



Texas Influenza Surveillance Summer Report 2018-2019 Season/2019 MMWR Week 39

(September 22, 2019 – September 28, 2019)

Report produced on 10/4/2019

Summary

Influenza activity is low across the state of Texas. The influenza season appears to have peaked in mid-February. Compared to the previous week, the percentage of patient visits due to influenza-like illness (ILI) has increased. The percentage of specimens testing positive for influenza reported by hospital laboratories has increased. No influenza-associated pediatric deaths were reported. No ILI/influenza-associated outbreaks were reported. In addition to flu, other respiratory viruses—especially rhinovirus—were detected in Texas during week 39.

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 influenza activity level reported to CDC (geographic spread of influenza) | Not determined during the summer | N/A | N/A | -- |
| Statewide ILINet Activity Indicator assigned by CDC (intensity of influenza-like illness) | Not determined during the summer | N/A | N/A | -- |
| Percentage of specimens positive for influenza by hospital laboratories | ▲ 0.25% | 1.67% | 1.42% | 1 |
| Percentage of visits due to ILI (ILINet) | ▲ 0.23% | 2.07% | 1.84% | 2 |
| Number of regions reporting increased flu/ILI activity | ▲ 2 | 3 | 1 | 4 |
| Number of regions reporting decreased flu/ILI activity | ▲ 1 | 2 | 1 | 4 |
| Number of variant/novel influenza infections | No cases reported | 0 | 0 | 4 |
| Number of ILI/influenza outbreaks | No change | 0 | 0 | 4 |
| Number of pediatric influenza deaths | No change | 0 | 0 | 5 |

[†]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. 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 39 | Season to Date Week Ending: September 28, 2019 |
|---|--------------------|--|
| Number of labs reporting flu tests | 19 | |
| Number of specimens tested | 1437 | 192315 |
| Number of positive specimens (%) [†] | 24 (1.67%) | 31296 (16.27%) |
| Percentage of total tests that were antigen detection tests | 36.12% | |
| Positive specimens by type/subtype [n (%)] | | |
| Influenza A | 10 (41.67%) | 27352 (87.40%) |
| Subtyping performed | 2 (20.00%) | 2227 (8.14%) |
| A (H1N1) | 2 (100.00%) | 667 (29.95%) |
| A (H3N2) | 0 (0.00%) | 1560 (70.05%) |
| Subtyping not performed | 8 (80.00%) | 25125 (91.86%) |
| Influenza B | 14 (58.33%) | 3944 (12.60%) |

[†]Laboratory data in 2016-2017 and 2017-2018 season reports may not be comparable to reports from seasons previous to 2016-2017 because the data only includes hospital laboratories data for the current season.

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

| | Week 39 | Season to Date Week Ending: September 28, 2019 |
|---|------------------|--|
| Number of labs reporting flu tests | 3 | |
| Number of specimens tested | 10 | 2841 |
| Number of positive specimens (%) [†] | 0 (0.00%) | 1466 (51.60%) |
| Positive specimens by type/subtype/lineage [n (%)] | | |
| Influenza A | 0 (0.00%) | 1346 (91.81%) |
| Subtyping performed | 0 (0.00%) | 1332 (98.96%) |
| A (H1N1) | 0 (0.00%) | 431 (32.36%) |
| A (H3N2) | 0 (0.00%) | 901 (67.64%) |
| Subtyping not performed | 0 (0.00%) | 14 (1.04%) |
| Influenza B | 0 (0.00%) | 120 (8.19%) |
| Lineage testing performed | 0 (0.00%) | 103 (85.83%) |
| B/Victoria | 0 (0.00%) | 80 (77.67%) |
| B/Yamagata | 0 (0.00%) | 23 (22.33%) |
| Lineage testing not performed | 0 (0.00%) | 17 (14.17%) |
| Other* | 0 (0.00%) | 0 (0.00%) |

[†]Laboratory data in 2016-2017, 2017-2018, and 2018-2019 seasons reports may not be comparable to reports from seasons previous to 2016-2017 because the data only includes hospital laboratories data for the current season

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

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 4: 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) | 11 | 688 | 26 | 3.78% |
| HMPV | 12 | 762 | 0 | 0.00% |
| Parainfluenza virus | 13 | 985 | 55 | 5.58% |
| Rhinovirus | 11 | 688 | 238 | 34.59% |
| RSV ^{†^} | 21 | 913 | 45 | 4.93% |
| Seasonal coronavirus (does not include MERS-CoV) | 8 | 560 | 8 | 1.43% |

[†]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>.

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

Table 5: Texas ILINet Reporting and Patient Visit Summary for the Current Week

| | Week 39 |
|--|-------------|
| Number of providers reporting [†] | 92 |
| Number of providers reporting patient visits | 92 |
| Number (%) of providers with at least one ILI case | 74 (80.43%) |
| Percentage of all visits due to ILI | 2.07% |
| Texas ILINet baseline [‡] , 2018-2019 | 5.60% |

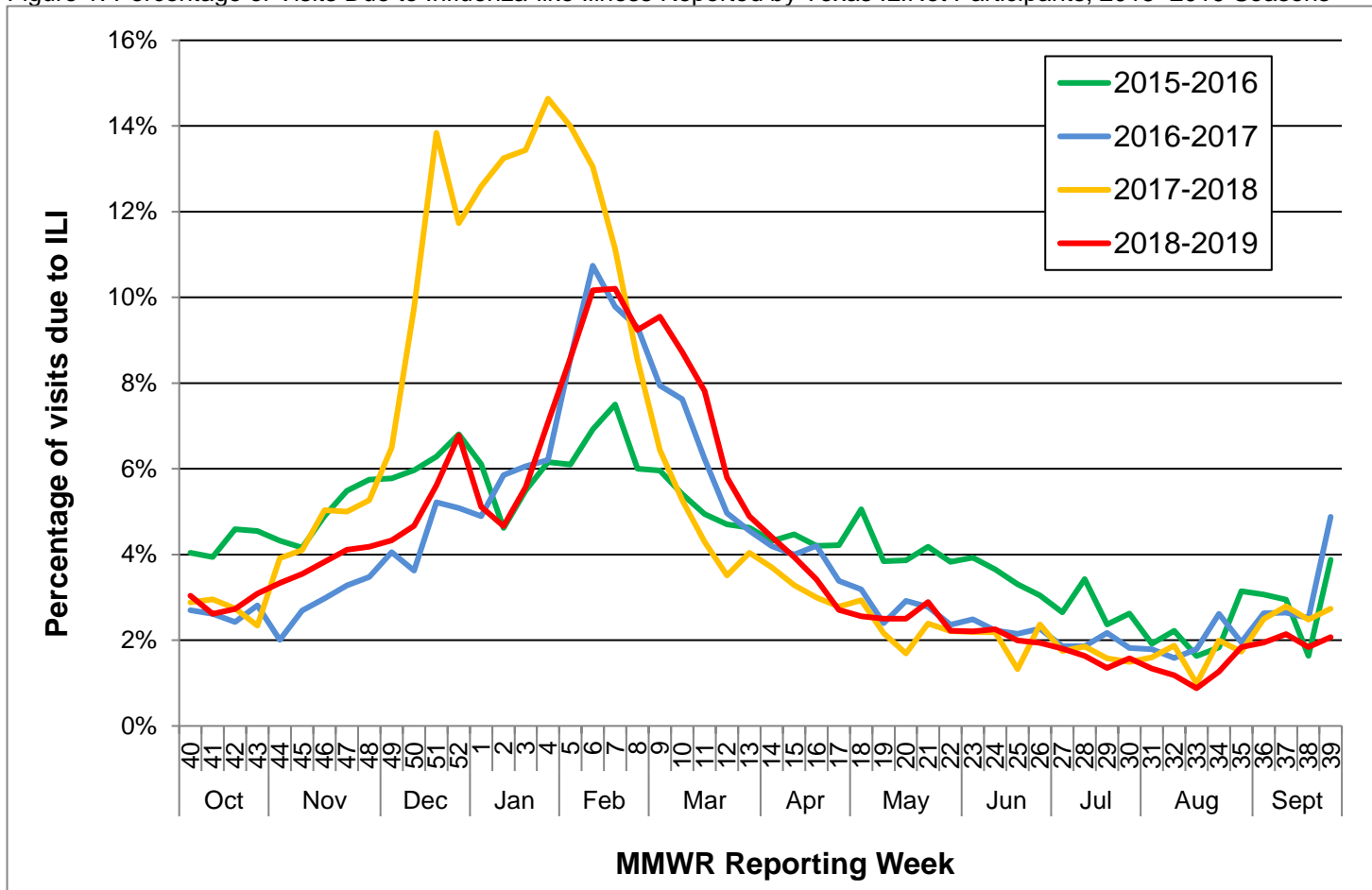
[†]Reporting providers include both ILINet and RVSP providers.

[‡]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

Table 6: Percentage of Visits for Influenza-like Illness Reported by Texas ILINet Providers (as of 10/03/2019 2:29 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+ | | | |
| 201840 | 114 | 139 | 341 | 169 | 132 | 135 | 916 | 30158 | 3.04% |
| 201841 | 113 | 155 | 216 | 185 | 116 | 98 | 770 | 29476 | 2.61% |
| 201842 | 113 | 126 | 275 | 180 | 92 | 120 | 793 | 29031 | 2.73% |
| 201843 | 112 | 165 | 335 | 209 | 108 | 128 | 945 | 30576 | 3.09% |
| 201844 | 114 | 168 | 357 | 230 | 121 | 139 | 1015 | 30443 | 3.33% |
| 201845 | 116 | 225 | 388 | 253 | 118 | 136 | 1120 | 31595 | 3.54% |
| 201846 | 116 | 227 | 374 | 278 | 168 | 130 | 1177 | 30725 | 3.83% |
| 201847 | 116 | 199 | 249 | 236 | 134 | 125 | 943 | 22934 | 4.11% |
| 201848 | 115 | 261 | 396 | 310 | 213 | 179 | 1359 | 32471 | 4.19% |
| 201849 | 115 | 217 | 406 | 303 | 188 | 199 | 1313 | 30324 | 4.33% |
| 201850 | 115 | 254 | 494 | 308 | 167 | 157 | 1380 | 29536 | 4.67% |
| 201851 | 107 | 267 | 472 | 363 | 206 | 213 | 1521 | 27103 | 5.61% |
| 201852 | 107 | 238 | 433 | 406 | 202 | 165 | 1444 | 21301 | 6.78% |
| 201901 | 111 | 196 | 305 | 462 | 173 | 108 | 1244 | 24340 | 5.11% |
| 201902 | 111 | 219 | 405 | 443 | 165 | 99 | 1331 | 28543 | 4.66% |
| 201903 | 114 | 258 | 665 | 472 | 153 | 73 | 1621 | 29076 | 5.58% |
| 201904 | 116 | 288 | 980 | 521 | 202 | 101 | 2092 | 29554 | 7.08% |
| 201905 | 114 | 292 | 1501 | 605 | 203 | 83 | 2684 | 31267 | 8.58% |
| 201906 | 116 | 383 | 1896 | 734 | 265 | 85 | 3363 | 33084 | 10.17% |
| 201907 | 117 | 407 | 1710 | 804 | 235 | 121 | 3277 | 32118 | 10.20% |
| 201908 | 117 | 344 | 1431 | 784 | 278 | 75 | 2912 | 31515 | 9.24% |
| 201909 | 117 | 354 | 1483 | 827 | 274 | 117 | 3055 | 31990 | 9.55% |
| 201910 | 119 | 325 | 1376 | 678 | 255 | 100 | 2734 | 31343 | 8.72% |
| 201911 | 116 | 288 | 846 | 637 | 223 | 115 | 2109 | 26992 | 7.81% |
| 201912 | 119 | 237 | 694 | 523 | 215 | 95 | 1764 | 30442 | 5.79% |
| 201913 | 114 | 236 | 603 | 388 | 125 | 59 | 1411 | 28825 | 4.90% |
| 201914 | 116 | 194 | 558 | 319 | 126 | 35 | 1232 | 27964 | 4.41% |
| 201915 | 118 | 181 | 535 | 298 | 92 | 46 | 1152 | 29229 | 3.94% |
| 201916 | 114 | 150 | 415 | 251 | 76 | 37 | 929 | 27143 | 3.42% |
| 201917 | 98 | 67 | 260 | 231 | 67 | 32 | 657 | 24247 | 2.71% |
| 201918 | 114 | 135 | 310 | 168 | 70 | 39 | 722 | 28211 | 2.56% |
| 201919 | 103 | 119 | 270 | 148 | 57 | 26 | 620 | 24747 | 2.51% |
| 201920 | 105 | 114 | 245 | 148 | 49 | 41 | 597 | 23869 | 2.50% |
| 201921 | 66 | 123 | 217 | 102 | 42 | 23 | 507 | 17519 | 2.89% |
| 201922 | 99 | 86 | 175 | 117 | 36 | 28 | 442 | 19918 | 2.22% |
| 201923 | 95 | 96 | 178 | 125 | 45 | 30 | 474 | 21463 | 2.21% |
| 201924 | 90 | 98 | 145 | 113 | 42 | 63 | 461 | 20432 | 2.26% |
| 201925 | 96 | 106 | 132 | 110 | 33 | 26 | 407 | 20435 | 1.99% |
| 201926 | 56 | 64 | 113 | 82 | 29 | 12 | 300 | 15471 | 1.94% |
| 201927 | 94 | 65 | 125 | 92 | 30 | 16 | 328 | 18187 | 1.80% |
| 201928 | 58 | 70 | 89 | 62 | 24 | 9 | 254 | 15531 | 1.64% |
| 201929 | 96 | 62 | 92 | 79 | 33 | 15 | 281 | 20791 | 1.35% |
| 201930 | 94 | 77 | 83 | 101 | 38 | 18 | 317 | 20060 | 1.58% |
| 201931 | 94 | 63 | 101 | 72 | 29 | 16 | 281 | 21000 | 1.34% |
| 201932 | 93 | 55 | 63 | 86 | 41 | 8 | 253 | 21374 | 1.18% |
| 201933 | 89 | 56 | 58 | 66 | 13 | 5 | 198 | 22518 | 0.88% |
| 201934 | 92 | 69 | 118 | 72 | 22 | 17 | 298 | 23482 | 1.27% |
| 201935 | 94 | 136 | 180 | 83 | 39 | 12 | 450 | 24437 | 1.84% |
| 201936 | 94 | 109 | 182 | 116 | 30 | 14 | 451 | 23214 | 1.94% |
| 201937 | 96 | 154 | 223 | 111 | 39 | 22 | 549 | 25594 | 2.15% |
| 201938 | 81 | 50 | 160 | 111 | 42 | 27 | 390 | 21210 | 1.84% |
| 201939 | 92 | 157 | 194 | 103 | 42 | 18 | 514 | 24830 | 2.07% |

Figure 1: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2015–2019 Seasons



Reports from Health Service Regions

Reports were received from seven Health Service Regions (HSRs) during week 39.

Table 7: Influenza Activity Compared to Week 38 by Health Service Region (HSR)

| Influenza Activity Comparison | Health Service Region (HSR) |
|-------------------------------|-----------------------------|
| Increased | 6/5S, 7, and 11 |
| Same | 2/3 and 9/10 |
| Decreased | 1 and 8 |
| Unsure | |

Variant Influenza Viruses

No variant or novel influenza viruses have been detected in Texas during the 2018-2019 season.

Institutional Outbreaks and School Closures

There were no outbreaks or school closures reported in week 39 during the 2018-2019 season.

P&I Mortality Surveillance Data

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. In particular, P&I deaths are based on ICD-10 pneumonia and influenza mortality codes.

Ten thousand and twenty P&I deaths have been reported in Texas during the 2018-2019 influenza season.

Table 8: Texas P&I Deaths Occurring Sept. 30, 2018- September 26, 2019* by Age

| Age Category (years) | Number of P&I Deaths ⁺ | Mortality Rate (per 100,000) |
|----------------------|-----------------------------------|------------------------------|
| 0 - 4 | 42 | 1.96 |
| 5 - 17 | 40 | 0.72 |
| 18 - 49 | 642 | 4.84 |
| 50 - 64 | 1702 | 32.81 |
| 65 + | 7594 | 198.0 |
| Overall | 10020 | 33.46 |

*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 9: Texas P&I Deaths Occurring Sept. 30, 2018- September 26, 2019* by Health Service Region (HSR)

| HSR | Number of P&I Deaths | Mortality Rate (per 100,000) |
|---------|----------------------|------------------------------|
| 1 | 369 | 39.62 |
| 2/3 | 2926 | 33.77 |
| 4/5N | 787 | 48.02 |
| 6/5S | 2375 | 30.29 |
| 7 | 1114 | 30.36 |
| 8 | 1087 | 35.16 |
| 9/10 | 508 | 31.76 |
| 11 | 848 | 33.75 |
| Unknown | <10 | N/A |
| Overall | 10020 | 33.46 |

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

Influenza-Associated Pediatric Mortality

No influenza-associated pediatric deaths were reported in week 39.

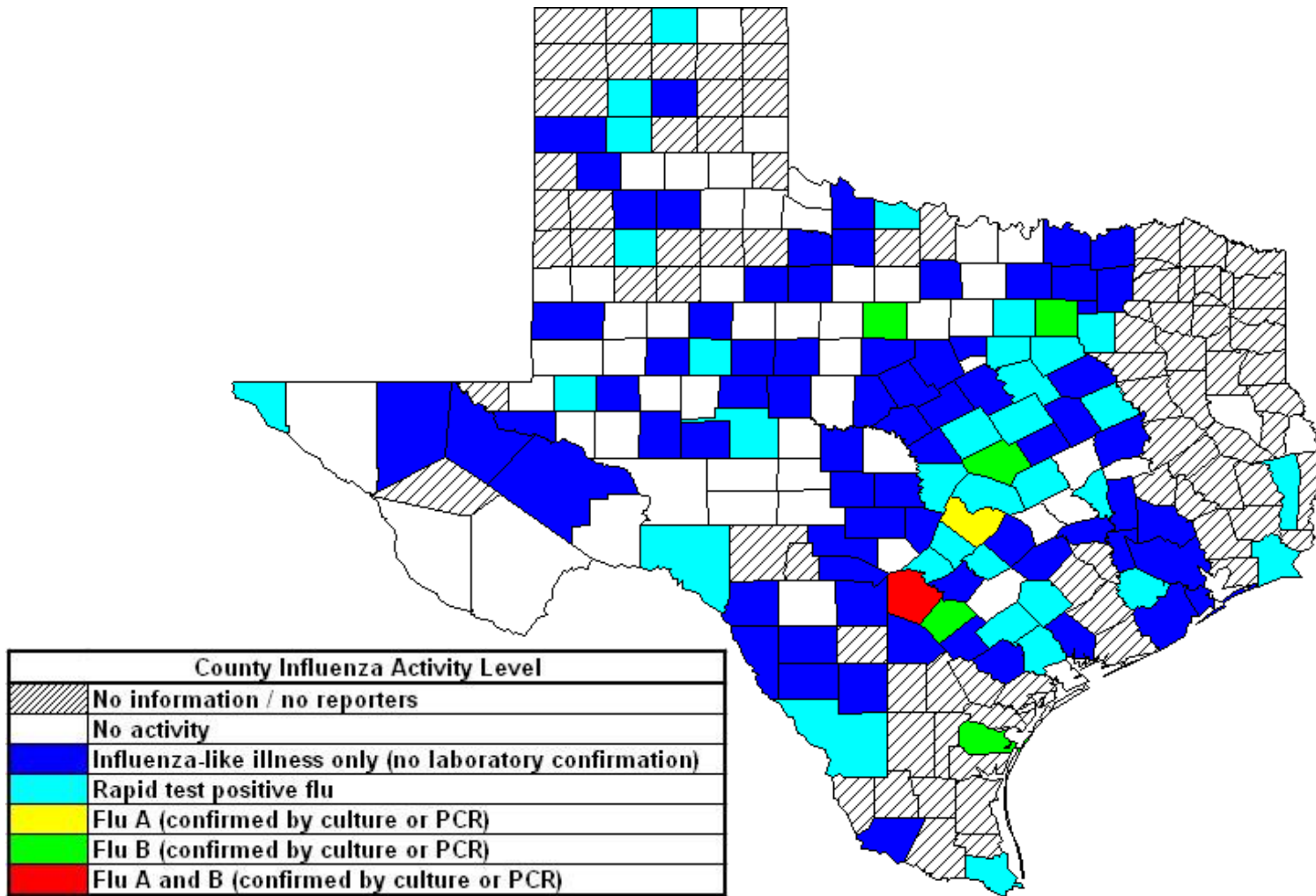
Seventeen influenza-associated pediatric deaths have been reported in Texas during the 2018-2019 influenza season. Cases of influenza-associated pediatric mortality (children <18 years of age) are reportable year-round and by law in Texas.

Table 10: Influenza-Associated Pediatric Deaths Reported in Texas during the 2018-2019 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 |
|--------------------------|--------------------|--------------------|----------------------------|-------------|---|--|---------------------------------------|
| 2018 | | | | | | | |
| October | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| November | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | | | | | | | |
| January | 1 | 1 | 4 | 1 | 0 | 0 | 7 |
| February | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| March | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| April | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| May | 1 | 0 | 2 | 0 | 0 | 0 | 3 |
| June | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| July | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| August | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| September | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 1 | 10 | 3 | 0 | 0 | 17 |

Statewide Influenza Activity Map

Figure 2: Texas Map Displaying the Highest Level of Influenza or ILI Activity Reported by County for the Week Ending Sept. 28, 2019 (MMWR Week 39)



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.

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/>