

Denton County Public Health

2018 – 2019 Influenza Surveillance Program

CDC Week 5, Week Ending February 2, 2019



Epidemiologic Overview

Denton County

- High influenza activity was reported in Denton County for week 5.
- 286 positive influenza tests (271 Flu A and 15 Flu B) and 24 hospitalizations were reported by Denton County sentinel providers for week 5.
- Syndromic surveillance for influenza-like illness (ILI) in Denton County increased for week 5 when compared to the previous week.
- 1.5% of the total reported school population was absent due to ILI in week 5.

Texas

- Influenza activity in the state of Texas was reported as widespread in week 5.
- The percentage of visits for ILI as reported by ILINet providers increased to 8.6% in week 5 compared to the previous week.
- The percentage of specimens testing positive for influenza in Texas increased to 31.0% in week 5 compared to the previous week.

US

- The proportion of outpatient visits for influenza-like illness (ILI) was 4.3%, which is above the national baseline of 2.2%. 10 of 10 regions reported ILI at or above their region-specific baseline level.
- The geographic spread of influenza in 47 states was reported as widespread; 2 states was reported as regional; and 1 state was reported as local.
- The percentage of specimens testing positive for influenza in the US was 21.6%.
- The proportion of deaths attributed to pneumonia and influenza (P&I) from the National Center for Health Statistics Mortality Surveillance System for week 4 was 6.9%. This percentage is below the epidemic threshold of 7.2% for week 4.

Figure 1. Influenza Surveillance Summary: Denton County Hospitals and Providers

| Week Ending | 12/29/18 | 1/05/19 | 1/12/19 | 1/19/19 | 1/26/19 | 2/2/19 | 9/22/18 - Present |
|--|----------|---------|---------|---------|---------|--------|-------------------|
| CDC Week | 52 | 1 | 2 | 3 | 4 | 5 | |
| Influenza Tests Performed Weekly | 691 | 596 | 569 | 557 | 715 | 979 | 8836 |
| Total Positive Influenza Tests | 105 | 52 | 54 | 95 | 171 | 286 | 939 |
| Percent Positive Influenza Tests* | 15.2% | 8.7% | 9.5% | 17.1% | 23.9% | 29.2% | |
| Positive A Influenza | 83 | 40 | 45 | 83 | 158 | 271 | 779 |
| Positive B Influenza | 22 | 12 | 9 | 12 | 13 | 15 | 160 |
| Non-differentiated Influenza | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Influenza Hospitalizations | 16 | 15 | 11 | 4 | 19 | 24 | 122 |
| Influenza-associated Pediatric Deaths | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Influenza-associated Adult Deaths | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

* Percent positive tests only includes positive tests from providers reporting number of tests performed weekly

Figure 2. Influenza Positive Tests and Percent Positive, Denton County Hospitals and Providers, 2018-2019 Season

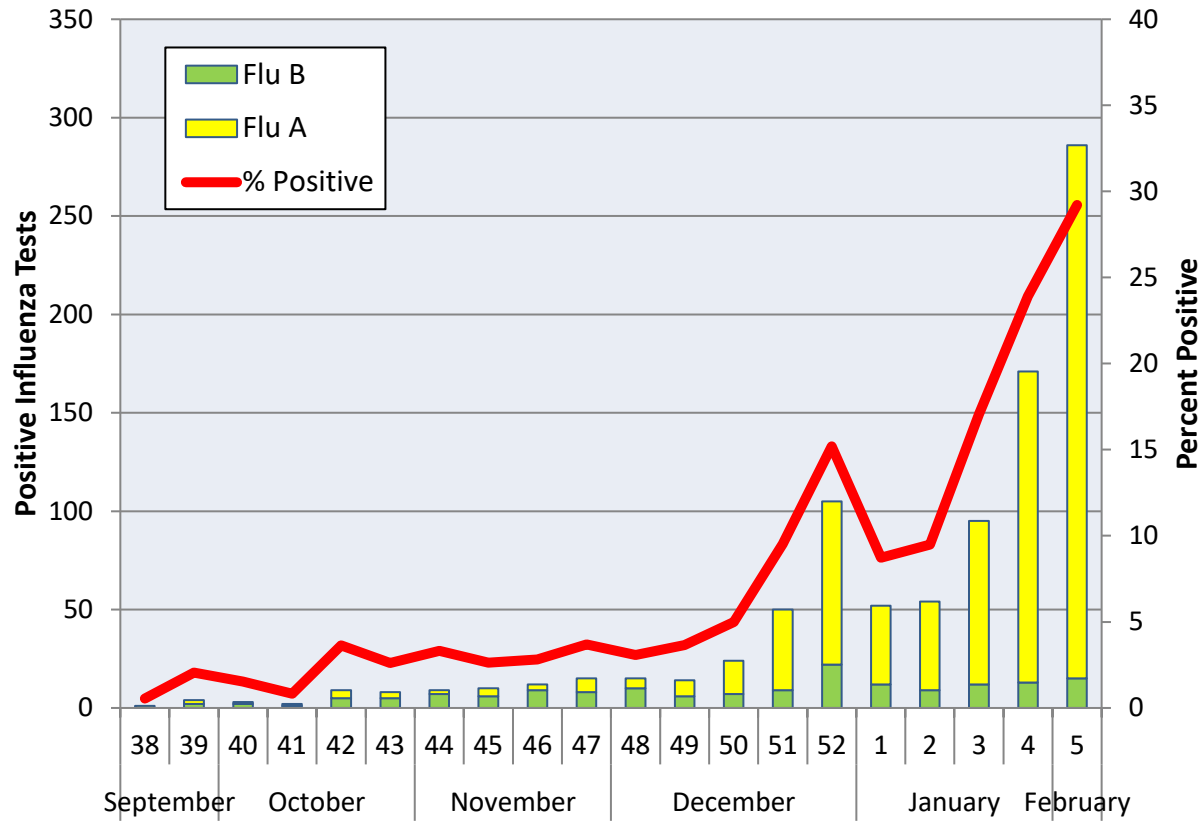
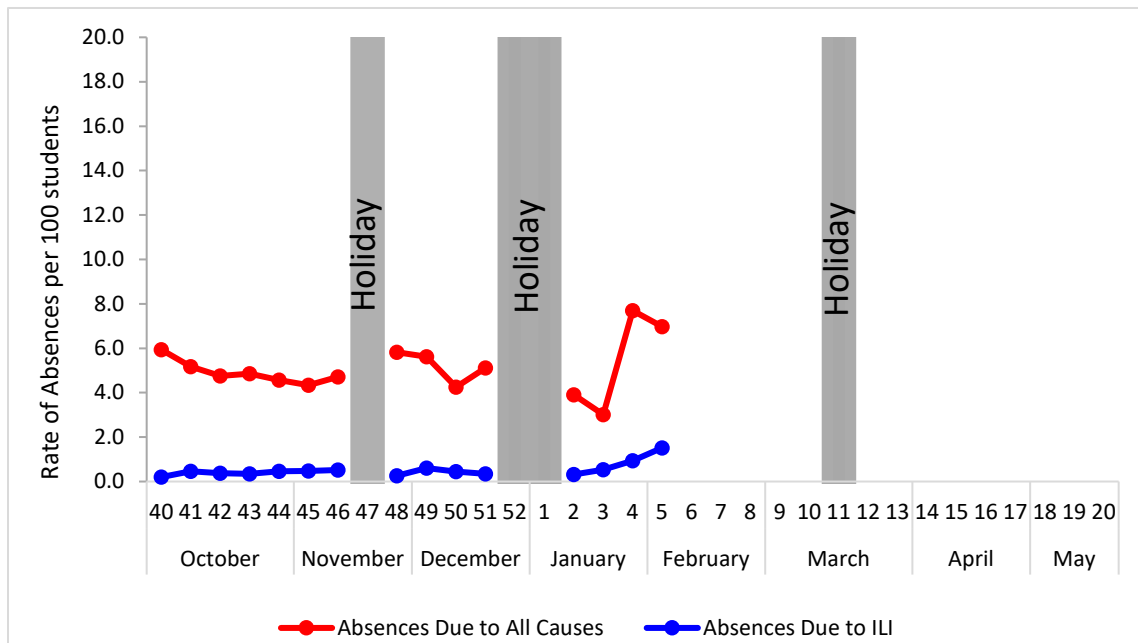


Figure 3. Percent of Absenteeism Due to All Causes and ILI, Denton County Schools*, 2018-2019 Season



*During week 5, a total of 3 Denton County Independent School Districts reported data to Denton County Public Health which included a total of 18,820 students.

Figure 4. Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, September 30, 2018 – February 2, 2019

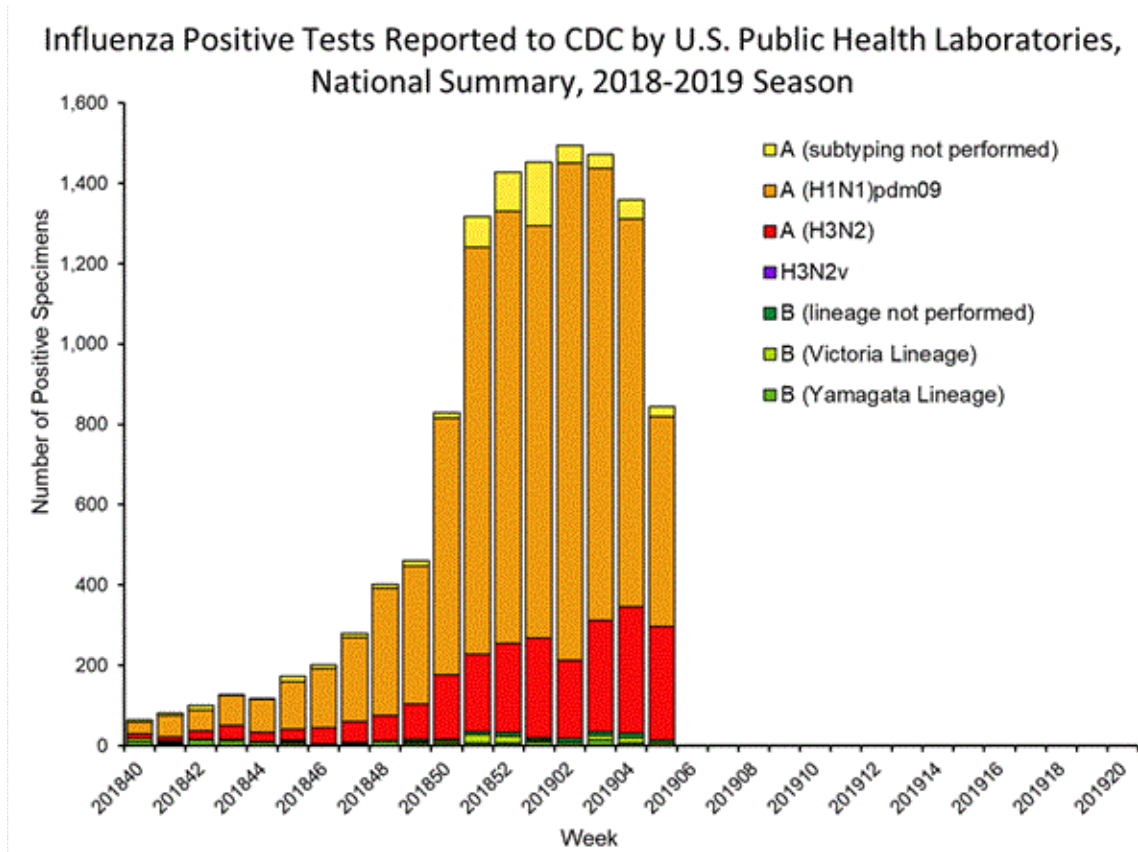


Figure 5. Influenza Positive Tests Reported to CDC by U.S. Clinical Laboratories, National Summary, September 30, 2018 – February 2, 2019

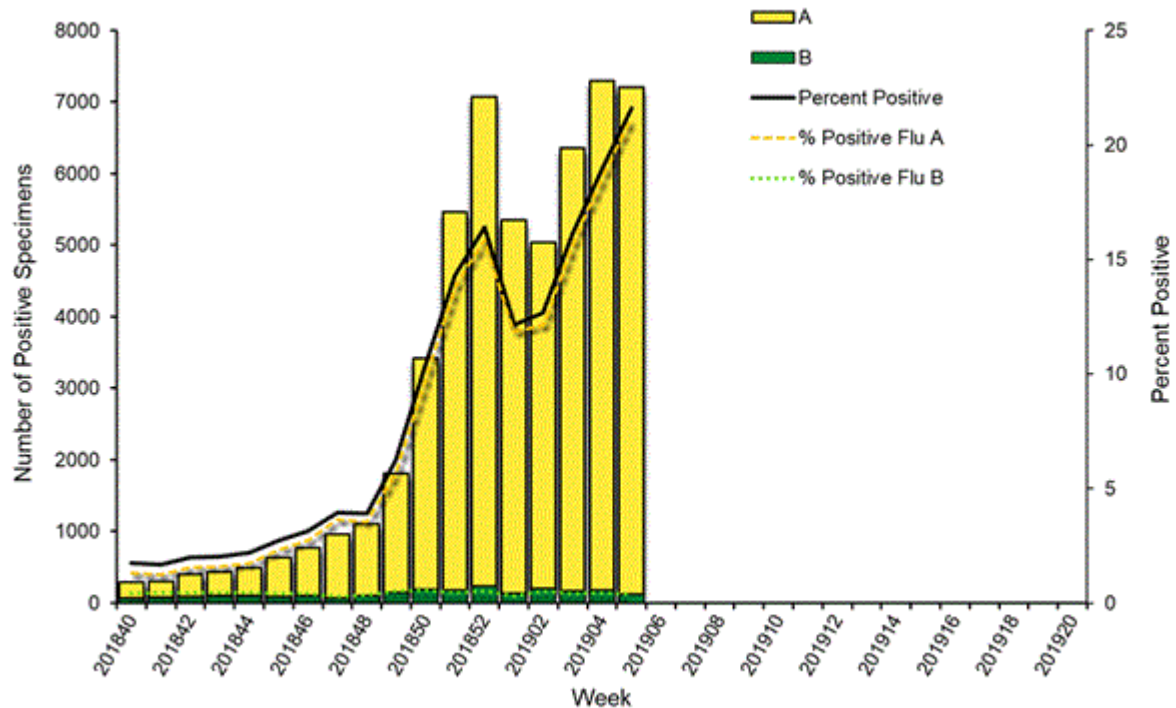


Figure 6. Antigenic Characterization of Influenza Isolates, Since September 30, 2018

| | |
|--------------------------------|---|
| Influenza A (H1N1) | 191 of 194 (98.5%) – A/Michigan/45/2015 pdm09-like |
| Influenza A (H3N2) | 102 of 145 (70.3%) – A/Singapore/INFIMH-16-0019/2016-like |
| Influenza B (Victoria Lineage) | 15 of 21 (71.4%) – B/Colorado/06/2017-like |
| Influenza B (Yamagata Lineage) | 33 of 33 (100%) – B/Phuket/3073/2013-like* |

2018-2019 Influenza Vaccine Composition, Northern Hemisphere:

- A/Michigan/45/2015 pdm09-like
- A/Singapore/INFIMH-16-0019/2016-like
- B/Colorado/06/2017-like
- B/Phuket/3073/2013-like*

*2018-2019 Northern Hemisphere quadrivalent influenza vaccine influenza B component

Figure 7. U.S. Virologic Surveillance, Week 5

| | Week 5 | Data Cumulative since September 30, 2018 (Week 40) |
|-----------------------------------|---------------|--|
| No. of specimens tested | 33,362 | 536,301 |
| No. of positive specimens (%) | 7,205 (21.6%) | 54,381 (10.1%) |
| <i>Positive specimens by type</i> | | |
| Influenza A | 7,080 (98.3%) | 52,028 (95.7%) |
| Influenza B | 125 (1.7%) | 2,353 (4.3%) |

Figure 8. ESSENCE Syndromic Surveillance for Influenza-like Illness: Denton County, August 1, 2018- February 2, 2019

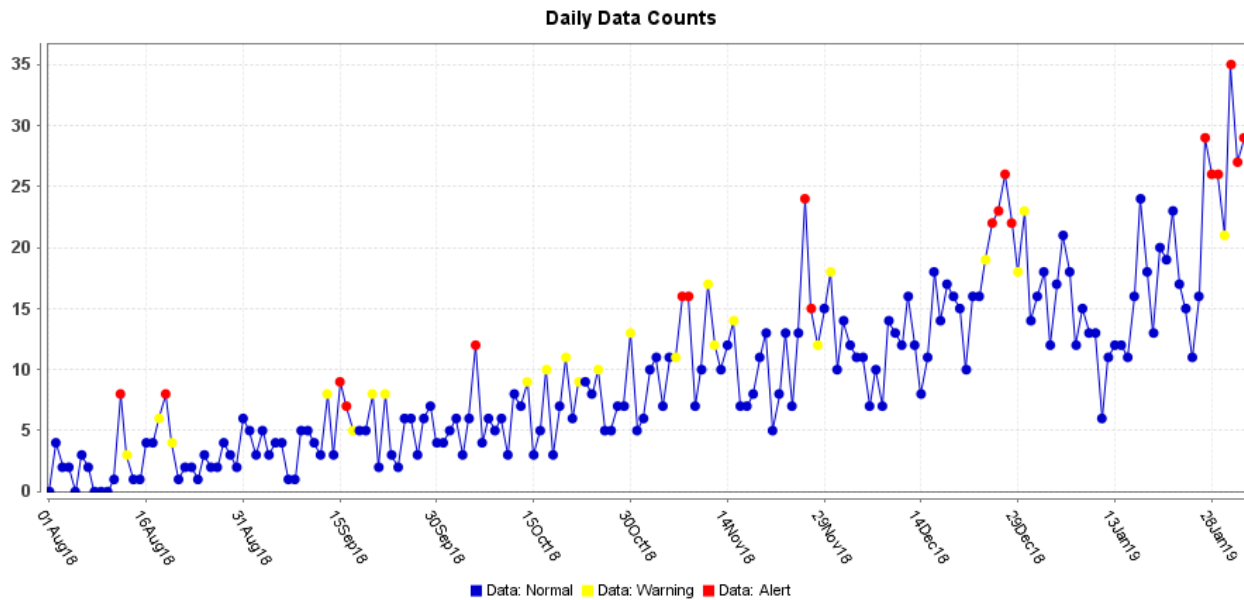
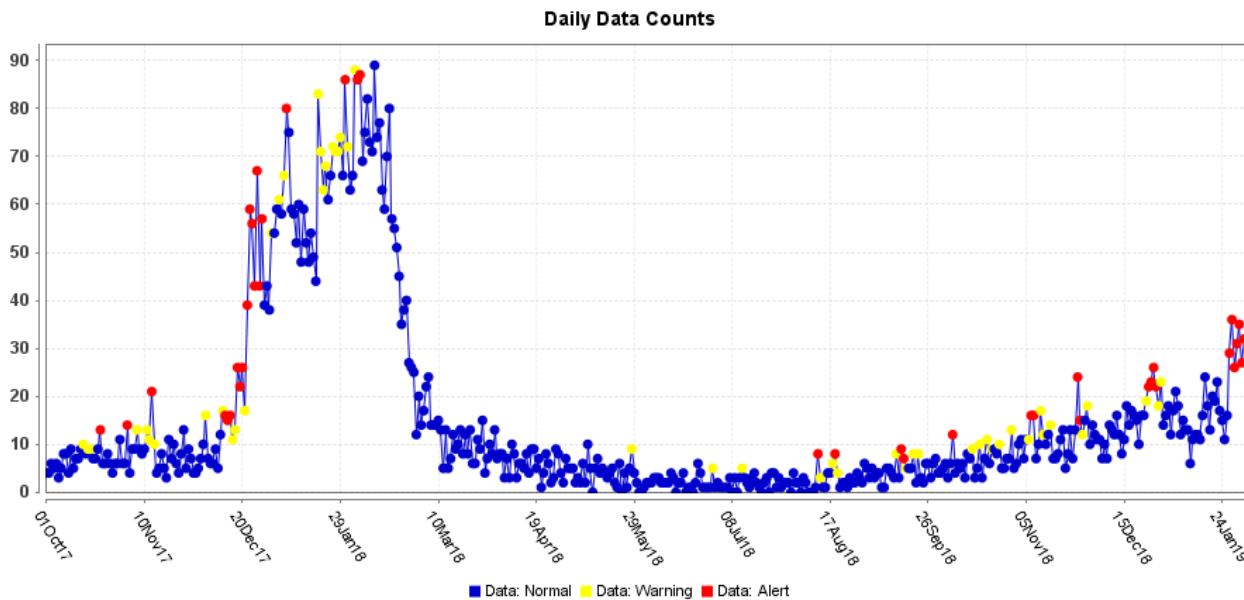


Figure 9. ESSENCE Syndromic Surveillance for Influenza-like Illness: Denton County, October 1, 2017 – February 2, 2019



Data obtained from hospitals participating in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) from October 2017 through the present. Depicted are the numbers of persons presenting to Emergency Departments according to patient location (Denton region) with self-reported chief complaints of influenza-like illness.

Figure 10. Pneumonia and Influenza Mortality from the National Center for Health Statistics Mortality Surveillance System: Week ending January 26, 2018

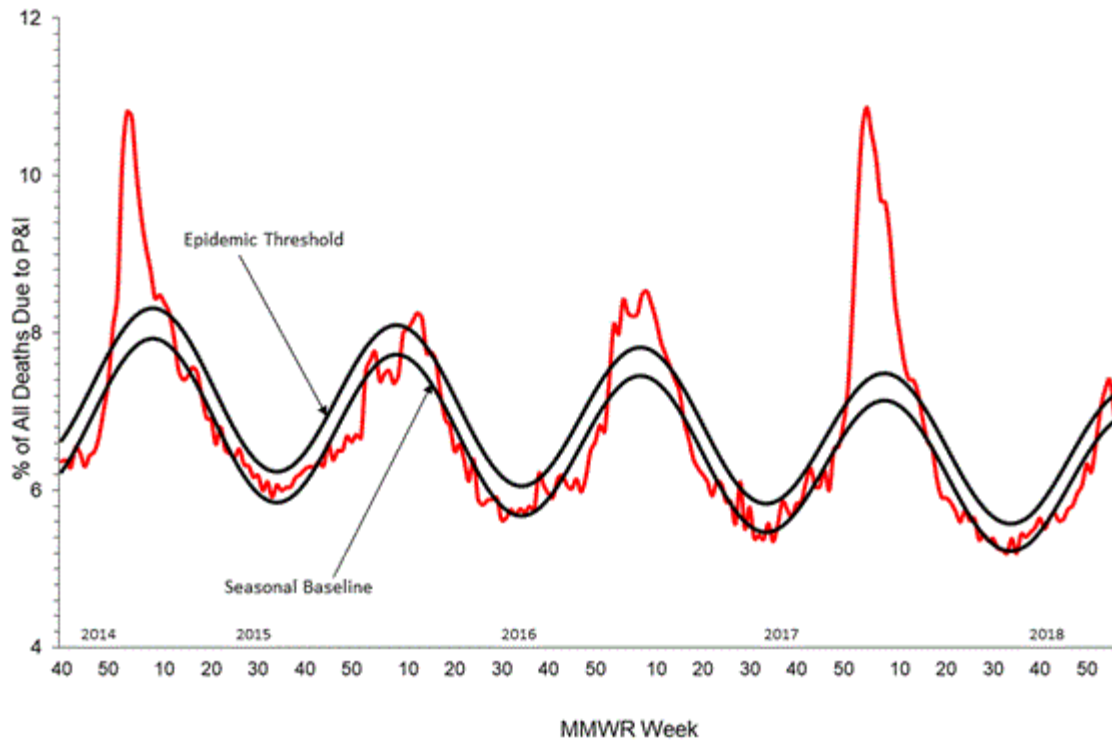


Figure 11. Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists: Week 5 – Week Ending February 2, 2019

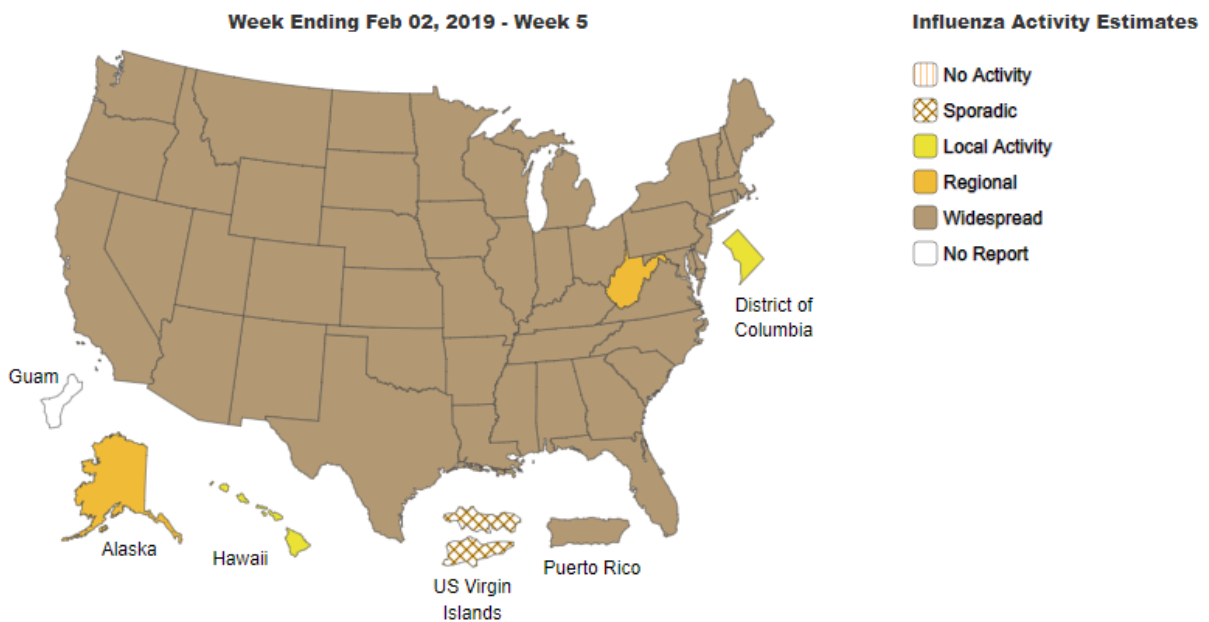
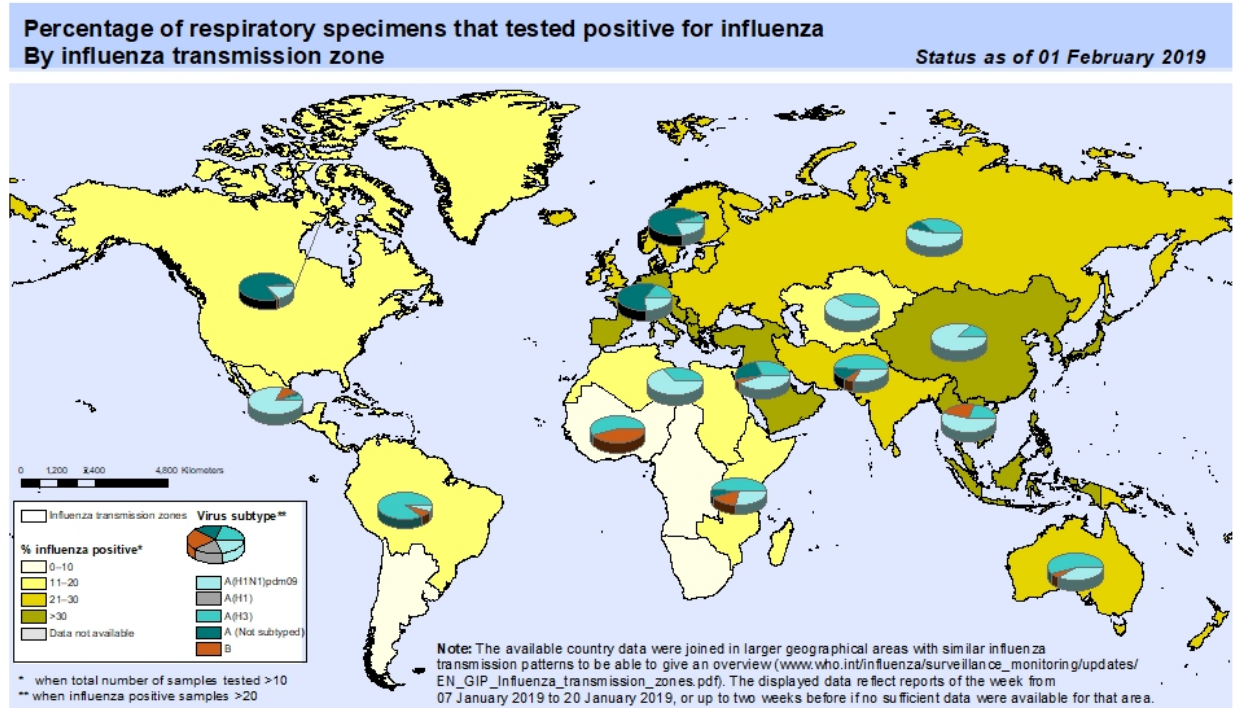


Figure 12. Percentage of Respiratory Specimens that Tested Positive for Influenza: WHO, based on data up to February 1, 2019



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source:
 Global Influenza Surveillance and Response System (GISRS),
 FluNet (www.who.int/flu-net)



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