COVID-19/Influenza/RSV associated death is determined by the specific ICD-10 code recorded as either an underlying or contributing cause of death on the death certificate.
 - These codes are as follows: COVID-19 (U07.1), Influenza (J09-J11), Respiratory Syncytial Virus (J12.1, J20.5, J21.0).

Statewide Trends in Viral Respiratory Deaths

Select a Date Range:

09/16/2023

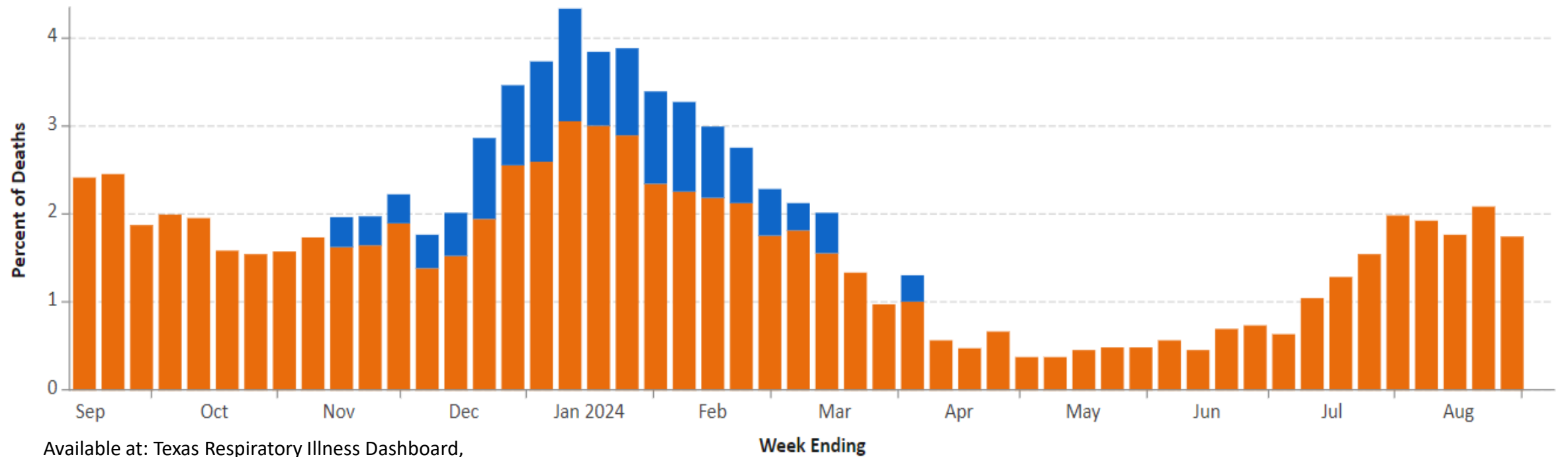


and

09/7/2024



Trends in Viral Respiratory Deaths in Texas



Available at: Texas Respiratory Illness Dashboard, [Deaths | Texas Respiratory Illnesses Dashboard \(arcgis.com\)](#) accessed 9/17/2024.

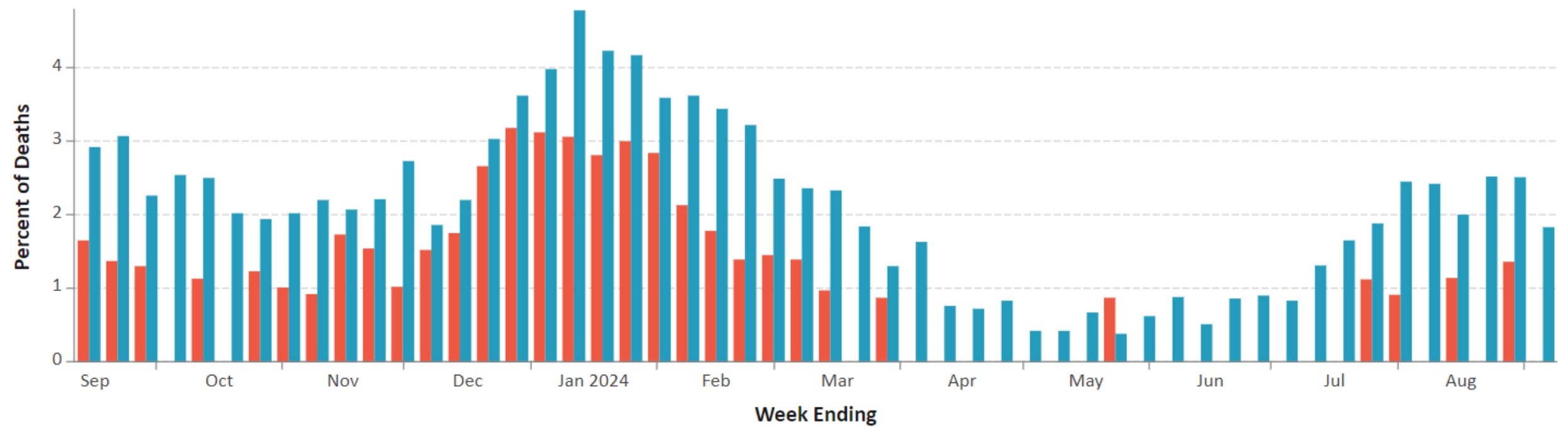
■ RSV ■ Influenza ■ COVID-19

Statewide Trends in Viral Respiratory Deaths by Age

Select a Date Range:

09/16/2023 × 📅 and 09/7/2024 × 📅

Trends in Deaths for Viral Respiratory Illness, by Age



Available at: Texas Respiratory Illness Dashboard, [Deaths | Texas Respiratory Illnesses Dashboard \(arcgis.com\)](#); accessed 9/26/2024

18-64 years 65+ years

Download Data

Additional Respiratory Disease Surveillance Notes



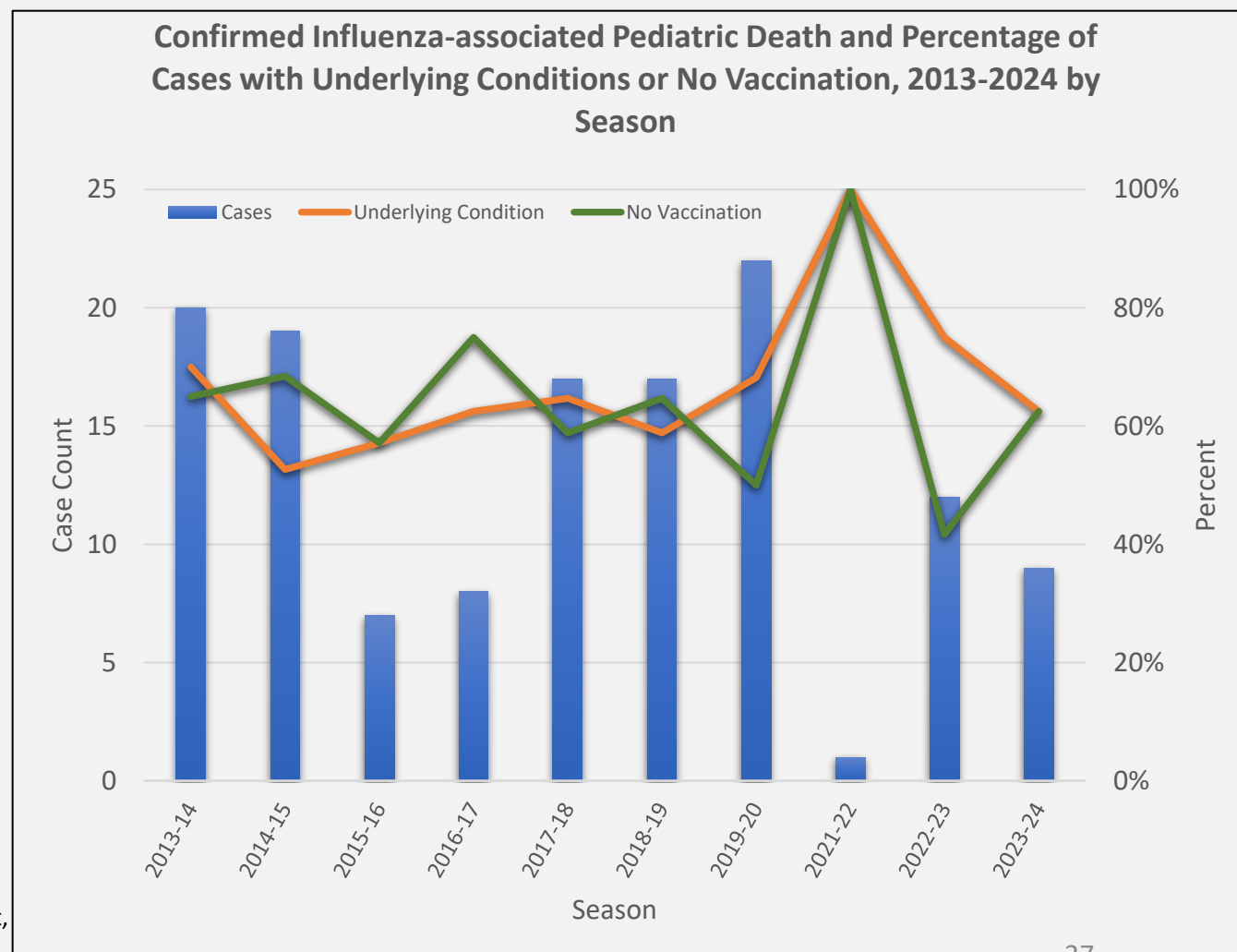
2023-2024 Influenza Surveillance

- The 2023-2024 influenza season began October 1st, 2023
 - Overall Influenza-like Illness (ILI) activity saw a return to 'normal' seasonality
 - Followed low activity during COVID-19 pandemic and an early onset in the previous season
 - H1N1 was the predominant strain of the season
 - 72 reported outbreaks
 - 9 influenza-associated pediatric deaths
 - 1 confirmed novel influenza report

Influenza-associated Pediatric Deaths (2013-2024)

- Influenza-associated pediatric (less than 18 years) deaths are reportable.
- January is the month with the most reported cases from 2013-2024.
- Over a 10-year period excluding the 2020-2021 season;
 - 64% of the pediatric deaths were in children with underlying conditions, and
 - 60.3% in children **without** a history of influenza vaccination.

Data Source: Texas Department of State Health Services, Emerging and Acute Infectious Disease Unit, accessed 9/13/2024

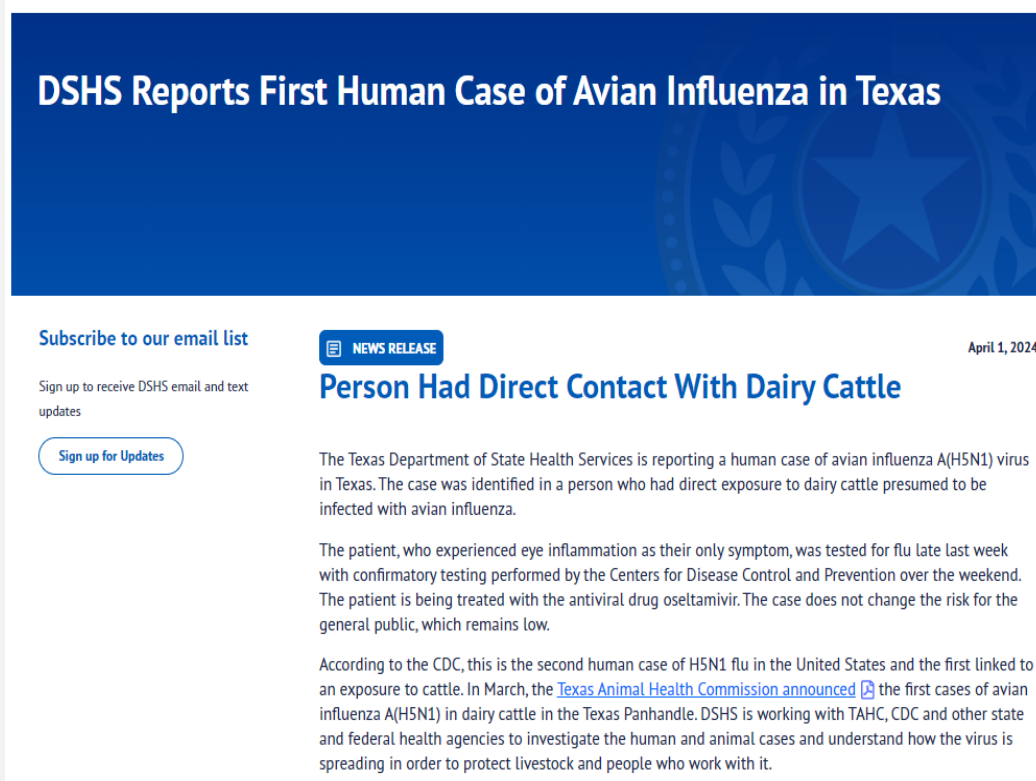


H5N1 (Bird Flu)

- The Centers for Disease Control and Prevention (CDC) are continually monitoring the situation and providing updates.
- Since April 2024, 14 human cases of avian influenza A(H5) virus infection have been reported in the United States.
 - Four of these cases were associated with exposure to sick dairy cows and nine were associated with exposure to avian influenza A(H5N1) virus-infected poultry.
 - The source of the exposure in the most recent case, which was reported by Missouri on September 6, has not been determined.
- As per the CDC, the immediate risk to the general public from H5 bird flu remains low.

H5N1 (Bird Flu)

- On April 1, 2024, Texas reported one and only confirmed H5N1 case in a person with reported exposure to dairy cattle.



DSHS Reports First Human Case of Avian Influenza in Texas

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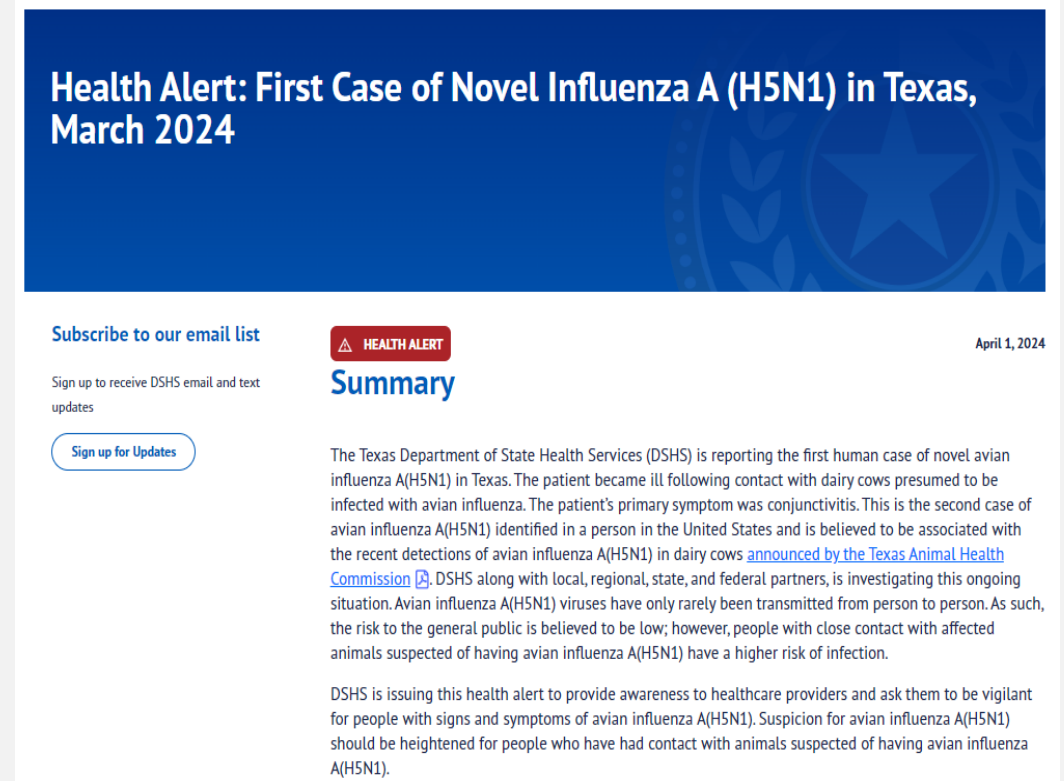
NEWS RELEASE April 1, 2024

Person Had Direct Contact With Dairy Cattle

The Texas Department of State Health Services is reporting a human case of avian influenza A(H5N1) virus in Texas. The case was identified in a person who had direct exposure to dairy cattle presumed to be infected with avian influenza.

The patient, who experienced eye inflammation as their only symptom, was tested for flu late last week with confirmatory testing performed by the Centers for Disease Control and Prevention over the weekend. The patient is being treated with the antiviral drug oseltamivir. The case does not change the risk for the general public, which remains low.

According to the CDC, this is the second human case of H5N1 flu in the United States and the first linked to an exposure to cattle. In March, the [Texas Animal Health Commission announced](#) the first cases of avian influenza A(H5N1) in dairy cattle in the Texas Panhandle. DSHS is working with TAHC, CDC and other state and federal health agencies to investigate the human and animal cases and understand how the virus is spreading in order to protect livestock and people who work with it.



Health Alert: First Case of Novel Influenza A (H5N1) in Texas, March 2024

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HEALTH ALERT April 1, 2024

Summary

The Texas Department of State Health Services (DSHS) is reporting the first human case of novel avian influenza A(H5N1) in Texas. The patient became ill following contact with dairy cows presumed to be infected with avian influenza. The patient's primary symptom was conjunctivitis. This is the second case of avian influenza A(H5N1) identified in a person in the United States and is believed to be associated with the recent detections of avian influenza A(H5N1) in dairy cows [announced by the Texas Animal Health Commission](#). DSHS along with local, regional, state, and federal partners, is investigating this ongoing situation. Avian influenza A(H5N1) viruses have only rarely been transmitted from person to person. As such, the risk to the general public is believed to be low; however, people with close contact with affected animals suspected of having avian influenza A(H5N1) have a higher risk of infection.

DSHS is issuing this health alert to provide awareness to healthcare providers and ask them to be vigilant for people with signs and symptoms of avian influenza A(H5N1). Suspicion for avian influenza A(H5N1) should be heightened for people who have had contact with animals suspected of having avian influenza A(H5N1).

Available at: <https://www.dshs.texas.gov/dshs-reports-first-human-case-avian-influenza>; accessed 9/20/2024

Available at: <https://www.dshs.texas.gov/health-alert-first-case-novel-influenza-h5n1>; accessed 9/20/2024

Respiratory Disease Wastewater Surveillance



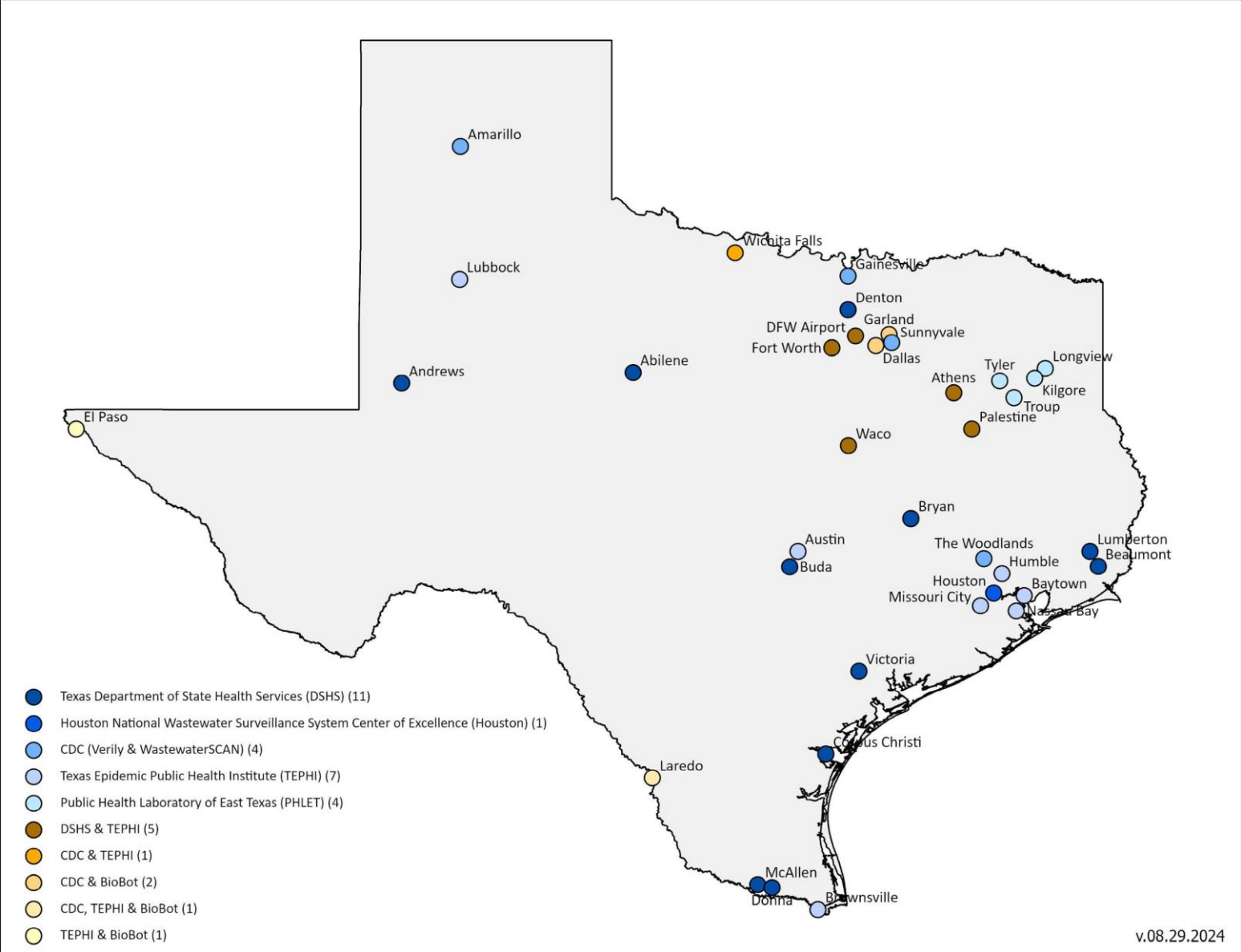
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Wastewater Surveillance

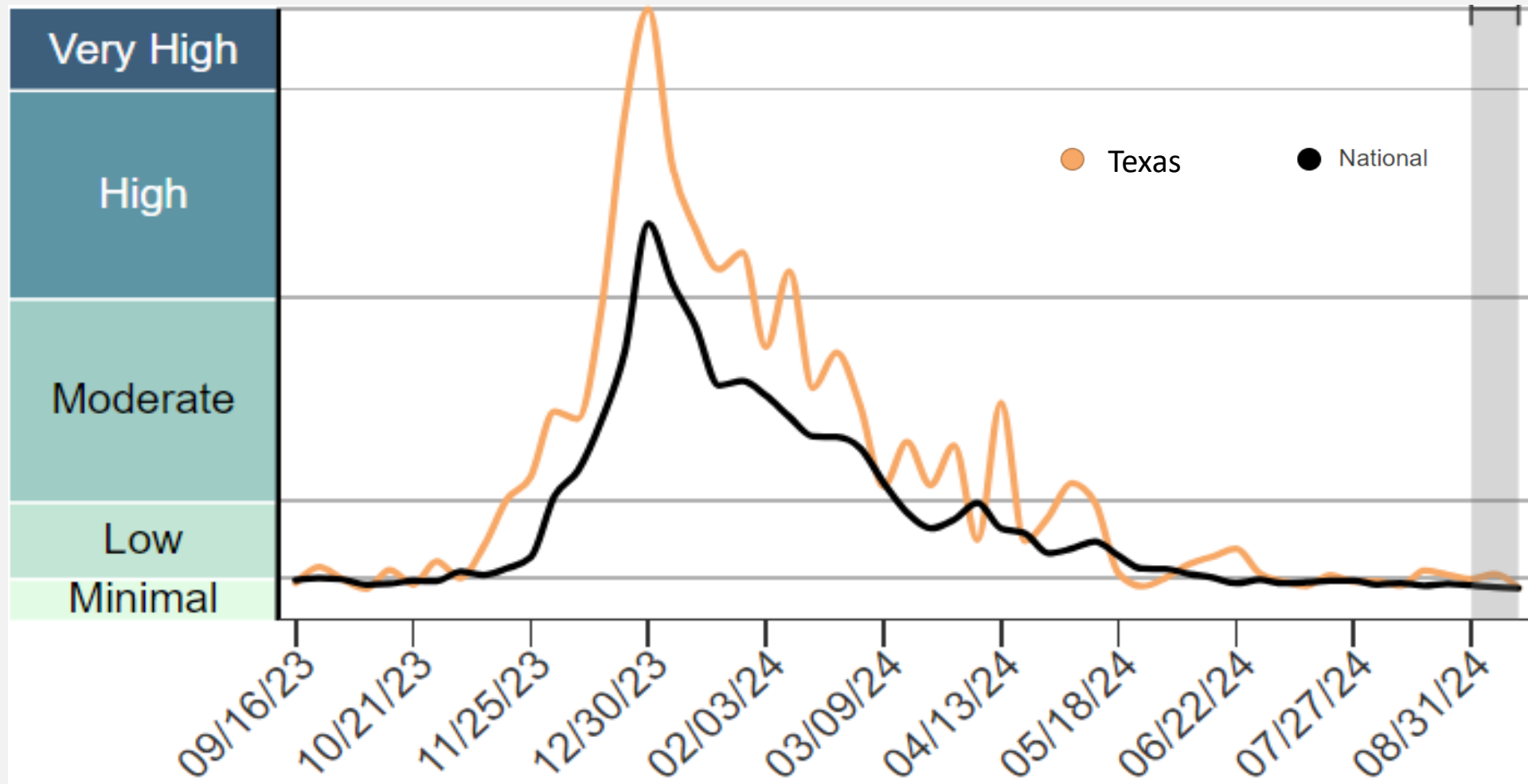
- DSHS partners with the CDC, local health departments, water utilities, and academic partners to track pathogens in wastewater and help communities prepare for and take action to address increasing cases of infectious diseases.
- Wastewater data cannot determine the source of viruses.
- Following a wastewater signal detection, we communicate with partners to better understand the source.
 - Considerations of possible environmental sources, particularly influenza H5 positive samples.

Wastewater-Based Disease Surveillance in Texas

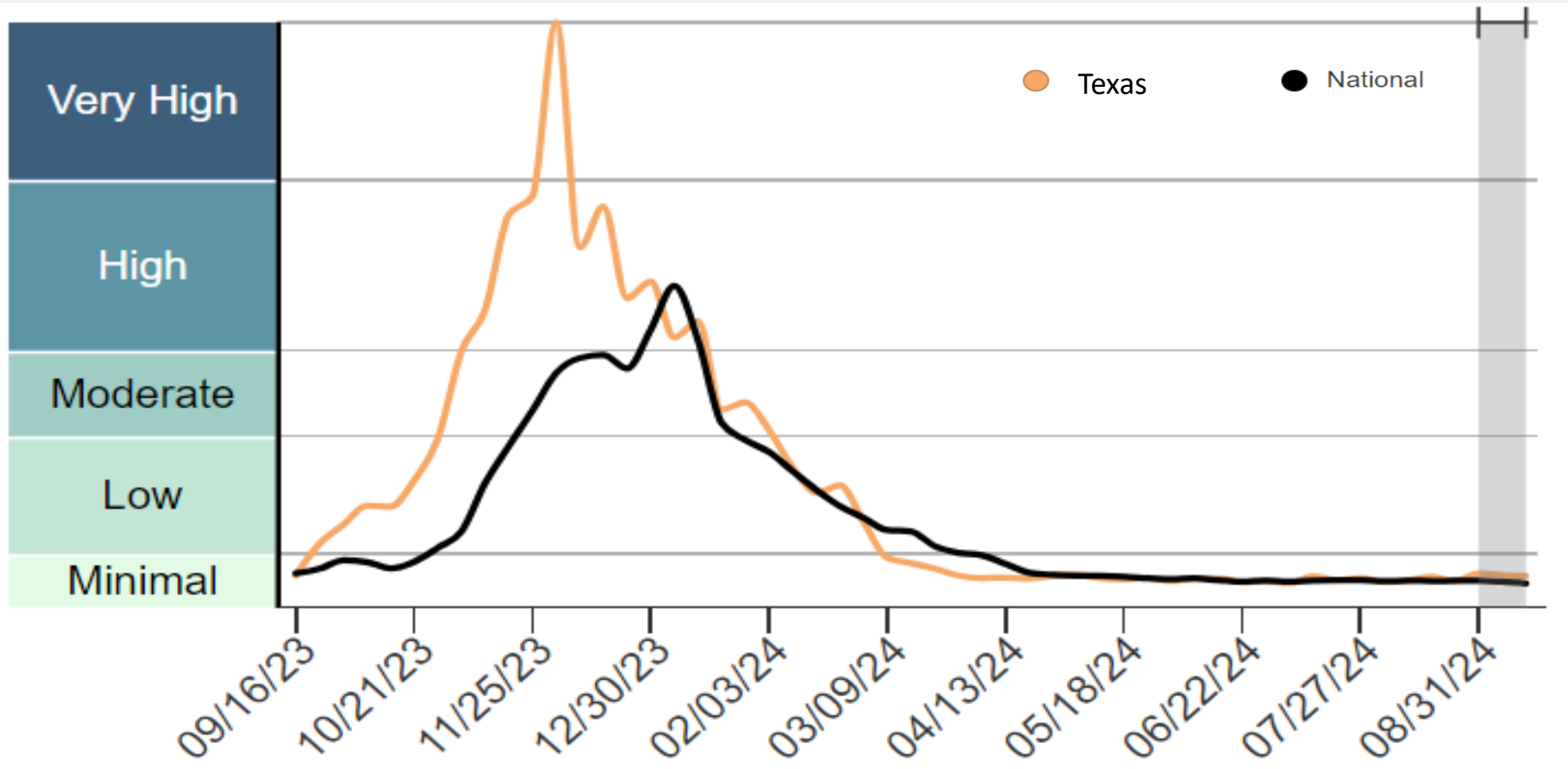


Source: DSHS Wastewater Epidemiology Surveillance Program

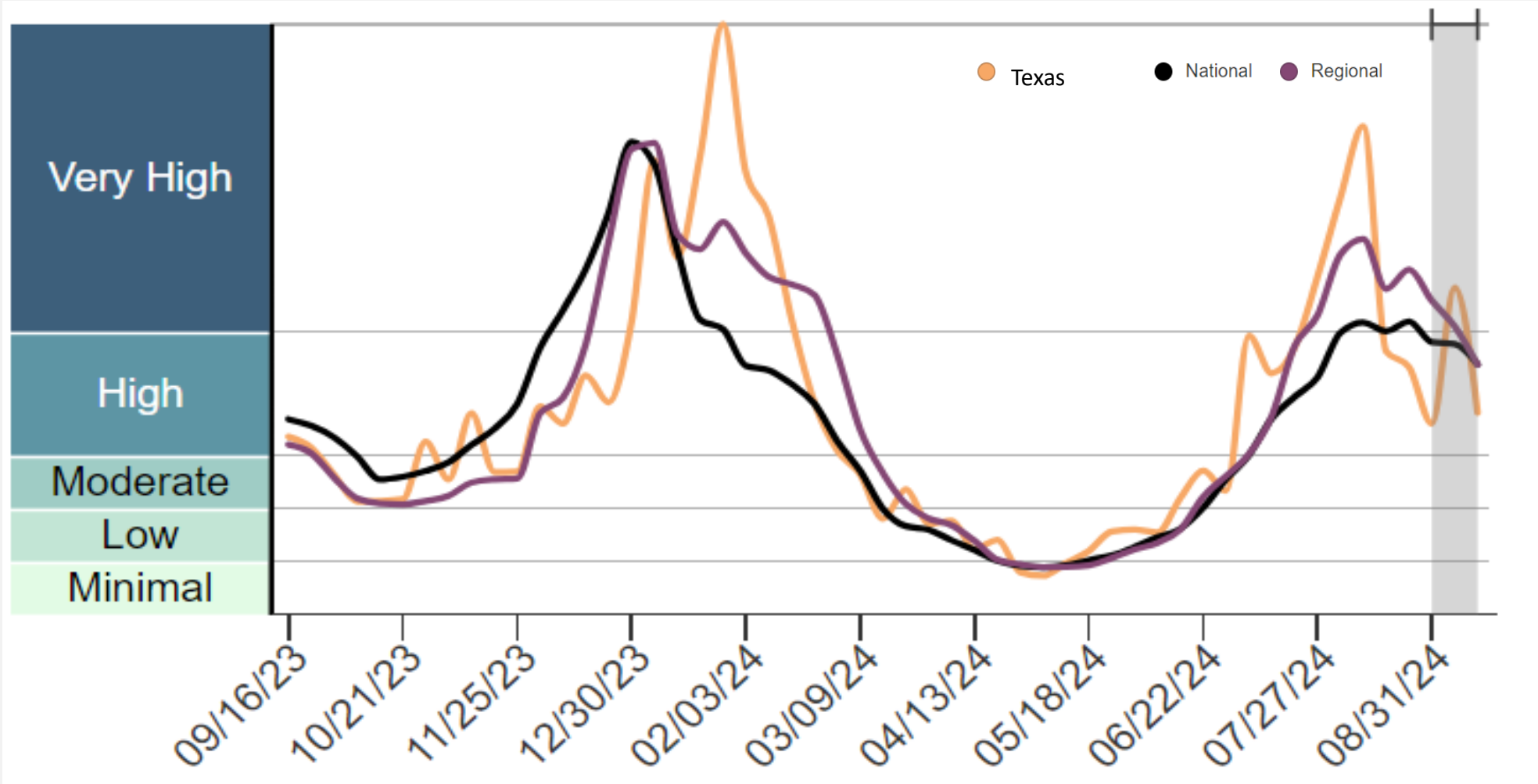
Wastewater Surveillance Influenza A Trends



Wastewater Surveillance RSV Trends



Wastewater Surveillance COVID-19 Trends



Thank you