

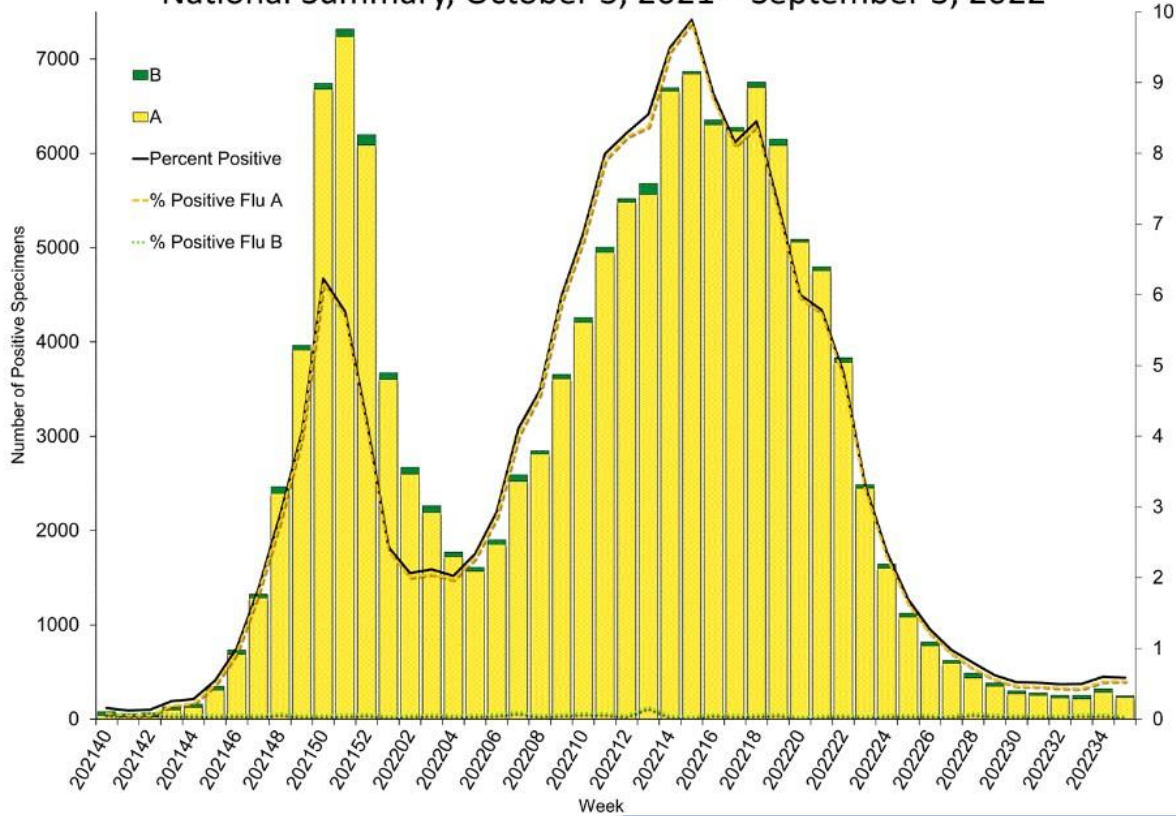
# Nebraska Influenza Surveillance 2022-2023

# What is Happening with Influenza

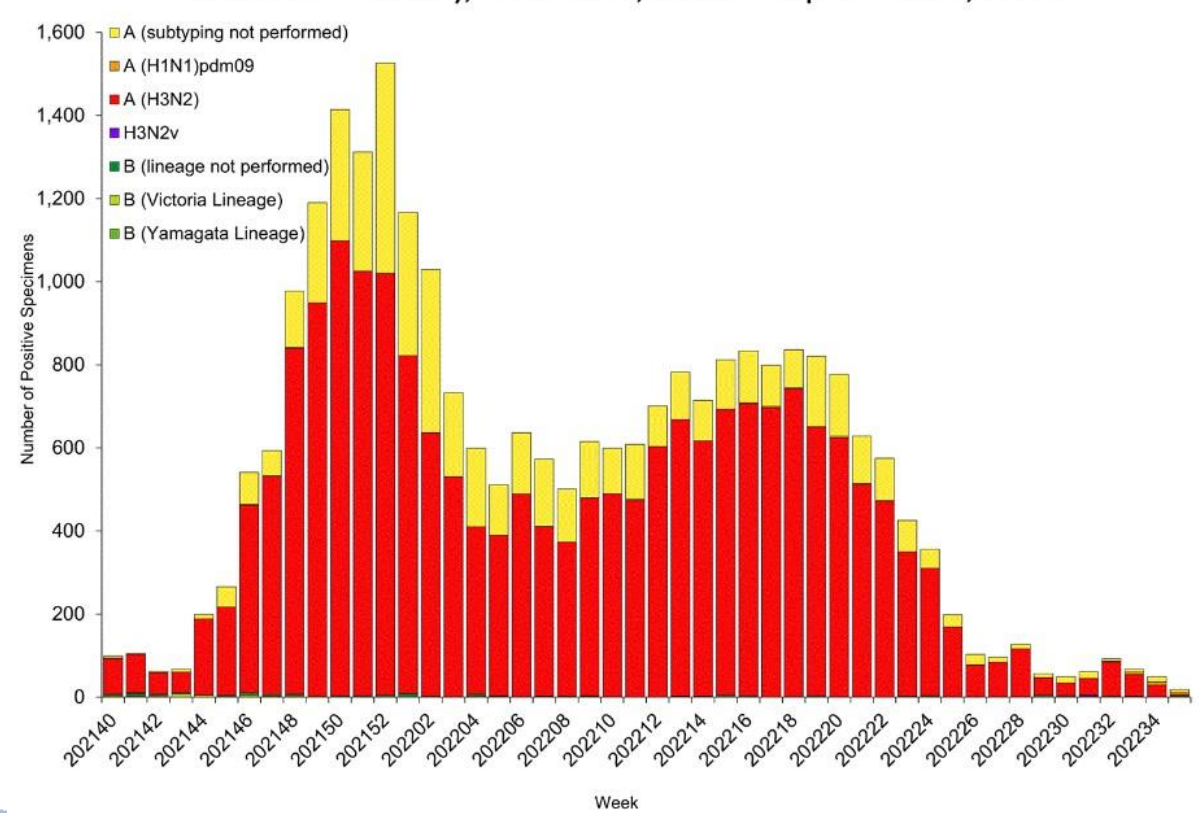
- Influenza (Flu) is a contagious respiratory illness caused by multiple influenza viruses
  - Flu A and B are the two main types of flu viruses
- On average, about 8% of the U.S. population gets sick from the flu each [year](#)
- Influenza A H3N2 was the predominant strain during the 2021-22 season
  - It is predicted that Flu A H3N2 will be the predominant strain for the 2022-23 season as that is the predominant strain in the Southern Hemisphere right [now](#)
  - Current flu severity in the southern hemisphere is typical of a normal flu season
- The 2022-23 flu season begins on October 2<sup>nd</sup>
  - We are currently seeing very minimal influenza activity in Nebraska

# US Influenza Surveillance October 2021-September 2022

Influenza Positive Tests Reported to CDC by U.S. Clinical Laboratories, National Summary, October 3, 2021 – September 3, 2022



Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, October 3, 2021 – September 3, 2022



# Influenza Vaccination

- Annual flu vaccination is recommended for everyone 6 months and older as it is the most effective way to prevent influenza
  - Those 65 and older are recommended for a higher dose
- There are two types of flu vaccines: egg-based and cell- or recombinant-based
  - Quadrivalent formation of egg-based influenza
    - A/Victoria/2570/2019 (H1N1)pdm09-like virus
    - A/Darwin/9/2021 (H3N2)-like virus
    - B/Austria/1359417/2021-like virus (B/Victoria lineage)
    - B/Phuket/3073/2013-like virus (B/Yamagata lineage)
  - Quadrivalent formation of cell-based influenza
    - A/Wisconsin/588/2019 (H1N1)pdm09-like virus
    - A/Darwin/6/2021 (H3N2)-like virus
    - B/Austria/1359417/2021-like virus (B/Victoria lineage)
    - B/Phuket/3073/2013-like virus (B/Yamagata lineage)

# Clinician Outreach and Communication Activity (COCA) Webinar

- COCA held a webinar on September 15<sup>th</sup> to talk about the recommendations for influenza prevention and treatment in children
- This webinar includes lots of useful information on recommended influenza antivirals, vaccines, and all the new updates to recommendations for this upcoming influenza season
- To access the webinar and slide deck, please visit

[https://emergency.cdc.gov/coca/calls/2022/callinfo\\_091522.asp](https://emergency.cdc.gov/coca/calls/2022/callinfo_091522.asp)

# Nebraska's Influenza Surveillance Program

- Influenza surveillance started in Nebraska in 2003 and has grown to include 7 surveillance systems
  - Allows us to determine when we first start to see flu activity each year
  - Provides an indicator of the progression of the influenza season as well as prevalence of disease in the community
  - Identifies what strains of influenza are circulating in any given year, thus determining whether the current vaccine protects against the circulating strain
- Our surveillance program is a collaborative effort between DHHS, local health departments, public health and clinical laboratories, vital statistics offices, healthcare providers, clinics, and emergency departments

# Summary

- Laboratory Surveillance
- School Absenteeism Surveillance
- Outpatient Influenza-like Illness Surveillance (ILINet)
- Emergency Department (ED) Syndromic Surveillance
- Outbreak Reporting
- Hospital Influenza-like Illness (ILI) Admissions Surveillance
- Mortality Surveillance

# Laboratory Surveillance

- On a weekly basis, 36 laboratories submit data to an on-line database
  - Number of influenza and RSV tests performed and number of positives (173 NAC 1 1-005.01C)
- 88 laboratories submit influenza electronic lab reports daily
  - Labs performing ELR must report all positive and negative tests (173 NAC 1 1-004.02)
- All other hospitals and clinics only report during outbreak situations (173 NAC 1 1-005.01B)
- Laboratories are asked to submit specimens to the Nebraska Public Health Laboratory (NPHL) for PCR testing and sub-typing of the influenza virus
  - NPHL submits specimens to the CDC to determine the strain of influenza circulating during the current season along with antiviral resistance
  - This assists with the determination of the following year's influenza vaccine

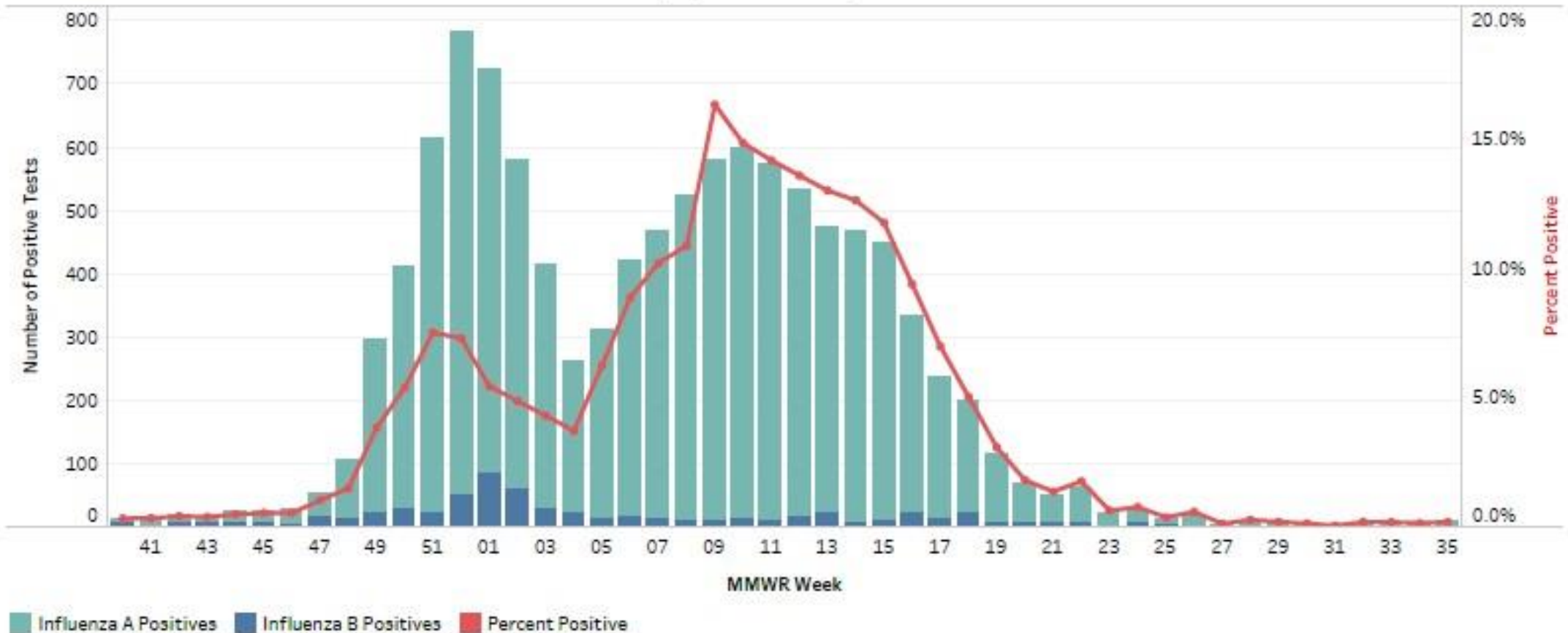


# Laboratory Surveillance

- When laboratories submit specimens, they do so by using a system called NUIirt
- In NUIirt, labs will begin an order by searching for a patient or creating a new patient for people who are not in the system yet
- After filling in the ordering provider and type of test, the lab will answer some epidemiologic questions
- Once the order is reviewed and complete, the lab will send the specimen along with a printed page of the order to NPHL
- To create a NUIirt account or for other questions, please call NPHL Client Services: 402-559-2440, or visit <https://nulirt.nebraskamed.com>

# Laboratory Surveillance

Number of Influenza A & B Positive Tests and Percent Positive, by MMWR Week, 2021-22



# School Absenteeism Surveillance

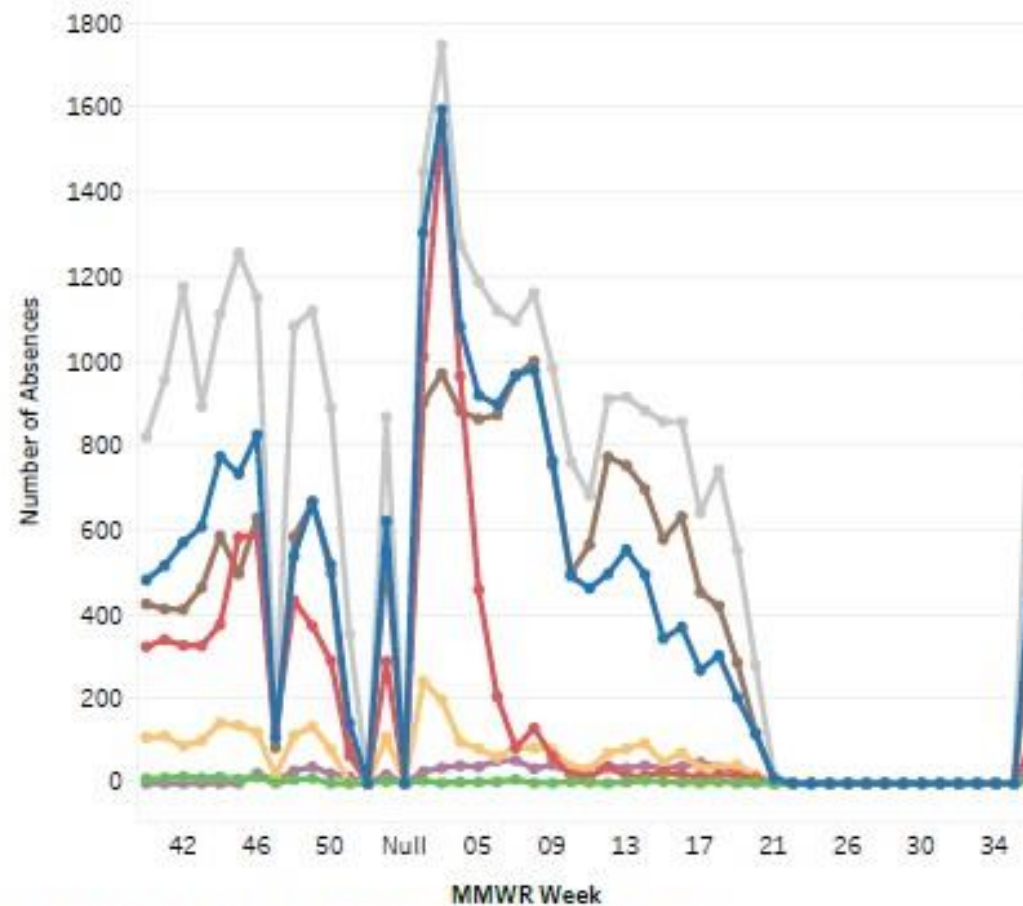
- On a weekly basis, schools submit the number of absent students due to illness through the School Absenteeism REDCap Survey
- Once a school is enrolled, they will receive a new survey every week to complete
  - Information collected in the survey includes the number of absences, reason for absences, and if any classrooms or the school was closed
- Please contact your local health department if you are interested in enrolling your school in this surveillance program
  - To check for potential duplicates, LHD's can log in REDCap and either browse the dashboard or search the report called "Active Schools"

For information on reducing the spread of seasonal influenza in schools, visit: [Guidance for School Administrators to Help Reduce the Spread of Seasonal Influenza in K-12 Schools](#)

For information on our school absenteeism surveillance program, visit: [Nebraska](#)

# School Absenteeism Surveillance

Student Absences due to Illness, by MMWR Week, 2021-22



Low Reporting Affected by Holiday for MMWR Weeks 47 & 52

Reason for Absence

- ILI
- COVID
- Gastro-Intestinal
- Other Illness
- RSV
- Other Respiratory
- Mental Health

# Outpatient Influenza-like Illness Surveillance (ILINet)

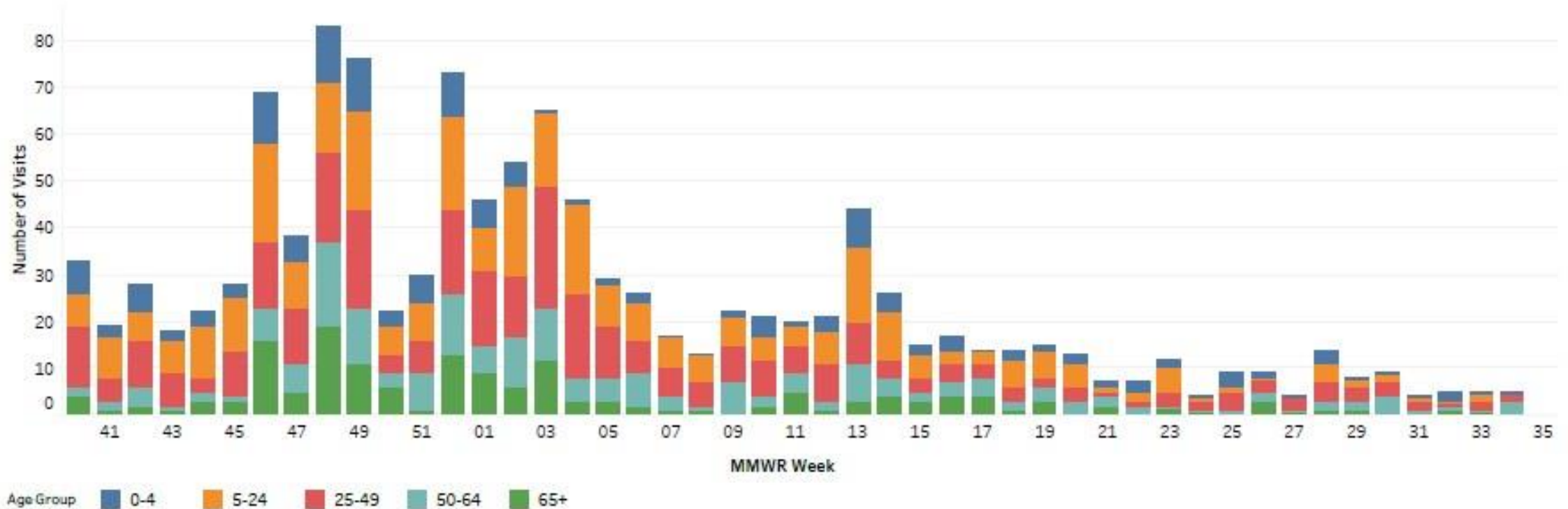
- On a weekly basis, a select group of Nebraska physicians (13) participate in the Outpatient Influenza-like Illness Surveillance Network (ILINet)
  - The sentinel providers report data to CDC on the total number of office visits and the number of those patients with influenza-like illness (ILI), by age group (0-4, 5-24, 25-49, 50-64, and 65+)
  - Providers also provide the number of patients seen within the past three years for each age group to give us a population served estimate

# Outpatient Influenza-like Illness Surveillance (ILINet)

- Sentinel providers are given 10 influenza specimen collection kits at the beginning of the flu season
  - The goal is for sentinel providers to report 85% of weeks during the flu season and to submit up to 10 influenza specimens to NPHL (2-3 specimens in October-December, 2-3 in January-February, and 2-3 in March-May)
- We are looking to get two providers for each local health department
  - Current sentinel providers are from North Central (1), LLCHD (1), DCHD (1), Sarpy/Cass (1), ELVLHD (1), South Heartland (1), West Central (1), East Central (1), Two Rivers (1), Panhandle (2), Central (1), and Four Corners (1)
  - REDCap survey to help get new providers enrolled to be published soon

# Outpatient Influenza-like Illness Surveillance (ILINet)

Number of ILI Visits Reported by the Nebraska Outpatient ILI Surveillance Network (ILINet), by MMWR Week, 2021-22





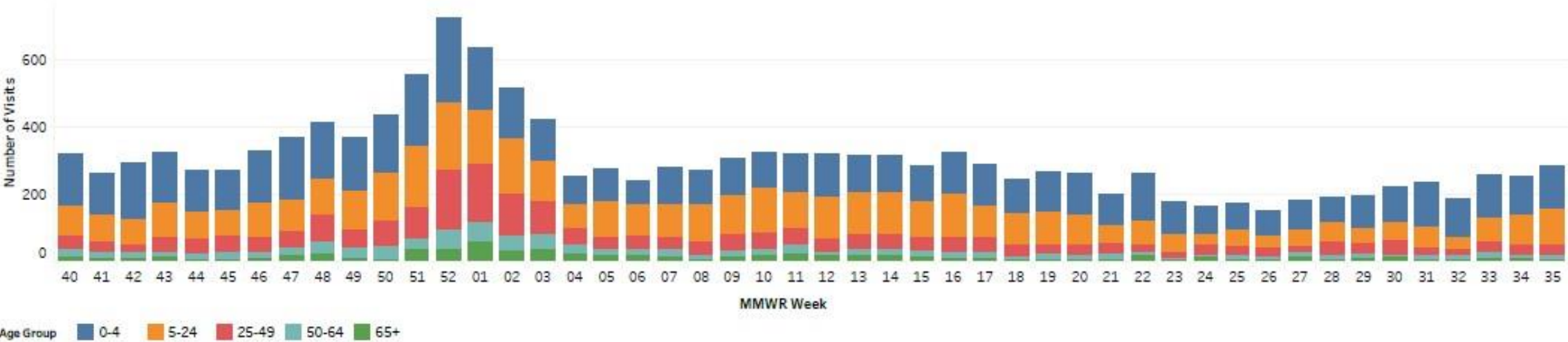
# Emergency Department (ED) Syndromic Surveillance

- Syndromic surveillance: real-time (or near real-time) collection of patient visit data from clinics, EDs, hospitals, and other healthcare facilities
  - NE receives ED data from 71 facilities across the state
- Analyze discharge diagnoses and chief complaint data for ILI to help determine burden of ILI illness in EDs
  - Track total ILI visits by age group and percent of ILI visits among all ED visits, by reporting week
- Also utilize syndromic data to track ILI outpatient data from 10 Federally Qualified Health Centers (FQHCs)
- Report this data weekly to CDC's ILINet year round



# Emergency Department (ED) Syndromic Surveillance

Number of ILI Emergency Department (ED) Visits by Age Group, by MMWR Week, 2021-22



# Outbreak Reporting

Reporting of respiratory outbreaks in long-term care facilities (LTCF), schools and other congregate settings is required by rules and regulations.

Outbreaks are required to be reported by rules and regulations.

- 173 NAC 11-004.01B Clusters, Outbreaks, or Unusual Events, Including Possible Bioterroristic Attacks: Clusters, outbreaks, or epidemics of any health problem, infectious or other, including food poisoning, healthcare-associated outbreaks or clusters, influenza, or possible bioterroristic attack; increased disease incidence beyond expectations; unexplained deaths possibly due to unidentified infectious causes; and any unusual disease or manifestations of illness must be reported immediately.

Definition of a respiratory outbreak:

A sudden increase in acute febrile respiratory illness\* over the normal background rate (e.g., 2 or more cases of acute respiratory illness occurring within 72 hours of each other)

\*Acute febrile respiratory illness is defined as fever > 100°F AND one or more respiratory symptoms (runny nose, sore throat, laryngitis, or cough). However, please note that elderly patients with influenza may not develop a fever.

For information on preventing outbreaks in long-term care facilities, visit: [Interim Guidance for Influenza Outbreak Management in Long-Term Care Facilities](#)

# Outbreak Reporting

- When a positive influenza, RSV, or any other respiratory virus test is identified in one of our long-term care facilities, DHHS reaches out to LHD's about a potential outbreak
  - LHD's will then contact the facility to see if they are experiencing an outbreak
- If there is an outbreak occurring, facilities and LHDs will complete our Outbreak Reporting survey through REDCap
  - The paper report form is still available for those who want to use it
- Please contact your local health department if a respiratory outbreak is identified
- Respiratory Outbreak Protocol to be published soon

# Outbreak Reporting

- The Outbreak Reporting survey has three forms to it
  - The initial outbreak summary form, the information about healthcare facilities form, and the patient line list form
- After the LHD or facility completes the Outbreak Summary form, they will create a password that they can use to get into the survey queue
- The LHD or facility will use the link and password to complete the healthcare facilities and patient line list forms that will appear in the survey queue

# Infection Control Assessment and Promotion Program (ICAP)

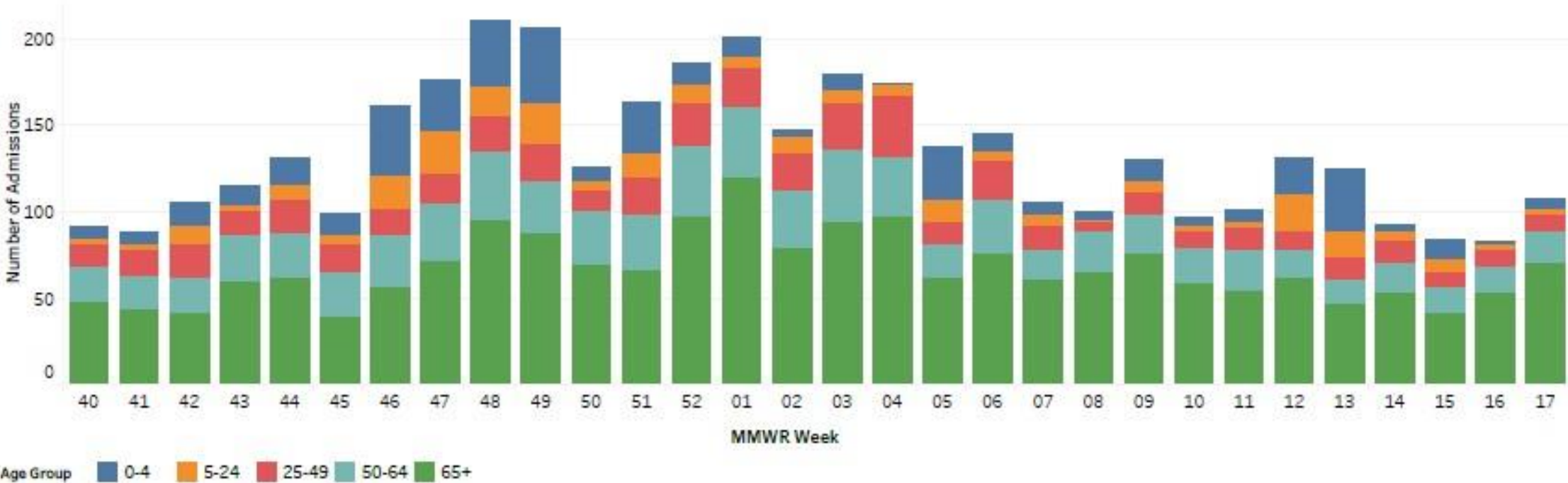
- ICAP is a program that is supported by Nebraska DHHS HAI/AR program via a CDC grant with a team consisting of experienced infection preventionists, infectious disease trained medical directors, and professional educators
- They offer no cost, peer-peer infection control assessments and recommendations to all facilities in Nebraska
  - Conduct infection control assessments and recommendations
  - Collect and analyze data from the Office of Epidemiology
  - Update ICAP resources and guidance to fill infection control gaps
  - Provide resources to facilities that are experiencing outbreaks
- For more information about ICAP, please visit <https://icap.nebraskamed.com/>

# Hospital Influenza-like Illness (ILI) Admissions Surveillance

- On a weekly basis, Nebraska Infection Preventionists from 87 hospitals submit influenza-like illness (ILI) admission data
  - Facility can submit the online form themselves
  - Facility can send data to their local health department for them to submit
- The current case definition for ILI is:
  - Clinically diagnosed with influenza or ILI
  - Has a fever  $\geq 100^{\circ}\text{F}$  ( $\geq 37.8^{\circ}\text{C}$ ), oral or equivalent, AND cough and/or sore throat

# Hospital Influenza-like Illness (ILI) Admissions Surveillance

Number of ILI Hospital Admissions by Age Group, by MMWR Week, 2021-22



# Mortality Surveillance

- Nebraska utilizes the electronic death registration system (EDRS) for surveillance of influenza-related deaths
  - We search for ICD-10 codes and causes of death related to influenza
  - It is very important to put influenza as an underlying cause if applicable
- It is required to report all influenza-associated pediatric deaths to a public health authority



# Influenza and Other Respiratory Disease Surveillance Report

- During flu season, we publish a weekly surveillance report that contains all this data and much more

- This report contains influenza and RSV surveillance
- The report can be accessed on the NE DHHS website
- To subscribe to the report, please visit

[https://public.govdelivery.com/accounts/NESTATE/subscriber/new?topic\\_id=NEDHHS\\_209](https://public.govdelivery.com/accounts/NESTATE/subscriber/new?topic_id=NEDHHS_209)

**Nebraska Influenza & Other Respiratory Disease Surveillance Report, 2021-22 Influenza Season, Week 06**  
*(All data are preliminary and may change as more reports are received.)*

### INFLUENZA WEEKLY SUMMARY

#### INFLUENZA LABORATORY SURVEILLANCE

Positive Influenza A & B Tests, Percent Positive, and Change from Last Week

MMWR Week	Influenza A Positives	Change from Last Week	Influenza B Positives	Change from Last Week	Overall Percent Positive	% Change from Last Week
06	390	▲88	19	0	8.7%	▲2.1%
Season Total	4,509		479			

Cumulative Influenza Positive Tests by Subtype and Age Group

	0-4	5-17	18-24	25-49	50-64	65+	Season Total
Flu A: H1			1				1
Flu A: H3	96	125	70	111	50	66	518

#### INFLUENZA-LIKE ILLNESS (ILI) OUTPATIENT SURVEILLANCE

Total ILI Visits Reported by the NE Outpatient ILI Surveillance Network (ILINet) and Change from Last Week

MMWR Week	Total ILI Outpatient Visits	Change from Last Week
06	19	▼7
Season Total	813	

#### ILI EMERGENCY DEPARTMENT (ED) SURVEILLANCE

Total ILI ED Visits and Change from Last Week

MMWR Week	Total ILI ED Visits	Change from Last Week
06	234	▼38
Season Total	7,263	

#### ILI HOSPITALIZATION SURVEILLANCE

Total ILI Hospital Admissions and Change from Last Week

MMWR Week	Total ILI Hospital Admissions	Change from Last Week
06	110	▲15
Season Total	2,292	

#### LONG-TERM CARE FACILITY OUTBREAK SURVEILLANCE

11 influenza-associated outbreaks have been reported for the surveillance season

#### MORTALITY SURVEILLANCE

11 influenza-associated deaths have been reported for the surveillance season

National Influenza Summary: Please see <http://www.cdc.gov/flu/weekly/>  
International Influenza Summary: Please see <https://www.who.int/news/global-influenza-programme/surveillance-and-monitoring/influenza-updates>  
For information on the prevention of influenza, please see: <http://www.cdc.gov/flu/protect/habits.htm>

### RESPIRATORY SYNCYTIAL VIRUS (RSV) WEEKLY SUMMARY

#### RSV LABORATORY SURVEILLANCE

Positive RSV Tests, Percent Positive, and Change from Last Week

MMWR Week	RSV Positives	Change from Last Week	Percent Positive	% Change from Last Week
06	27	▼8	1.1%	▼.2%
Season Total	2,909			

RSV Percent Positive by Test Type and Percent Change from Last Week

MMWR Week	PCR	Antigen
06	1.2% ▼.2%	4.3% ▼4.0%

#### LONG-TERM CARE FACILITY OUTBREAK SURVEILLANCE

5 RSV-associated outbreaks have been reported for the surveillance season

#### MORTALITY SURVEILLANCE

3 RSV-associated deaths have been reported for the surveillance season

# Other Resources

- [Nebraska DHHS Flu Page](#)
- [CDC Flu Page](#)
- [CDC FluView: Weekly Influenza Surveillance Report](#)
- [WHO FluNet](#)
- [High Path Avian Influenza](#)
- [Youth in Agriculture](#)

# Questions/Comments

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