

Influenza Activity in Kansas

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Influenza Surveillance Coordinator

April 13, 2018

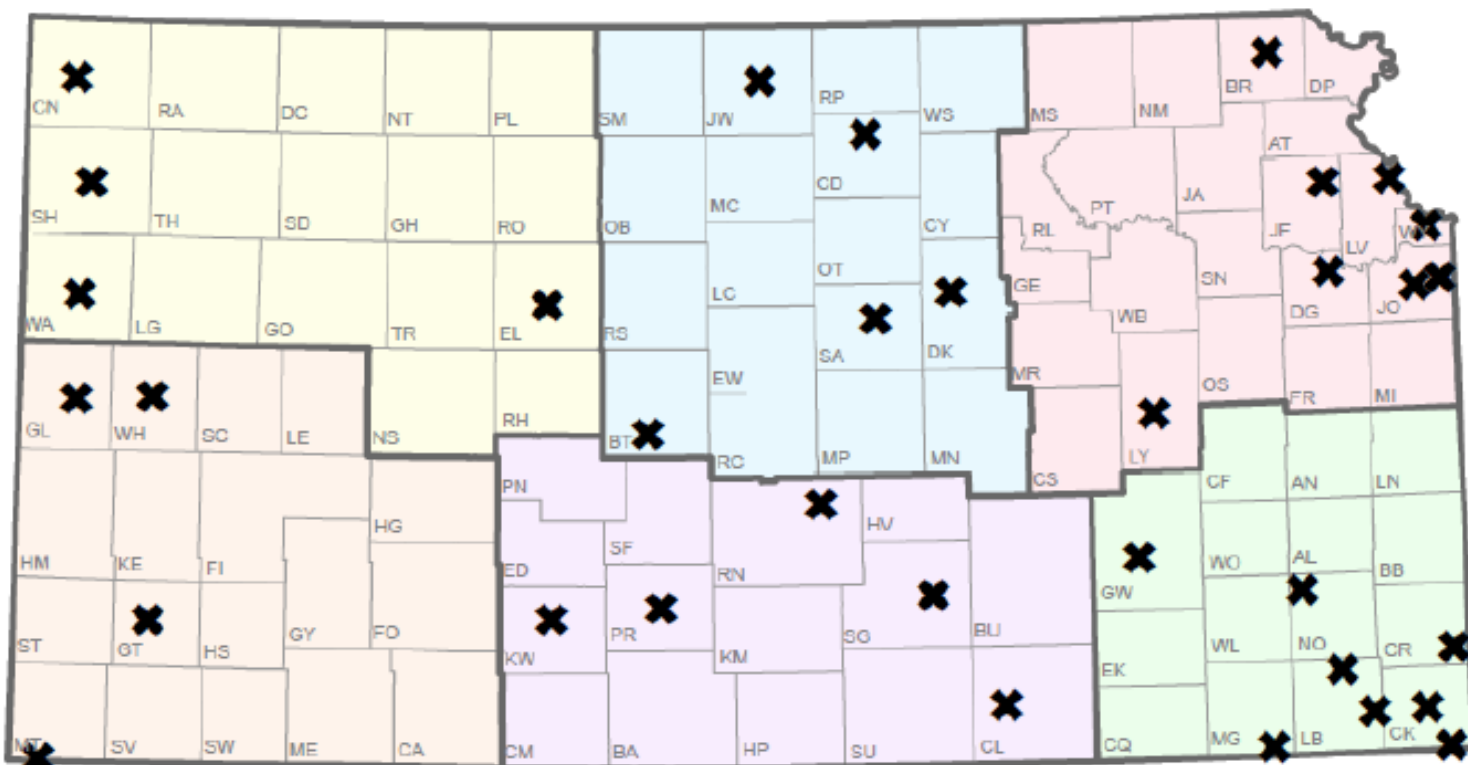
Influenza Surveillance

- Influenza is not a reportable disease in Kansas
- Surveillance consists of:
 - **ILINet**
 - **Laboratory Surveillance**
 - **Respiratory Viral Panel testing**
 - **ESSENCE** (Electronic Surveillance System for the Early Notification of Community-Based Epidemics)
 - **Pneumonia and Influenza Mortality**

ILINet

- U.S. Outpatient Influenza-like Illness Surveillance Network
- Entails weekly reporting to KDHE between October and May
- KDHE recruits providers for participation

Sites enrolled in the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Kansas, October 1, 2017 – May 19, 2018 (n=34)



ILI Net Clinics Available



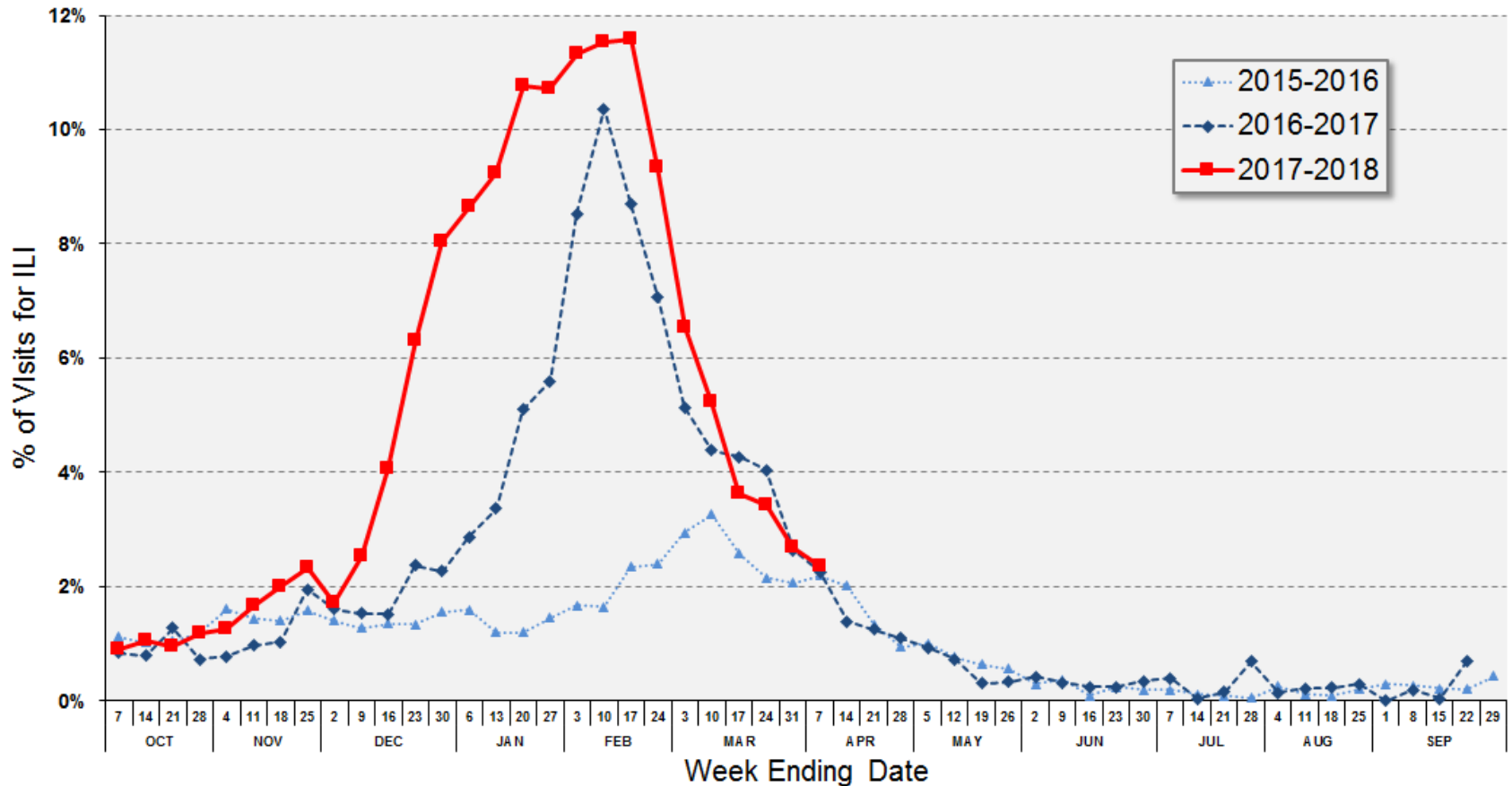
ILI Net Regions



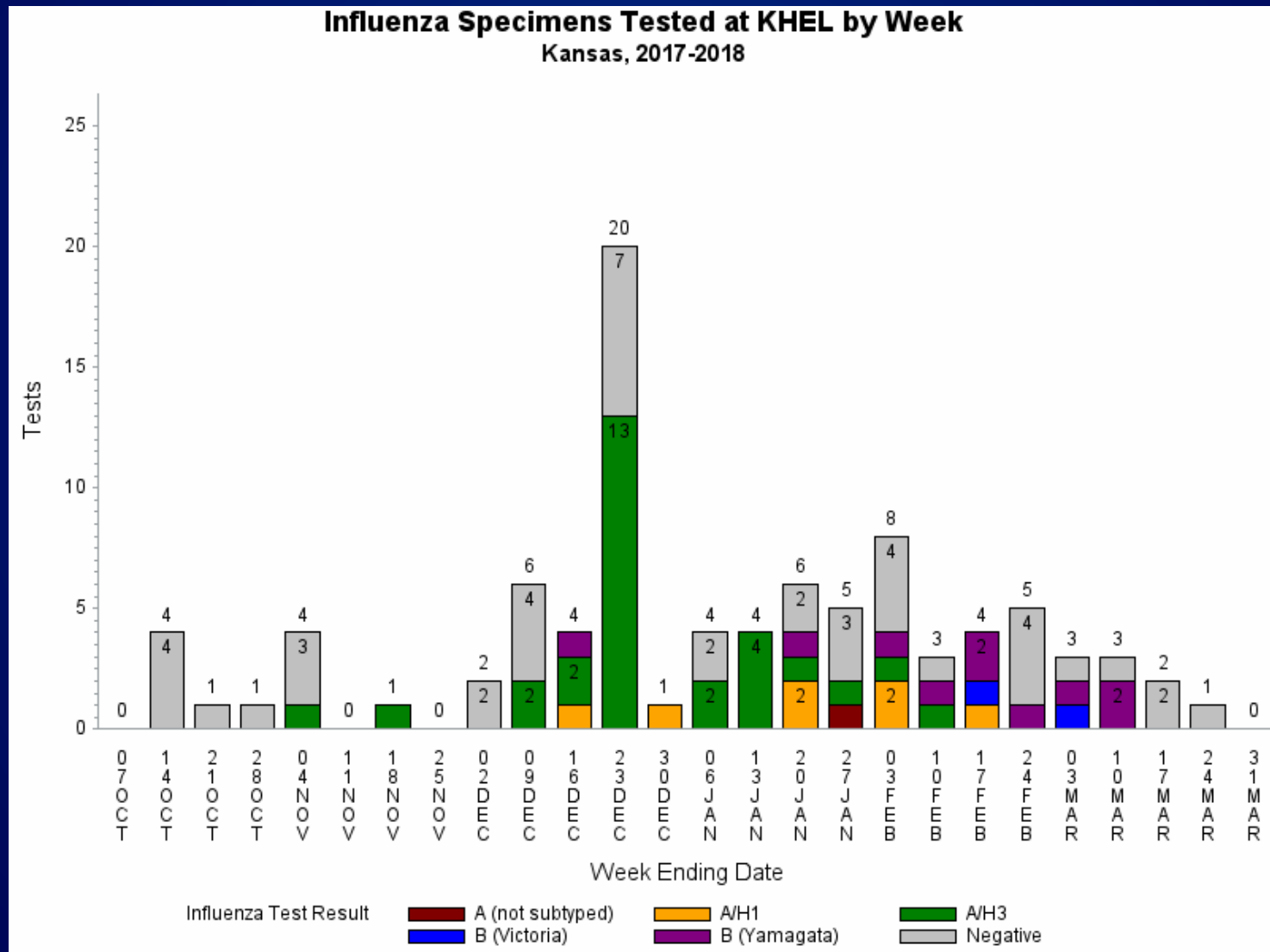
The purpose of this publication is to illustrate ILINet distribution across Kansas and does not measure the severity of influenza activity. This map product is provided without representation or implied or expressed warranty of accuracy for any uses beyond those expressed. The originating agencies are not responsible for publication or use of this product for purposes other than those expressed.

Data sources: KS Depart. of Health and Environment

Percentage of Visits for ILI Reported by ILINet Sites, Kansas, October 2017-September 2018 and the Previous Two Seasons



Influenza Specimens Tested at KHEL by Week, 2017-2018



Laboratory Surveillance

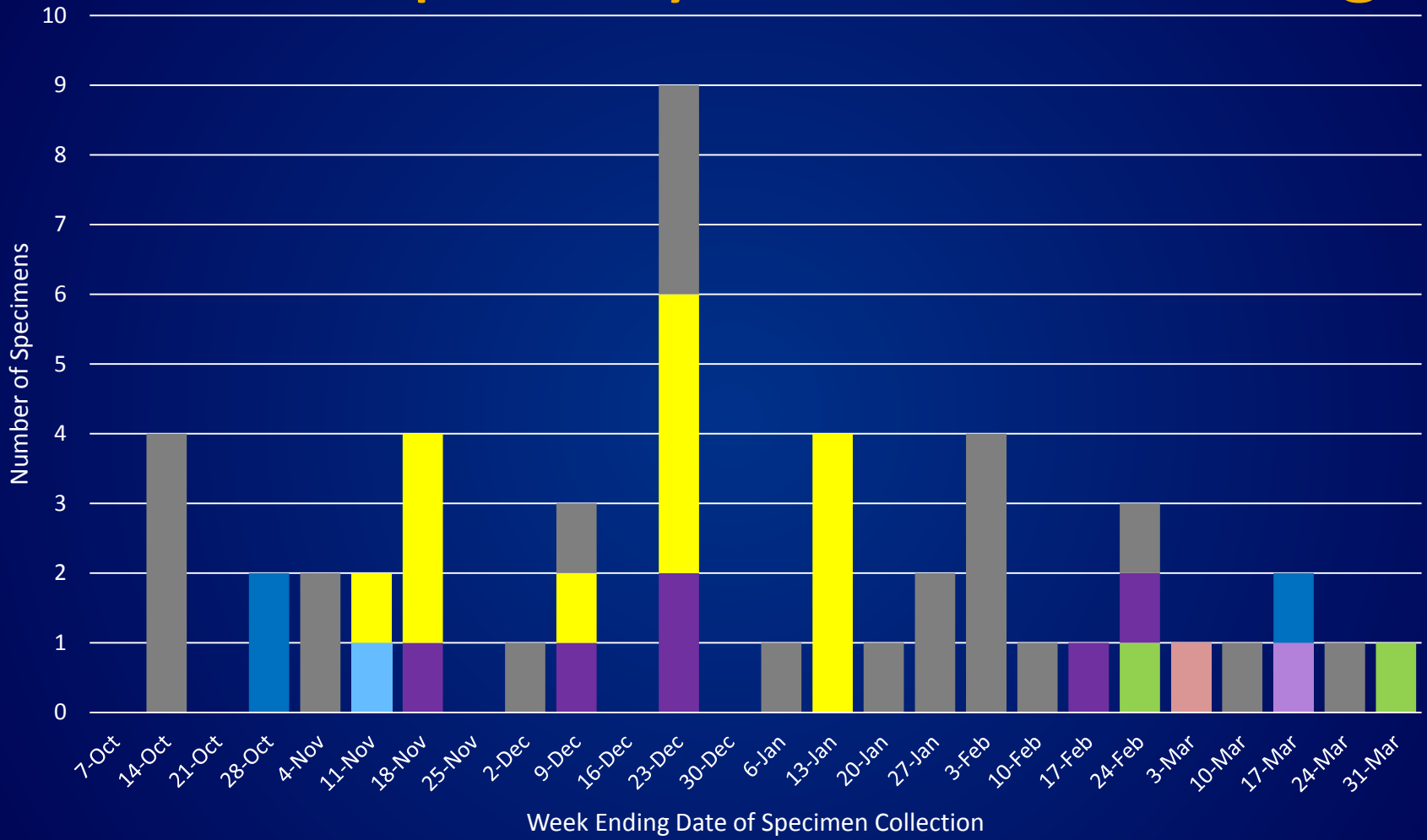
- National virologic surveillance
 - Influenza A(H3N2)
 - Influenza A(H1N1)pdm09
 - Influenza B
- Antiviral resistance testing
- Monitoring for novel strains

Influenza Laboratory Testing

- Negative influenza specimens are tested on the Biofire[®] Respiratory Viral Panel Assay

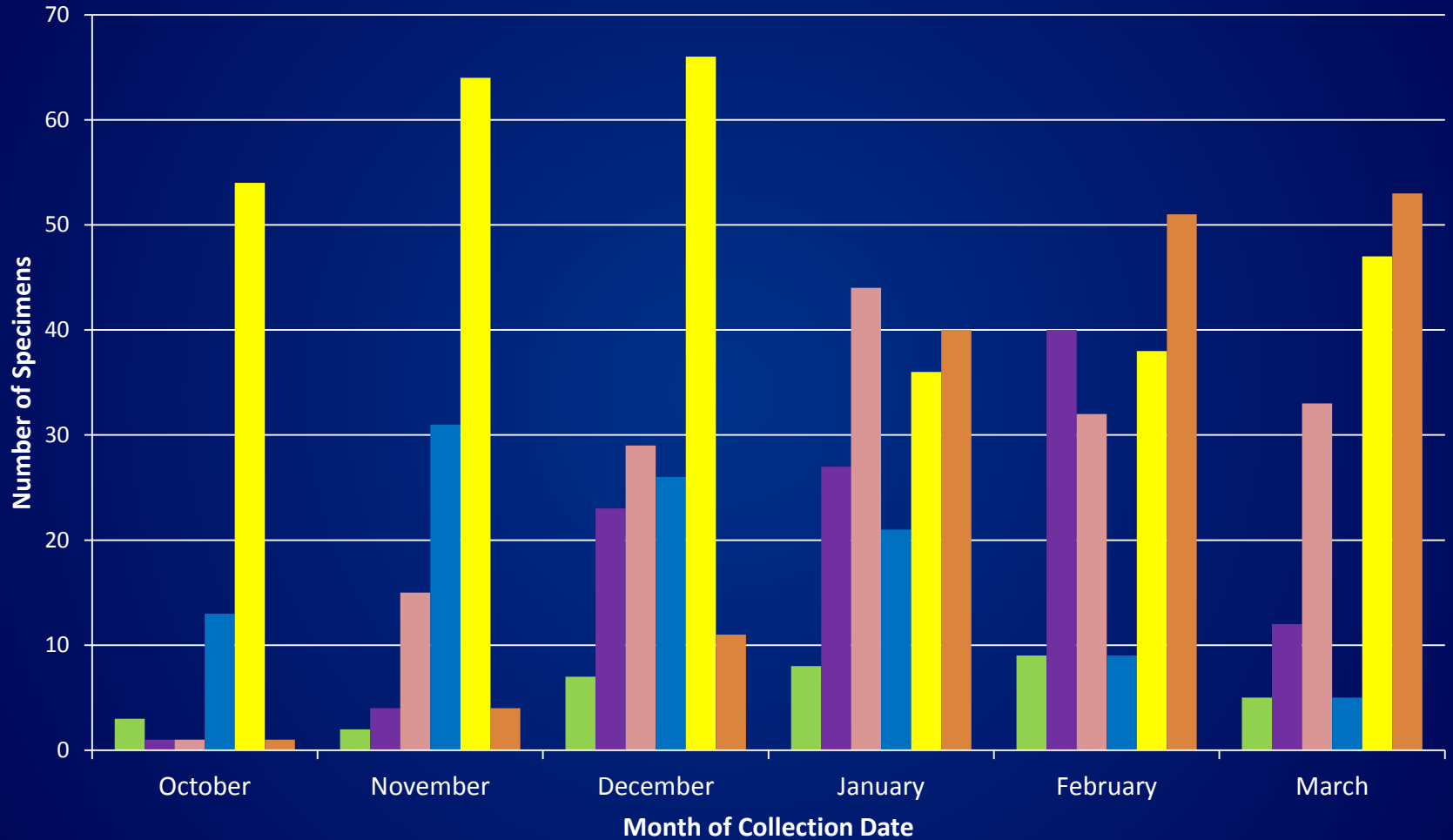
- Adenovirus
- Coronavirus HKU1
- Coronavirus NL63
- Coronavirus 229E
- Coronavirus OC43
- Human Metapneumovirus
- Human Rhino/Enterovirus
- Influenza A
- Influenza A/H1
- Influenza A/H3
- Influenza A/H1-2009
- Influenza B
- Parainfluenza Virus 1
- Parainfluenza Virus 2
- Parainfluenza Virus 3
- Parainfluenza Virus 4
- Respiratory Syncytial Virus

KHEL Respiratory Viral Panel Testing



- Adenovirus
- Coronavirus NL63
- Coronavirus OC43
- Human Metapneumovirus
- Parainfluenza 1
- Parainfluenza 4
- Rhinovirus/Enterovirus
- Negative

Via Christi Respiratory Viral Panel Testing



Adenovirus

Coronavirus

Human Metapneumovirus

Parainfluenza

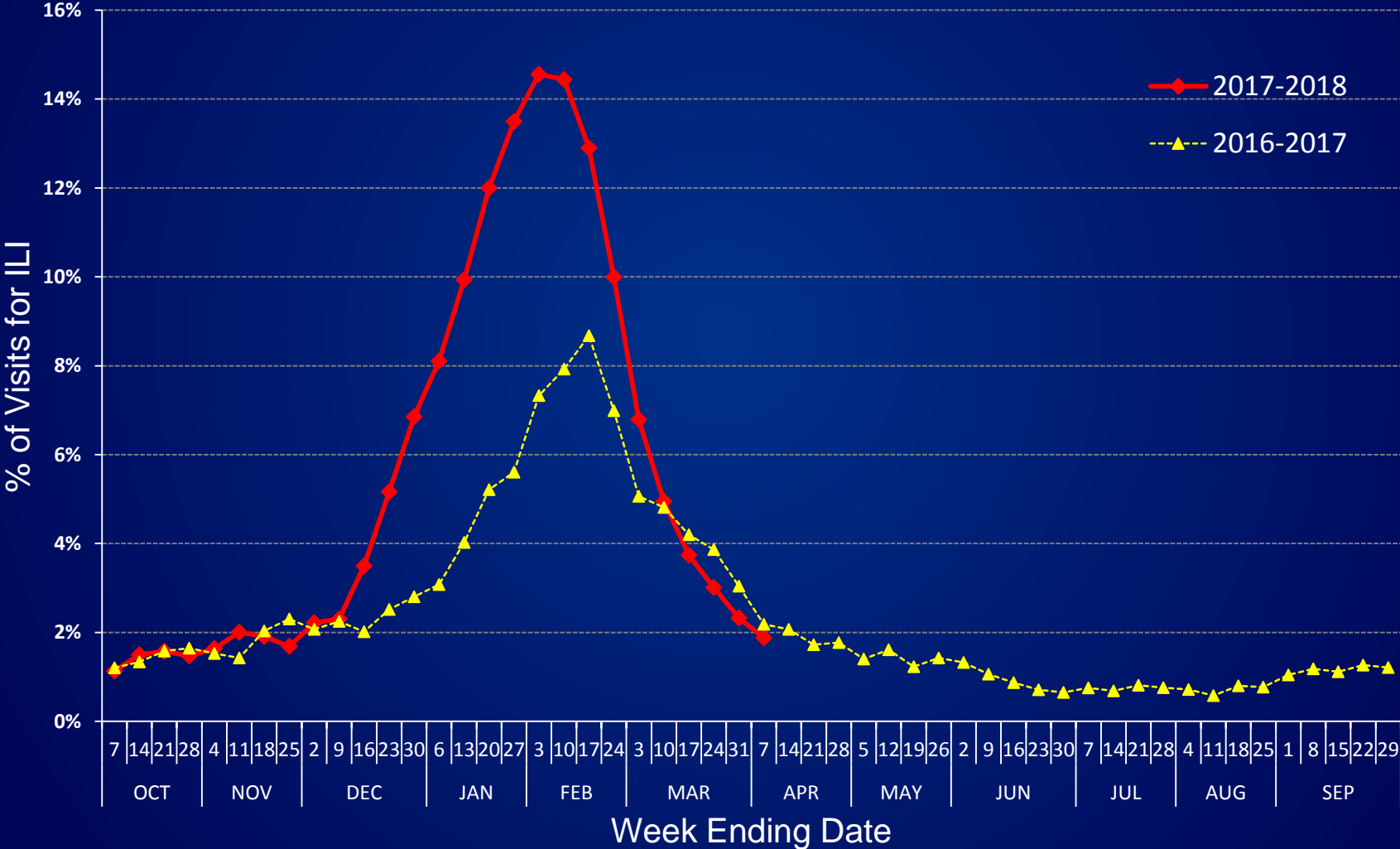
Rhinovirus/Enterovirus

Respiratory Syncytial Virus

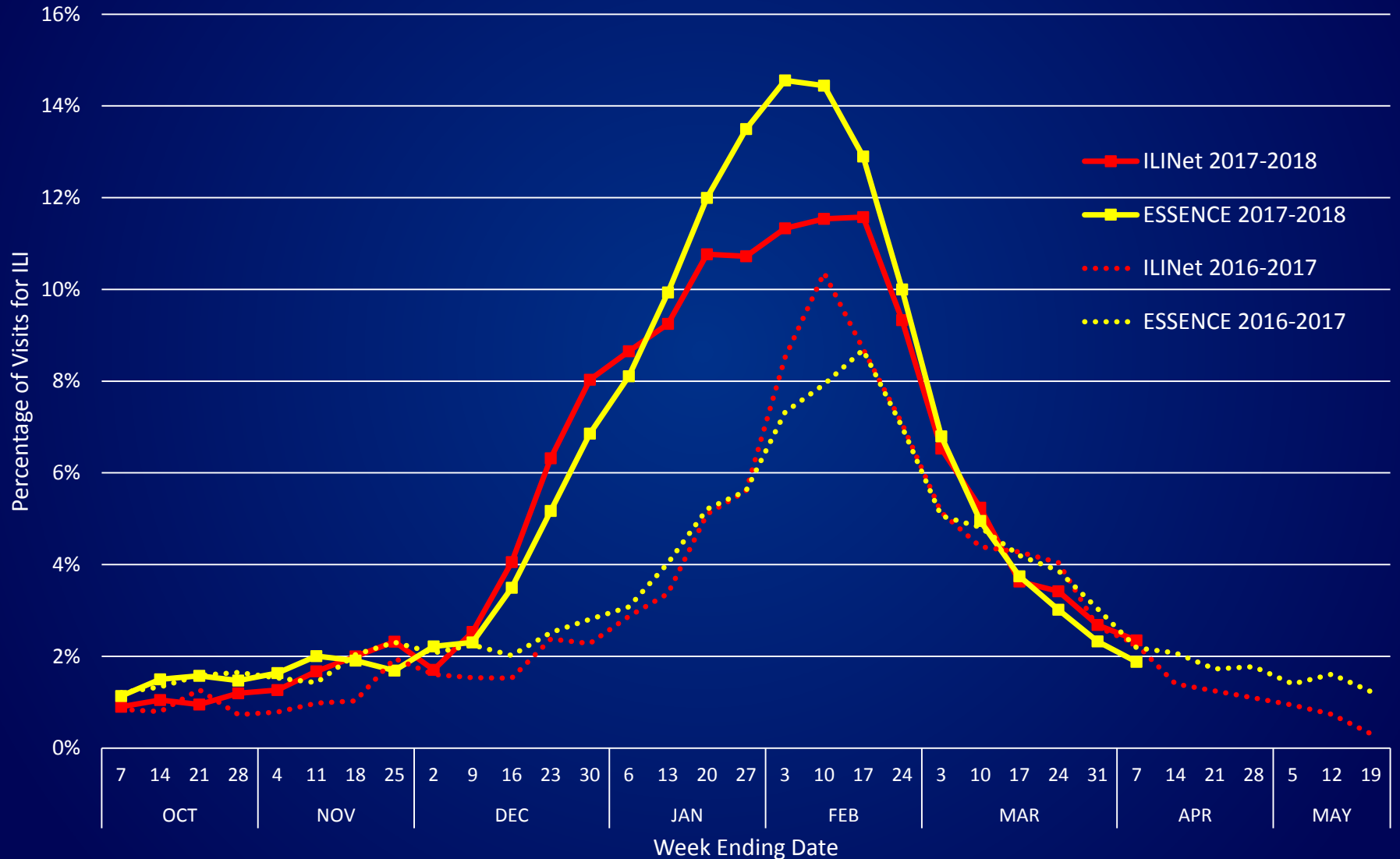
Kansas Syndromic Surveillance Program (KSSP)

- Collection and analysis of electronic health record (EHR) data in real time from emergency departments
 - ED patients
 - Most extreme cases
 - Most vulnerable populations
 - Chief Complaint
 - Near real time
 - Daily automatic updates

Percentage of Visits for ILI reported to ESSENCE, October 2017-September 2018 and the Previous Season

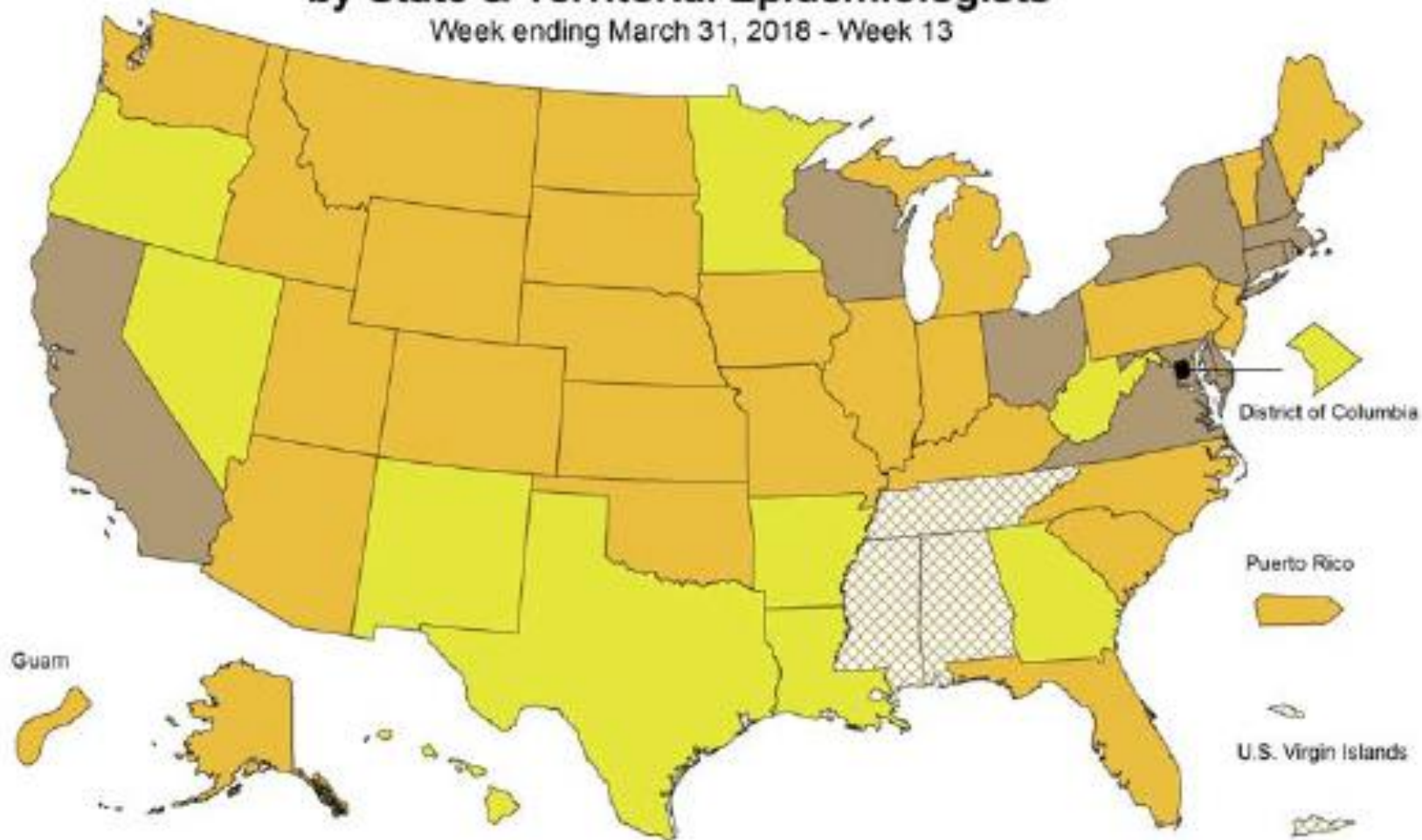


Comparison of ILINet and ESSENCE, October 2017- Present and Previous Season



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*

Week ending March 31, 2018 - Week 13



No Report



No Activity



Sporadic



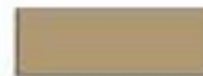
Local



Regional



Widespread



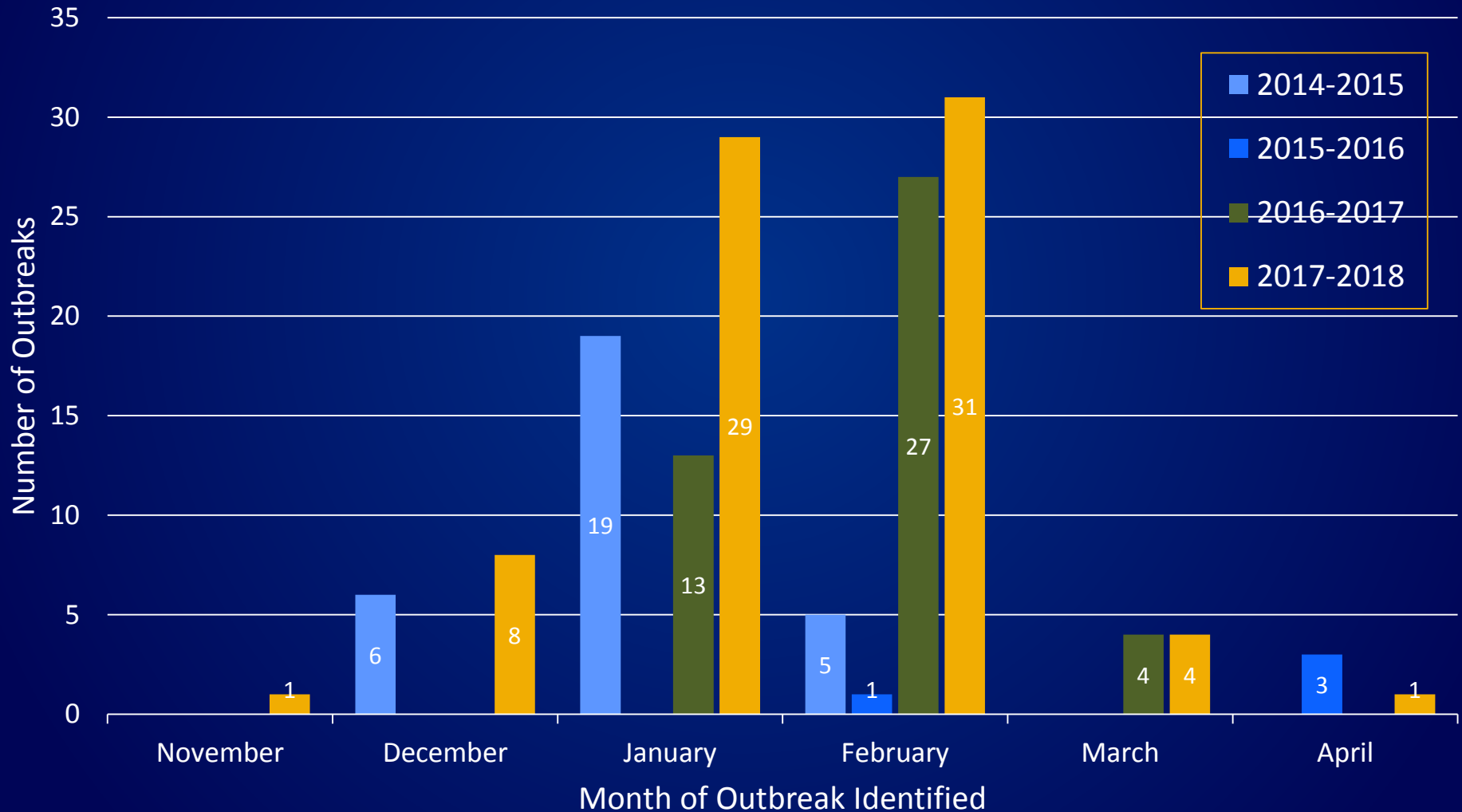
Influenza Outbreak Definition

- Two or more persons who are epidemiologically-linked who develop symptoms of influenza-like illness (ILI) within 72 hours

OR

- One laboratory confirmed influenza case and other persons with ILI in close proximity to each other

Reported Influenza Outbreaks, Kansas, 2014-2018

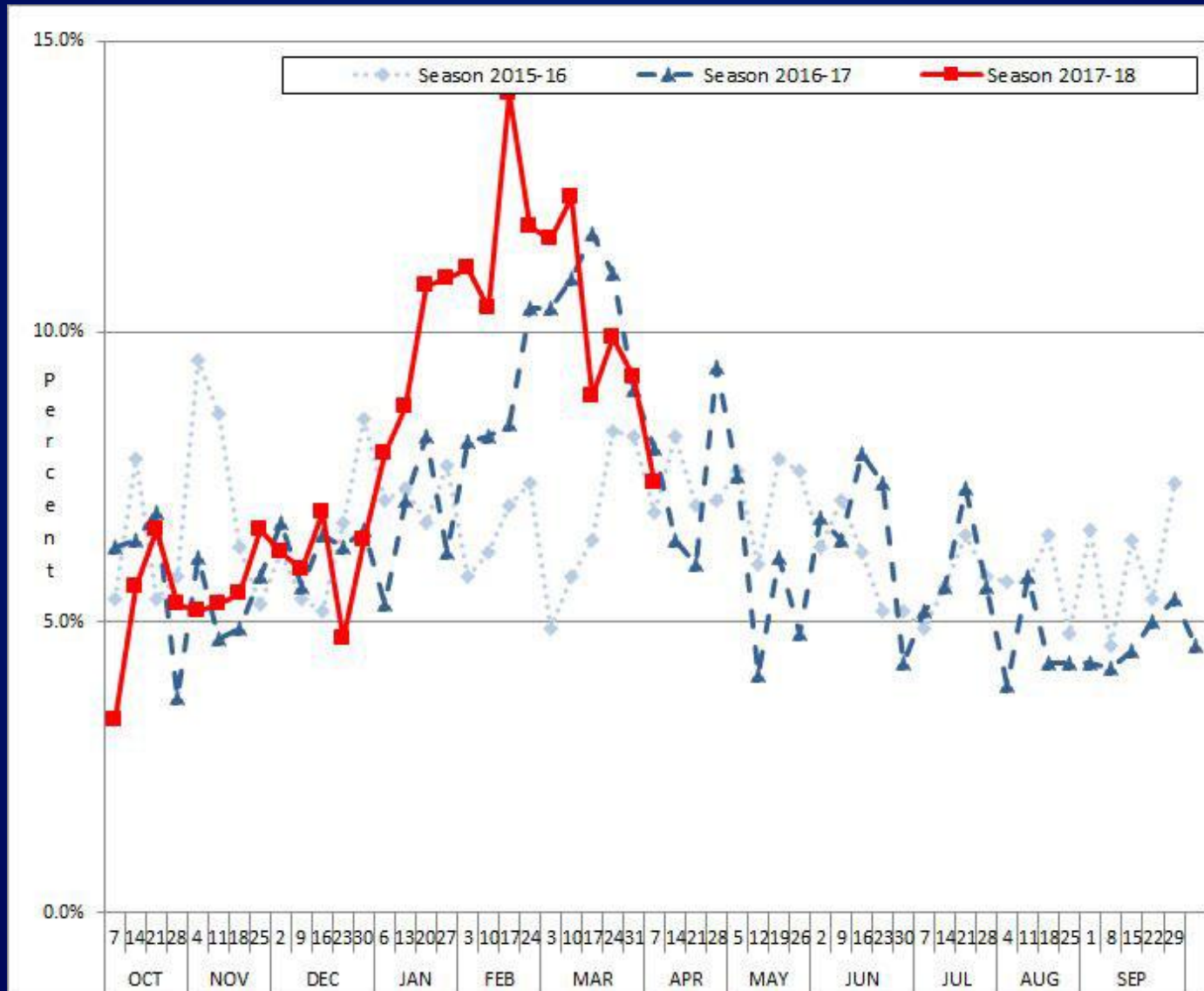


2017-2018 Influenza Outbreaks

(As of February 23, 2018)

Type of Facility	Number of Outbreaks
Adult Care Facility	47
School or College	21
Child Care Facility	6

Pneumonia and Influenza Deaths



Pneumonia and Influenza Deaths

(As of April 9, 2018)

	Season		
	2015-2016	2016-2017	2017-2018
Influenza – Contributing Cause of Death Only	5	25	52
Influenza- Direct Cause of Death	19	100	180
Pneumonia – Direct Cause of Death	414	372	291
Pneumonia – Contributing Cause of Death	966	1092	910
Total	1404	1589	1069

Vaccine Effectiveness (VE)

Overall Influenza A and B: **36%**



6 months through 8 years: **59%**

Overall Influenza
A(H3N2): **25%**

Overall Influenza
A(H1N1)pdm09: **67%**

Overall Influenza B:
42%



6 months
through 8
years: **51%**

Summary

- Flu season peaked during early February
- A/H3 predominant season and low vaccine effectiveness contributed to severe season
- Most deaths with influenza as a direct cause since 1995
 - Two pediatric deaths
- Majority of influenza outbreaks reported in adult care facilities

2018-2019 Influenza Vaccines

- In the U.S., the Food and Drug Administration (FDA) is the national regulatory agency responsible for selecting the composition of all U.S. seasonal flu vaccines
- On March 1, 2018, the Vaccines and Related Biological Products Advisory Committee voted on 2018-2019 Northern Hemisphere flu vaccines

2017-2018

2018-2019

Trivalent

A/Michigan/45/2015
(**H1N1**)pdm09-like virus

A/Michigan/45/2015
(**H1N1**)pdm09-like virus

A/Hong Kong/4801/2014
(**H3N2**)-like virus

A/Singapore/INFIMH-16-
0019/2016 (**H3N2**)-like virus

B/Brisbane/60/2008-like
virus (*Victoria lineage*)

B/Colorado/06/2017-like
virus (*Victoria lineage*)

Quadrivalent

B/Phuket/3073/2013-like
virus (*Yamagata lineage*)

B/Phuket/3073/2013-like
virus (*Yamagata lineage*)

Questions





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