



2018/2019 Flu Season Update

**Task Force on Infectious Disease
Preparedness and Response**

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Health Services

October 3, 2018



Presentation Outline

- Influenza Overview
- 2017 – 2018 Flu Season Recap
- 2018 – 2019 Flu Season
 - Vaccinations Available
 - Antiviral Drugs Available
- DSHS Preparedness for Influenza Pandemics



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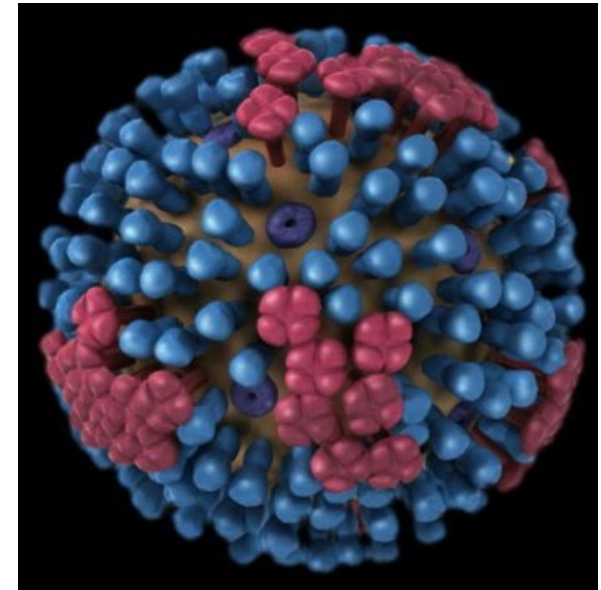
10/3/2018

Influenza Virus Overview



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- Two main types of flu virus in humans:
 - Influenza A
 - Causes seasonal epidemics and pandemics
 - Subtypes include H1N1 and H3N2
 - Influenza B
 - Causes seasonal epidemics
 - Lineages include Yamagata and Victoria



Influenza Vaccine Overview

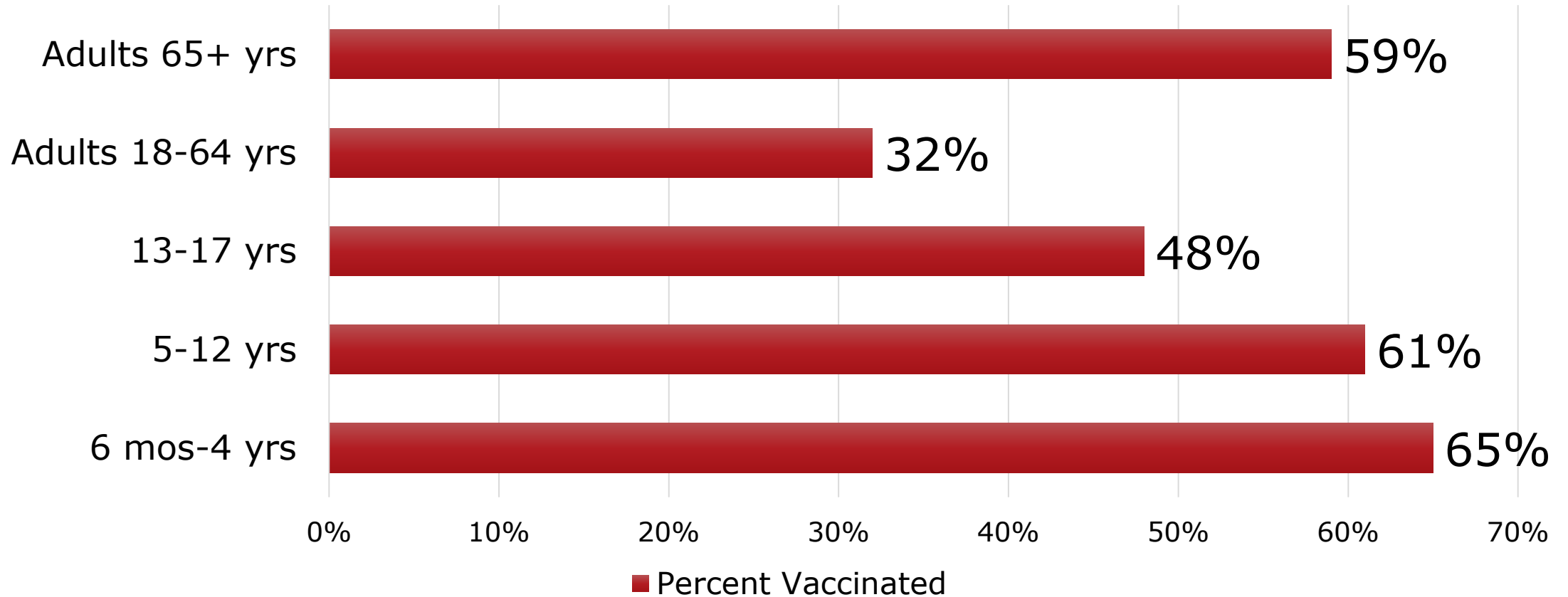


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- Antibodies develop in the body ~2 weeks after vaccination
 - Provide protection against the viruses that are in the vaccine
- A flu vaccine is needed every season for two reasons:
 1. Flu viruses change over time and require updated vaccines
 2. Immune response from vaccination declines over time
- When a large percentage of the population is vaccinated, the spread of the disease is limited
 - This protects unimmunized individuals, including those who can't be vaccinated, and those for whom vaccination was not successful
 - As the number of those vaccinated increases, the protective effect increases—herd immunity
- Decreases risk of pandemic strains evolving

Texas Flu Vaccination Coverage

Estimated Flu Vaccination Coverage in Texas, by Age Group, for the 2017 – 2018 Season (as of 9/21/18)



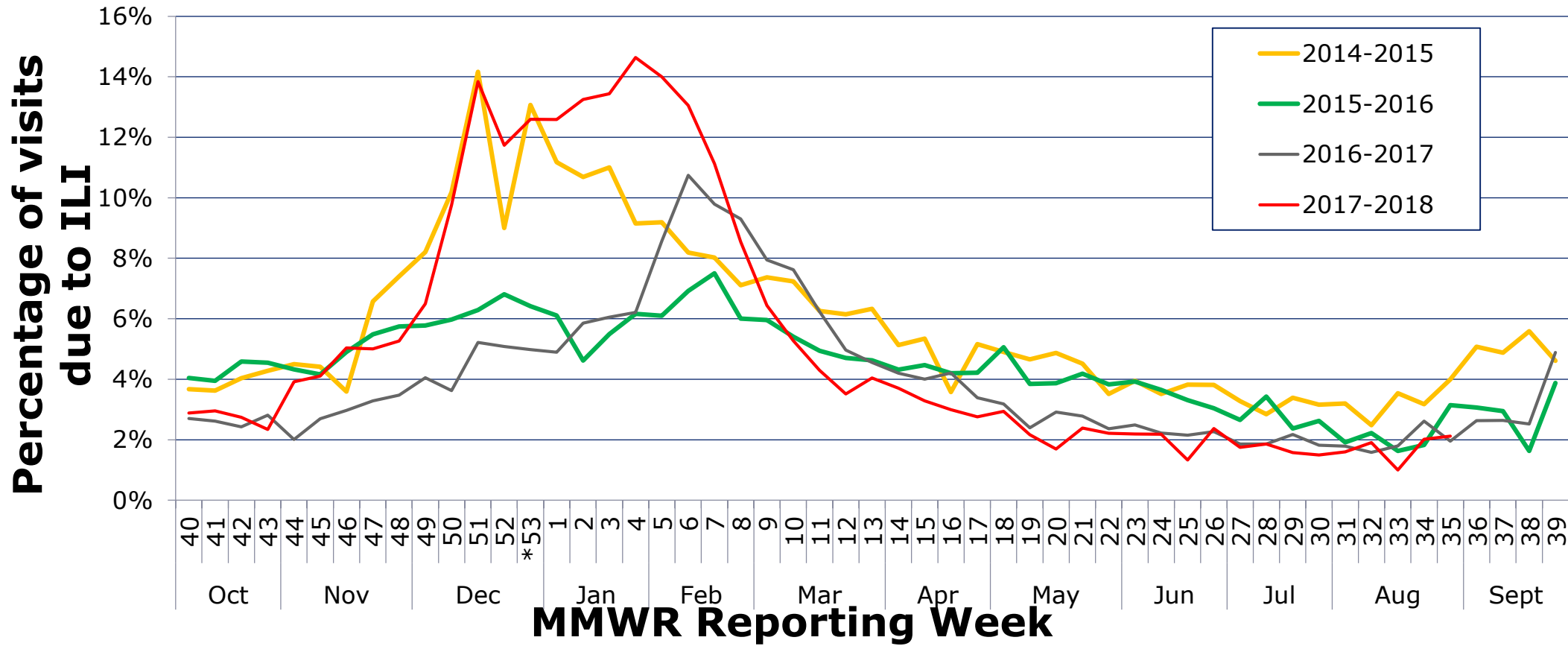
Reporting Influenza-Associated Conditions



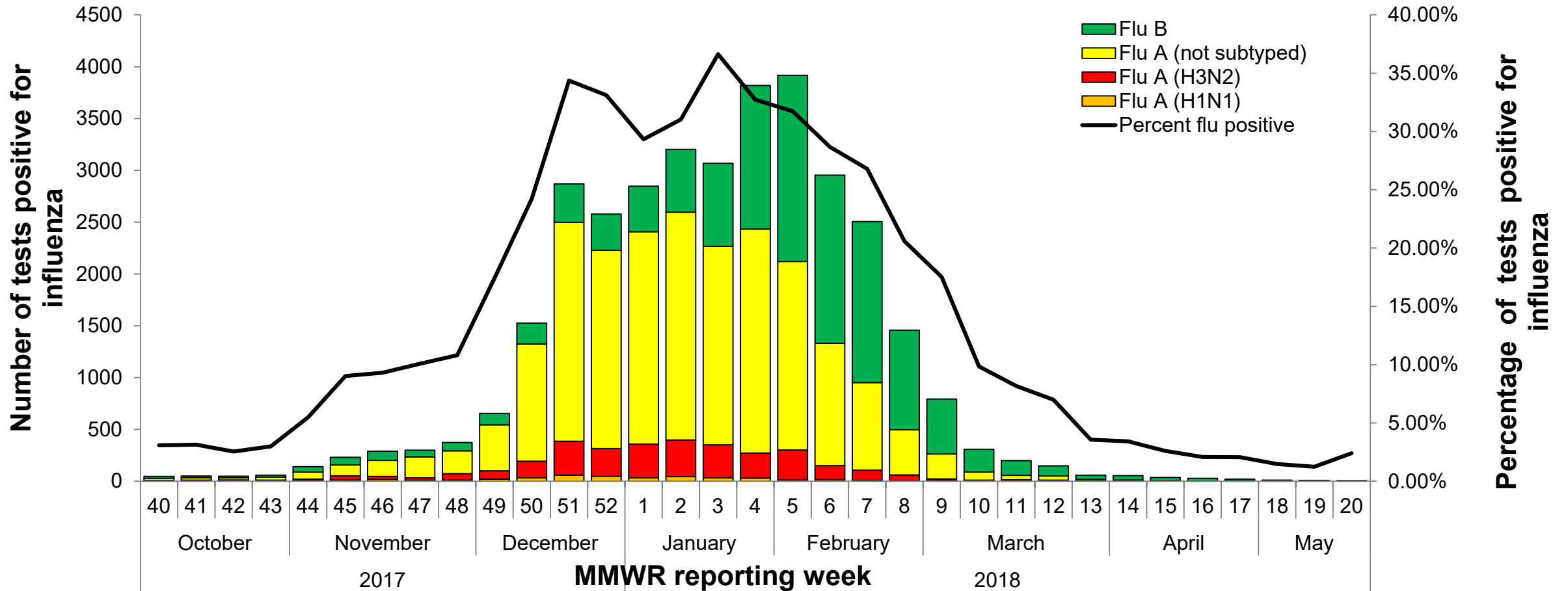
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- Individual cases of influenza are **not** reportable in Texas
- What is reportable:
 - Novel and variant influenza A cases in humans
 - Influenza-associated pediatric deaths
 - Respiratory, influenza, or influenza-like illness (ILI) outbreaks
 - Influenza-like illness is characterized as a fever of 100°F or greater with a cough and/or a sore throat in the absence of another known cause

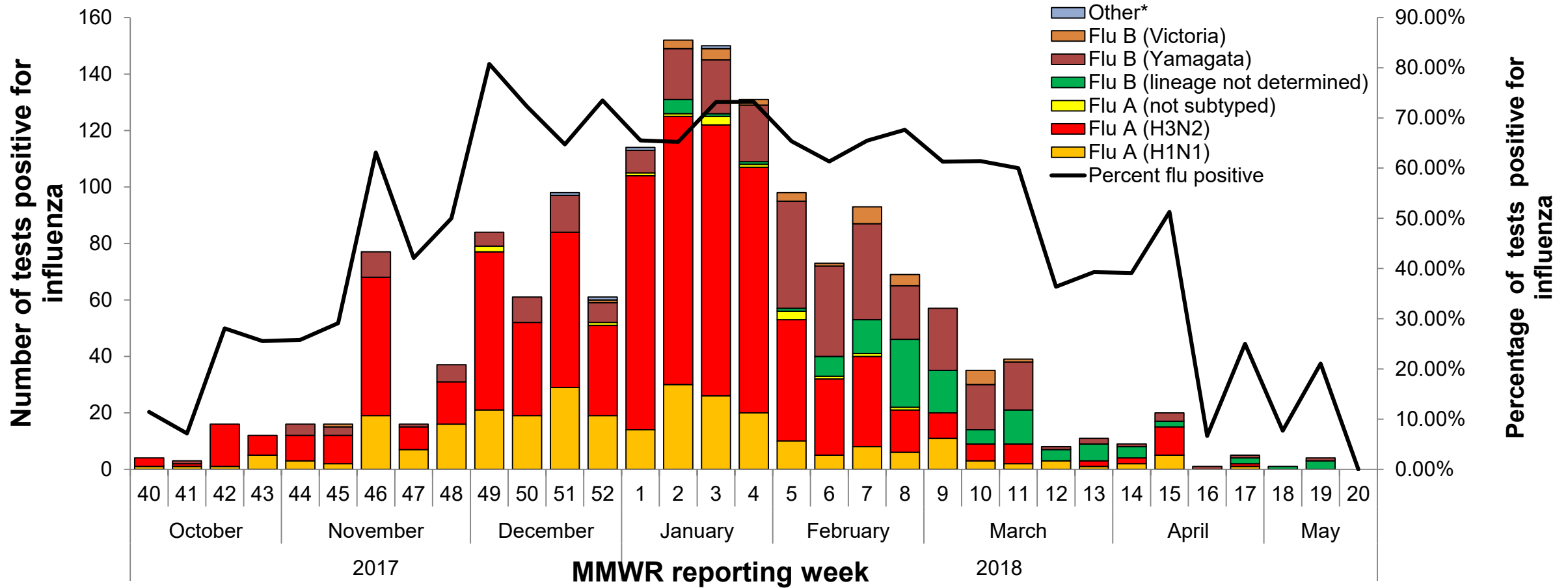
Percentage of Visits Due to Influenza-Like Illness Reported by Texas ILINet Participants, 2014–2018 Seasons



Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas Hospital Laboratories, 2017–2018 Season



Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type, Subtype, and Lineage Reported by Texas Public Health Laboratories, 2017-2018 Season

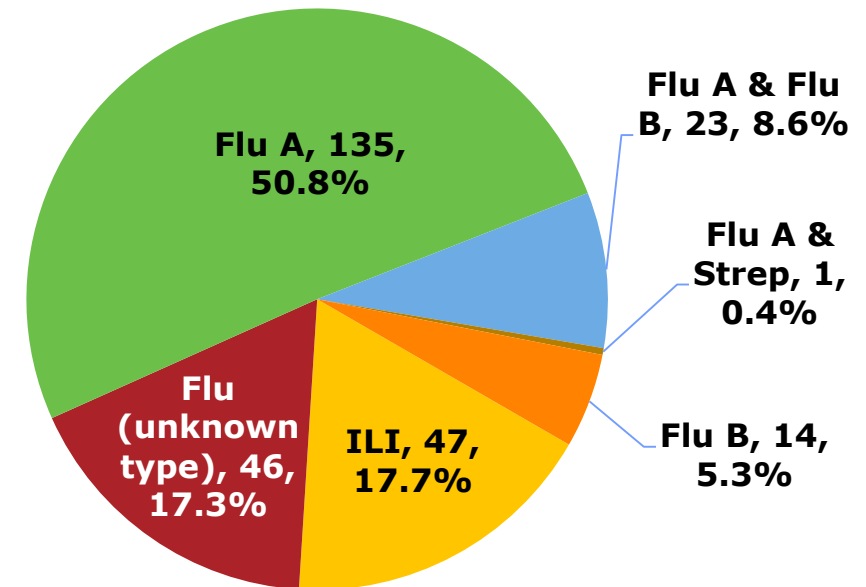


Texas Influenza-Like and Influenza-Associated Outbreaks as of September 12, 2018



- The number of reported outbreaks in Texas increased by 153% when compared to the last flu season
 - 105 in 2016-17 season
 - 266 in 2017-18 season
- Over 75% of the outbreaks were reported in long-term care facilities

Number of Reported ILI/Influenza-associated Outbreaks in Texas by Pathogen Type, 2017-18 Season, N=266



Texas Influenza-Associated Pediatric Mortality, 2017-2018 Season



- 16 influenza-associated pediatric deaths were reported in the 2017-2018 season as of September 12, 2018
 - > half of the children were positive for influenza A
 - 5 (31%) children had no underlying health conditions
 - 2016-17 season: 2 out of 8 (25%) had no underlying health conditions
 - 10 out of 11 (90.9%) of the children with known vaccination status were not vaccinated for influenza for the 2017-2018 season

Texas Pneumonia and Influenza Mortality Rates by Age Group, 2015-2018

Age Group (Years)	2015-2016 Rate	2016-2017 Rate	2017-2018 Rate (as of 9/12/18)
0 - 4	2	3	2
5 - 17	0.4	0.6	0.4
18 - 49	4	5	5
50 - 64	29	36	35
65 +	192	239	223
Overall	30	38	37



2018-2019 Flu Season



- Flu is unpredictable
 - This flu season may be as severe as the last
- Recent Southern Hemisphere flu season has been relatively mild
 - H1N1 flu virus has predominated
 - May or may not be predictive of Northern Hemisphere season
- Increased flu vaccine options available



2018 – 2019 Seasonal Influenza Vaccine



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- 2018-2019 Composition:
 - Trivalent vaccines will contain:
 - A/Michigan/45/2015 (H1N1)pdm09–like virus
 - A/Singapore/INFIMH-16-0019/2016 (H3N2)–like virus
 - B/Colorado/06/2017–like virus (Victoria lineage)
 - Quadrivalent vaccines will contain:
 - Same components as trivalent vaccine
 - B/Phuket/3073/2013–like virus (Yamagata lineage)

2018 – 2019 Antiviral Drugs



- Antivirals recommended for the 2018-2019 season:
 - Oseltamivir—available as a generic version or under the trade name Tamiflu®:
 - Pill or liquid suspension FDA approved for early treatment of flu in people 14 days old and older
 - Zanamivir—trade name Relenza®:
 - Powder that is inhaled and approved for early treatment of flu in people 7 years of age and older, not recommended for people with breathing problems like asthma or COPD
 - Peramivir—trade name Rapivab®:
 - Given intravenously by a health care provider and is approved for early treatment of flu in people 2 years of age and older

DSHS Preparedness



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- Constantly working to adapt and scale our everyday activities to disaster and pandemic situations:
 - 2009 H1N1 Pandemic:
 - Distributed lots of vaccine and antivirals
 - Difficulty with provision of medical care
 - Hurricane Harvey flooding:
 - Distributed 70,633 vaccines
 - 7,690 doses of flu vaccine
 - Responded to 3 flu outbreaks in shelters
 - Difficulty with cold-chain management and vaccination of first responders



DSHS Pandemic Preparedness



- Staff dedicated to preparedness planning
- Ongoing efforts to:
 - Form partnerships across the state with pharmacies and others
 - Strengthen plans for cold chain management of vaccines
 - Establish receiving and distribution sites for National Strategic Stockpile shipments
 - Train public health officials and staff on effective response through table top exercises





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Thank you

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