

Texas Respiratory Virus Surveillance Report 2023-2024 Season/ 2024 MMWR Week 16

(April 14, 2024 – April 20, 2024)
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Influenza Surveillance

Summary

Compared to the previous week, the percentage of specimens testing positive for influenza reported by hospital laboratories has decreased. The percentage of patient visits due to influenza-like illness (ILI) has decreased. Zero influenza-associated pediatric deaths were reported. Zero influenza-associated outbreaks were reported in week 16.

Table 1: Summary of Texas Influenza (Flu) and Influenza-like Illness (ILI) Activity for the Current Week

Texas Surveillance Component	Change from Previous Week	Current Week	Previous Week [†]	Page of Report
Statewide ILINet Activity Indicator assigned by CDC (intensity of influenza-like illness)	No change	Minimal	Minimal	-
Percentage of specimens positive for influenza by hospital laboratories	▼ 0.58%	2.37%	2.95%	-
Percentage of visits due to ILI (ILINet)	▼ 0.37%	2.89%	3.26%	4
Number of regions reporting increased flu/ILI activity	▼ 3	0	3	7
Number of regions reporting decreased flu/ILI activity	▲ 1	4	3	7
Number of variant/novel influenza infections	No change	0	0	7
Number of ILI/influenza outbreaks	No change	0	0	7
Number of pediatric influenza deaths	No change	0	0	8

[†]Data displayed have been updated since last week's flu report with any new reports received.

Laboratory Results

Influenza

Hospital laboratories across Texas voluntarily report influenza tests (antigen, culture, and PCR) to the National Respiratory and Enteric Virus Surveillance System (NREVSS). Providers throughout Texas also submit specimens for influenza testing (PCR) to Texas public health laboratories, including the Texas Department of State Health Services (DSHS) state laboratory in Austin and the nine Texas Laboratory Response Network (LRN) laboratories. The results reported by Texas NREVSS participants and public health laboratories for the current week are summarized in the two tables below (Tables 2 and 3). Additional influenza test results (rapid tests, culture, PCR) and ILI activity were reported from providers and public health departments throughout the state (see county map at the end of this report).

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

	Week 16	Season to Date Week Ending April 20, 2024
Number of labs reporting flu tests	21	
Number of specimens tested	5895	254220
Number positive specimens (%)	140 (2.37%)	38413 (15.11%)
Percentage of total tests that were antigen detection tests	20.27%	
Positive specimens by type/subtype [n(%)]		
Influenza A	111 (79.29%)	24012 (62.51%)
Subtyping performed (3)	19 (17.12%)	3185 (13.26%)
A (H1N1) (6)	5 (26.32%)	2220 (69.70%)
A (H3N2) (6)	14 (73.68%)	965 (30.30%)
Subtyping not performed	92 (82.88%)	20827 (86.74%)
Influenza B	29 (20.71%)	14401 (37.49%)

Figure 1: Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas Hospital Laboratories, 2023-2024 Season

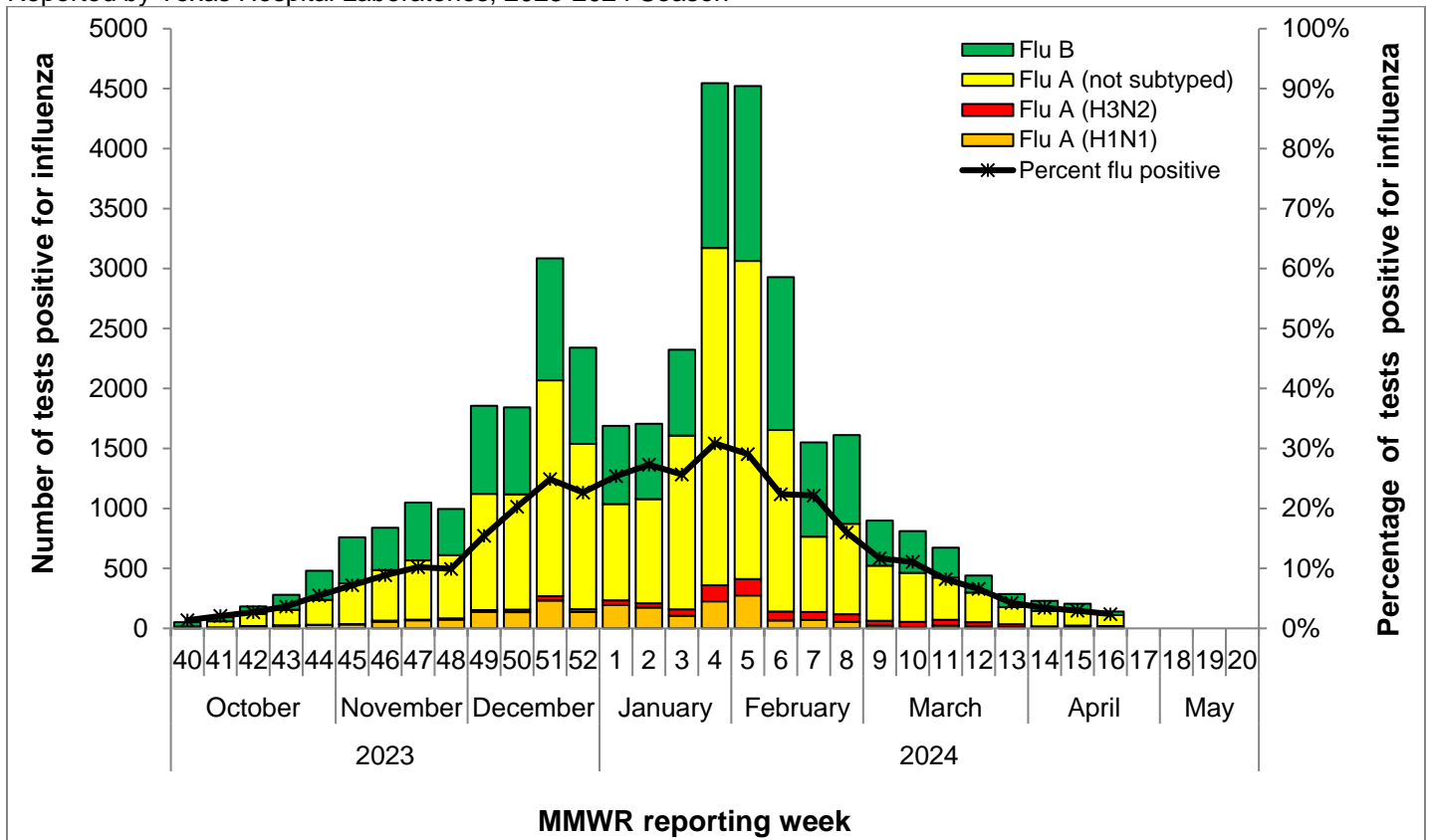
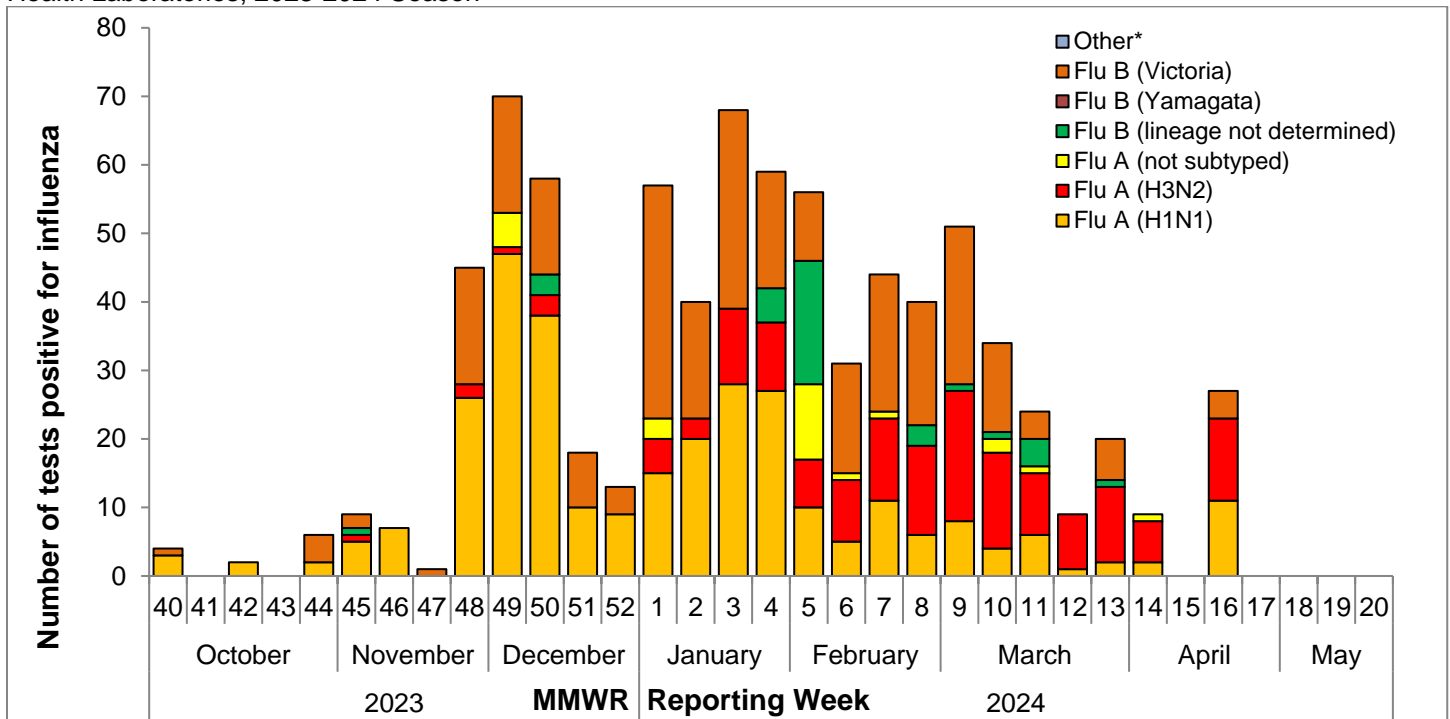


Table 3: Influenza Testing Performed by Texas Public Health Laboratories for the Current Week

	Week 16	Season to Date Week Ending: April 20, 2024
Number of labs reporting flu tests	5	
Number of specimens tested	71	2130
Number of positive specimens (%)	27 (38.03%)	802 (37.65%)
Positive specimens by type/subtype/lineage [n (%)]		
Influenza A	23 (85.19%)	486 (60.60%)
Subtyping performed	23 (100.00%)	461 (94.86%)
A (H1N1)	11 (47.83%)	305 (66.16%)
A (H3N2)	12 (52.17%)	156 (33.84%)
Subtyping not performed	0 (0.00%)	25 (5.14%)
Influenza B	4 (14.81%)	316 (39.40%)
Lineage testing performed	4 (100.00%)	279 (88.29%)
B/Victoria	4 (100.00%)	279 (100.00%)
B/Yamagata	0 (0.00%)	0 (0.00%)
Lineage testing not performed	0 (0.00%)	37 (11.71%)
Other*	0 (0.00%)	0 (0.00%)

*Other denotes specimens with coinfections (i.e. one specimen was positive for both influenza A (H1N1) and influenza A (H3N2))

Figure 2: Number of Tests (PCR) Positive for Influenza by Type, Subtype, and Lineage Reported by Texas Public Health Laboratories, 2023-2024 Season



*Other denotes specimens with coinfections (i.e. one specimen was positive for both influenza A (H1N1) and influenza A (H3N2))

Antigenic Characterization

Since October 1, 2023, CDC has reported antigenic characterization results from nine Influenza A (H1N1), two Influenza A (H3N2) and ten Influenza B viruses received from the Texas Department of State Health Services (DSHS) Laboratory and the City of Houston Department of Health. The DSHS Laboratory and participating LRN Laboratories send a representative sample of influenza viruses to the CDC throughout the flu season.

Influenza A (H1N1) [9]

- Nine (81.8%) viruses have been characterized as an A/Wisconsin/67/2022-Like virus; included as an influenza A component of the 2023-2024 Northern Hemisphere influenza vaccine.

Influenza A (H3N2) [2]

- Two (18.2%) viruses have been characterized as an A/Darwin/6/2021-Like virus; included as an influenza A component of the 2023-2024 Northern Hemisphere influenza vaccine.

Influenza B [10]

- Victoria lineage [10]: Ten (100.0%) influenza B/Victoria-lineage virus has been characterized as a B/Austria/1359417/2021-Like virus; included as an influenza B component of the 2023-2024 Northern Hemisphere influenza vaccine.

Antiviral Resistance

No antiviral resistance testing data for Texas specimens is available presently.

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)

Table 4: Texas ILINet Reporting and Patient Visit Summary for the Current Week

	Week 16
Number of providers reporting	51
Number of providers reporting patient visits	51
Number (%) of providers with at least one ILI case	42 (82.4%)
Percentage of all visits due to ILI	2.89%
Texas ILINet baseline [‡] , 2023-2024	4.32%

[‡]The baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons plus two standard deviations. A "non-influenza week" is defined as a week that accounted for less than 2% of the season's total number of specimens that tested positive for influenza

Special Note: The case definition was changed to capture respiratory pathogens causing illness, including CoVID-19, through the ILINet. The Influenza-like Illness (ILI) case definition is a patient with fever ($\geq 100^{\circ}\text{F}$, 37.8°C) AND cough and/or sore throat. There is no longer a restriction on the cause.

Table 5: Percentage of Visits for Influenza-like Illness Reported by Texas ILINet Providers (as of 04/25/2024 1:51 PM)

Week	Providers Reporting	Number of ILI Cases by Age Group (Years)					Total ILI (all ages)	Total Patients	% ILI
		0-4	5-24	25-49	50-64	65+			
202340	52	343	859	360	104	70	1736	53699	3.23%
202341	53	391	846	301	114	77	1729	53273	3.25%
202342	53	455	1018	374	131	82	2060	54958	3.75%
202343	54	502	1149	400	112	97	2260	55743	4.05%
202344	54	491	1242	343	105	84	2265	51048	4.44%
202345	54	631	1539	487	157	109	2923	51562	5.67%
202346	55	729	1780	526	171	112	3318	54922	6.04%
202347	56	540	1138	542	224	128	2572	41620	6.18%
202348	40	455	1342	680	252	147	2876	47568	6.05%
202349	40	465	1535	628	261	143	3032	48002	6.32%
202350	55	564	1868	698	295	161	3586	52897	6.78%
202351	40	582	1883	1024	362	224	4075	52371	7.78%
202352	52	192	696	863	373	1314	3438	47242	7.28%
202401	53	450	1149	1105	501	315	3520	50423	6.98%
202402	53	459	1083	895	301	218	2956	53730	5.50%
202403	54	597	1209	788	263	167	3024	48990	6.17%
202404	54	709	1886	1018	355	217	4185	57966	7.22%
202405	54	903	2441	1098	361	197	5000	60038	8.33%
202406	53	814	1971	987	335	191	4298	59459	7.23%
202407	54	682	1470	803	269	191	3415	55708	6.13%
202408	54	686	1290	749	276	164	3165	57419	5.51%
202409	53	642	1067	609	205	109	2632	55939	4.71%
202410	53	577	937	441	188	86	2229	50052	4.45%
202411	45	459	490	331	156	86	1522	35473	4.29%
202412	51	416	642	368	146	121	1693	50980	3.32%
202413	50	434	636	336	137	84	1627	48822	3.33%
202414	37	412	615	325	146	83	1581	51495	3.07%
202415	50	444	699	321	153	88	1705	52241	3.26%
202416	51	388	602	299	116	91	1496	51837	2.89%

Figure 3: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2023-2024 Season

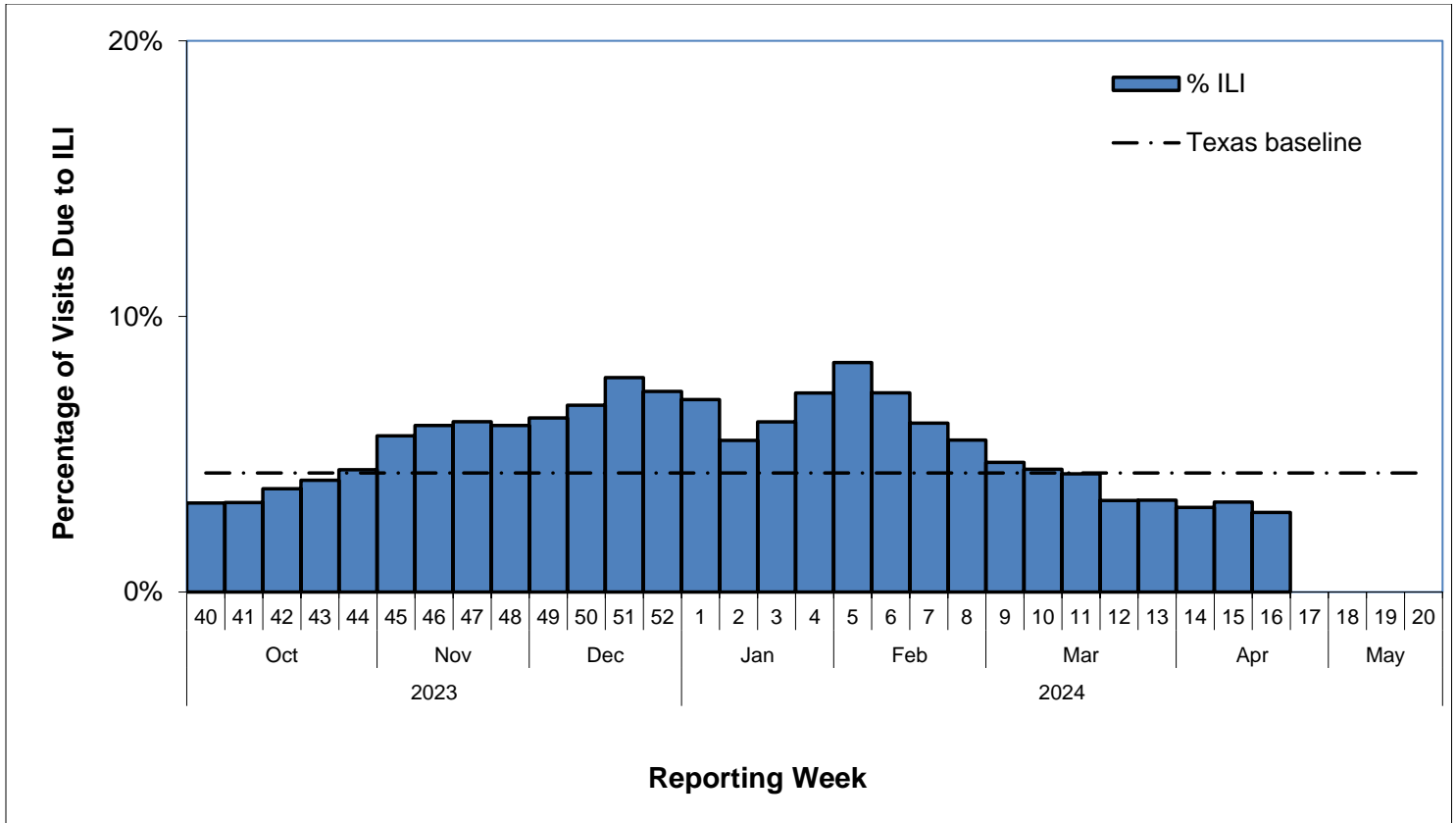
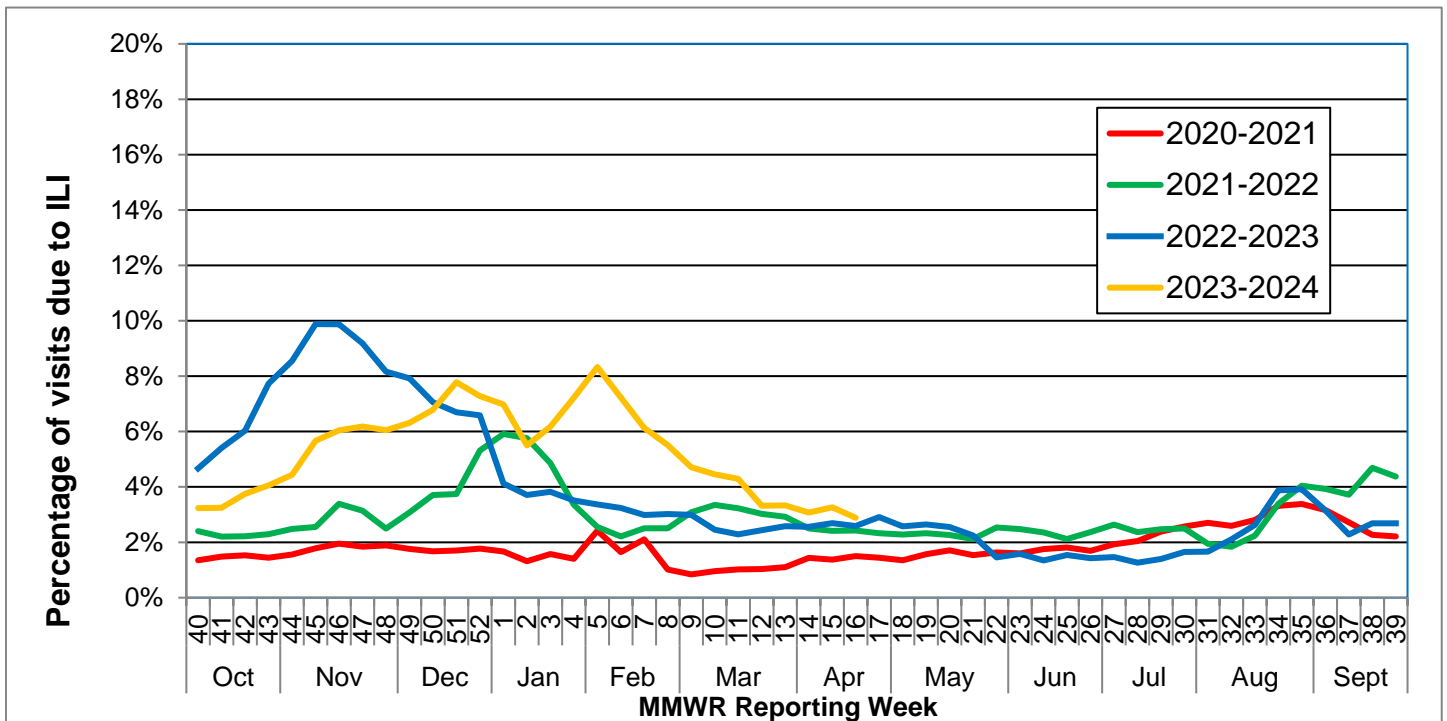


Figure 4: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2020–2024 Seasons



Note: The 2020-2021 Flu Season contains MMWR week 202053. For graphical display compatibility with seasons containing 52 weeks, average values were generated using MMWR week 52 and 1.

Reports from Public Health Regions

Reports were received from all Public Health Regions (PHRs) during week 16.

Table 6: Influenza Activity compared to week 15 by Public Health Region (PHR)

Influenza Activity Comparison	
Increased	
Same	1, 2/3, 6/5S, 8
Decreased	4/5N, 7, 9/10, 11
Unsure	

Variant Influenza Viruses

One novel influenza virus has been detected in Texas during the 2023-2024 season. The novel influenza was identified as influenza A (H5N1), commonly identified as avian influenza, in a patient that was experiencing conjunctivitis following exposure to livestock. Patient was not hospitalized and has recovered.

Institutional Outbreaks and School Closures

No respiratory disease outbreak was reported for week 16.

P&I Mortality Surveillance Data

***Deaths due to COVID-19 may be classified as pneumonia deaths or influenza deaths (deaths due to “flu” or “flu-like illness”) in the absence of positive SARS-CoV-2 test results.** Pneumonia and influenza (P&I) death data are obtained from death certificates of Texas residents whose underlying or contributing cause(s) of death is reported as pneumonia or influenza. P&I deaths are identified based on ICD-10 multiple cause of death codes for pneumonia and influenza related mortality.

Six thousand five hundred and sixty-eight (6568) P&I deaths have been reported in Texas during the 2023-2024 influenza season.

Table 7: Texas P&I Deaths Occurring October 1, 2023– April 20, 2024* by Age

Age Category (years)	Number of P&I Deaths ⁺	Mortality Rate (per 100,000)
0 - 4	31	1.39
5 - 17	23	0.41
18 - 49	458	3.28
50 - 64	1155	21.81
65 +	4901	107.09
Overall	6568	20.73

*NOTE: Data are provisional and subject to change, errors, and duplicates

+ If the cell count is less than 10, the number of P&I deaths is suppressed and <10 is written in the cell.

Table 8: Texas P&I Deaths Occurring October 1, 2023– April 20, 2024* by Public Health Region (PHR)

PHR	Number of P&I Deaths ⁺	Mortality Rate (per 100,000)
1	217	23.43
2/3	1785	19.31
4/5N	534	34.23
6/5S	1559	18.11
7	759	19.59
8	668	19.83
9/10	397	23.16
11	647	27.08
Unknown	2	-
Overall	6568	20.73

*NOTE: Data are provisional and subject to change, errors, and duplicates

+ If the cell count is less than 10, the number of P&I deaths is suppressed and <10 is written in the cell.

Influenza-Associated Pediatric Mortality

No influenza-associated pediatric mortalities were reported in week 16.

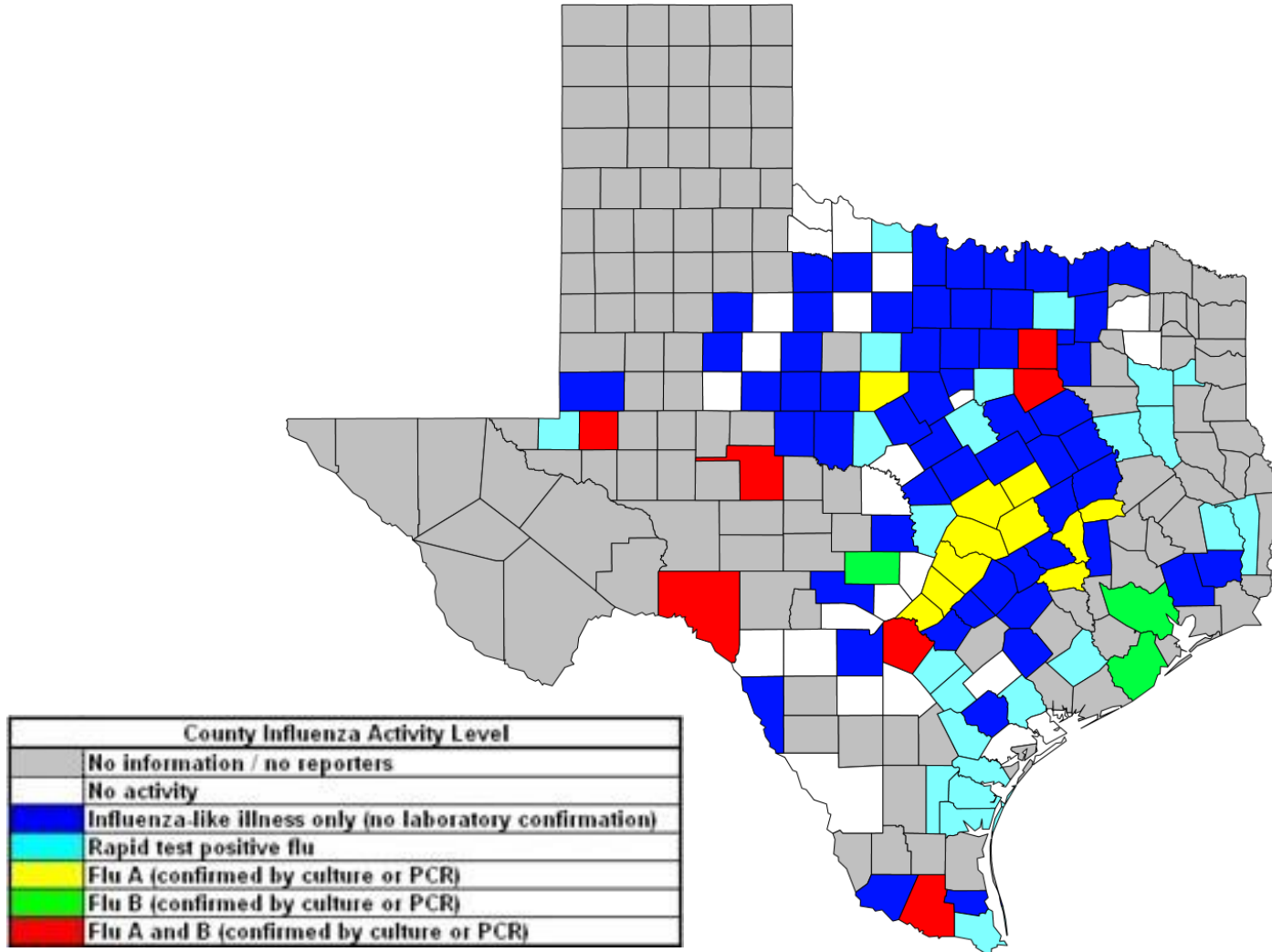
Eight influenza-associated pediatric mortalities have been reported in Texas during the 2023-2024 influenza season. Cases of influenza-associated pediatric mortality (children <18 years of age) are reportable year-round by law in Texas.
Table 9: Influenza-Associated Pediatric Deaths Reported in Texas during the 2023-2024 Season

Month of Pediatric Death	Influenza A (H1N1)	Influenza A (H3N2)	Influenza A (Not Subtyped)	Influenza B	Influenza, Not Typed / Not Differentiated	Influenza virus co-infection: A (not subtyped) and B	Total, All Influenza Types / Subtypes
2023							
October	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0
December	0	0	0	1	0	0	1
2024							
January	1	0	0	0	0	0	1
February	3	0	0	2	0	1	6
March	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0
Total*	4	0	0	3	0	1	8

*Total count of typed cases may be adjusted as lab testing and case investigation is completed, this does not alter total count of all cases (final column).

Statewide Influenza Activity Map

Figure 5: Texas Map Displaying the Highest Level of Influenza or ILI Activity Reported by County for the Week Ending April 20, 2024 (MMWR Week 16)



Please note: The majority of influenza cases are not reportable by law in Texas. This map contains data from sentinel sites and only displays influenza and ILI cases that were reported to public health. Positive laboratory results are reported according to specimen collection date, or date received in the laboratory if the former is unknown.

Respiratory Syncytial Virus (RSV) Surveillance

Respiratory Syncytial Virus (RSV) surveillance in Texas utilizes passive surveillance and is based on data submitted by providers and facilities to the National Respiratory and Enteric Virus Surveillance System (NREVS). Data is reported in aggregate and is utilized by DSHS to produce the weekly surveillance graphs statewide and by health service regions. Some providers report RSV data directly to DSHS. As such, the weekly surveillance graphs may differ from NREVS data. For a review of available RSV data by region, please see the addendum found at the end of this report.

Figure 6: Number and Percent of Antigen Tests Positive for Respiratory Syncytial Virus in the State of Texas, 2023-2024 Season

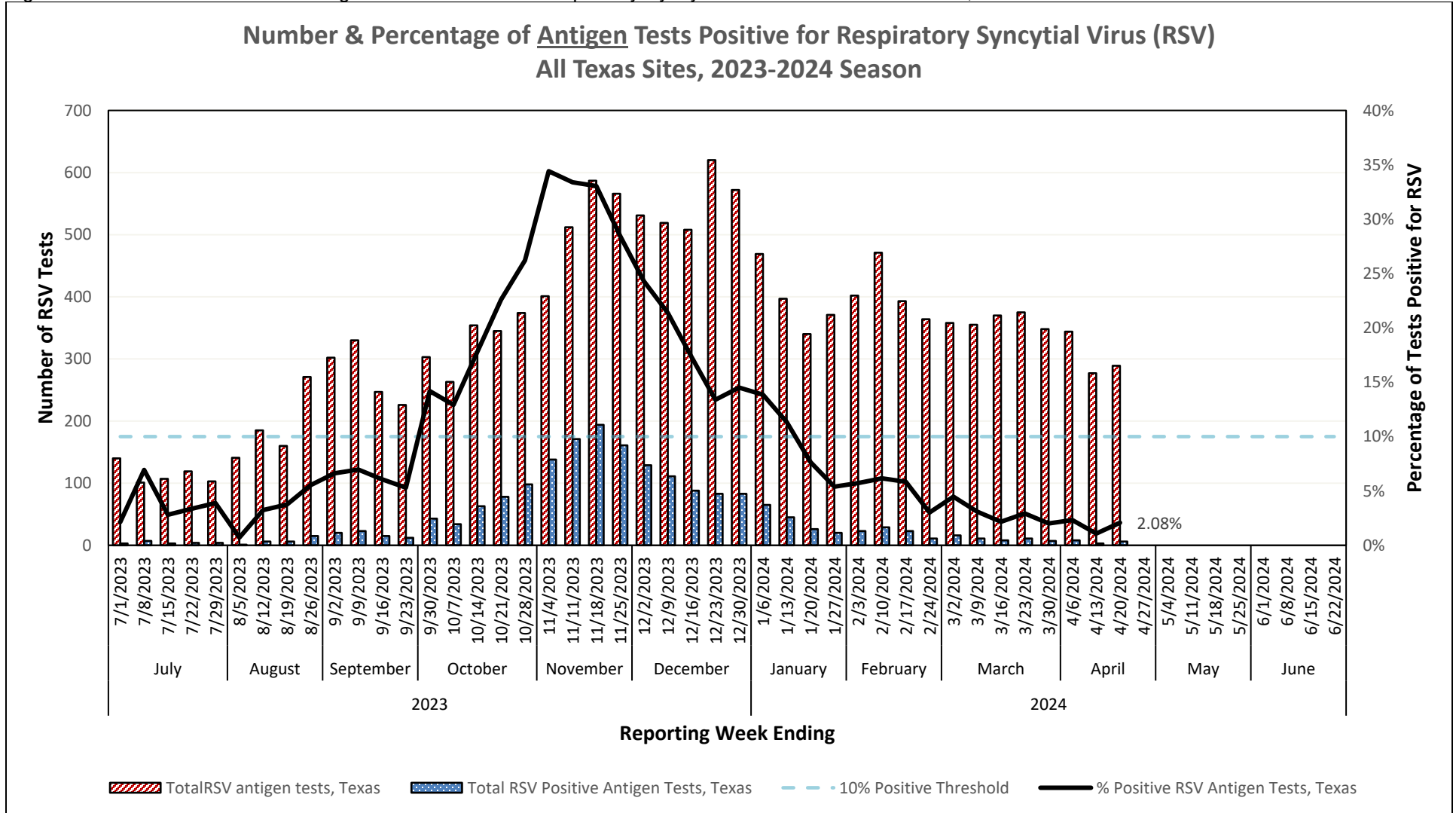
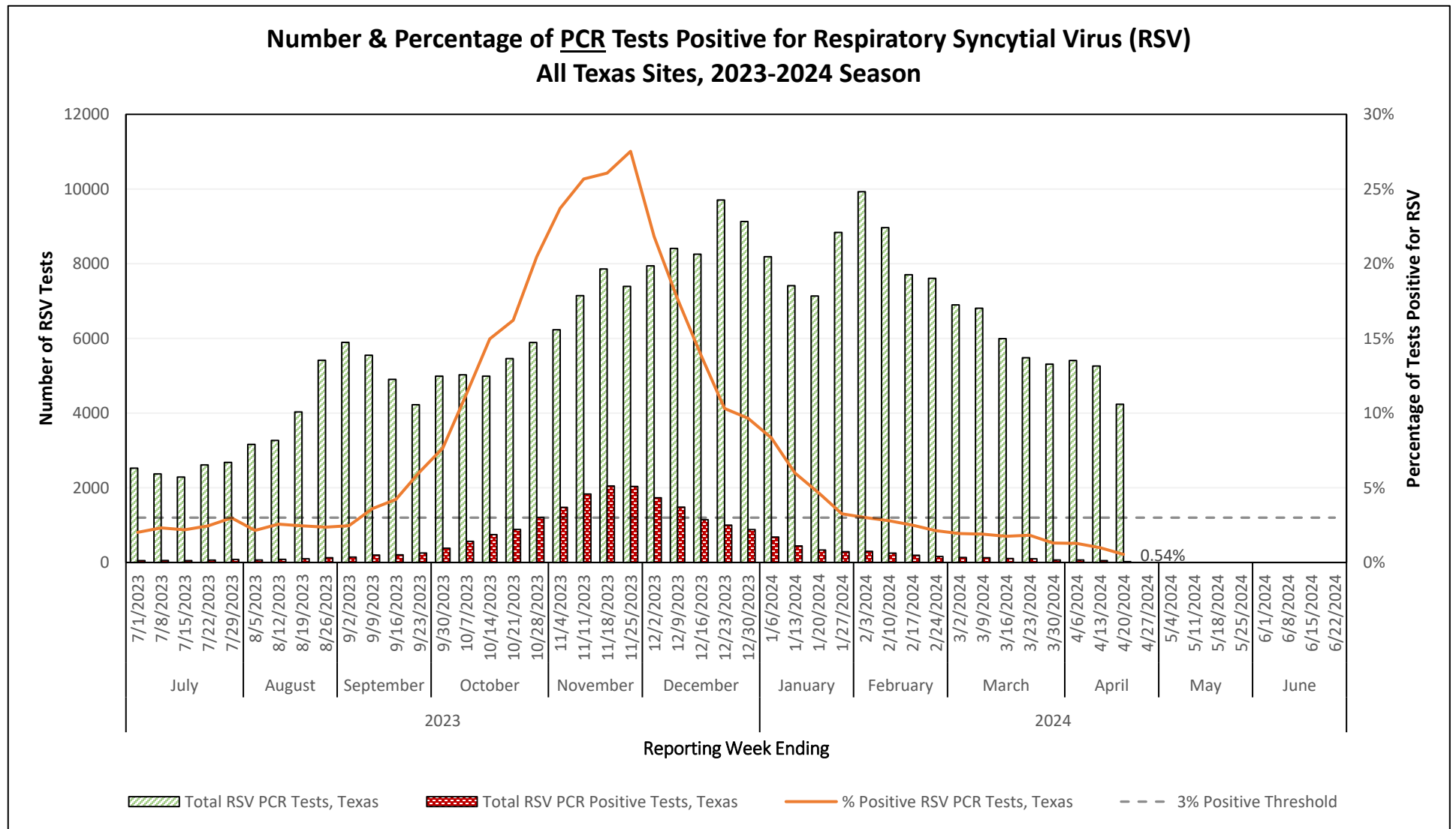


Figure 7: Number and Percent of PCR Tests Positive for Respiratory Syncytial Virus in the State of Texas, 2023-2024 Season



Other Respiratory Viruses

The NREVSS system collects information on a variety of respiratory viruses in addition to influenza including parainfluenza virus, respiratory syncytial virus (RSV), rhinovirus, human metapneumovirus (HMPV), seasonal coronavirus, and respiratory adenovirus. The results for the current week are summarized below.

Table 10: Non-Influenza Respiratory Virus Testing Performed by Texas NREVSS Laboratories for the Current Week

Virus	Number of Laboratories Testing	Tests Performed	Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	17	2519	95	3.77%
HMPV	17	2519	174	6.91%
Parainfluenza virus	17	2519	177	7.03%
Rhino/enterovirus	17	2834	947	33.42%
RSV ^{†^}	20	4395	27	0.61%
Seasonal coronavirus (does not include MERS-CoV or COVID-19)	17	2064	45	2.18%

[†] RSV tests displayed in the table are a combination of antigen detection, PCR, and culture tests. Some non-NREVSS reporters also contribute to the RSV data.

[^] Numbers and percentage may differ from the weekly RSV report. The weekly RSV report may be accessed at <https://www.dshs.state.tx.us/RSV/disease/rsv-Data.aspx>.

COVID-19 Surveillance

Note: As of March 8, 2024, individual confirmed, and probable COVID-19 cases are no longer required to be reported to the Texas Department of State Health Services. Thus, as of March 8, 2024, COVID-19 case counts and associated rates represent COVID-19 cases which were reported to DSHS on a voluntary basis rather than a mandatory basis.

Summary

The Texas Department of State Health Services (DSHS) is working closely with the Centers for Disease Control and Prevention (CDC) in monitoring Coronavirus Disease 2019 (COVID-19). Multiple sources of data are being used to monitor the situation in Texas.

Between March 6, 2020, and the current report week, **9,194,425 confirmed and probable cases** of COVID-19 were reported in Texas. So far for 2024, **202,289 confirmed and probable cases** of COVID-19 were reported in Texas.

Table 11: Summary of COVID-19 Cases, COVID-19-Associated Fatalities, and Hospitalizations for the Current Reporting Week*

Texas Surveillance Component	Change from Previous Week	Current Week	Previous Week
New COVID-19 Cases (Probable and Confirmed) **	▼ 223	1,762	1,985
New COVID-19 Confirmed Cases**	▼ 14	946	960
New COVID-19 Probable Cases**	▼ 209	816	1,025
Total COVID-19 Cases (Probable and Confirmed) **	▲ 1,762	9,194,425	9,192,663
Total COVID-19 Confirmed Cases**	▲ 946	6,990,524	6,989,578
Total COVID-19 Probable Cases**	▲ 816	2,203,901	2,203,085
Newly Reported COVID-19-Associated Fatalities	▼ 21	19	40
Hospitalized COVID-19 Cases (Day of Report)	▼ 2	673	675
Hospitalized COVID-19 Cases (Rolling 7-Day Avg.)	▼ 30	684	714

▲ = increase and ▼ = decrease

* Numbers and percentages might vary from the previous COVID-19 report due to additional data becoming available for non-finalized surveillance years. COVID-19 case data for 2020-2021 are finalized. All other data are provisional and subject to change.

** Cases for the current week include both cases reported in the last week and may include newly reported cases from prior weeks.

COVID-19 cases reported decreased in Texas by **11.2%** in **Week 16** compared to the previous MMWR week.

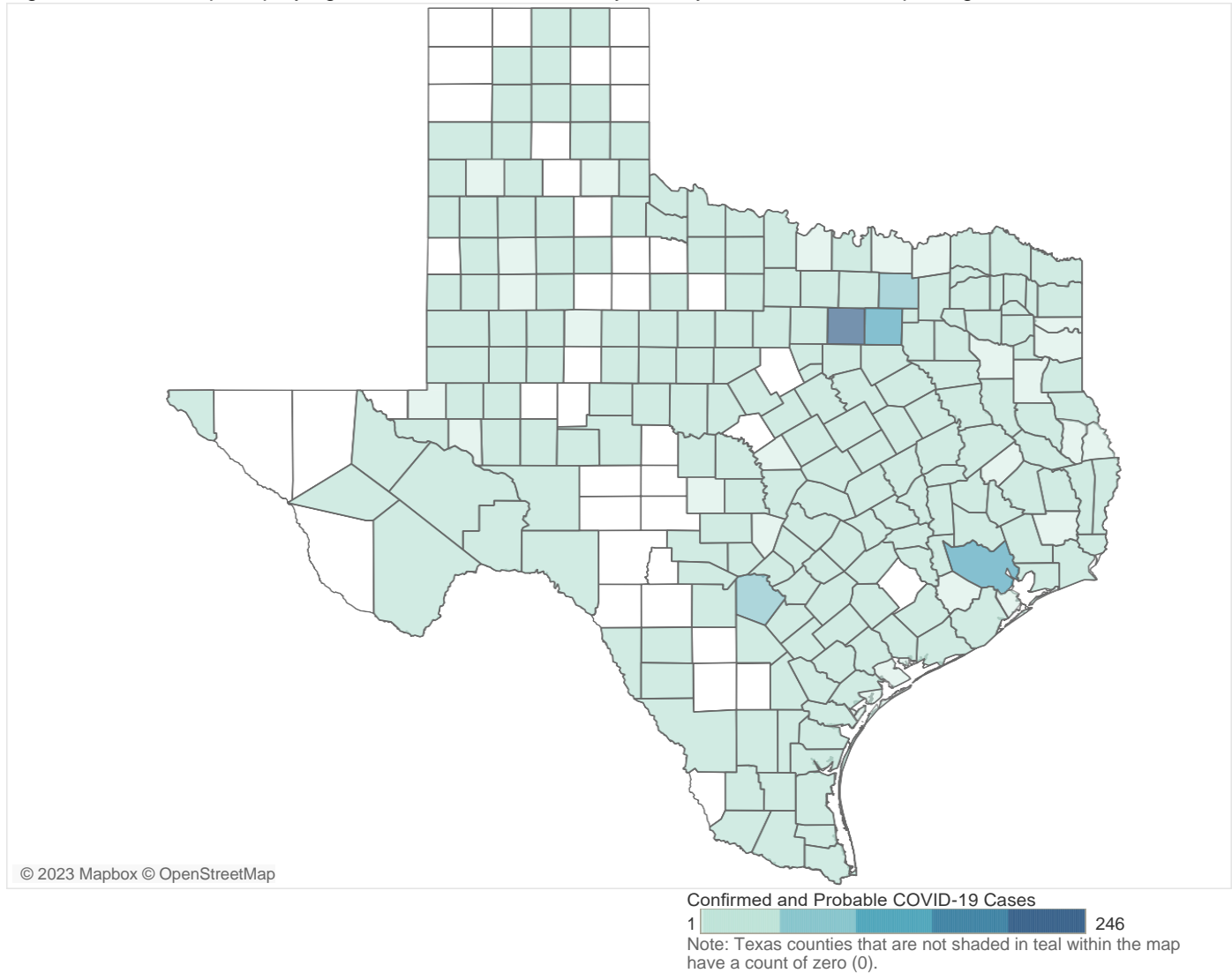
COVID-19-associated fatalities decreased by **52.5%** in **Week 13** when compared to the previous week. COVID-19-associated fatalities are shown by week during which the death occurred, up to three weeks prior to current report week because death certificates are required to be filed within 10 days of date of death.

Note: Cumulative counts will consistently reflect all cases within the National Electronic Disease Surveillance System as of report date. Counts may include cases which were provided after initial reporting, such as backlogged cases; and reflect regular case quality assurance updates.

Weekly COVID-19 Case Map

A map of weekly confirmed and probable COVID-19 cases by county can be viewed below.

Figure 8: Texas Map Displaying COVID-19 Case Counts by County for the Current Reporting Week.



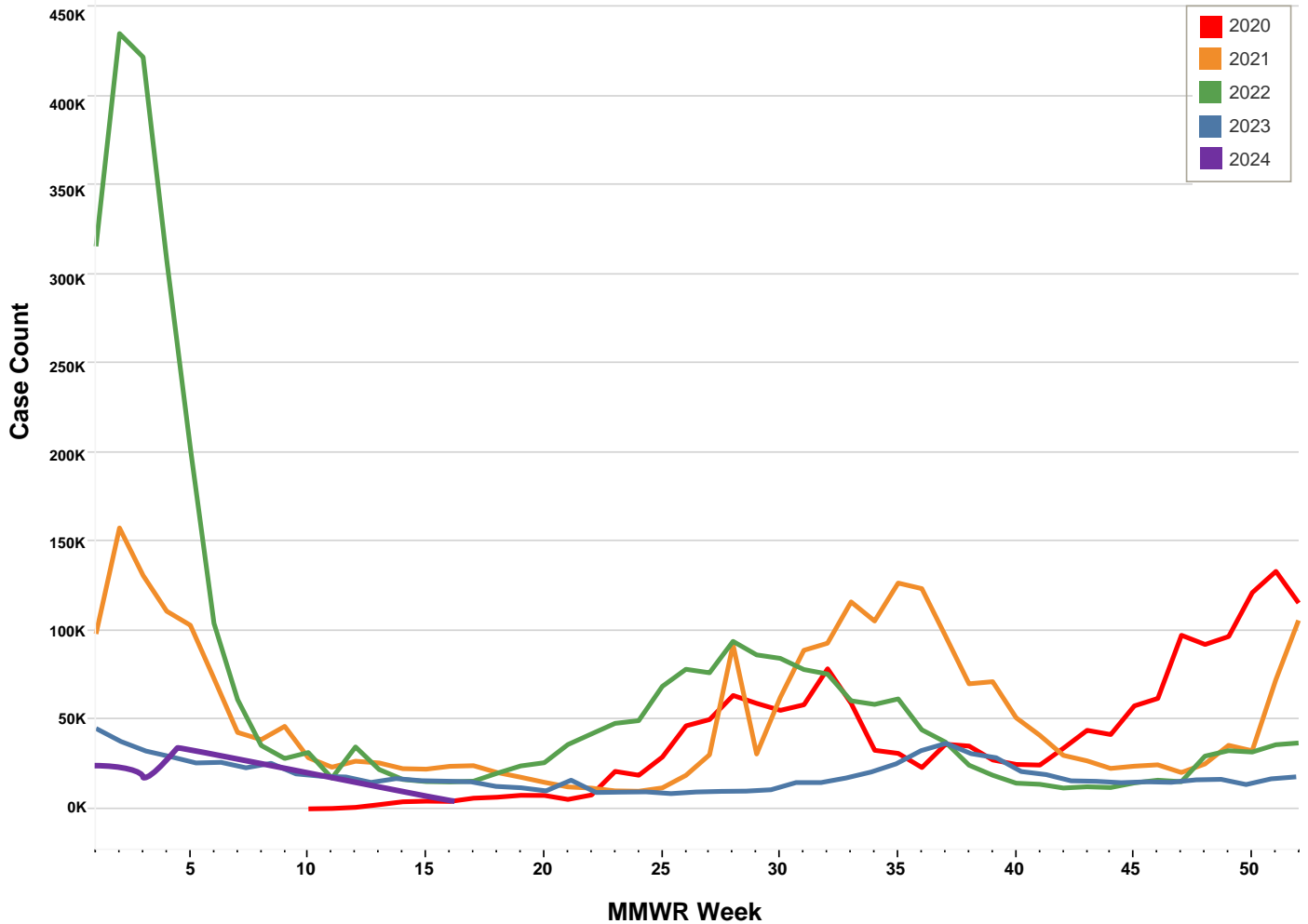
COVID-19 Case Map Notes

COVID-19 cases shown are for the MMWR week of the report. This count includes cases reported in the past week, as well as newly reported cases from prior weeks. All counts are provisional and subject to change.

The populations used are population projections from the Texas Demographic Center*. There may be COVID-19 cases with incomplete address reported to Texas DSHS which are not included in the COVID-19 Case Map by County, Figure 8.

*Refer to Appendix 4 for the link to view the population projections from Texas Demographic Center

Figure 9. Cases of COVID-19 by MMWR Week, Texas, 2020 to Current Report Week (N = 9,194,425)



Note: The COVID-19 pandemic reported the first locally acquired SARS-CoV-2 case in Texas during the MMWR Week 10 in 2020. Prior to MMWR Week 10 in 2020 there were no locally acquired cases of SARS-CoV-2 infection reported among Texas residents. Case counts are reported based on all MMWR weeks as they are provided.

Laboratory Results

Providers throughout Texas submit specimens for SARS CoV-2 testing to Texas laboratories which are reported to the National Electronic Disease Surveillance System (NEDSS).

Statewide, COVID-19 laboratory reporting decreased in **Week 16**.

Table 12: Summary of All COVID-19 PCR and Antigen Tests Reported for the Current Week Versus the Previous Week

Test Reported	Change from Previous Week	Current Week	Previous Week
PCR Tests*	▼ 185	2,092	2,277
per 100,000 population	-	6.71	7.30
Antigen Tests*	▼ 238	742	980
per 100,000 population	-	2.38	3.14

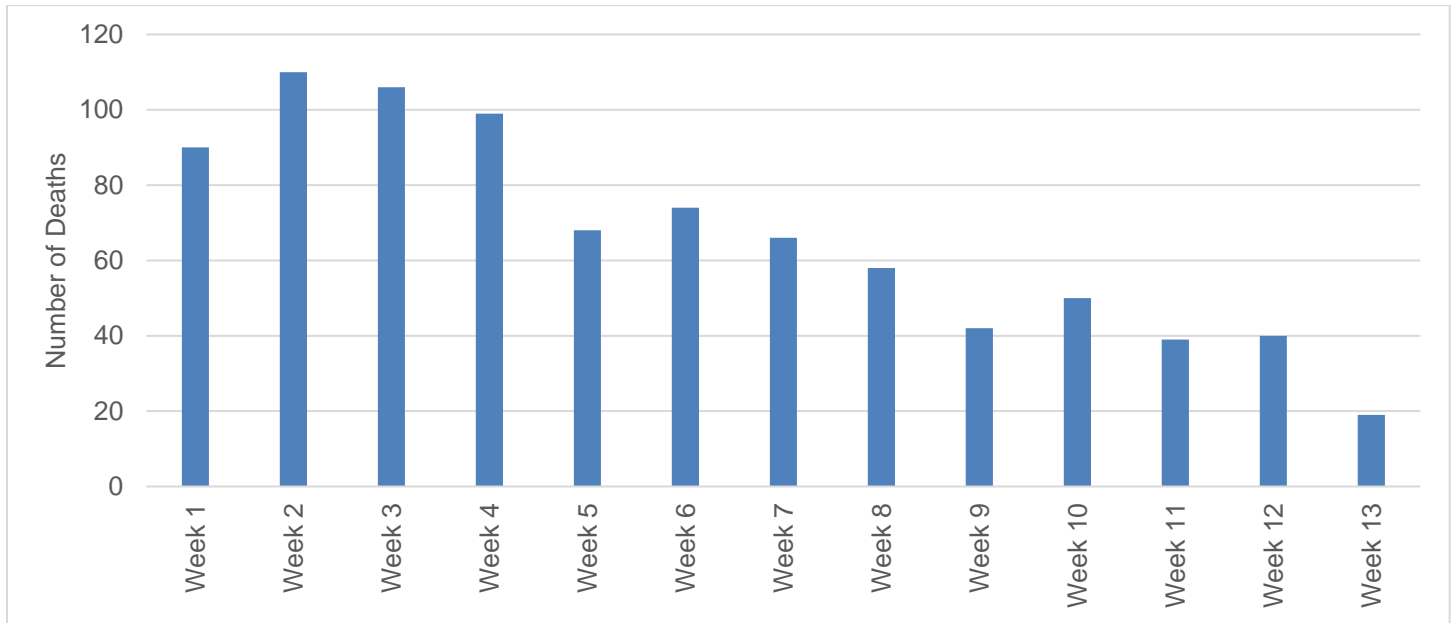
* As of June 15th, 2023, only positive tests must be reported to DSHS. Negative tests are no longer required to be reported, resulting in a decrease in the number of tests reported.

COVID-19 Mortality

COVID-19 mortality data in this report are obtained from death certificates of Texas residents whose underlying or contributing cause(s) of death is reported as COVID-19. Reporting of deaths occurs up to three weeks following date of death. Data is provisional until data close out occurs.

879[†] COVID-19-associated deaths were reported up to MMWR Week 13 in 2024 from death certificates of Texas residents. There were **19 COVID-19-associated deaths** reported in MMWR Week 13. In total, **94,865 COVID-19-associated deaths** have been identified from death certificates of Texas residents.

Figure 10: COVID-19 Associated Deaths Identified from Vital Statistics Data by MMWR Week of Death, MMWR Year 2024 Week 13



Note: Counts shown reflect the available death certificate data. This will be updated as death certificate data becomes available. Data exclude the most recent three MMWR weeks due to lag time inherent in death registration and reporting processes. Death certificate data should be considered provisional and subject to change as additional information becomes available.

Table 13: COVID-19-Associated Mortality Rate by Age for the Current Year*

Age Group	Total Number of COVID-19 Deaths (2024) [†]	Total Mortality Rate (Per 100,000) (2024) [†]	MMWR Week Total Number of COVID-19 Deaths	MMWR Week Mortality Rate (per 100,00)
<1 year	<10	<10	<10	<10
1-9 years	<10	<10	<10	<10
10-19 years	<10	<10	<10	<10
20-29 years	<10	<10	<10	<10
30-39 years	<10	<10	<10	<10
40-49 years	13	0.00	<10	<10
50-59 years	35	0.00	<10	<10
60-64 years	24	1.40	<10	<10
65-69 years	55	3.64	<10	<10
70-74 years	69	5.82	<10	<10
75-79 years	119	13.60	<10	<10
80+ years	460	45.74	<10	<10
Unknown	92	N/A	<10	N/A
Overall	879	2.77	19	0.06

* If the cell number of deaths is less than 10, the number or percent of COVID-19 deaths is suppressed and <10 or n/a is written in the cell. The population estimates from the Texas Demographic Center are used for population rates. Data is provisional and subject to change, errors, and duplicates.

[†] Refer to Texas COVID-19 Surveillance Components and Measures on page 7, Section: Mortality.

Table 14: COVID-19-Associated Mortality Rate by Race/Ethnicity for the Current Year*

Race/Ethnicity	Total Number of COVID-19 Deaths (2024) †	Total Mortality Rate (per 100,000) (2024) †	MMWR Report Week Number of COVID-19 Deaths	MMWR Report Week Mortality Rate (per 100,000)
White	570	4.59	11	0.09
Black	80	2.08	<10	<10
Hispanic	195	1.52	<10	<10
Asian	29	1.58	<10	<10
Other Race	<10	<10	<10	<10
Unknown Race/Ethnicity	<10	N/A	<10	N/A
Overall	879	2.77	19	0.06

* If the cell number of deaths is less than 10, the number or percent of COVID-19 deaths is suppressed and <10 or n/a is written in the cell. The population estimates from the Texas Demographic Center are used for population rates. Data is provisional and subject to change, errors, and duplicates.

Table 15: COVID-19-Associated Mortality Rate by PHR for the Current Year*

PHR	Total Number of COVID-19 Deaths (2024) †	Total Mortality Rate (per 100,000) (2024) †	MMWR Report Week Number of COVID-19 Deaths	MMWR Report Week Mortality Rate (per 100,000)
PHR 1	28	3.02	<10	<10
PHR 2/3	263	2.85	<10	<10
PHR 4/5N	61	3.59	<10	<10
PHR 6/5S	169	1.96	<10	<10
PHR 7	93	2.40	<10	<10
PHR 8	113	3.38	<10	<10
PHR 9/10	49	2.45	<10	<10
PHR 11	103	4.31	<10	<10
Overall**	879	2.77	19	0.06

* If the cell number of deaths is less than 10, the number or percent of COVID-19 deaths is suppressed and <10 or n/a is written in the cell. The population estimates from the Texas Demographic Center are used for population rates. Data is provisional and subject to change, errors, and duplicates.

** The year total includes two additional cases with unknown PHR.

Table 16: COVID-19-Associated Mortality Rate by Sex for the Current Year*

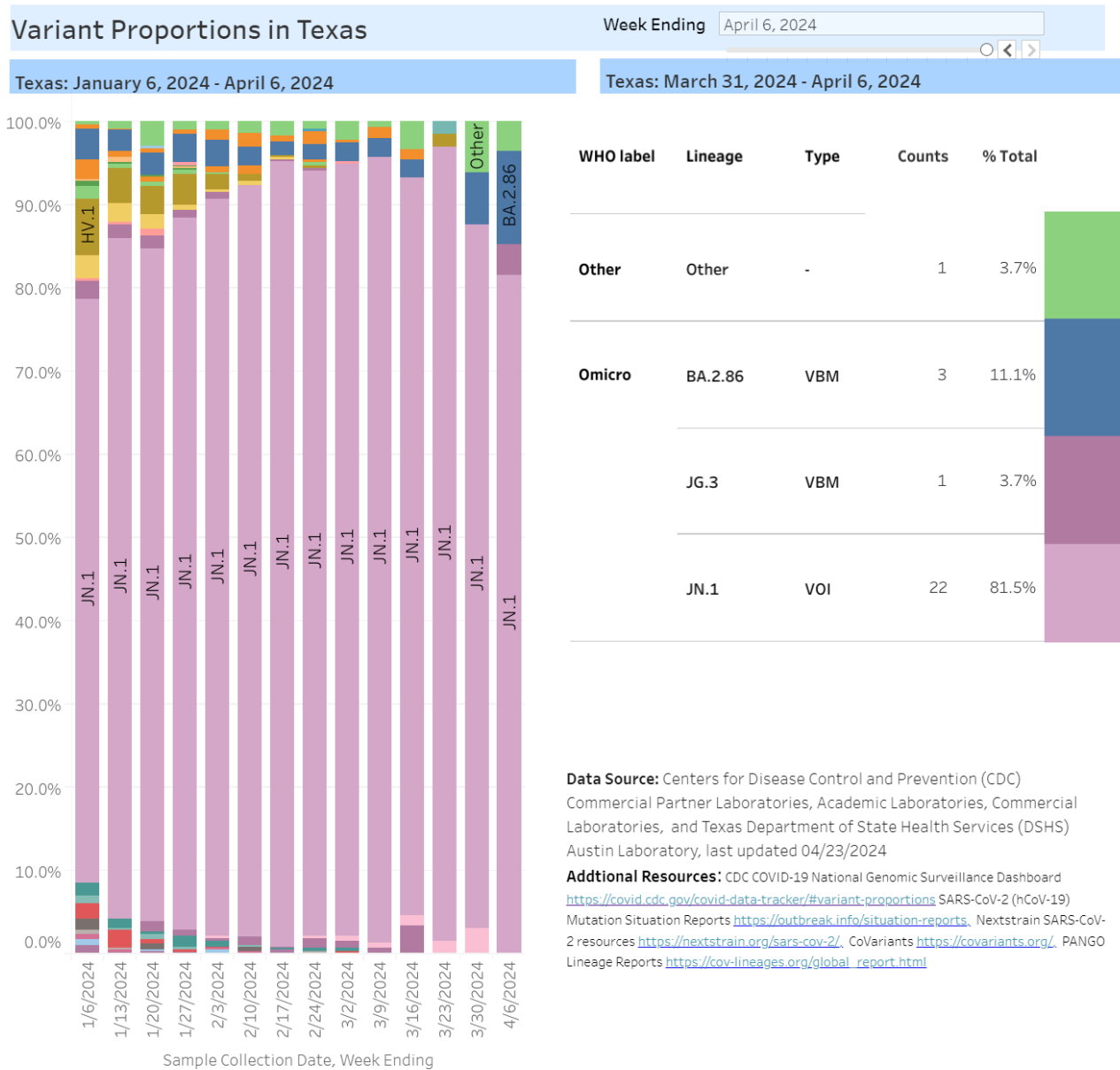
Sex	Total number of COVID-19 Deaths (2024) †	Total Mortality Rate (per 100,000) (2024) †	MMWR Report Week Number of COVID-19 Deaths	MMWR Report Week Mortality Rate (per 100,000)
Female	410	2.57	<10	<10
Male	469	2.98	11	0.07
Overall	879	2.77	19	0.06

*If the cell number of deaths is less than 10, the number or percent of COVID-19 deaths is suppressed and <10 or n/a is written in the cell. The population estimates from the Texas Demographic Center are used for population rates. Data is provisional and subject to change, errors, and duplicates.

† Refer to Texas COVID-19 Surveillance Components and Measures on page 7, Section: Mortality.

COVID-19 Sequencing and Variant Surveillance

An interactive version of the DSHS COVID-19 variant dashboard, updated weekly, can be viewed at: <https://www.dshs.texas.gov/covid-19-coronavirus-disease/sars-cov-2-variants-and-genomic-surveillance-texas>



Note: Further information about data sources, limitations, and context is described in the Texas COVID-19 Surveillance Components and Measures Section of this report.

Surveillance Components and Measures

Texas Influenza Surveillance Components and Measures

Activity codes (see <http://www.cdc.gov/flu/weekly/overview.htm>)

Statewide influenza activity level

A code reported weekly by states and territories to CDC indicating the geographic spread of influenza in the state. Levels are no activity, sporadic, local, regional, and widespread.

ILINet Activity Indicator

A statewide level of influenza-like illness intensity (on a scale of 1-10, with 1 being the lowest level) assigned to each state weekly by CDC based on data reported through ILINet.

Morbidity

Novel/variant influenza

Thorough investigations are performed on all cases of novel/variant influenza. *This condition is reportable by law in Texas.*

Texas ILINet

Providers voluntarily report weekly to CDC's ILINet system on the number of outpatient visits for ILI and total outpatient visits. Providers may submit up to 5 specimens per month for influenza testing. **See <http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/ILINet/> for information on how to become an ILINet provider.**

ILI activity

Non-ILINet providers report ILI or influenza data weekly to local or regional health departments.

Outbreaks

Healthcare, schools, childcare, and correctional facilities report ILI and influenza outbreaks to health departments in Texas. *This condition is reportable by law in Texas.*

Mortality

Pneumonia and Influenza (P&I) Mortality Surveillance

The DSHS Vital Statistics Unit collects death certificate information for all deaths on Texas residents from various partners such as funeral homes and local registrars around the state. The death certificates are then sent to the National Center for Health Statistics (NCHS) where the cause of death and underlying causes of death on the death certificates are coded with ICD-10 mortality codes. Once death certificates are coded, the information is sent back to DSHS Center for Health Statistics (CHS). CHS produces a Weekly Pneumonia and Influenza (P&I) Death Report and sends it to the State Influenza Surveillance Coordinator for inclusion in the Texas Weekly Flu Report. P&I deaths are identified based on ICD-10 multiple cause of death codes, and in particular, pneumonia and influenza mortality codes. Delays inherent in death reporting and coding practices may cause the number of reported P&I deaths to vary considerably each week.

Influenza-associated pediatric deaths

Deaths that are associated with influenza in children < 18 years of age are reported to health departments in Texas. *This condition is reportable by law in Texas.* <http://www.dshs.state.tx.us/idcu/disease/IAPM/>

Laboratory

DSHS Austin laboratory

Providers voluntarily submit specimens to the DSHS Austin laboratory for influenza PCR testing throughout the season. Providers sign up for this program through their local health departments.

Laboratory Response Network (LRN) laboratories

Providers voluntarily submit specimens to one of the 9 Texas LRNs for influenza PCR testing throughout the season. Providers sign up for this program through their local health departments.

NREVSS

Laboratories voluntarily report influenza and other respiratory virus data weekly through the CDC's online NREVSS reporting system. **Laboratories sign up for this program by contacting DSHS.** <http://www.cdc.gov/surveillance/nrevss/>

Recommended Resources

Texas Department of State Health Services

DSHS influenza page: <http://www.texasflu.org/>

Influenza surveillance data and reports: <http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/>

Map of Texas Health Service Regions: <http://www.dshs.state.tx.us/regions/state.shtm>

Centers for Disease Control and Prevention

National FluView weekly flu report: <http://www.cdc.gov/flu/weekly/>

Variant influenza viruses: <http://www.cdc.gov/flu/swineflu/variant.htm>

Avian influenza viruses: <http://www.cdc.gov/flu/avianflu/index.htm>

Swine influenza viruses: <http://www.cdc.gov/flu/swineflu/index.htm>

Infection Control in Healthcare Facilities: <http://www.cdc.gov/flu/professionals/infectioncontrol/>

Seasonal Flu Information for Schools and Childcare Providers: <http://www.cdc.gov/flu/school/index.htm>

World Health Organization

Influenza page: <http://www.who.int/topics/influenza/en/>

Disease Outbreak News: <http://www.who.int/csr/don/en/>

Texas Respiratory Syncytial Virus (RSV) Surveillance Components and Measures

Technical Notes

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.

“The percentage of positive detections reflects test ordering practices and might not directly reflect disease burden.”
Centers for Disease Control and Prevention. Respiratory Syncytial Virus-United States, July 2007-June 2011. Morbidity and Mortality Weekly Report (MMWR). September 2011; 60 (35):1203-1206.

National and state RSV analyses typically rely on antigen test data, however PCR testing is also becoming more common.

Regional-level results may not be reliable if the number of RSV tests performed each week is small or if reporting is inconsistent. There is currently insufficient data/ participating RSV reporters to properly present trends for the following regions:

PHR 10 (Upper Rio Grande/El Paso)

RSV is not a notifiable condition in Texas. Sentinel laboratories voluntarily enter their RSV data weekly into the CDC National Respiratory and Enteric Virus Surveillance System (NREVSS), and these data are compiled to create the Texas Weekly RSV Report

Texas COVID-19 Surveillance Components and Measures

Provisional Data

Provisional data may not be complete. More data may be coming in to complete the data set, and DSHS and others have not completed quality checks of the information. Provisional data become final once the data set is complete and quality checks are finished. That process often takes several months.

COVID-19 Case Reporting

Investigations are performed on all cases of Coronavirus Disease 2019 (COVID-19). This condition is reportable by law in Texas.

Confirmed Case

A person who has tested positive through a molecular test that looks for the virus's genetic material. Texas uses the confirmed case definition adopted by the Council of State and Territorial Epidemiologists (CSTE). See the DSHS Epidemiologic Case Criteria Guide for full case definition.

Probable Case

A person who has tested positive through an antigen test. Texas uses the probable case definition adopted by the Council of State and Territorial Epidemiologists (CSTE).

New Confirmed Cases, New Probable Cases or Newly Reported Fatalities

Cases or fatalities reported for the first time on the DSHS COVID-19 report that day.

Mortality

COVID-19-associated deaths in Texas Residents

Deaths associated with COVID-19 are reported to health departments in Texas. Deaths suspected of being caused by a reportable disease are required to be reported in accordance with Texas Health and Safety Code §81.045. Death certificates must be filed with Texas DSHS within 14 days of the date of death but may be amended at a later date. COVID-19 associated deaths are deaths for which COVID-19 is listed as a cause of death on the death certificate. A medical certifier, usually a doctor, determines the cause(s) of death. DSHS does not include deaths of people who had COVID-19 but died of an unrelated cause. Fatalities are reported by where the person lived as listed on the death certificate. Fatality data may include both confirmed and probable cases. Data is considered provisional and subject to update as additional information becomes available until annual data has been finalized.

†While reviewing report production methods, the 2023 COVID-19-Associated Deaths count as well as 2023 subtotals reported within tables 3 through 6 were found to have incorporated fatalities that had been reported with dates of death up through the report date rather than up through the end of the MMWR week. This has been corrected as of the MMWR week 38 report. The 2023 count thus was adjusted from with the original calculation method to the displayed count.

Laboratory

Positive SARS-CoV-2 laboratory results are reported to the Texas DSHS National Electronic Disease Surveillance System (NEDSS) by laboratories or local health departments. Positive SARS-CoV-2 laboratory results, including antigen, antibody, and molecular tests performed under CLIA oversight must be reported to Texas DSHS in accordance with Texas Health and Safety Code §81.045. This number does not include tests with results pending. Testing data is considered provisional and subject to update as additional information becomes available until annual data has been finalized.

Genomic Surveillance

Variants of SARS-CoV-2, the virus that causes COVID-19, are expected to continue to emerge, a natural process that occurs as viruses spread. Some variants will disappear, and others will continue to spread and may overtake previous variants. For example, the ancestral strain of the virus that caused the first Texas COVID-19 cases in early 2020 is no longer being detected. It was displaced by the Alpha variant, followed by the Delta variant and Omicron variants and may continue to be replaced by other emerging variants.

The Texas SARS-CoV-2 genomic sequencing data includes data provided by the CDC's commercial partner laboratories as a part of the national SARS-CoV-2 genomic surveillance program, sequencing conducted at academic and commercial laboratories, and Texas Department of State Health Services Austin Laboratory's genomic sequencing. The programs sequence hundreds of COVID-19 cases each week to monitor the spread of variants in Texas. This information helps scientists and public health professionals understand how the virus spreads and changes over time. It also helps researchers know whether existing COVID-19 tests, treatments, and vaccines will continue to work against emerging variants.

This report shows data on variants of concern (VOC), variants of interest (VOI) and variants being monitored (VBM) with all other variants grouped together. More information on variant classification is available on the CDC website at <https://www.cdc.gov/coronavirus/2019-ncov/variants/>

Lab Confirmed COVID-19 Patients in Texas Hospitals

The total number of patients in Texas hospitals who have tested positive for COVID-19.

Appendix

Appendix 1: COVID-19 Data Sources and Limitations

Data sources for this report are Texas DSHS Vital Statistics, COVID-19-Associated Fatalities, and National Electronic Disease Surveillance System (NEDSS), each of which have associated limitations. The use of multiple data sources can lead to overestimation through duplication of case reports within each system, and between systems. COVID-19 case investigation data entered into NEDSS is dependent upon accurate user entry of case information into the system and resources available for public health follow up.

Limitations

Vital Statistics

- Delay in reporting of COVID-19-associated fatalities of 10-14 days on average from date of death.

NEDSS

- Cases created off electronic laboratory report (ELR) feed may be missing information, such as patient race or ethnicity, or complete address.
- The completeness of case investigations is dependent on the information available to case investigators in the initial report, the resources available to local health departments for case follow up, and the availability of medical records and the information provided by the case.
- Case count data from 2020 and 2021 is considered finalized. Data from 2022 and 2023 are considered provisional and subject to update until data are finalized.

Note: DSHS completed the process of transferring case investigations from the COVID Case Investigation System (CCIS) to the Texas National Electronic Disease Surveillance System (NEDSS) in November 2021. Deduplication between cases entered into CCIS and NEDSS has taken place and the transition was completed as of 11/15/2021. NEDSS data cited in this report is provisional and subject to the limitations of resources available for case investigation, the participation of the public in case investigation, and the process of transition from CCIS to NEDSS. Deduplication of newly reported COVID-19 laboratory results in NEDSS occurs automatically prior to data ingestion into NEDSS preventing generation of duplicate case reports.

Variant Dashboard Limitations

The data shown in this report is collected by the CDC's commercial partner laboratories as a part of the national SARS-CoV-2 genomic surveillance program, commercial laboratories, academic laboratories and Texas Department of State Health Services Austin Laboratory's genomic sequencing. Because samples collected by CDC National SARS-CoV-2 Strain Surveillance (NS3) partner laboratories are intended to be representative of Texas' proportion of the national population and estimate the prevalence of variants statewide, this data is not intended to count every variant case present in Texas. It does not necessarily represent geographic trends within the state of Texas. Some areas may be oversampled due to high numbers of participating laboratories. Local health officials may have more specific information regarding variant cases in their jurisdictions. No sample weighting is applied to this data. Sequencing results included in this data set take an average of 11 days from initial sample collection to report date. DSHS will post results after two weeks so that there will be enough results to represent a reliable estimate. The data visualization on the DSHS website is updated weekly on Tuesdays before 5 pm. Data is displayed by week of sample collection. Data should be considered preliminary and subject to change.

COVID Case Numbers

Case numbers and percentages might vary from the previous COVID-19 report due to continual changes in previous week totals. Data are provisional and are subject to change.

Possible attributes of various case numbers:

- Backlog from of COVID-19 results from reporting facilities
- Electronic laboratory reporting (ELR) failure in importing lab data
- Evidence of increased transmissibility
- Evidence of increased disease severity

Appendix 2: COVID-19 Data Cleaning Procedures

This report is generated on a weekly cycle, with the report prepared on Thursdays covering a one-week period beginning and ending the previous MMWR week.

Deduplication occurs routinely within NEDSS and ELR imports are prevented from creating duplicate case investigation and patient records if records matching first name, last name, date of birth and patient sex already exist. Data cleaning for this report included removal of out of state cases, matching residency based on patient address and county assignment in NEDSS. County of residency is determined based on zip code of residence, followed by provider zip code if residence zip code is unavailable. If both provider and residence zip codes are unavailable, ordering facility zip code is used. Out of bounds dates for specimen collection pre-January 1, 2020, and post report date are recoded as blank.

For the ELR Lab data file, the following cleaning procedures were used; out of state data was removed, residency is determined based on zip code of residence, followed by provider zip code if residence zip code is unavailable. If both provider and residence zip codes are unavailable, ordering facility zip code is used. Records are deduplicated by testing lab accession number, specimen collection date, ordered test code and reporting facility CLIA.

Appendix 3: COVID-19 MMWR Weeks

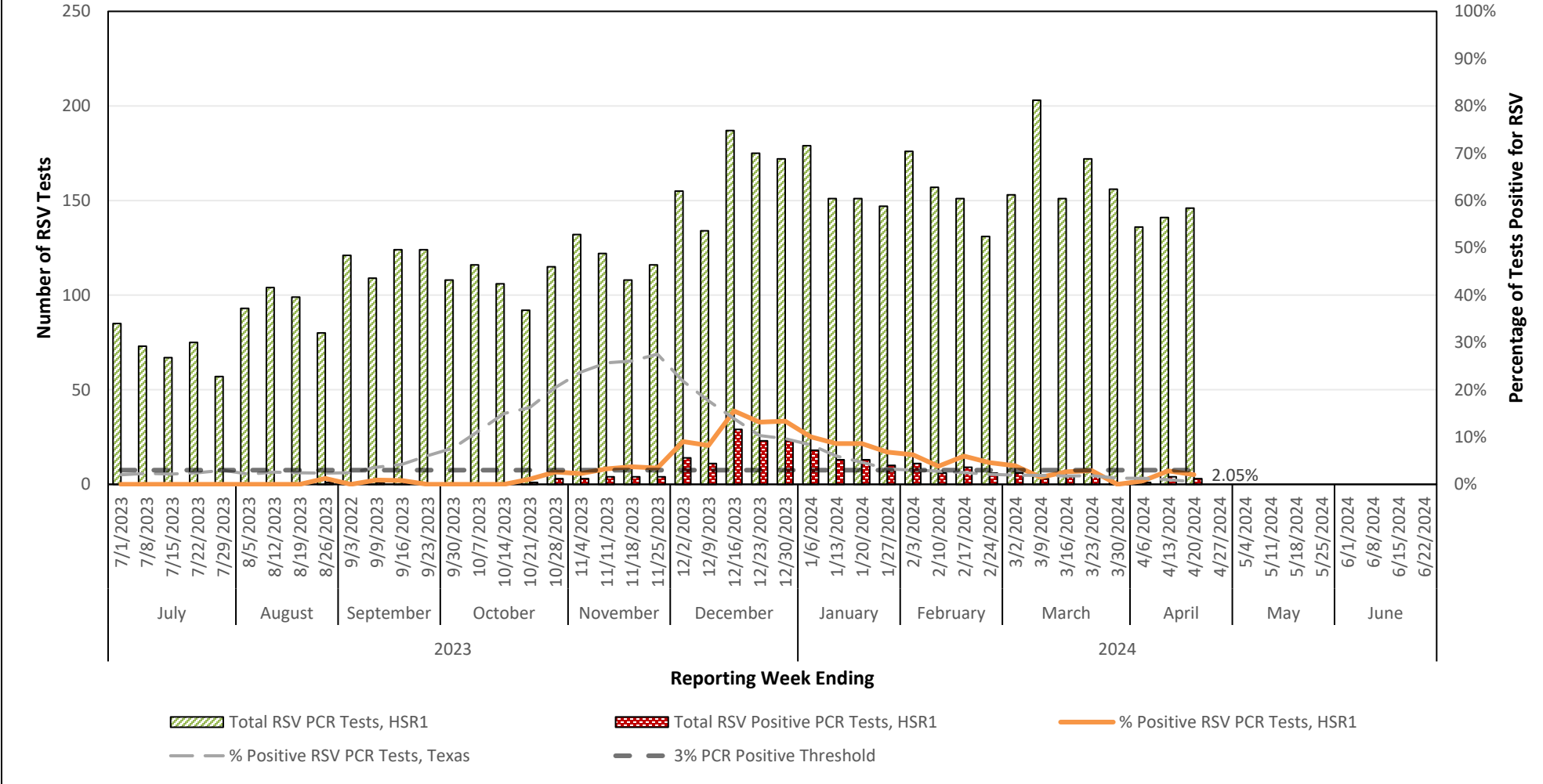
For a full list of MMWR Week dates please visit: <https://ndc.services.cdc.gov/wp-content/uploads/MMWR-Week-Log-2022-2023.pdf>

Appendix 4: COVID-19 Texas Demographic Center

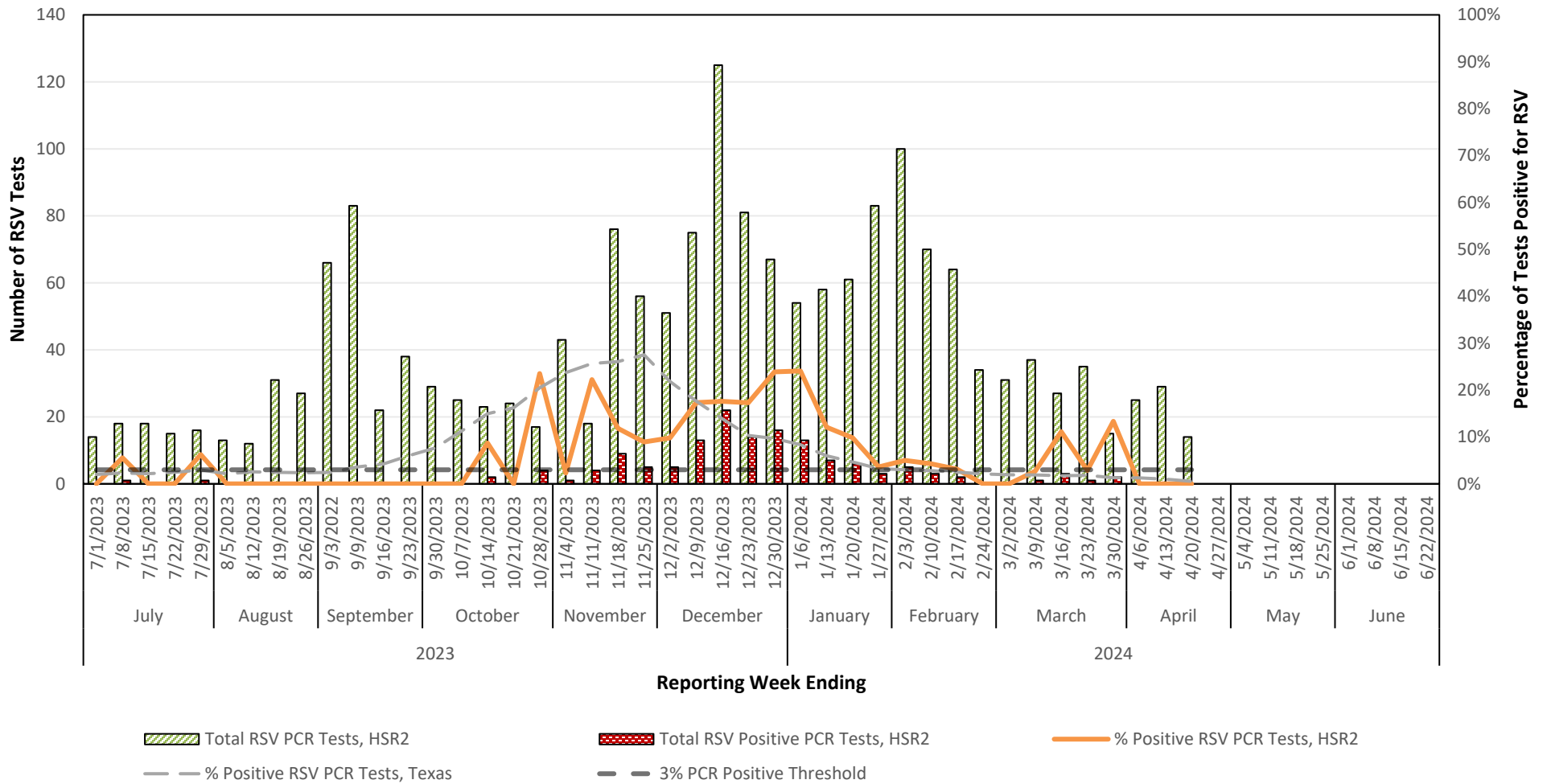
For population projections in Texas by county, please visit: <https://demographics.texas.gov/Projections/>

Appendix 5: Texas Respiratory Syncytial Virus (RSV) Surveillance by Health Service Region

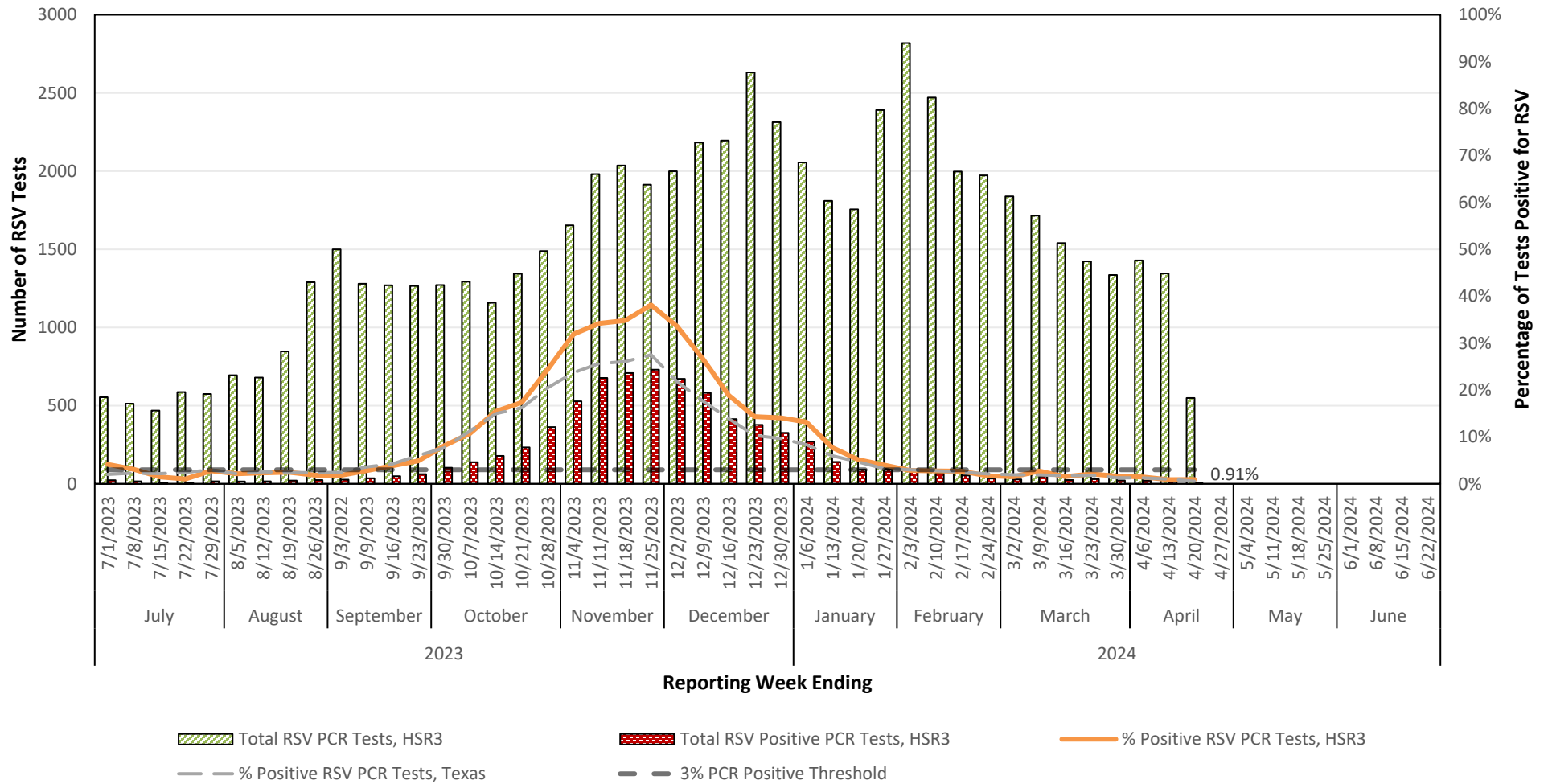
Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV)
 Health Service Region 1 (High Plains/Panhandle), 2023-2024 Season



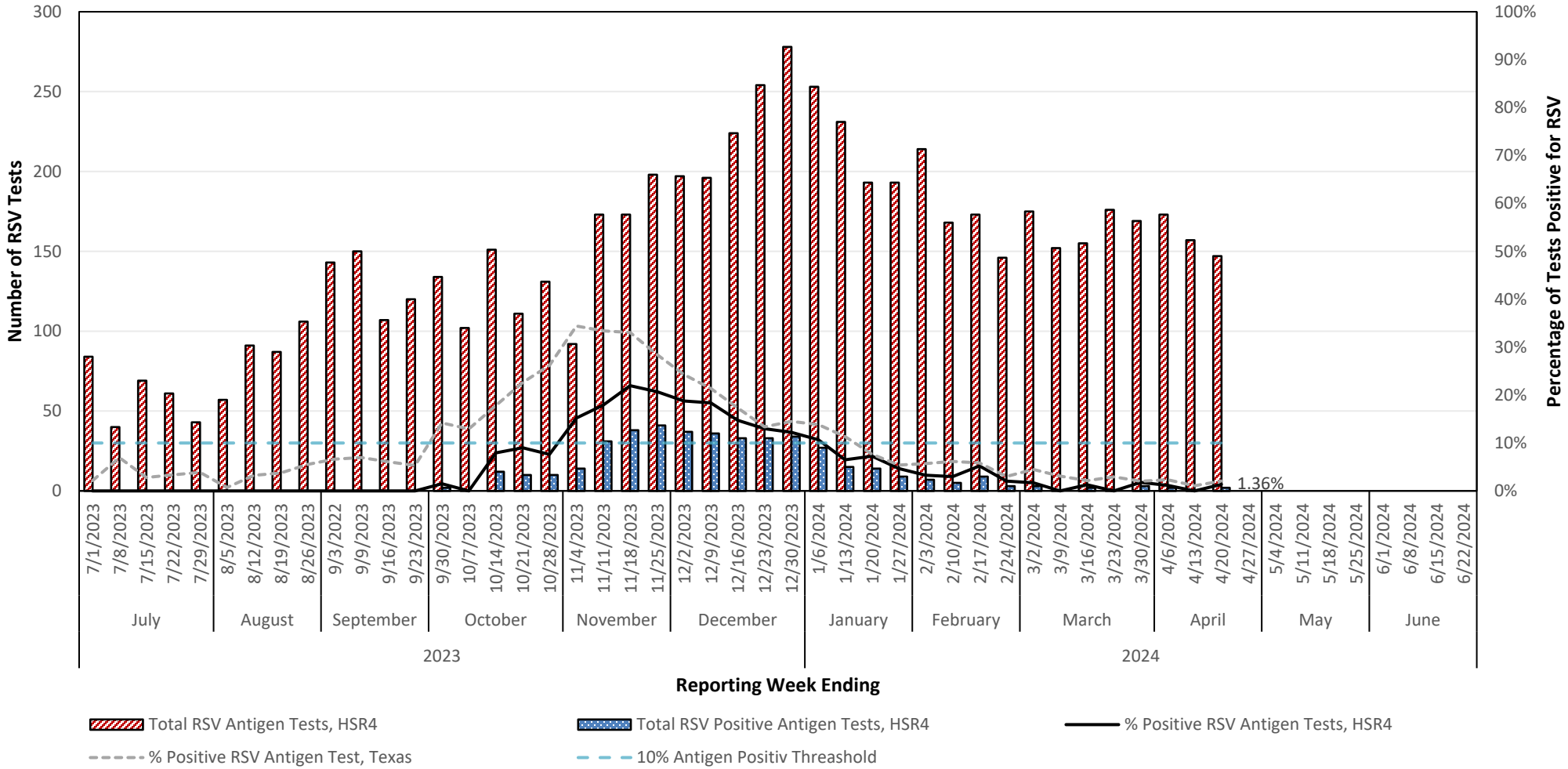
Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 2 (Northwest Texas), 2023-2024 Season



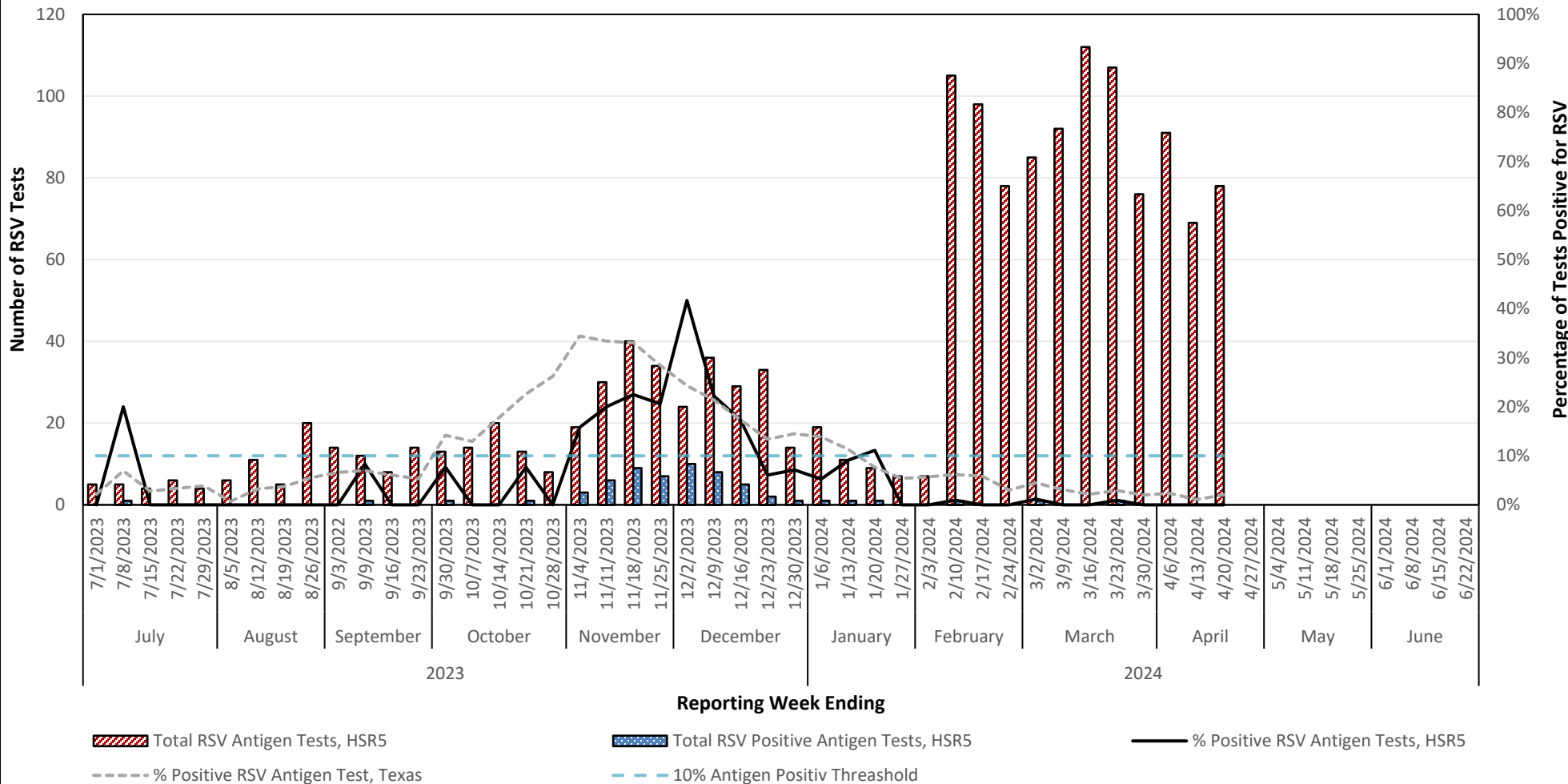
Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 3 (DFW Metroplex), 2023-2024 Season



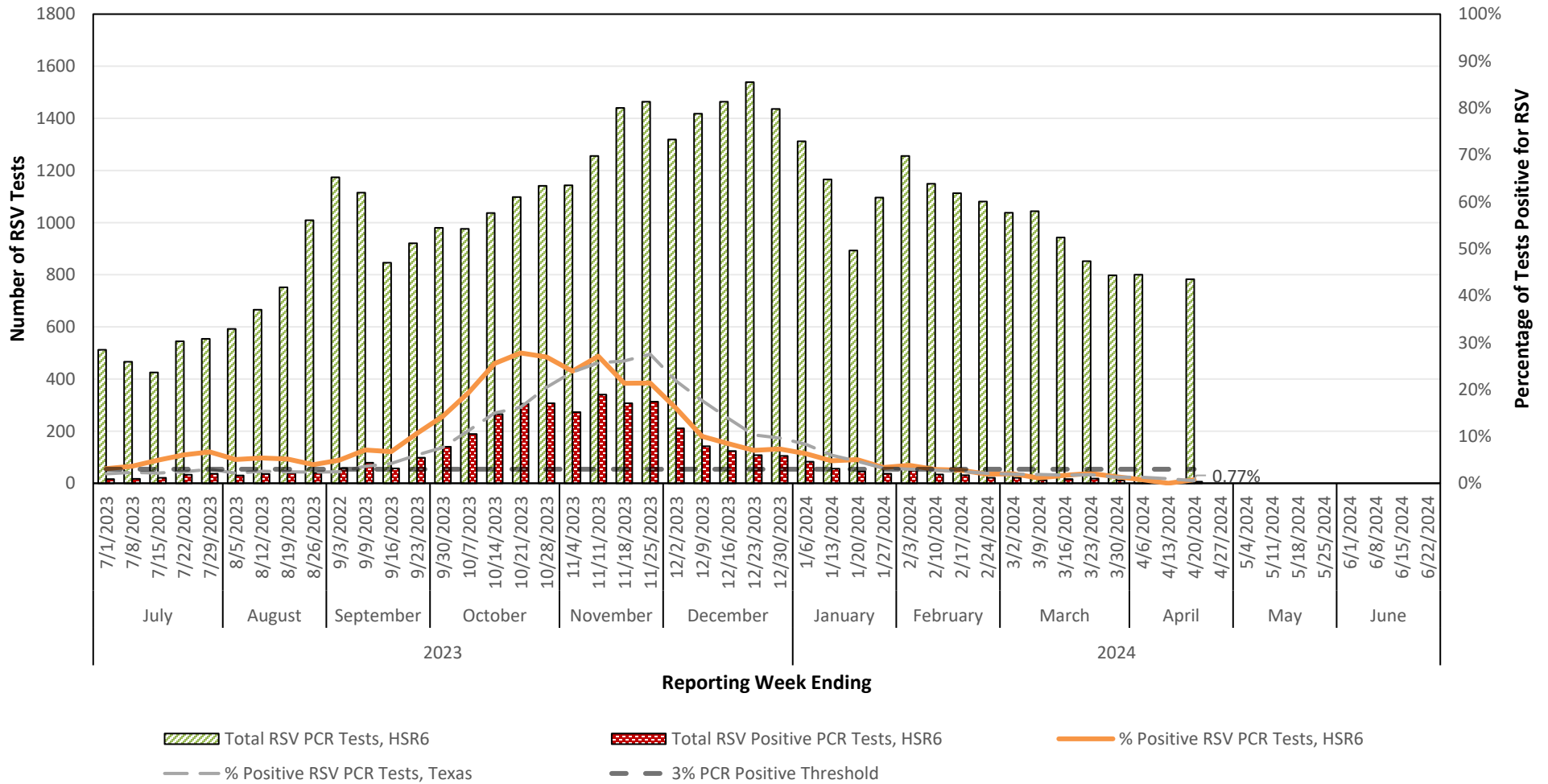
Number & Percentage of Antigen Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 4 (Upper East Texas), 2023-2024 Season



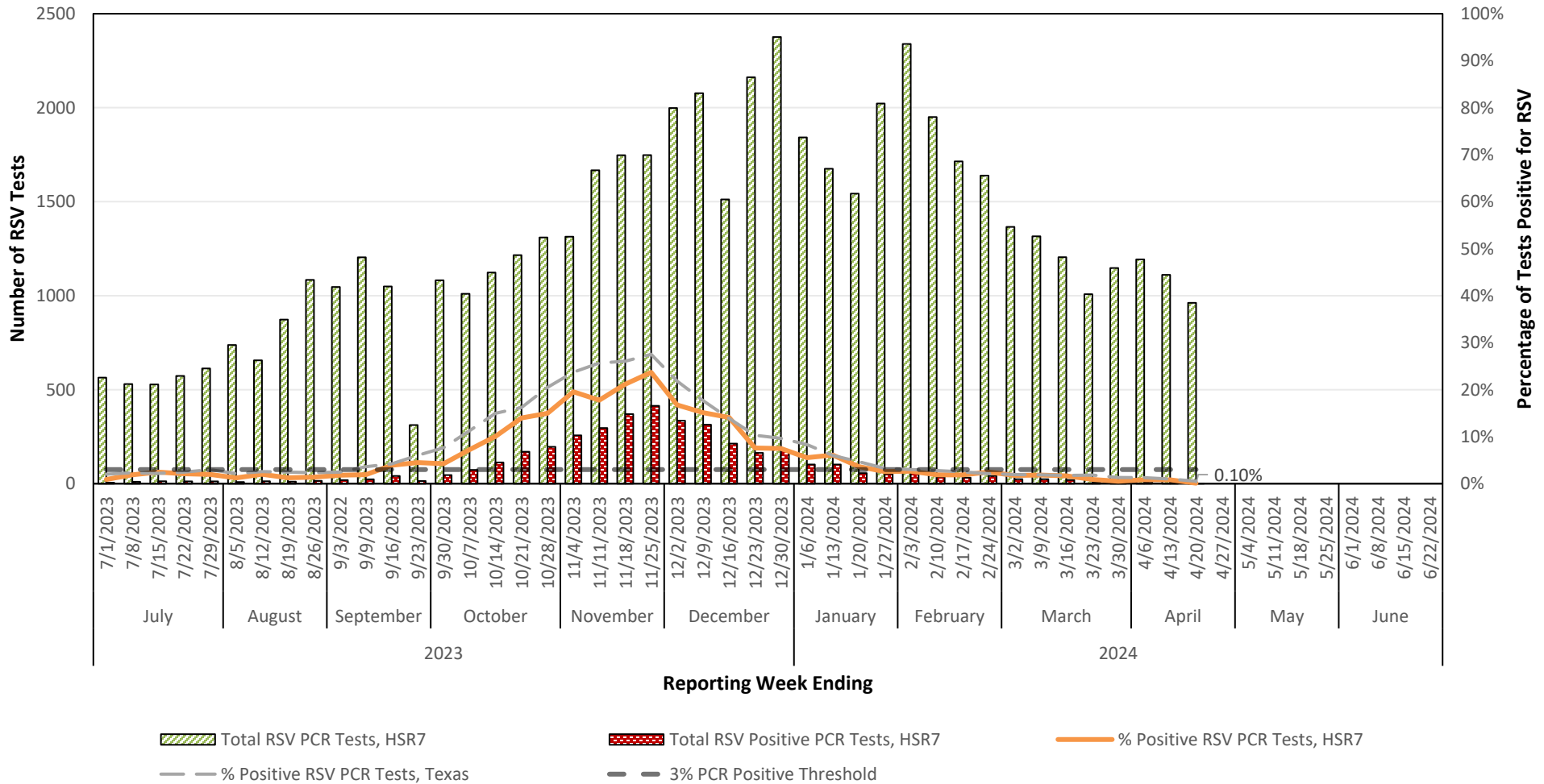
Number & Percentage of Antigen Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 5 (Southeast), 2023-2024 Season



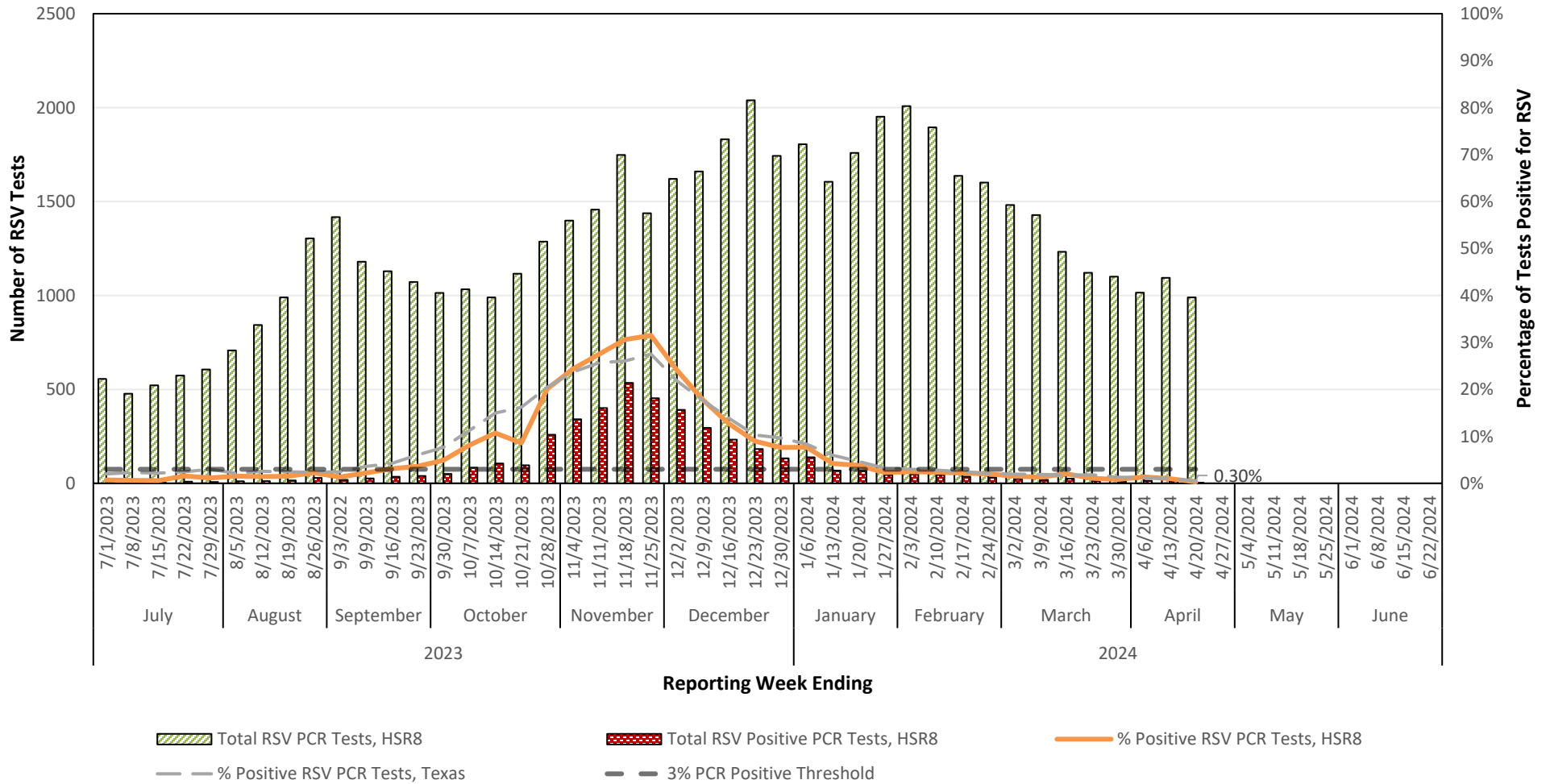
Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 6 (Gulf Coast/Houston), 2023-2024 Season



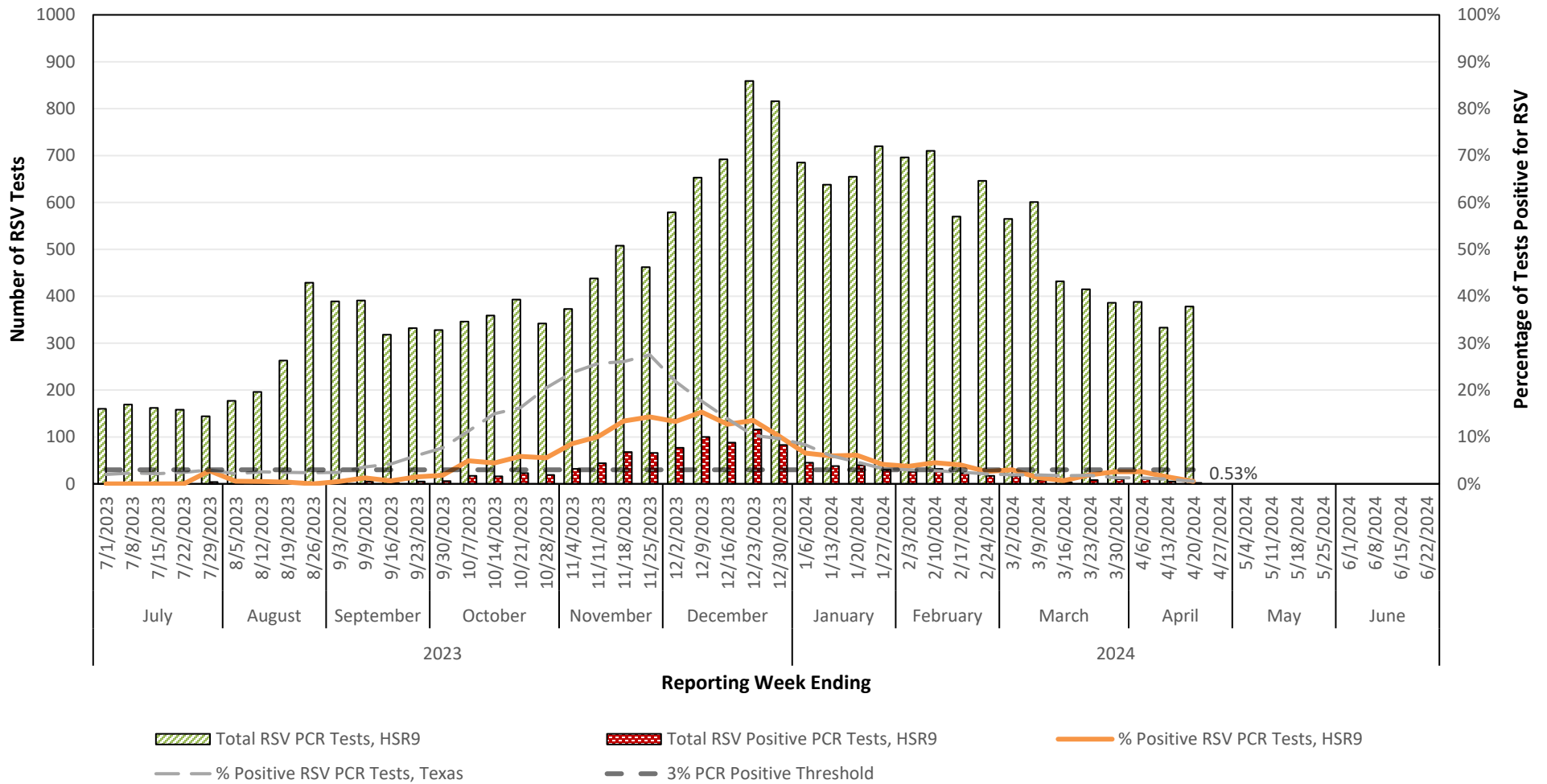
Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 7 (Central Texas), 2023-2024 Season



Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 8 (Upper South Texas), 2023-2024 Season



Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 9 (West Texas/Midland/Odessa), 2023-2024 Season



Number & Percentage of PCR Tests Positive for Respiratory Syncytial Virus (RSV) Health Service Region 11 (Lower South Texas), 2023-2024 Season

