

2013-2014 Influenza Season Summary in Texas

By

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Learning Objective

- Participants will be able to...
 - Describe influenza activity that occurred in Texas during the 2013-2014 influenza season

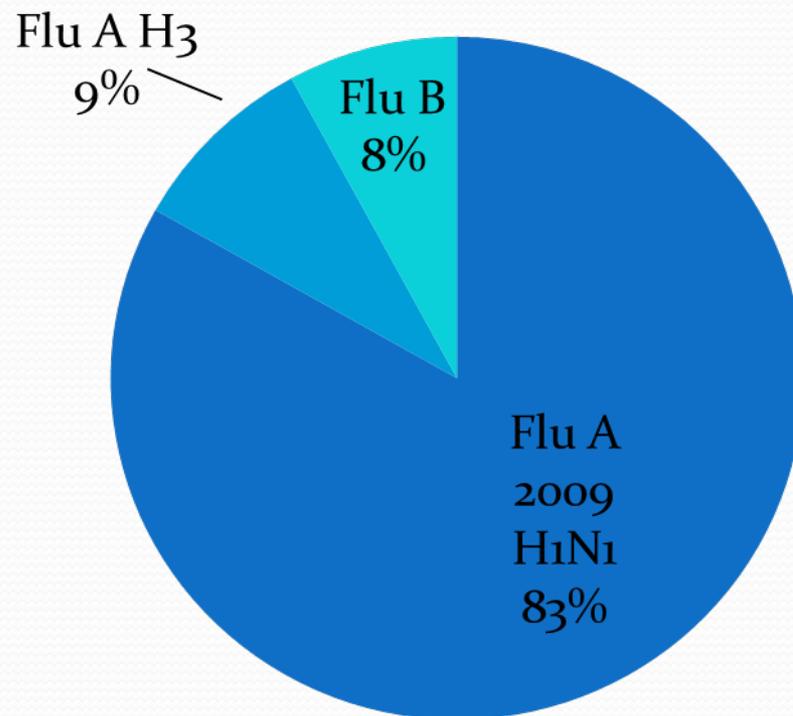
Influenza Surveillance Activities in Texas

- **Viral Surveillance**
 - LRN and DSHS Labs Data
 - NREVSS
- **Morbidity**
 - **ILI**
 - ILINet
 - Enhanced ILINet/IISP
 - ILI activity
 - **Flu**
 - Novel Influenza Reporting
 - **Other**
 - Outbreaks
- **Mortality**
 - Influenza-associated Pediatric

Viral Surveillance

- DSHS and TX LRN Lab Testing, week 40-20
 - 3944 specimens were tested for influenza
 - 1714 were positive (43.5%)
 - 1426 Flu A 2009 H1N1
 - 152 Seasonal Flu A H3
 - 136 Flu B

Influenza Type and Subtype Identified from Positive Influenza Specimens



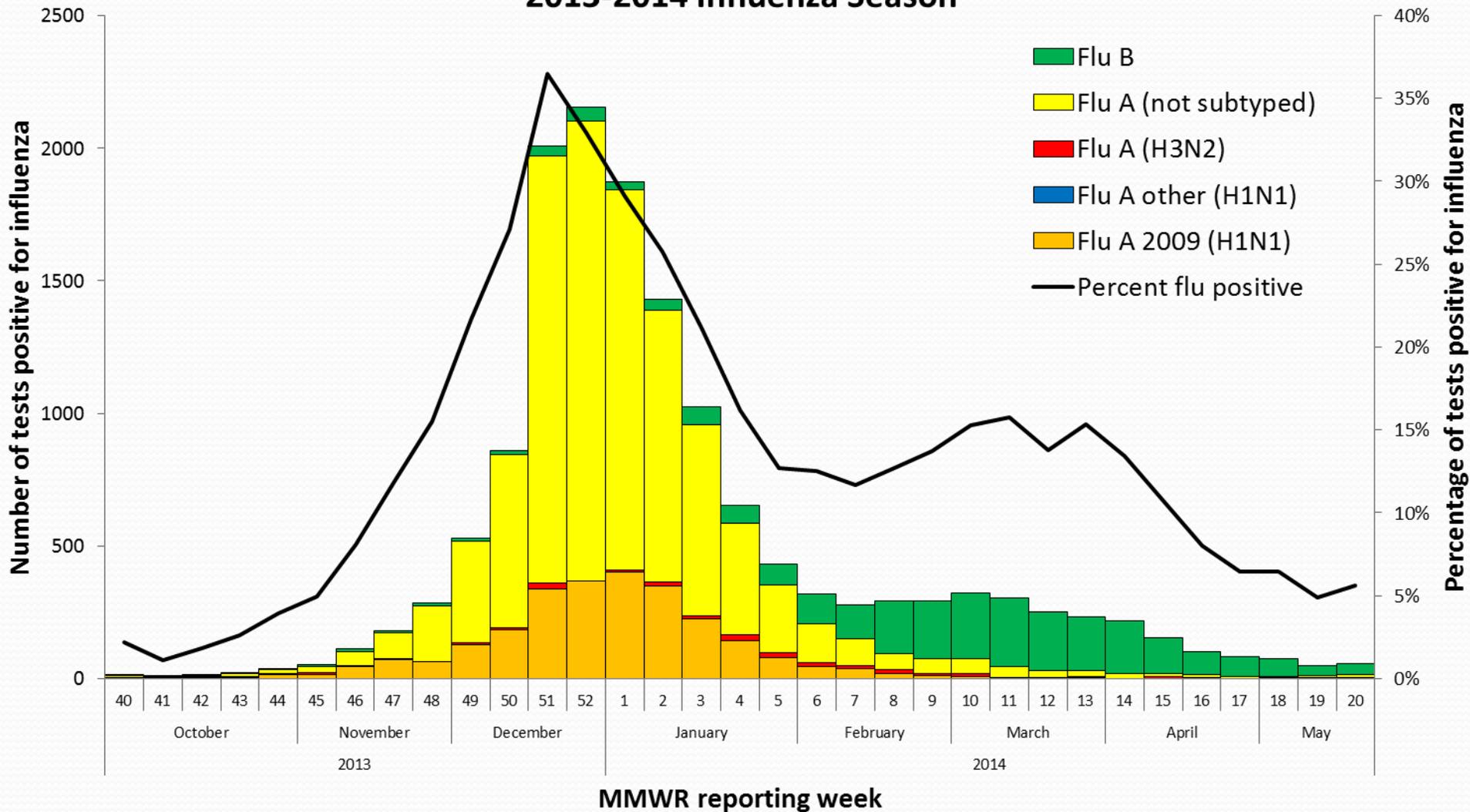
Viral Surveillance

DSHS and TX LRN Labs Influenza Testing by Health Services Region from Week 40-Week 20 of the 2013-2014 Influenza Season

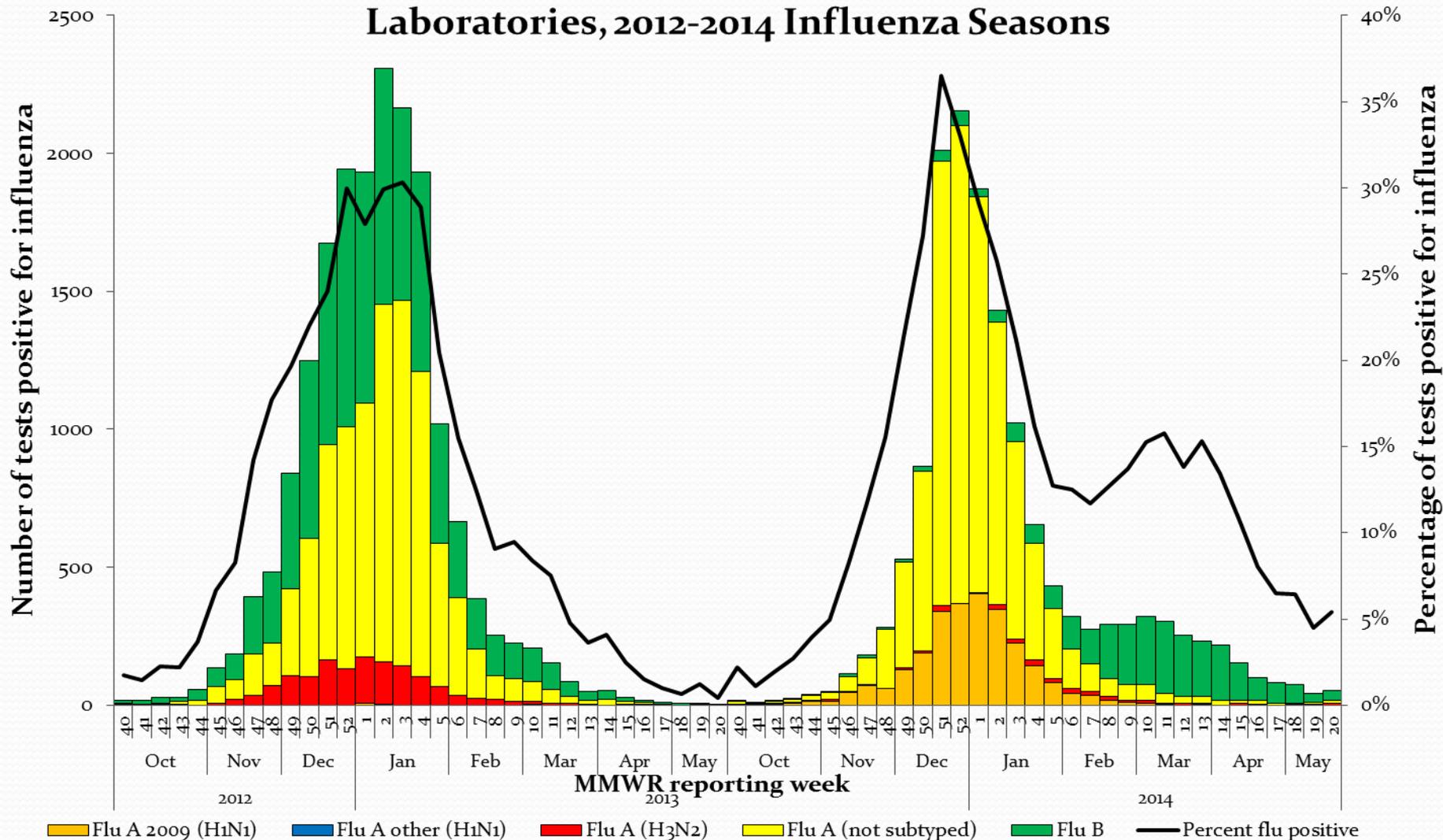
Health Service Region	Total Number of Specimens Received	Unsatisfactory	Total # of specimens tested	2009 H1N1 Influenza	A (H1)	Seasonal Influenza A H3	Influenza B Positive	Negatives
HSR 1	215	29	186	30	0	3	9	144
HSR 2/3	1183	10	1173	704	0	22	82	358
HSR 4_5N	199	6	198	85	0	3	1	104
HSR 6_5S	690	47	639	146	0	13	27	435
HSR 7	308	10	298	97	0	7	8	186
HSR 8	126	1	125	55	0	16	4	50
HSR 9_10	610	26	584	99	0	52	0	429
HSR 11	746	4	741	210	0	36	5	488
Grand Total	4077	133	3944	1426	0	152	136	2194

Data is current as of 5/29/2014

Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas NREVSS Laboratories, 2013-2014 Influenza Season



Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas NREVSS Laboratories, 2012-2014 Influenza Seasons



Viral Surveillance

- **Antigenic Characterization Testing**

- Results of 158 influenza viruses that were tested by the CDC
 - 85 influenza A (H₁N₁) viruses
 - 100% matched the strain included in the 2013-2014 influenza vaccine
 - 27 influenza A (H₃N₂) viruses
 - 100% matched the strain included in the 2013-2014 influenza vaccine
 - 48 influenza B viruses
 - 33% belonged to the Yamagata lineage that matched the strain in the 2013-2014 trivalent and quadrivalent vaccine
 - 67% belonged to the Victoria lineage that matched the influenza strain in the 2013-2014 quadrivalent vaccine

Viral Surveillance

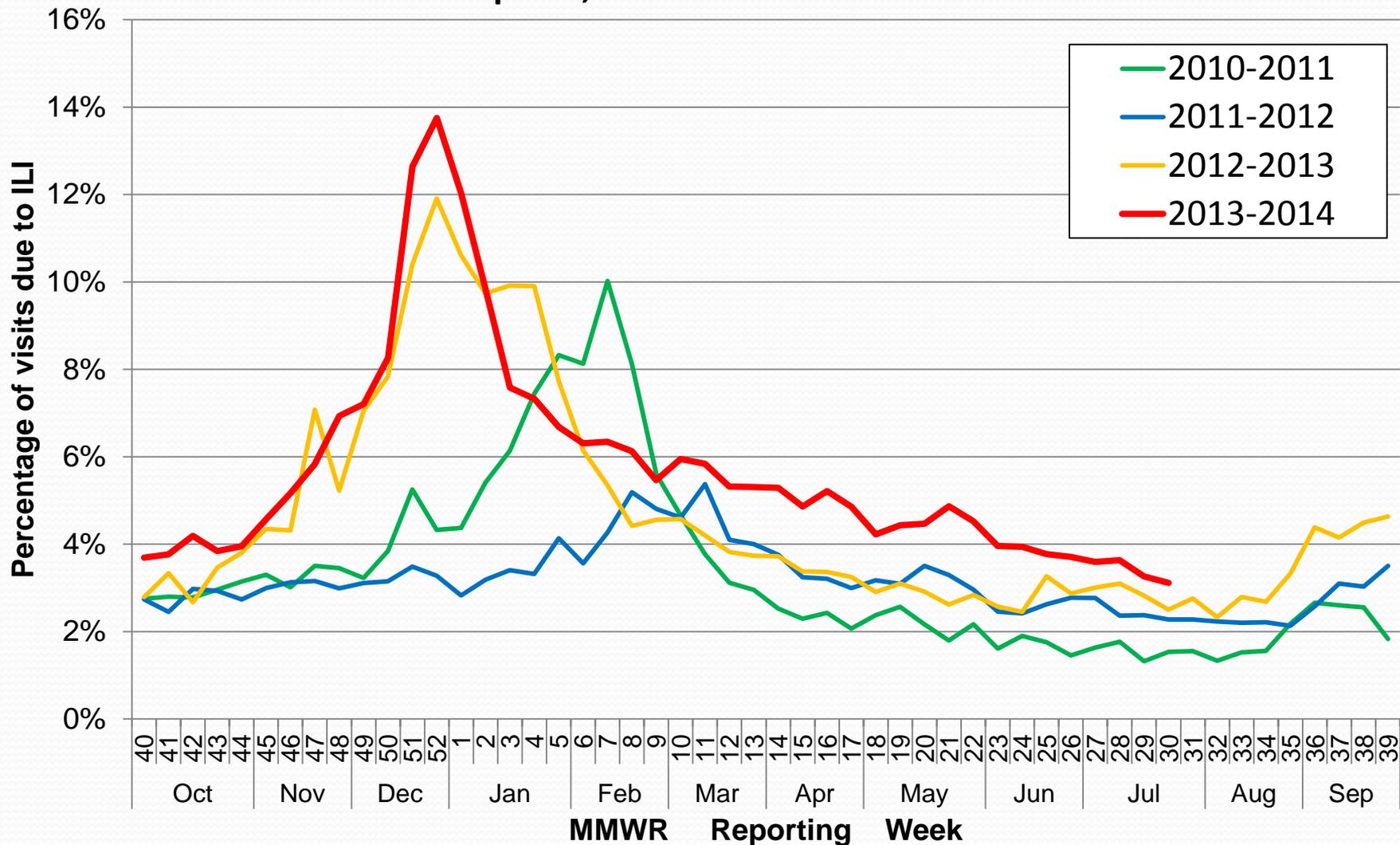
- Antiviral Testing
 - 374 viruses from Texas were tested

	Oseltamivir		Zanamivir	
	Virus samples tested (n)	Resistant viruses, number (%)	Virus samples tested (n)	Resistant viruses, number (%)
Influenza A (H1N1)	354	3 (0.85%)	75	0 (0%)
Influenza A (H3N2)	15	0 (0%)	15	0 (0%)
Influenza B	5	0 (0%)	5	0 (0%)

Morbidity Surveillance

- **ILINet**
 - **An average of 120 providers participated on a weekly basis from Week 40 through Week 20**
 - **Range of participating providers on a weekly basis: 105-129**
 - **6.28% was the average reported ILI percentage for the season**
 - **Min reported ILI %: 3.69% in week 40**
 - **Max reported ILI %: 13.75% in week 52**

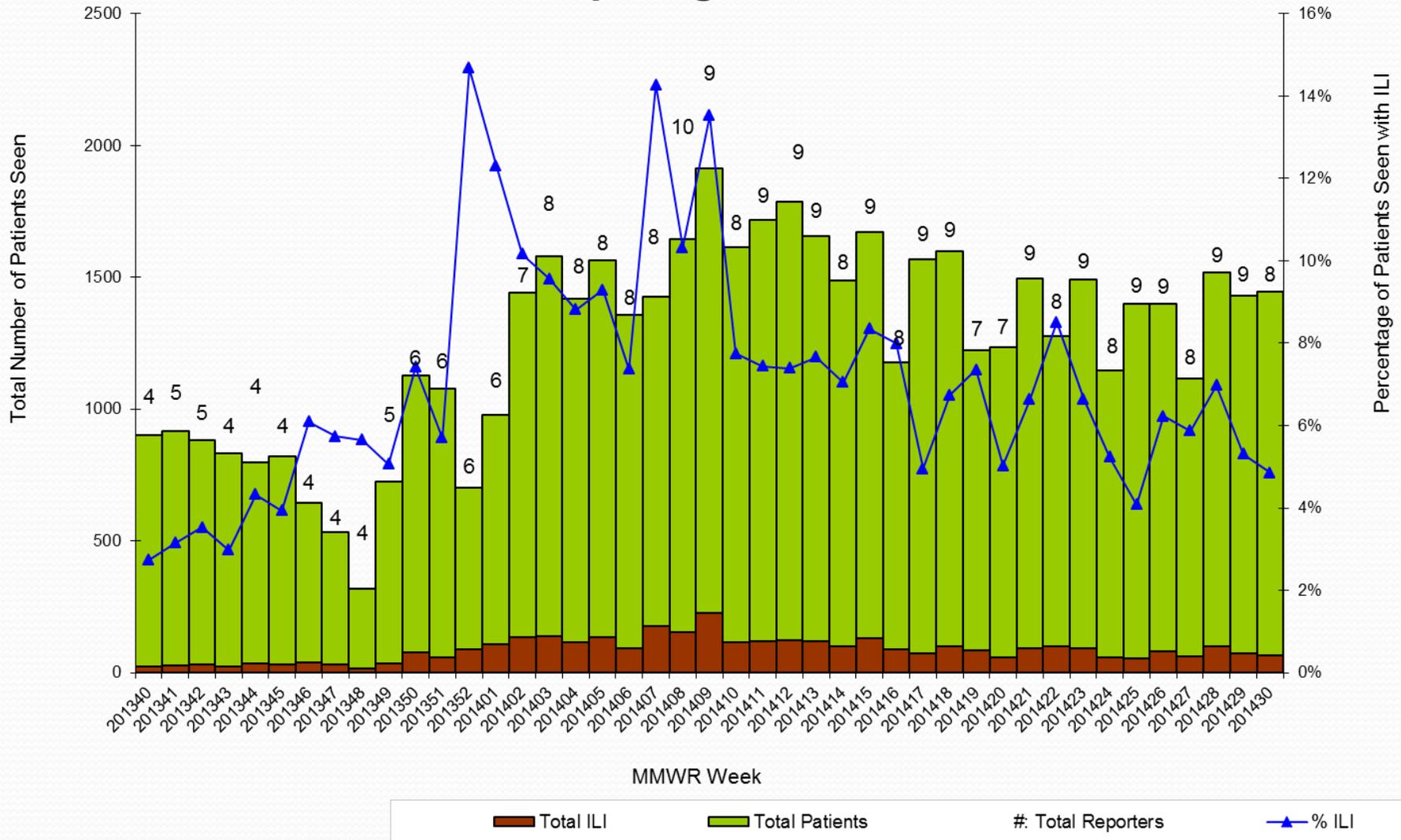
Percentage of Patient Visits due to Influenza-like Illness Reported by Texas ILINet Participants, 2010-2014 Influenza Seasons



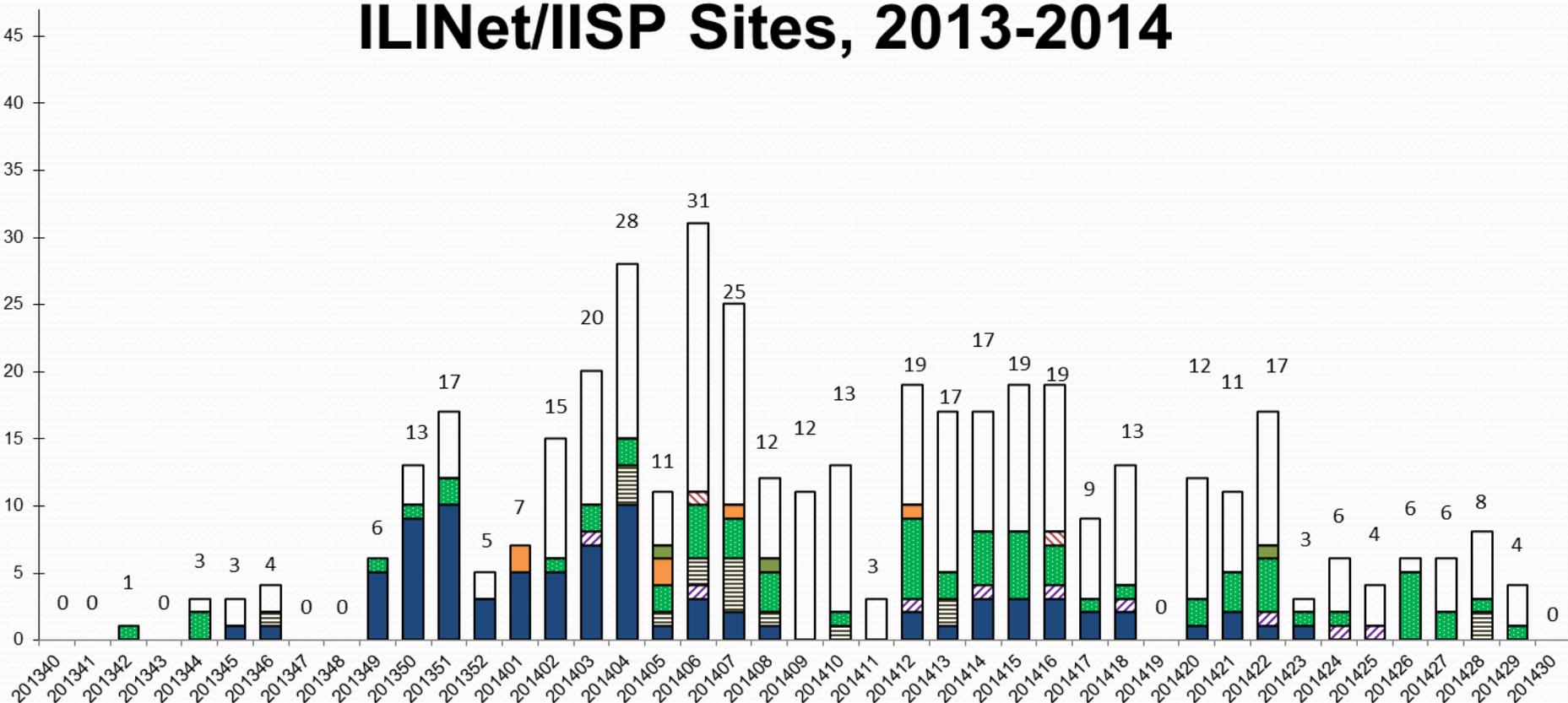
Morbidity Surveillance

- **Enhanced ILINet/IISP**
 - **Providers participating in the project agreed to**
 - Report to ILINet or to the health department on a weekly basis
 - Provide weekly aggregate data on the number of ILI cases by age group and the number of total patients seen using standardized ILI case definitions
 - Collect appropriate specimens and patient data from the first 10 patients with ILI each week
 - Submit specimens to the DSHS Lab
 - Meet all specimen submission requirements of the DSHS lab

Number of Patients Seen and the Percentage of Influenza-like Illness (ILI) from Texas Enhanced ILINet/IISP Participating Sites, 2013–2014



Respiratory Viruses Detected from Specimens that were sent by Enhanced ILINet/IISP Sites, 2013-2014



■ Influenza

■ Rhinovirus

■ Multiple viruses detected

■ Parainfluenza

■ Adenovirus

□ Negative

■ Human Metapneumovirus

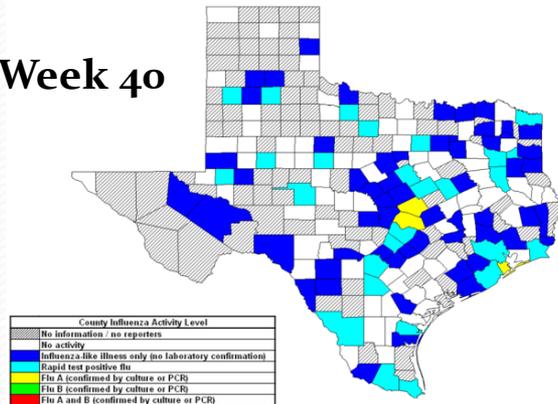
■ RSV

= Total Tests Done

Morbidity Surveillance

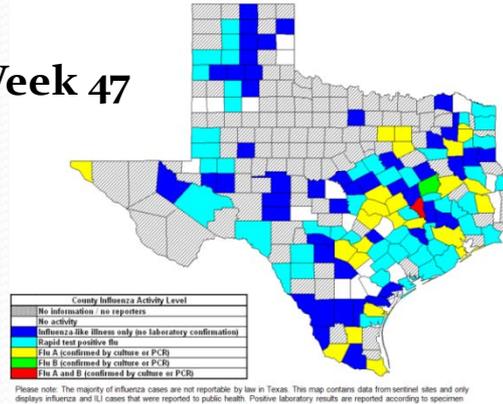
- ILI/Influenza Activity

Week 40



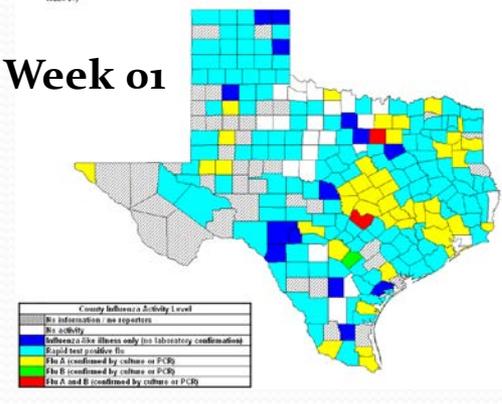
Please note: The majority of influenza cases are not reportable by law in Texas. This map contains data from sentinel sites and only displays influenza and ILI cases that were reported to public health. Positive laboratory results are reported according to specimen collection date, or date received in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

Week 47



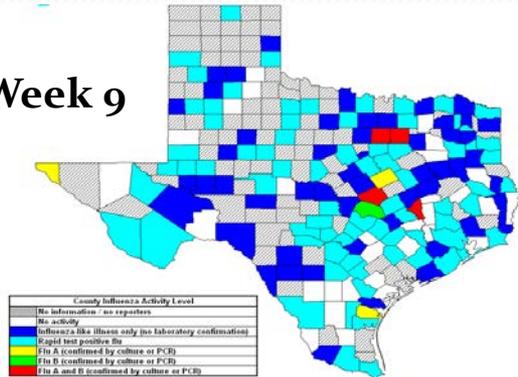
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Week 01



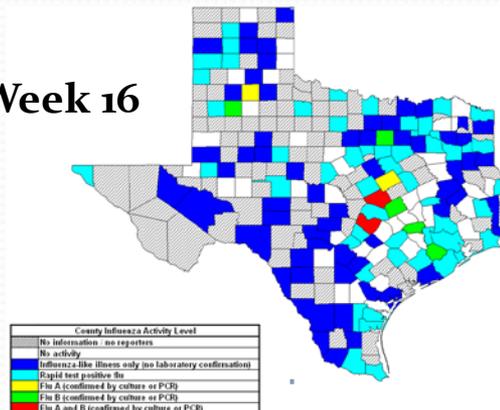
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Week 9



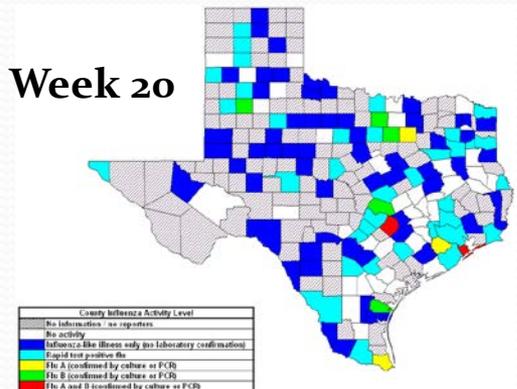
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Week 16



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Week 20



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Morbidity Surveillance

- **Outbreaks**
 - **16 total outbreaks reported**
 - **2 ILI Associated**
 - **14 Influenza Associated**
 - **12 were Flu A**
 - **1 was Flu B**
 - **1 unknown**

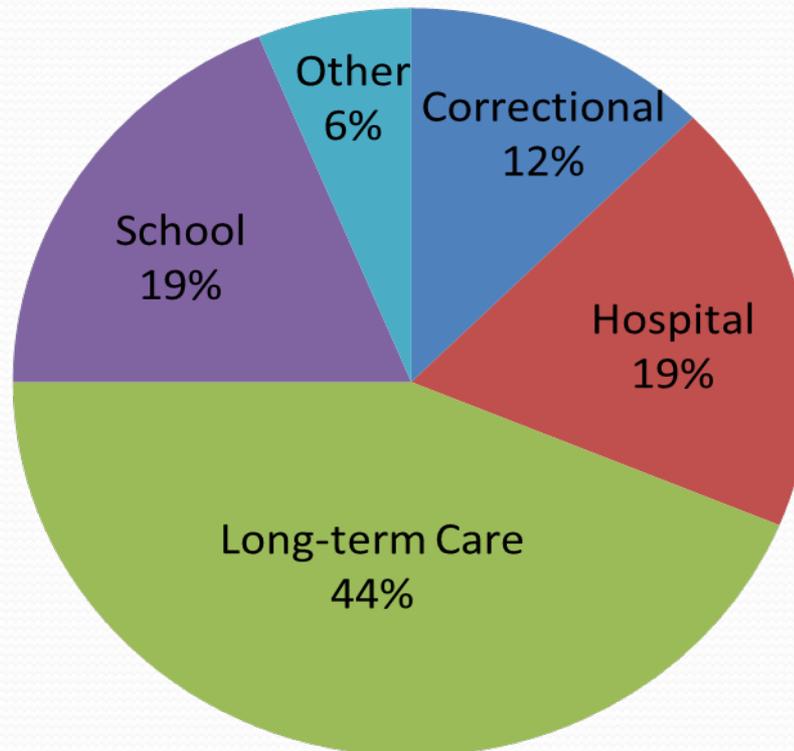
Morbidity Surveillance

- Outbreaks
 - Statistics
 - Earliest Outbreak Reported: 10/18/2013
 - Last Outbreak Reported: 7/11/2014
 - Average size: ~12 people (Range: 3-24 people)

Morbidity Surveillance

- Outbreaks

Number of Reported Influenza/Influenza-like Illness Outbreaks in Texas by Type of Facility, 2013-2014 Influenza Season



Mortality

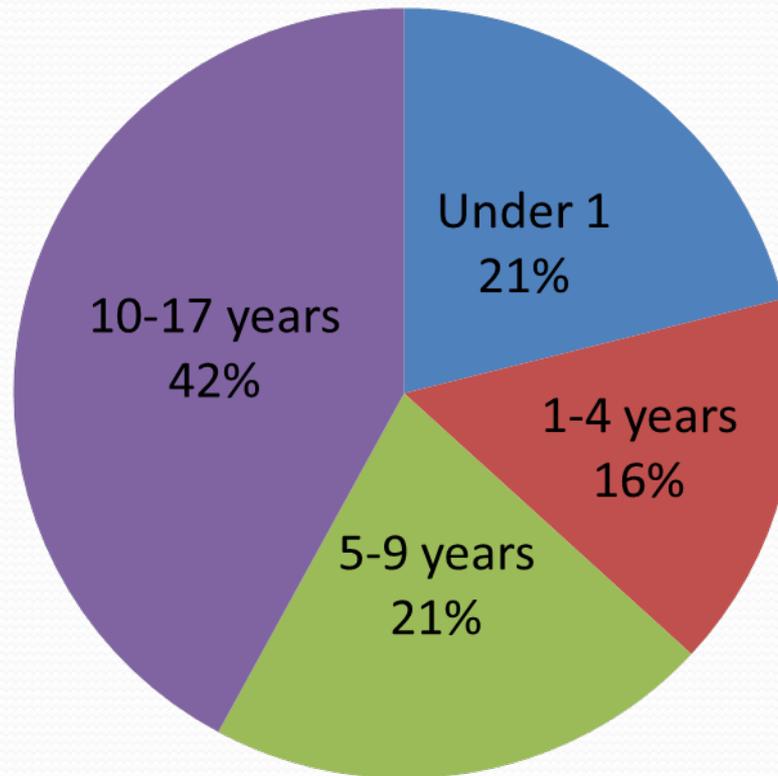
- **Influenza-associated pediatric deaths**
 - 19 reported as of July 29, 2014

Descriptive Statistics	Number of Flu Associated Deaths
Age Average (range)	~8 years (<1 years-17 years)
Gender Male Female	10 9
Race White Black Asian	16 1 2
Ethnicity Non-Hispanic Hispanic	9 10

Mortality

- Influenza-associated pediatric deaths

Number of Influenza (Flu) Associated Deaths in Texas by Age Category, 2013-2014 Influenza Season



Mortality

- Influenza-associated pediatric deaths

Number of Influenza Associated Pediatric Deaths in Texas by Type of Influenza, 2013-2014 Influenza Season

Influenza Type	Number of Flu Associated Pediatric Deaths
Flu A	15
Flu A 2009 H1N1	9
Flu A H3	1
Flu B	3
Flu A and B	1

Mortality

- **Influenza-associated pediatric deaths**

Number of Influenza Associated Pediatric Deaths in Texas by Underlying Health Conditions, 2013-2014 Influenza Season

Underlying Health Condition	Number of Flu Associated Pediatric Deaths*
Asthma	3
Developmental Delays	3
Seizures	4
Cerebral Palsy	4
Heart defects/problems	3
No underlying health conditions	5
Other (ex. born with one lung, cancer, VP shunt, premature)	4

*There are some cases in multiple categories due to some cases having multiple underlying health conditions

Mortality

- **Influenza-associated pediatric deaths**

Number of Influenza Associated Pediatric Deaths in Texas by Vaccination Status, 2013-2014 Flu Season

Vaccinated with 2013-2014 Flu Vaccine	Number of Flu Associated Pediatric Deaths
Yes	3
No	13 (4 were too young to receive vaccine)
Partially (1 dose)	1
Unknown	2

Contact US

- Sign up for flu report notifications:

<http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2015/>



- DSHS Austin's Flu Team mailbox:
flutexas@dshs.state.tx.us



Questions ???