

2014-2015
Influenza
Season and
EV-D68
Update

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2014-2015 Influenza Season

Influenza Reporting

- Individual cases are not reportable in the state of Texas
- Situations where influenza is reportable
 - Influenza-associated death in a person <18 years of age
 - Novel (new) influenza virus has been identified
- Associated with an outbreak

Burden of Influenza

	United States	Texas
Influenza illnesses (5%-20% ill annually)	15.8 to 63.2 million	1.3 to 5.3 million
Influenza hospitalizations (primary discharge diagnosis)	226,054 (range: 54,523 to 430,960)	18,989
Influenza- associated deaths, all ages	23,607 (range: 3,349 to 48,614)	1,983

Goals of Influenza Surveillance

- Find out when and where influenza activity is occurring
- Determine what type of influenza viruses are circulating
- Detect changes in the influenza viruses
- Track influenza-related illness and
- Measure the impact influenza is having on deaths in the United States.

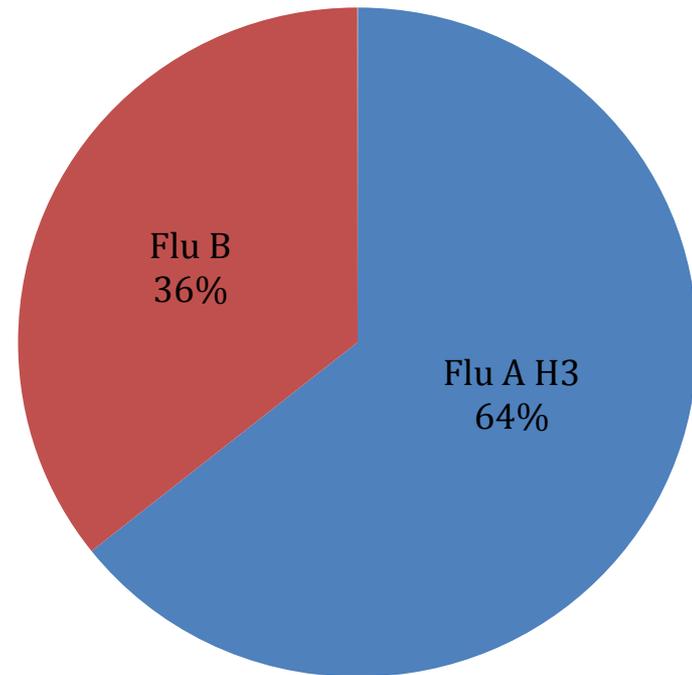
Influenza Surveillance Activities in Texas

- Viral Surveillance
- Morbidity
 - ILI
 - ILINet
 - Flu
 - Novel Influenza Reporting
 - Other
 - Outbreaks
- Mortality
 - Influenza-associated Pediatric

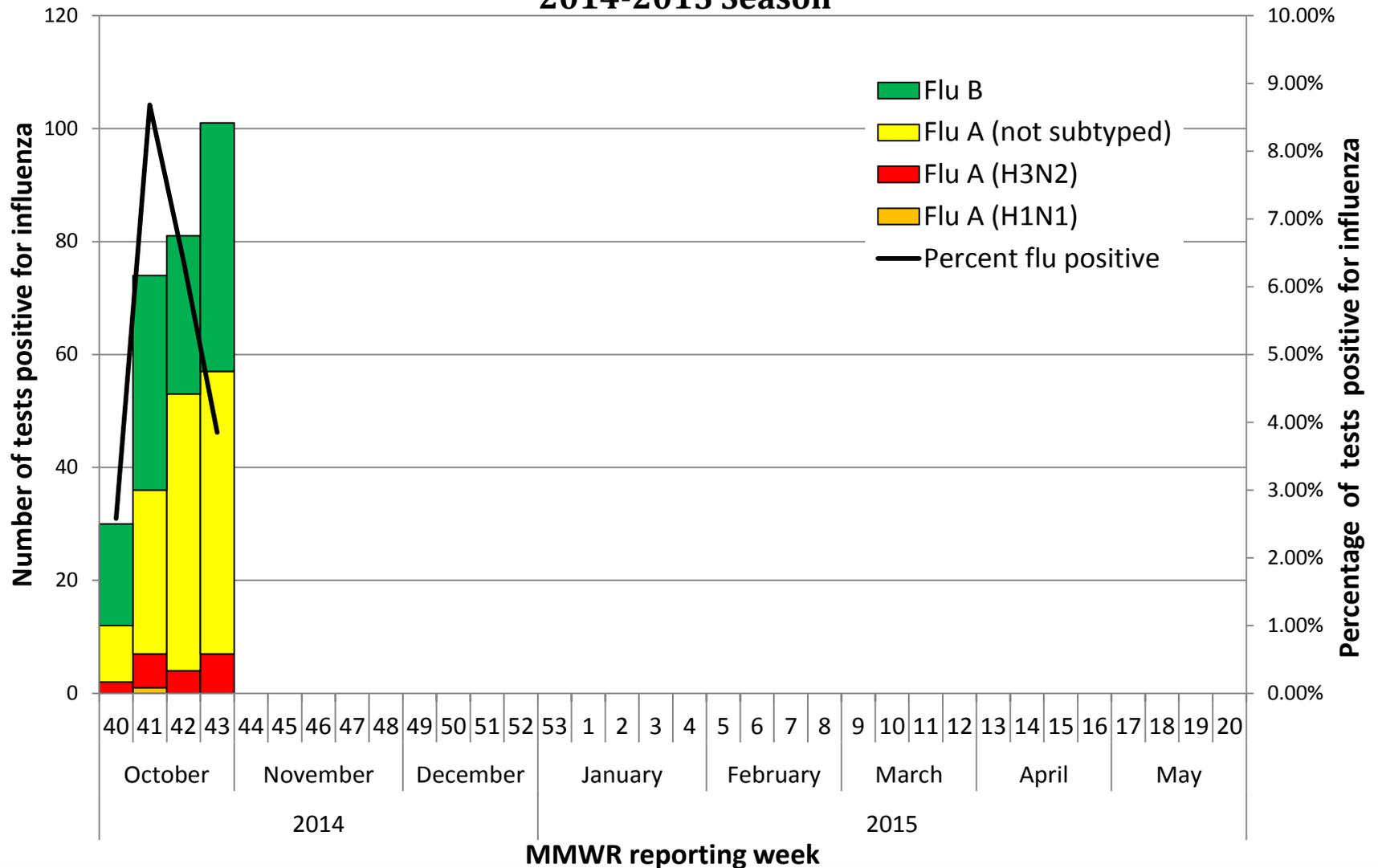
Viral Surveillance

- DSHS and TX LRN Lab Testing, week 40-43
- 185 specimens tested for influenza*
- 14 positive for influenza*

Influenza Type and Subtype Identified from Positive Influenza Specimens



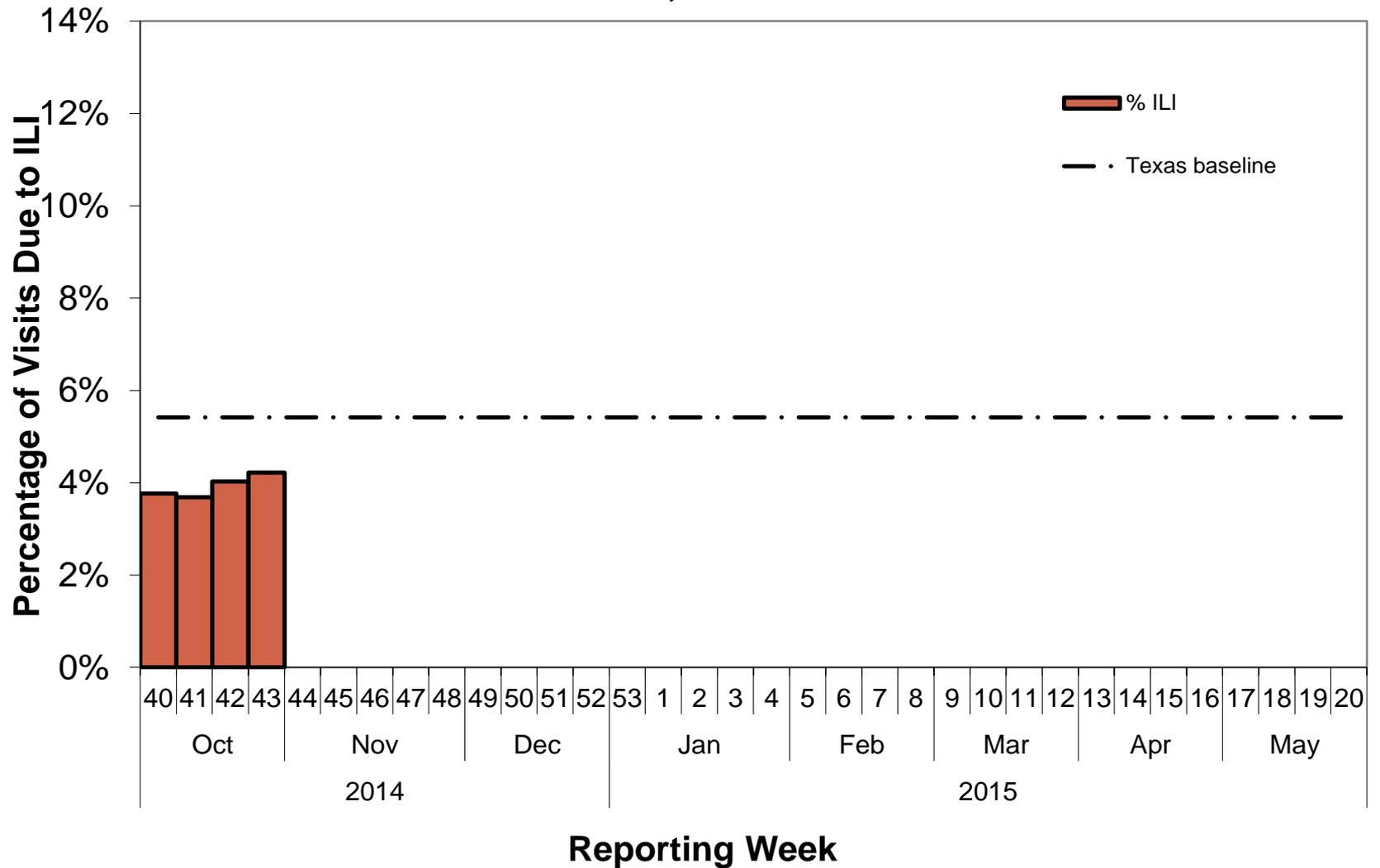
Number and Percentage of Test (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas Laboratories, 2014-2015 Season



Morbidity Surveillance

- ILINet
 - An average of 100 (Range: 97-103) have reported ILI on a weekly basis from Week 40-43*
 - Average reported % ILI for Week 40-43: 3.91%*
 - Minimum % ILI reported: 3.69% in Week 41
 - Maximum % ILI reported: 4.22% in Week 43

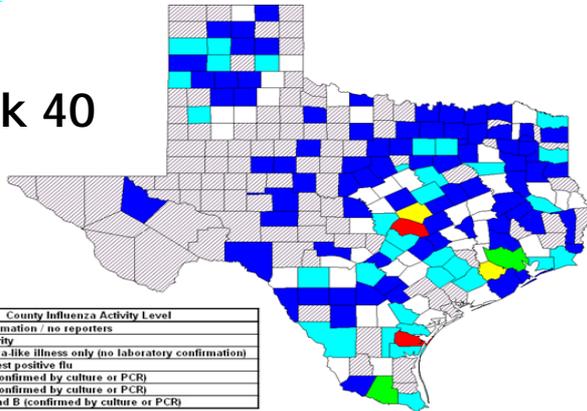
Percentage of Visits Due to Influenza-like Illness (ILI) Reported by Texas Providers in the U.S. Outpatient Influenza-like Illness Surveillance Network, Week 40-43 of 2014–2015 Season



Morbidity Surveillance

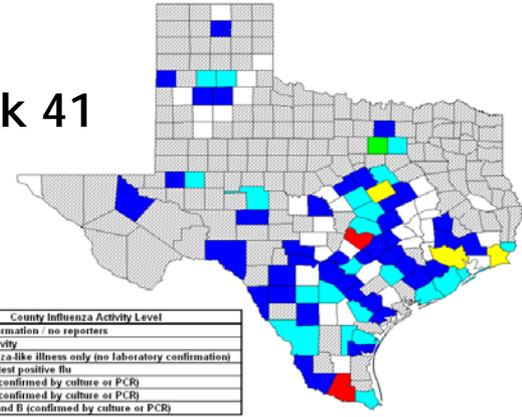
● ILI/Flu Activity

Week 40



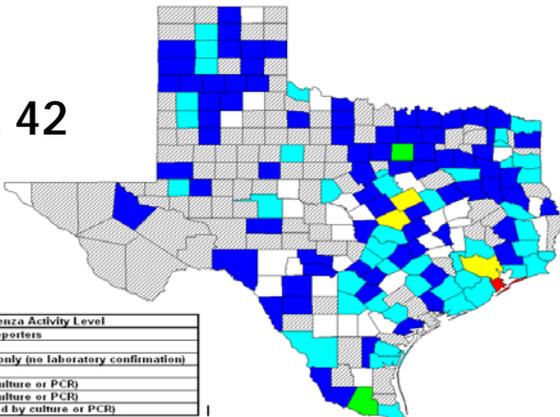
Please note: The majority of influenza cases are not reportable by law in Texas. This map contains data from sentinel sites and only displays influenza and ILI cases that were reported to public health. Positive laboratory results are reported according to specimen collection date, or date received in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

Week 41



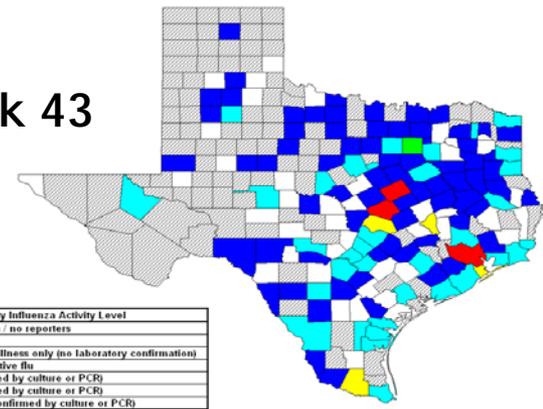
Please note: The majority of influenza cases are not reportable by law in Texas. This map contains data from sentinel sites and only displays influenza and ILI cases that were reported to public health. Positive laboratory results are reported according to specimen collection date, or date received in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

Week 42



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.

Week 43



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.

Morbidity Surveillance

- Outbreaks
 - 1 ILI-associated outbreak has been reported for this season so far*
 - School located in HSR 9/10
 - 16 were reported for 2013-2014 influenza season
 - 2 ILI-associated
 - 14 were influenza-associated
 - 11 were Flu A
 - 2 were Flu B
 - 1 was unknown

Mortality Surveillance

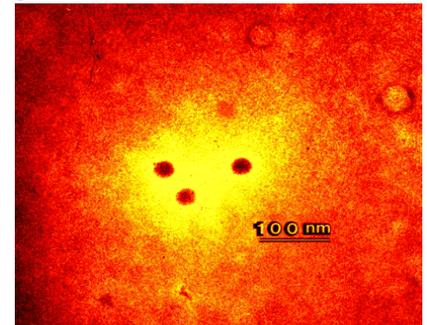
- Influenza-associated Pediatric Deaths
 - None has been reported for this season*
- Twenty were reported for 2013-2014 influenza season
 - Type of influenza
 - 16 positive for influenza A
 - 3 positive for influenza B
 - 1 positive for influenza A and B
- Vaccination Status
 - 14 (~78%) of the children were not fully vaccinated with a 2013-2014 influenza vaccine
 - 4 were too young to vaccinate



Enterovirus D68 (EV-D68)

Non-Polio Enteroviruses

- More than 100 serotypes of non-polio enteroviruses
 - Coxsackie viruses A and B
 - Echoviruses
 - “Numbered” enteroviruses (e.g., EV-D68)
- Virus circulation highest in summer and fall
- Enterovirus circulation patterns are complex:
 - Circulating enteroviruses change frequently
 - Multiple strains of the same enterovirus type can co-circulate each year



Non-Polio Enterovirus Illnesses

- Enteroviruses cause a variety of illnesses:
 - Respiratory
 - Febrile rash
 - Conjunctivitis
 - Neurologic (e.g., aseptic meningitis, encephalitis)
- Most illnesses occur in infants, children, and teenagers
- Estimated 10–15 million infections annually in US

EV-D68 Viruses

- First recognized in 1962 in California
 - Small numbers of infections reported annually since 1987
 - Clusters since 2008:
 - Most clusters reported < 30 cases
 - Largest: Japan, 120 cases
 - Most cases not fatal
- Currently circulating strains are not new
 - At least 3 EV-D68 strains circulating now
 - Most prominent current strain was also detected in 2012 and 2013
- Similar to rhinoviruses

EV-D68 Illnesses

- EV-D68 causes respiratory illnesses
 - Infections can result in asymptomatic to severe illness
 - Full illness spectrum unknown
 - Mild: fever, runny nose, sneezing, cough, body/muscle aches
 - Severe: wheezing and difficulty breathing
- Risk groups
 - Infection: Infants, children, and teenagers
 - Severe illness: Children with asthma
- EV-D68 virus is found in respiratory secretions
 - Transmission occurs through
 - Direct contact via respiratory droplets
 - Indirect contact with contaminated surfaces



Current US EV-D68 Outbreak

- US: 1,105 patients in 47 states with respiratory illness caused by EV-D68*
- 9 persons who died were positive for EV-D68
 - 2 deaths were caused by EV-D68

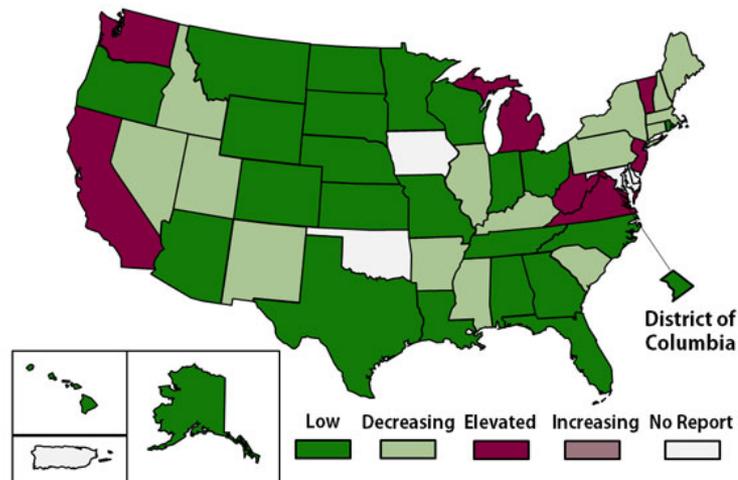


EV-D68 in Texas

- EV-D68 detected in specimens from 19 Texas residents with respiratory illnesses*
 - Median age: 7 years (range: < 1-14 years)
 - Onsets range from 7/29/14 – 10/03/2014
 - No deaths
 - Counties: Anderson, Bexar, Dallas, Denton, Harris, Johnson, Lubbock and Midland
- Other currently circulating respiratory viruses may cause similar illnesses

Enhanced EV-D68 Surveillance

- CDC has asked states to report:
 - A weekly EV-D68-like activity level
 - Low and similar to the previous week
 - Increased compared to the previous week
 - Elevated but similar to the previous week
 - Decreased compared to the previous week



EV-D68 Prevention

- Healthcare professionals should recommend the following:
 - Wash hands often with soap and water for 20 seconds
 - Avoid touching your eyes, nose, and mouth with unwashed hands
 - Avoid kissing, hugging, and sharing cups or eating utensils with people who are sick
 - Disinfect frequently touched surfaces especially if someone is sick
 - Cover your coughs and sneezes with a tissue or your elbow/sleeve
 - Stay home when feeling sick and consult with your doctor

EV-D68 Prevention & Treatment

- Patients with history of asthma should:
 - Have an asthma action plan
 - Take medications as prescribed
 - Get a flu shot
 - Seek care early if needed
- No vaccine available
- No specific treatment



Influenza



Questions?

