STATE OF IOWA DEPARTMENT OF
Health AND Human
SERVICES

IOWA | State Hygienic Laboratory

Iowa Respiratory Virus Surveillance Webinar 2023-24 Season

Iowa Department of Health and Human Services

State Hygienic Laboratory at the University of Iowa

Housekeeping

- All participants will be muted during the presentation.
  - Questions can be submitted directly to the facilitator via the Q/A feature located on your control panel
  - All questions submitted will be answered at the end of the presentation

- This session will be recorded and made available for reviewing
  - When available, you will receive a follow-up-email on how to access this recording

Presentation Overview

- Respiratory Virus Surveillance Description and Summary
- Influenza and Other Respiratory Outbreaks
- Antiviral Update
- Influenza Vaccination Update
- Submitting Specimens to SHL and Survey Test Results

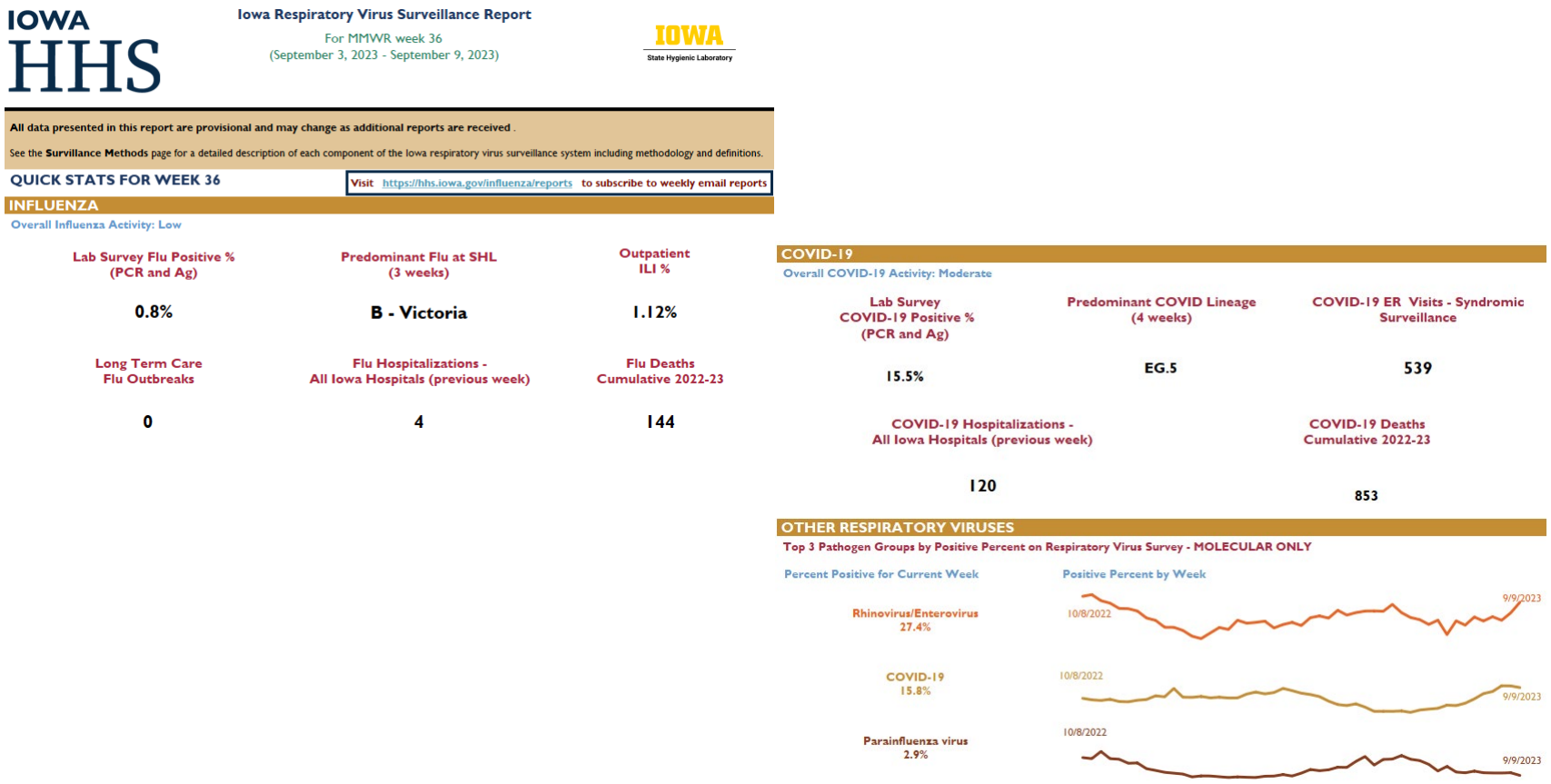
Presenters

- Andy Weigel, LMSW, Influenza Surveillance Coordinator, Iowa HHS
- Andrew Hennenfent DVM, MPH, DACVPM HAI Program Manager, Iowa HHS
- Robert Kruse, MD, MPH, State Medical Director, Iowa HHS
- Shelly Jensen, RN, BSN, Immunization Nurse Clinician, Iowa HHS
- Jeff Benfer, MS, MB (ASCP)cm, Supervisor of Virology and Molecular Biology, SHL

Respiratory Virus Surveillance

Andy Weigel, Iowa HHS Influenza Epidemiologist

Iowa Respiratory Virus Surveillance Report



IOWA HHS

Iowa Respiratory Virus Surveillance Report

For MMWR week 36
(September 3, 2023 - September 9, 2023)

IOWA State Hygienic Laboratory

All data presented in this report are provisional and may change as additional reports are received .

See the **Survillance Methods** page for a detailed description of each component of the Iowa respiratory virus surveillance system including methodology and definitions.

QUICK STATS FOR WEEK 36

Visit https://hhs.iowa.gov/influenza/reports to subscribe to weekly email reports

INFLUENZA

Overall Influenza Activity: Low

Lab Survey Flu Positive % (PCR and Ag)	Predominant Flu at SHL (3 weeks)	Outpatient ILI %
0.8%	B - Victoria	1.12%

Long Term Care Flu Outbreaks	Flu Hospitalizations - All Iowa Hospitals (previous week)	Flu Deaths Cumulative 2022-23
0	4	144

COVID-19

Overall COVID-19 Activity: Moderate

Lab Survey COVID-19 Positive % (PCR and Ag)	Predominant COVID Lineage (4 weeks)	COVID-19 ER Visits - Syndromic Surveillance
15.5%	EG.5	539

COVID-19 Hospitalizations - All Iowa Hospitals (previous week)	COVID-19 Deaths Cumulative 2022-23
120	853

OTHER RESPIRATORY VIRUSES

Top 3 Pathogen Groups by Positive Percent on Respiratory Virus Survey - MOLECULAR ONLY

Percent Positive for Current Week

Positive Percent by Week

Rhinovirus/Enterovirus 27.4%

COVID-19 15.8%

Parainfluenza virus 2.9%

10/8/2022 — 9/9/2023

Visit https://hhs.iowa.gov/influenza/reports to subscribe to weekly email reports

Iowa Respiratory Virus Surveillance

- Outpatient influenza-like illness (ILINet)
- Influenza and COVID-19 hospitalizations
- Public health and clinical laboratory testing
- Long-term care facility outbreaks
- Influenza-related and COVID-19 mortality
- School absences due to illness
- Syndromic surveillance (Flu and COVID-19 ED visits)
- Influenza and COVID-19 immunizations
- Influenza and COVID-19 genetic or antigenic characterization

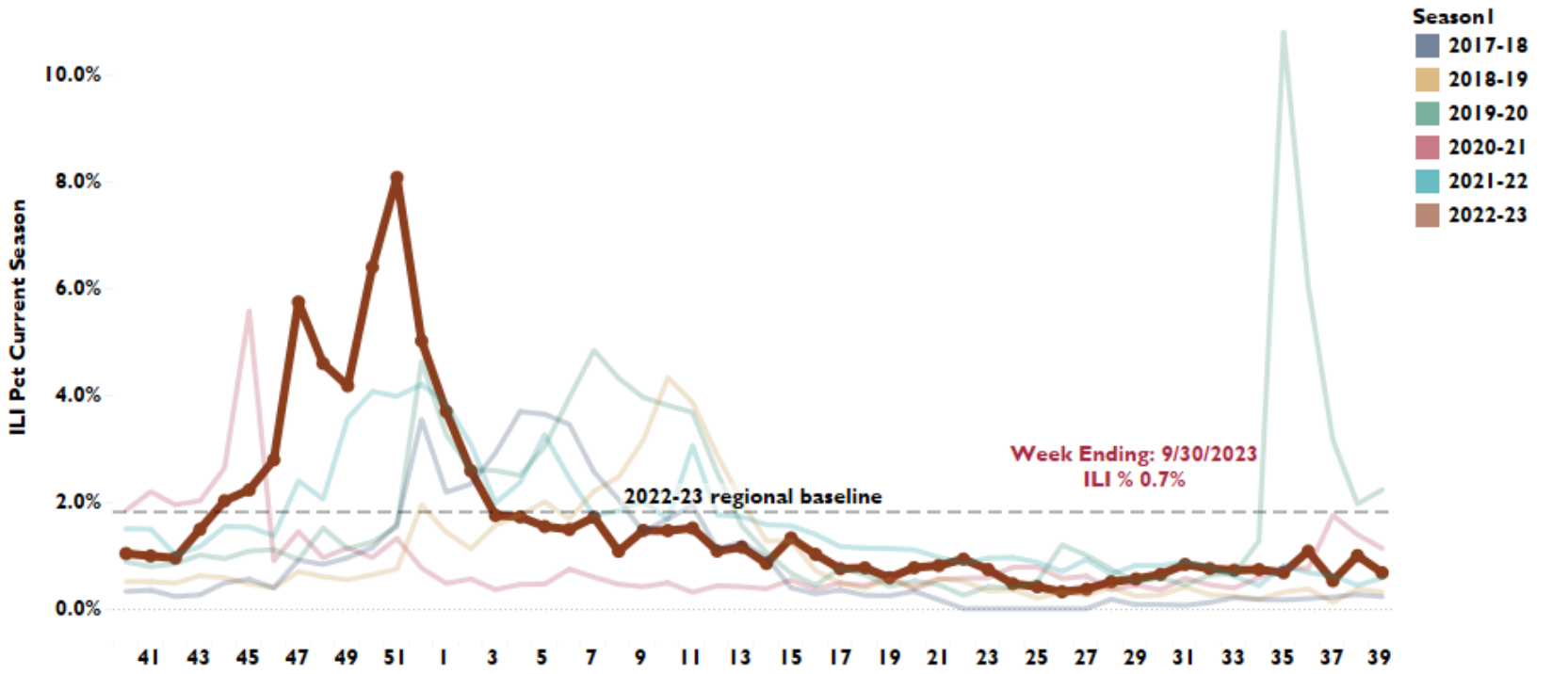
Contact Andy Weigel at 515-322-1937 or andy.weigel@idph.iowa.gov to become a surveillance site or suggest a site.

How Does the 2022-23 Season Compare?

Season	Peak Flu Positivity	Main Flu Subtypes	Deaths
2015-16	24%	A(H1N1)	44
2016-17	33%	A(H3)	135
2017-18	32%	A(H3)	272
2018-19	34%	A(H1N1,AH3)	89
2019-20	37%	B(Vic),A(H1N1)	103
2020-21	1%	A(H1N1),A variants	5
2021-22	12%	A(H3)	46
2022-23	36%	A(H3)	144

Subtypes or lineages are influenza A(H3),A(H1N1)pdm09 and B(Victoria lineage)

Outpatient Influenza-like Illness (ILINet) 2017-23



Respiratory Virus Hospitalization Surveillance

Before COVID pandemic

- Iowa survey with sentinel hospitals

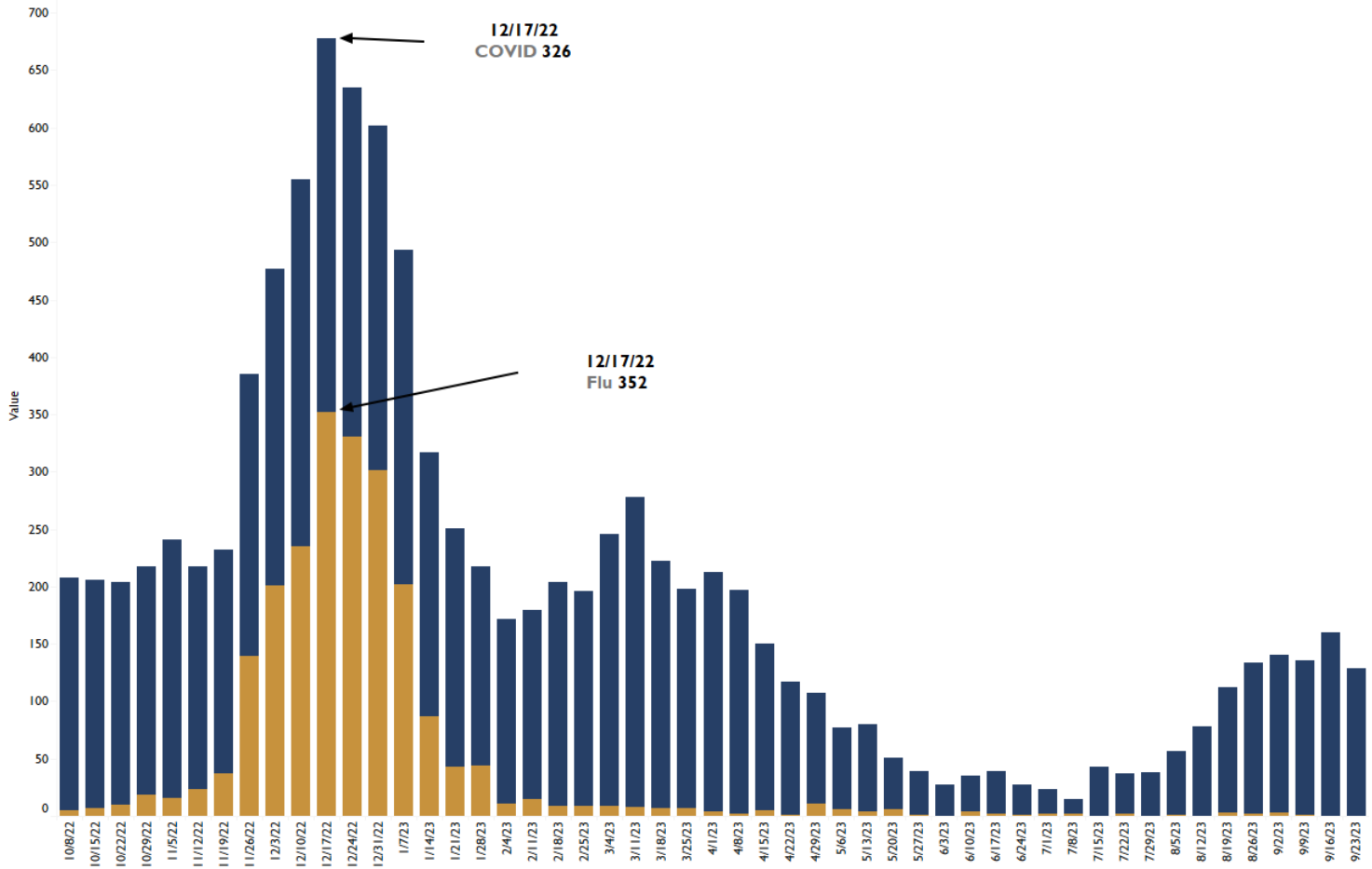
During COVID pandemic

- US HHS Protect / NHSN COVID-19 survey with added influenza questions
- Decreased participation in hospital surveys due to extra burden
- Started syndromic surveillance and increased coverage

After pandemic

- NHSN survey expected to stop spring 2024
- Increased importance of syndromic surveillance

Influenza and COVID-19 Hospitalizations – US HHS Protect



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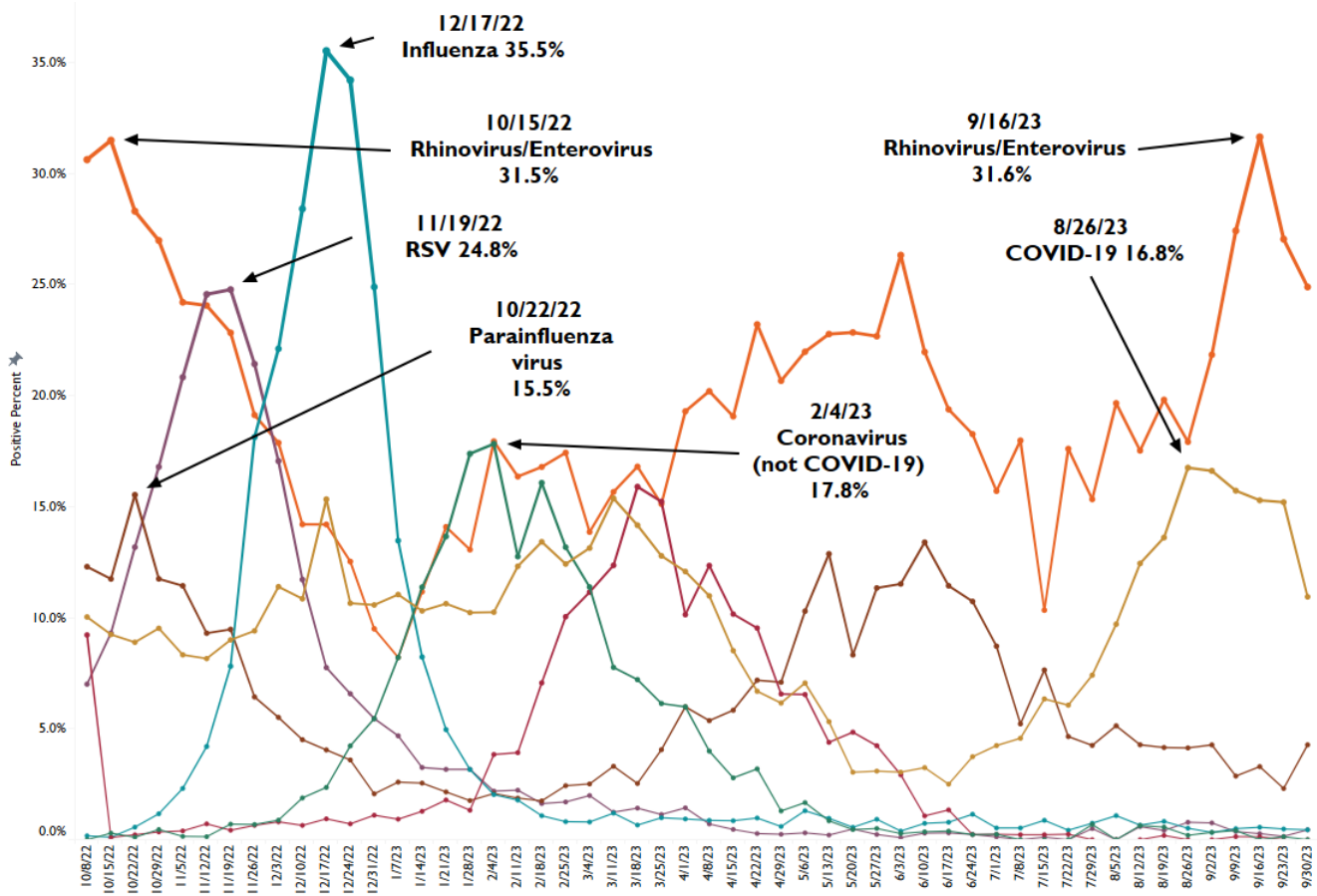
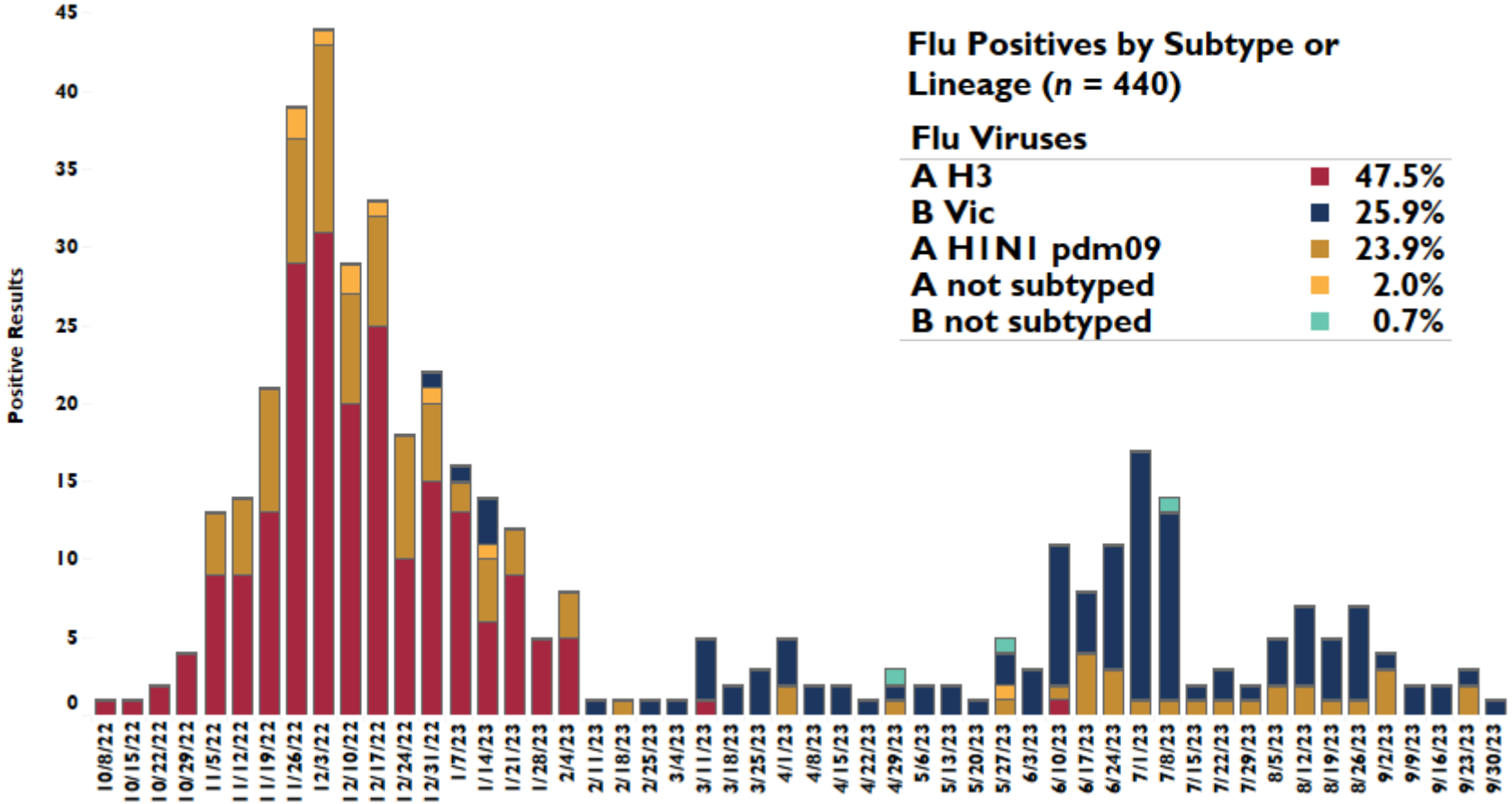
Respiratory Virus Positivity by Week



Influenza Testing at SHL



Reporting School Illness

Schools with at least 10 percent illness

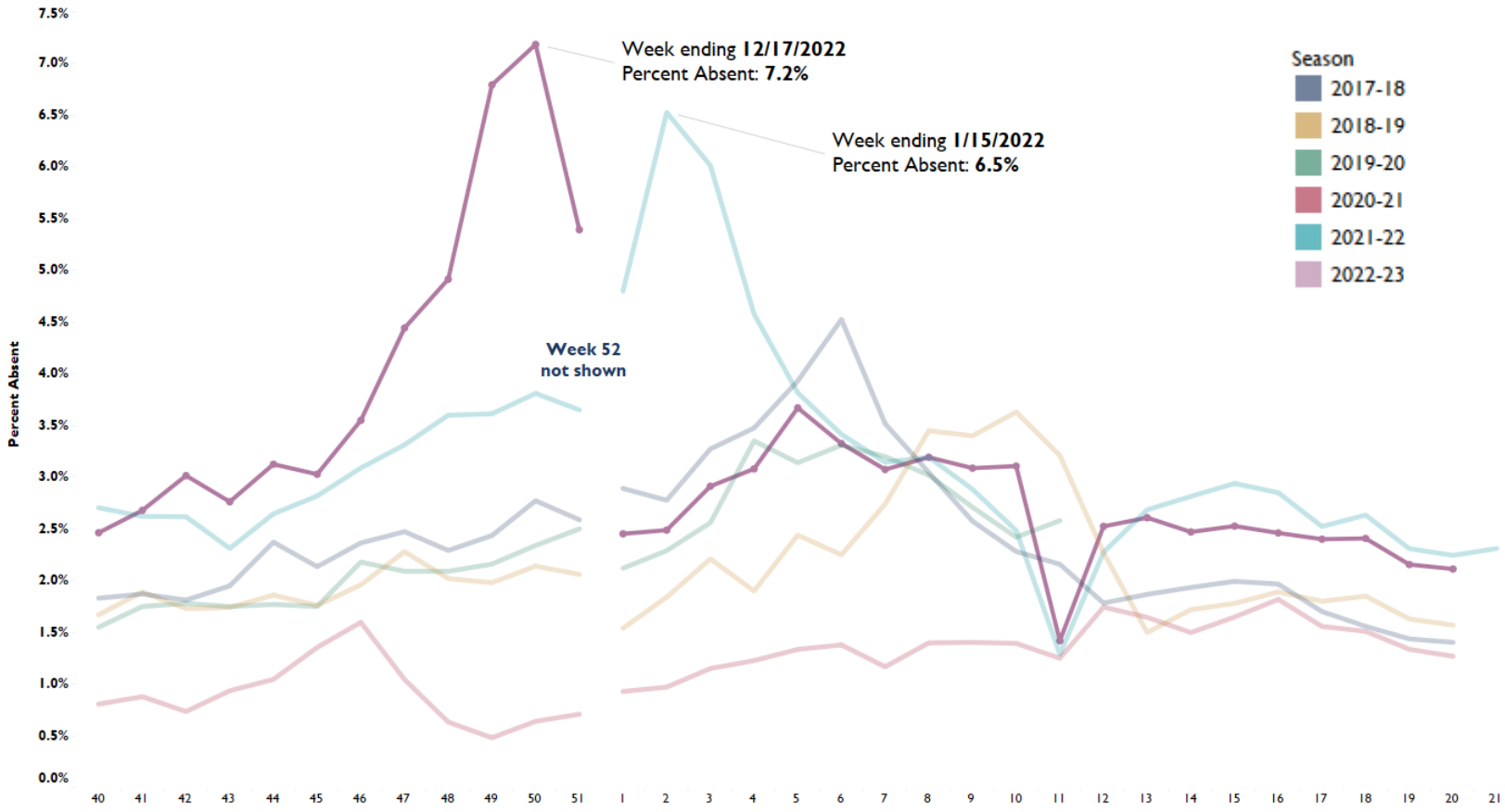
- All Iowa schools are required to report to Iowa HHS when percent of illness meets or exceeds 10 percent
- Report using survey https://redcap.link/iowaschool10pct23-24
- Link and instructions available at idph.iowa.gov/influenza/schools

Weekly illness reporting from sentinel sites

- Sites volunteer to submit total illness numbers each week
- Start reporting your data at https://redcap.link/iowaweeklyschool23-24

To become a school site or to help recruit one, contact Andy Weigel at 515-322-1937 or andy.weigel@idph.iowa.gov

Weekly School Illness by Season 2017-23



Outbreak Control for Schools and Child Care Centers

- Work with local public health agencies to investigate and collect specimens as needed
- Utilize resources at Iowa HHS and CDC
- Reinforce illness policies
- Increase cleaning and disinfecting of key areas
- Encourage and teach hand hygiene
- Notify and educate parents
- Many of the steps we are taking for COVID-19 will help prevent many other illnesses at school

Child Illness and Exclusion Criteria for Education and Child Care Settings

Iowa Influenza and COVID-19 Immunization

Iowans Vaccinated for Flu by Season as of 9/15/2023

Flu Season	Percent of Iowans Immunized
2018-2019	38.0%
2019-2020	40.6%
2020-2021	38.5%
2021-2022	33.9%
2022-2023	37.0%

Iowans Fully Vaccinated for COVID-19 as of 8/31/2022

Measure	Value
Rate of Immunization	60.3%
# of Immunized Patients	1,907,959
Census Population Estimate	3,163,561
Number of Monovalent Boosters	1,373,437
Number of Bivalent Doses	658,441

Sources: https://tracking.idph.iowa.gov/Health/Immunization/Influenza-Vaccine/Influenza-Vaccine-Data
https://tracking.idph.iowa.gov/Health/Immunization/covid-19-vaccine/data

Contact Information

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Iowa Influenza Epidemiologist

Iowa HHS

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Respiratory Outbreaks in Long-Term Care Facilities

Investigation and Response

Andrew Hennenfent, DVM, MPH, DACVPM
HAI Program Manager, Iowa HHS

IOWA HHS

Reporting Respiratory Outbreaks (including COVID-19)

- While most individual cases are not reportable, in Iowa **all respiratory virus outbreaks are required to be reported** to the Iowa Department of Health and Human Services (Iowa HHS) by Iowa Administrative Code [641] Chapter 1.

- This can be done **online** using a secure and HIPAA compliant form. https://hhs.iowa.gov/influenza/ltc-facilities

Reporting Respiratory Outbreaks (including COVID-19)

- The following outbreak definitions should be used to determine if your facility is experiencing a reportable respiratory virus outbreak:

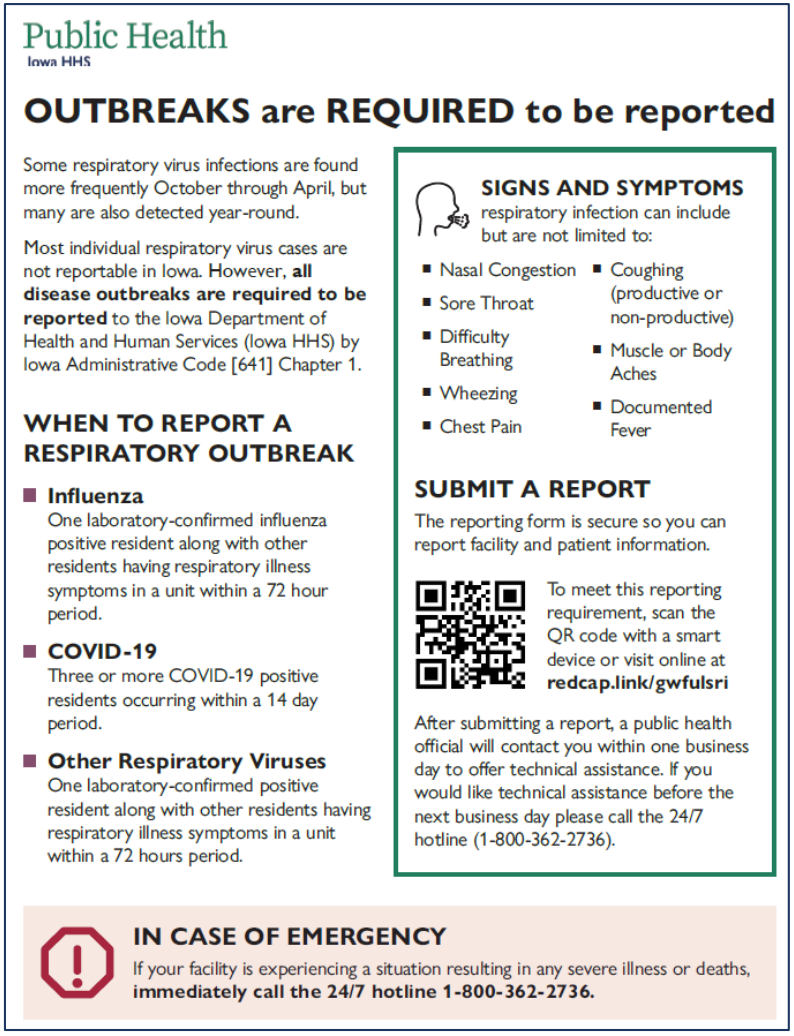
- Influenza:
  - One laboratory-confirmed influenza positive resident along with other residents having respiratory illness symptoms in a unit within a 72 hour period.

- COVID-19:
  - Three or more COVID-19 positive residents occurring within a 14 day period.

- Other respiratory viruses:
  - One laboratory-confirmed positive resident along with other residents having respiratory illness symptoms in a unit within a 72 hours period.

- Signs and symptoms of a respiratory infection can include but are not limited to nasal congestion, sore throat, difficulty breathing, wheezing, chest pain, coughing (productive or non-productive), muscle or body aches, or documented fever.

Reporting Respiratory Outbreaks (including COVID-19)



Public Health
Iowa HHS

OUTBREAKS are REQUIRED to be reported

Some respiratory virus infections are found more frequently October through April, but many are also detected year-round.

Most individual respiratory virus cases are not reportable in Iowa. However, **all disease outbreaks are required to be reported** to the Iowa Department of Health and Human Services (Iowa HHS) by Iowa Administrative Code [641] Chapter 1.

WHEN TO REPORT A RESPIRATORY OUTBREAK

- **Influenza**
  One laboratory-confirmed influenza positive resident along with other residents having respiratory illness symptoms in a unit within a 72 hour period.
- **COVID-19**
  Three or more COVID-19 positive residents occurring within a 14 day period.
- **Other Respiratory Viruses**
  One laboratory-confirmed positive resident along with other residents having respiratory illness symptoms in a unit within a 72 hours period.

SIGNS AND SYMPTOMS

respiratory infection can include but are not limited to:

- Nasal Congestion
- Sore Throat
- Difficulty Breathing
- Wheezing
- Chest Pain
- Coughing (productive or non-productive)
- Muscle or Body Aches
- Documented Fever

SUBMIT A REPORT

The reporting form is secure so you can report facility and patient information.

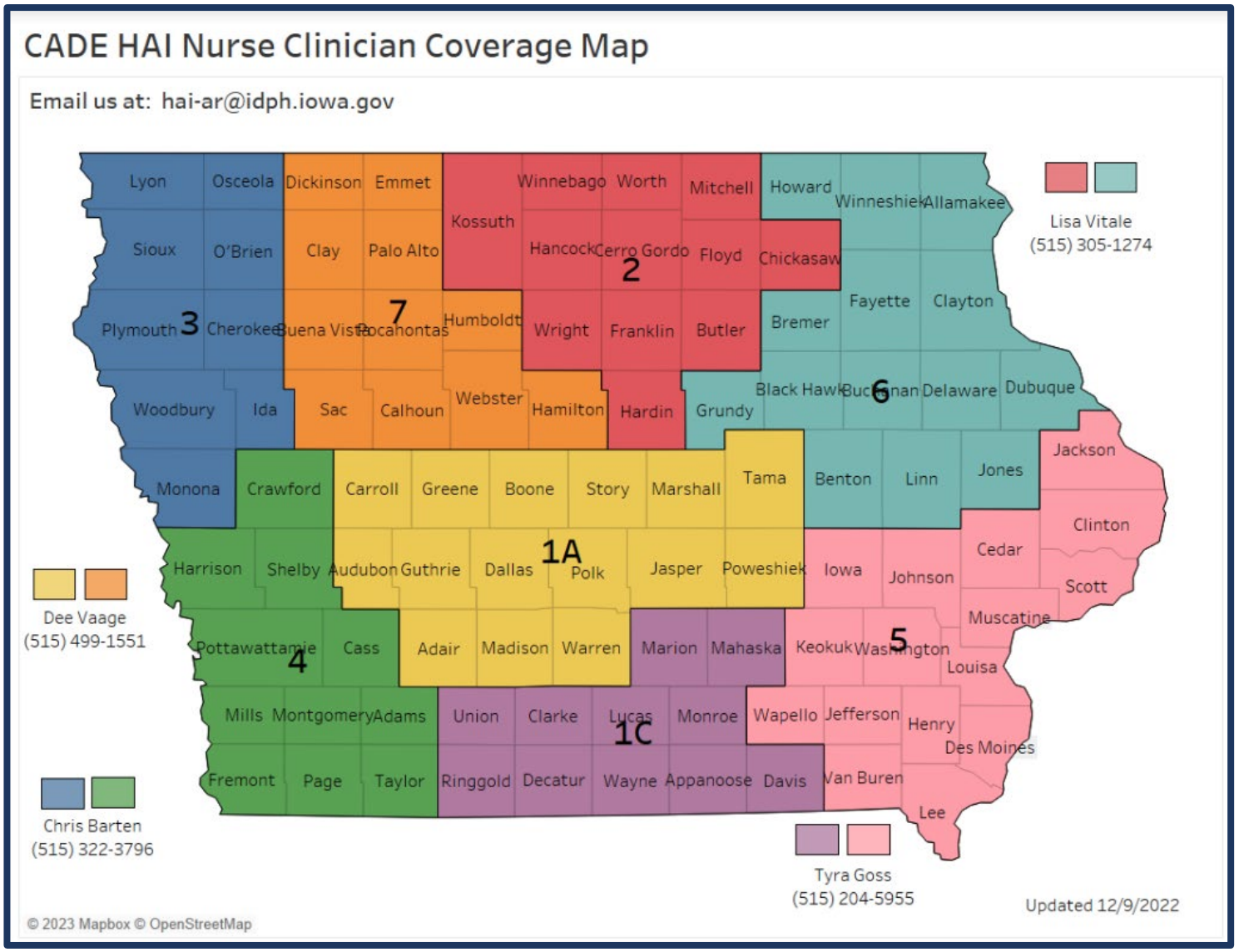
To meet this reporting requirement, scan the QR code with a smart device or visit online at **redcap.link/gwfulsri**

After submitting a report, a public health official will contact you within one business day to offer technical assistance. If you would like technical assistance before the next business day please call the 24/7 hotline (1-800-362-2736).

IN CASE OF EMERGENCY

If your facility is experiencing a situation resulting in any severe illness or deaths, **immediately call the 24/7 hotline 1-800-362-2736.**

Contacts


CADE HAI Nurse Clinician Coverage Map
Email us at: hai-ar@idph.iowa.gov
Lyon
Osceola
Dickinson
Emmet
Winnebago
Worth
Mitchell
Howard
Winneshiek
Allamakee
Kossuth
Sioux
O'Brien
Clay
Palo Alto
Hancock
Cerro Gordo
Floyd
Chickasaw
2
Fayette
Clayton
Plymouth
3
Cherokee
Buena Vista
7
Pocahontas
Humboldt
Wright
Franklin
Butler
Bremer
Black Hawk
Buchanan
6
Delaware
Dubuque
Woodbury
Ida
Sac
Calhoun
Webster
Hamilton
Hardin
Grundy
Jackson
Monona
Crawford
Carroll
Greene
Boone
Story
Marshall
Tama
Benton
Linn
Jones
Clinton
Cedar
Harrison
Shelby
Audubon
Guthrie
Dallas
1A
Polk
Jasper
Poweshiek
Iowa
Johnson
Scott
Muscatine
Pottawattamie
4
Cass
Adair
Madison
Warren
Marion
Mahaska
Keokuk
Washington
5
Louisa
Mills
Montgomery
Adams
Union
Clarke
Lucas
1C
Monroe
Wapello
Jefferson
Henry
Des Moines
Fremont
Page
Taylor
Ringgold
Decatur
Wayne
Appanoose
Davis
Van Buren
Lee
Lisa Vitale
(515) 305-1274
Dee Vaage
(515) 499-1551
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(515) 322-3796
Tyra Goss
(515) 204-5955
Updated 12/9/2022
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hai-ar@idph.iowa.gov

Influenza Antiviral Medication

2023-2024 influenza season

Source: www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm

Recommended Antivirals for Treatment of Influenza, U.S. 2023-2024

- **Four FDA-approved antivirals are recommended:**
  - All have demonstrated efficacy and are FDA-approved for early treatment (< 2 days of illness onset) in outpatients with uncomplicated influenza
  - Neuraminidase inhibitors (NAIs):
    - **Oseltamivir**(oral, twice daily x 5 days)
    - **Zanamivir** (inhaled, twice daily x 5 days) [investigational IV zanamivir is not available in the U.S.]
    - **Peramivir**(intravenous: single dose)
  - Cap-dependent endonuclease inhibitor: **Baloxavir marboxil** (oral: single dose)

Antiviral Drug	Route of Administration	Recommended ages for Treatment
Oseltamivir	Oral (twice daily x 5d)	All ages
Zanamivir	Inhaled (twice daily x 5d)	≥7 years
Peramivir	Intravenous (single infusion)	≥6 months
Baloxavir	Oral (single dose)	≥5 years (otherwise healthy) ≥12 years (high-risk)

https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm

CDC Antiviral Treatment Recommendations

- Focused on prompt treatment of persons with severe disease and those at increased risk of influenza complications

- **Antiviral treatment is recommended as soon as possible for any patient with confirmed or suspected influenza who is:**
  - Hospitalized (without waiting for testing results)
  - Outpatients with complicated or progressive illness of any duration
  - Outpatients who are at high risk for influenza complications

- Antiviral treatment can be considered for any previously healthy, non-high-risk outpatient with confirmed or suspected influenza (e.g. with influenza-like illness) on the basis of clinical judgment, if treatment can be initiated within 48 hours of illness onset; including empiric treatment (e.g. in-person visit or via telemedicine)

https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm

Recommended Antiviral Treatment for Outpatients

- For **outpatients with complications or progressive disease and suspected or confirmed influenza** (e.g., pneumonia, or exacerbation of underlying chronic medical conditions), antiviral treatment with oral **oseltamivir** is recommended as soon as possible.

- For **outpatients with suspected or confirmed uncomplicated influenza**, oral oseltamivir, inhaled zanamivir, intravenous peramivir, or oral baloxavir may be used for early treatment, depending upon approved age groups and contraindications.
  - In one randomized controlled trial, baloxavir had greater efficacy than oseltamivir in high-risk adolescents and adults with influenza B virus infection

- Clinicians can consider starting early (≤48 hours after illness onset) empiric antiviral treatment of non-high-risk outpatients with suspected influenza [e.g., influenza-like illness (fever with either cough or sore throat)], based upon clinical judgement, including without an office visit. **SARS-CoV-2 and other etiologies of influenza-like illness should also be considered.**

Ison MG et al., Lancet Infect Dis 2020

Oseltamivir Efficacy in Uncomplicated Influenza

Randomized controlled trials (RCTs) have shown that oseltamivir treatment has significant clinical benefit when started within 36-48 hours after illness onset versus placebo

- Pooled meta-analysis of 5 RCTs in children (oseltamivir n=770 vs. placebo n=838)
  - **Treatment started within 48 hours of onset:**
    - **Reduced illness duration by 18 hours overall and by 30 hours in children without asthma** (-29.9 hours; 95% CI: -53.9 to -5.8 hours)
    - **Reduced risk of otitis media by 34%** (RR 0.66; 95% CI: 0.47-0.95)

- Pooled meta-analysis of 9 RCTs in adults (oseltamivir n=1565 vs. placebo n=1295)
  - **Treatment started within 36 hours of onset:**
    - **Reduced illness duration by 25.2 hours** (-25.2 hours; 95% CI: -36.2 to -16.0 hours)
    - **44% Reduced risk of lower respiratory tract complications occurring >48 hours after treatment requiring antibiotics** (RR: 0.56; 95% CI: 0.42 to 0.75; p=0.0001)

Malosh RE et al., Clinical Infect Dis 2018; Dobson J et al., Lancet 2015

Baloxavir Efficacy in Uncomplicated Influenza

RCTs have shown that baloxavir treatment has similar clinical benefit to oseltamivir and significant clinical benefit versus placebo when started within 48 hours after illness onset

- RCT in non-high-risk children (aged 1 to <12 yrs)
  - Treatment started ≤48 hours of onset (oseltamivir **vs. baloxavir):**
    - **Single-dose baloxavir** (n=115) **had similar median time to alleviation of influenza signs and symptoms** (138 hours) **versus 5 days of oseltamivir** (150 hours) (n=58)
- RCTs in adults (aged ≥12 yrs)
  - **Treatment started ≤48 hours of onset (baloxavir vs. placebo vs. oseltamivir):**
    - **Single-dose baloxavir** (n=456) **significantly reduced illness duration by a median of 26.5 hours vs. placebo** (n=231) **in non-high-risk persons** (95% CI, 72.6 to 87.1 hours; p<0.001)
      - Median time to alleviation of symptoms was similar for baloxavir and oseltamivir (n=377)
    - **Single-dose baloxavir** (n=388) **significantly reduced illness duration by a median of 29 hours vs. placebo** (n=386) **in persons with ≥1 high-risk condition** (95% CI 14·6 to 42·8; p<0.0001)
      - Median time to improvement of symptoms was similar for baloxavir and oseltamivir
        - **Baloxavir significantly reduced median time to improvement of influenza B symptoms by 27 hours versus oseltamivir** (95% CI: 6.9 to 42.3 hours; p=0.025)

Baker J et al., Ped Infect Dis J 2020; Hayden FG et al., NEJM 2018; Ison MG et al., Lancet Infect Dis 2020

Special Populations – CDC Recommendations

- Pregnant women
  - For treatment of pregnant women and up to 2 weeks postpartum, oral oseltamivir is preferred
  - Baloxavir is not recommended for treatment of pregnant women or breastfeeding mothers
    - No efficacy or safety data for baloxavir in pregnant or lactating women
    - Substantial evidence of oseltamivir safety for pregnancy and birth outcomes
- Immunocompromised persons
  - Prolonged influenza viral replication is a possibility, with emergence of antiviral resistant viruses during/after treatment
  - Monitoring for antiviral resistance is advised
  - Infection prevention and control precautions are recommended to reduce nosocomial transmission risk
  - Neuraminidase inhibitor treatment is recommended
  - Baloxavir is not recommended (risk of resistance emergence)

https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm

Oseltamivir Recommended for Hospitalized Patients

- Oseltamivir treatment (oral or enterically-administered) is recommended as soon as possible for hospitalized patients with confirmed or suspected influenza (without waiting for testing results)
  - Recommendation is based on observational studies
  - Starting oseltamivir at admission is associated with reduced hospital length of stay in adults; early initiation of treatment is associated with shorter hospital duration in children and adults, and may reduce mortality risk in adults

- Inhaled zanamivir and oral baloxavir are **not recommended** because of the lack of data in hospitalized influenza patients

- Insufficient data for peramivir treatment of hospitalized influenza patients
  - For patients who cannot tolerate or absorb oral or enterically-administered oseltamivir (e.g. gastric stasis, malabsorption, or gastrointestinal bleeding), intravenous peramivir is an option

- Optimal duration of oseltamivir treatment for critically ill patients is unclear

Uyeki TM et al., Lancet 2022

Additional Resources

- CDC Influenza homepage: https://www.cdc.gov/flu/
- Influenza surveillance: https://www.cdc.gov/flu/weekly/fluactivitysurv.htm
- Influenza vaccination coverage: https://www.cdc.gov/flu/fluvaxview/index.htm
- For Healthcare Professionals: https://www.cdc.gov/flu/professionals/index.htm
  - Influenza Vaccination homepage: https://www.cdc.gov/flu/professionals/vaccination/index.htm
  - 2022-23 ACIP Influenza Recommendations: https://www.cdc.gov/mmwr/volumes/71/rr/pdfs/rr7101a1-H.pdf
  - Influenza Testing homepage: https://www.cdc.gov/flu/professionals/diagnosis/index.htm
  - Influenza Antivirals homepage: https://www.cdc.gov/flu/professionals/antivirals/index.htm

Vaccine Updates

Shelly Jensen, RN, BSN, Immunization Nurse Clinician, Iowa HHS

Triple Respiratory Threat

- Influenza
- COVID-19
- Respiratory Syncytial Virus (RSV)

Influenza Vaccination

Routine annual influenza vaccination for all persons aged ≥6 months who do not have contraindications

Influenza Primary Updates

- The composition of 2023-24 U.S. seasonal influenza vaccines.
- Updated recommendations regarding influenza vaccination of persons with egg allergies.

2023-24 Influenza Vaccine Composition

Egg-based influenza vaccines (i.e., vaccines other than ccIIV4 and RIV4) will contain HA derived from

- an influenza A/Victoria/4897/2022 (H1N1)pdm09-like virus,
- an influenza A/Darwin/9/2021 (H3N2)-like virus,
- an influenza B/Austria/1359417/2021 (Victoria lineage)-like virus, and
- an influenza B/Phuket/3073/2013 (Yamagata lineage)-like virus

U.S. cell culture–based inactivated (ccIIV4) and recombinant (RIV4) influenza vaccines will contain HA derived from

- an influenza A/Wisconsin/67/2022 (H1N1)pdm09-like virus,
- an influenza A/Darwin/6/2021 (H3N2)-like virus,
- an influenza B/Austria/1359417/2021 (Victoria lineage)-like virus, and
- an influenza B/Phuket/3073/2013 (Yamagata lineage)-like virus.

Persons with Egg Allergy

- All persons aged ≥ 6 months with egg allergy should receive influenza vaccine.

- Any influenza vaccine (egg based or non-egg based) that is otherwise appropriate for the recipient's age and health status can be used.

Persons with Egg Allergy

- It is no longer recommended that persons who have had an allergic reaction to egg, involving symptoms other than urticarial, should be vaccinated in an inpatient or outpatient setting and supervised by a healthcare provider who is able to recognize and manage severe allergic reactions if an egg based vaccine is used.

- Egg allergy alone necessitates no additional safety measures beyond those recommended for any recipient of any vaccine.

- All vaccines should be administered in settings in which staff and equipment needed for rapid recognition and treatment of acute hypersensitivity reactions are available.

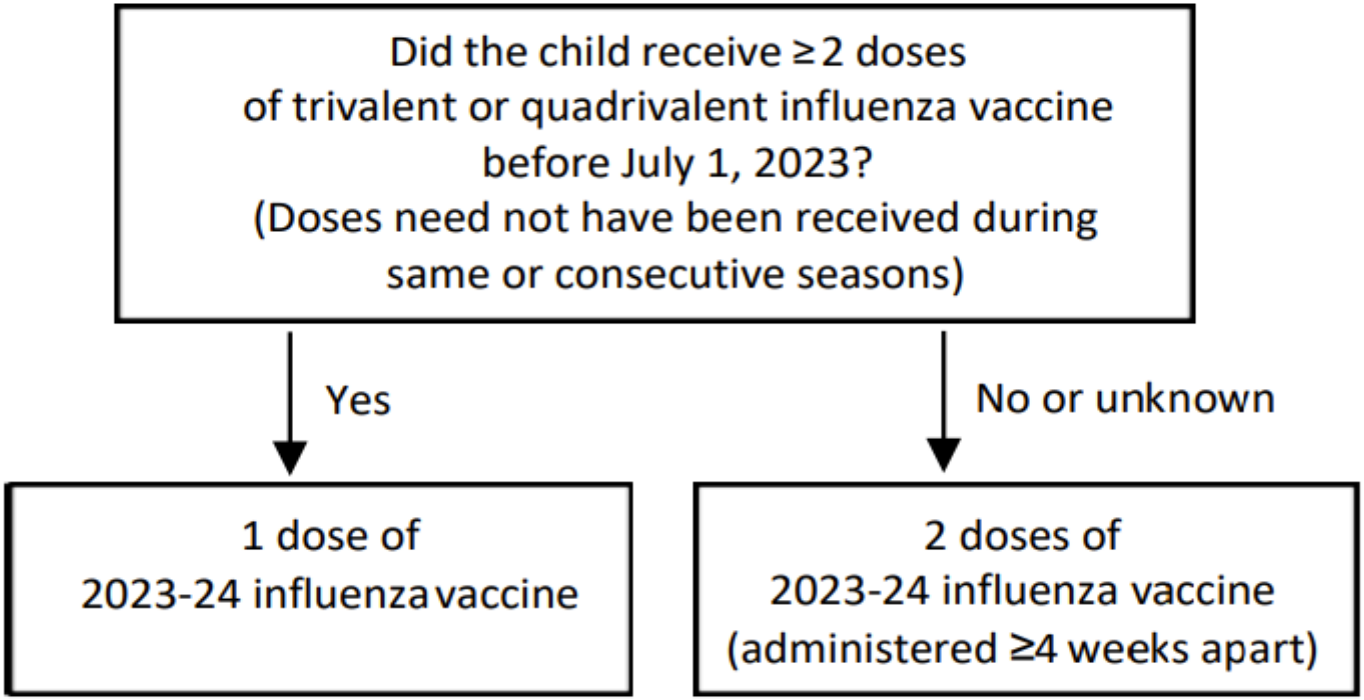
Influenza Vaccine Timing

Ideally by the end of October

For most adults (particularly adults ≥ 65 years) and pregnant women in the first or second trimester:

- Vaccination during July and August should be avoided unless there is concern that vaccination later in the season might not be possible.
- **Children who require 2 doses:** should receive their first dose as soon as possible to allow the second dose to be received by the end of October.
- **Children who require only 1 dose:** vaccination during July and August can be considered.
- **Pregnant women in the third trimester:** vaccination during July and August can be considered because vaccination has been associated with reduced risk of influenza illness in their infants during the first months after birth, when they are too young to receive vaccine.
- NO recommendation is made for revaccination (i.e., booster dose) later in the season of persons who have already been fully vaccinated for the season regardless of when in the current season vaccine was received.

Children 6 Months - 8 Years



Influenza Preferential Recommendation

Adults ≥ 65 years of age should **preferentially** receive any of the following higher dose or adjuvanted flu vaccines:

- Fluzone High-Dose Quadrivalent inactivated flu vaccine (HD-IIV4)
- Flublok Quadrivalent Recombinant flu vaccine (RIV4) or
- Fluad Quadrivalent Adjuvanted flu vaccine (aIIV4)

* If none of these vaccines are available at an opportunity for vaccine administration, any other age appropriate flu vaccine should be administered.

Approved Ages and Dose Volumes

Approved ages and dose volumes for intramuscular influenza vaccines (IIV4s and RIV4):

Vaccine	Approved Ages	Dose volume
Afluria Quadrivalent	6 through 35 months ≥3 years	0.25 mL 0.5 mL
Fluarix Quadrivalent	≥6 months	0.5 mL
FluLaval Quadrivalent	≥6 months	0.5 mL
Fluzone Quadrivalent	6 through 35 months ≥3 years	0.5 mL (see below) 0.5 mL
Flucelvax Quadrivalent	≥6 months	0.5 mL
Flublok Quadrivalent	≥18 years	0.5 mL
Fluzone High-Dose Quadrivalent	≥65 years	0.7 mL
Fluad Quadrivalent	≥65 years	0.5 mL

Fluzone is approved as either 0.25mL or 0.5mL dose size for 6-35 months of age.

Flu Vaccine Information for Health Professionals

- 2023-2024 Influenza Dosing Algorithm for Children
- 2023-2024 Influenza Vaccine Products
- 2023-2024 Contraindications and Precautions to the Use of Influenza Vaccines
- 2023-2024 Contraindications and Precautions for Persons with Severe Allergic Reaction
- How to administer intramuscular, intradermal, and intranasal influenza vaccine
- Influenza Immunization Brochure
- Flu Vaccine Label Examples
- Standing Orders Templates (Immunization Action Coalition)

Resources

- Seasonal Influenza Recommendations
- MMWR: Prevention and Control of Seasonal Influenza
- Vaccine Information Statement - Inactivated Influenza
- Vaccine Information Statement - Live, Intranasal Influenza
- Screening Checklists

https://hhs.iowa.gov/immtb/immunization/influenza/recommendations

COVID-19 Vaccines

- CDC recommends everyone 6 months of age and older receive an updated COVID-19 vaccine.
- Monovalent component that corresponds to the Omicron variant XBB.1.5

2023-24 COVID-19 Vaccines

- Everyone ≥ 5 years, regardless of previous COVID-19 vaccination history, should receive one dose of the updated 2023-2024 vaccine.
- Individuals 6 mos-4 yrs of age who have been previously vaccinated against COVID-19 vaccine are eligible to receive one or two doses of the updated vaccine (timing and number of doses depends on previous COVID-19 vaccination history).
- Unvaccinated individuals 6 mos-4 yrs are eligible to receive three doses of the updated Pfizer or two doses of the updated Moderna COVID-19 vaccines

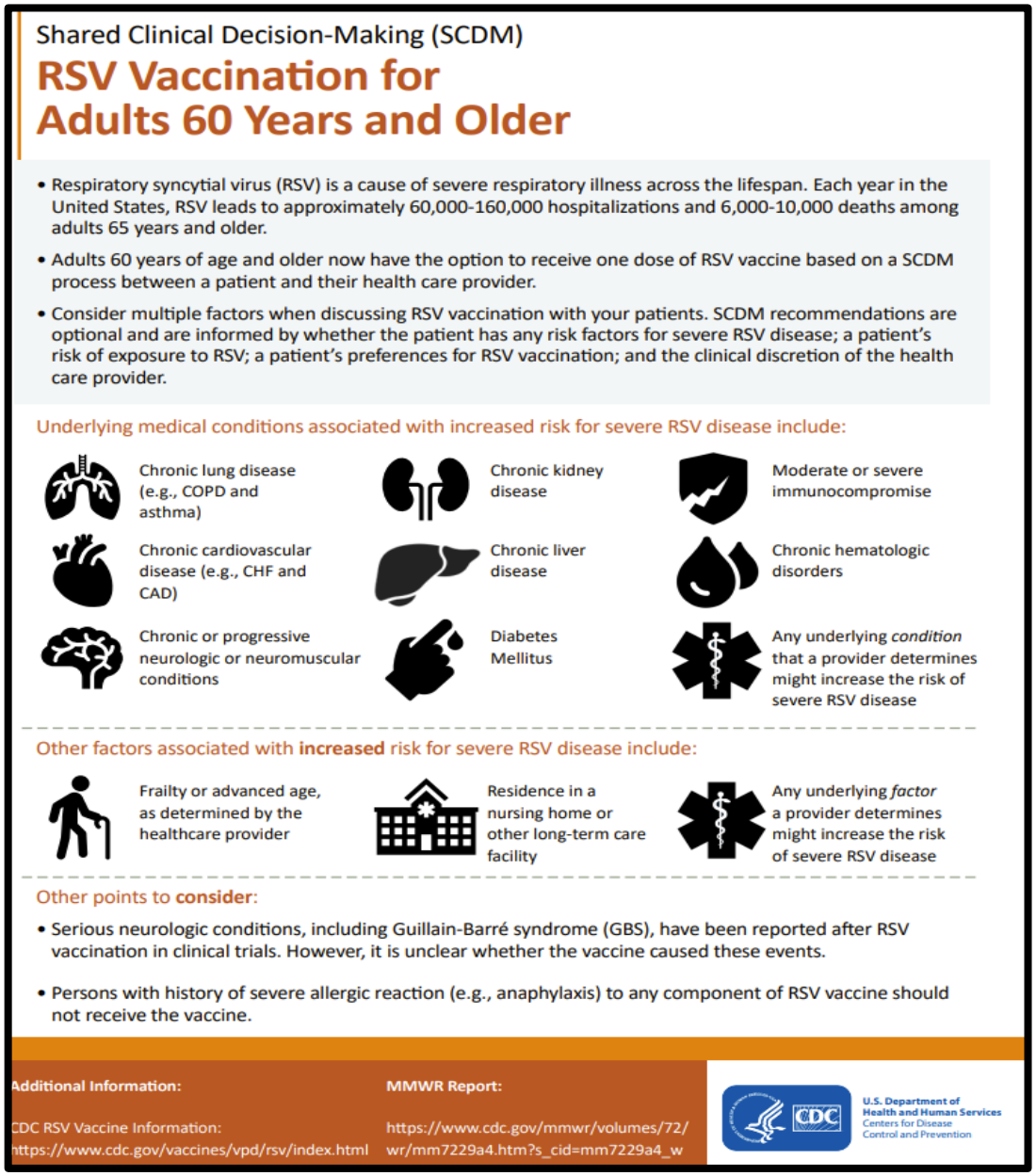
RSV Vaccination of Adults

- Adults ≥ 60 years may receive a single dose of RSV vaccine, based on shared clinical decision making.

- Two available vaccines, with no preferential recommendation:

  AREXVY (GSK) ABRYSVO (Pfizer)

- Coadministration of RSV vaccine with other vaccines is acceptable.



Shared Clinical Decision-Making (SCDM)

RSV Vaccination for Adults 60 Years and Older

- Respiratory syncytial virus (RSV) is a cause of severe respiratory illness across the lifespan. Each year in the United States, RSV leads to approximately 60,000-160,000 hospitalizations and 6,000-10,000 deaths among adults 65 years and older.
- Adults 60 years of age and older now have the option to receive one dose of RSV vaccine based on a SCDM process between a patient and their health care provider.
- Consider multiple factors when discussing RSV vaccination with your patients. SCDM recommendations are optional and are informed by whether the patient has any risk factors for severe RSV disease; a patient's risk of exposure to RSV; a patient's preferences for RSV vaccination; and the clinical discretion of the health care provider.

Underlying medical conditions associated with increased risk for severe RSV disease include:

- Chronic lung disease (e.g., COPD and asthma)
- Chronic kidney disease
- Moderate or severe immunocompromise
- Chronic cardiovascular disease (e.g., CHF and CAD)
- Chronic liver disease
- Chronic hematologic disorders
- Chronic or progressive neurologic or neuromuscular conditions
- Diabetes Mellitus
- Any underlying *condition* that a provider determines might increase the risk of severe RSV disease

Other factors associated with **increased** risk for severe RSV disease include:

- Frailty or advanced age, as determined by the healthcare provider
- Residence in a nursing home or other long-term care facility
- Any underlying *factor* a provider determines might increase the risk of severe RSV disease

Other points to **consider**:

- Serious neurologic conditions, including Guillain-Barré syndrome (GBS), have been reported after RSV vaccination in clinical trials. However, it is unclear whether the vaccine caused these events.
- Persons with history of severe allergic reaction (e.g., anaphylaxis) to any component of RSV vaccine should not receive the vaccine.

Additional Information:

CDC RSV Vaccine Information:
https://www.cdc.gov/vaccines/vpd/rsv/index.html

MMWR Report:

https://www.cdc.gov/mmwr/volumes/72/wr/mm7229a4.htm?s_cid=mm7229a4_w

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

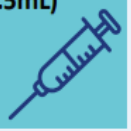
https://www.cdc.gov/vaccines/vpd/rsv/downloads/provider-job-aid-for-older-adults-508.pdf

Respiratory Syncytial Virus vaccines (RSV)

Fact Sheet for Healthcare Providers

CDC recommends that adults ages 60 years and older may receive a single dose of RSV vaccine using shared clinical decision-making (SCDM).

If you vaccinate, either approved RSV vaccine (Abrysvo™ or Arexvy®) can be used.

Patients	Doses	Administer	Storage (prior to reconstitution)
60+ Years Old	One (0.5mL) dose 	Intramuscularly in the deltoid 	Refrigerate at 36°F to 46°F (2°C to 8°C) 

How do shared clinical decision-making recommendations (SCDM) differ from routine, catch-up, and risk-based immunization recommendations?

- SCDM vaccination recommendations are individually based rather than population based and informed by a decision process between the health care provider and the patient.
- Consider multiple factors when discussing RSV vaccination with your patients. The decision to vaccinate is informed by whether the patient has any risk factors for severe RSV disease, a patient's risk of exposure to RSV, a patient's preferences for RSV vaccination, and the clinical discretion of the health care provider.

About RSV vaccines

- Abrysvo is a recombinant stabilized prefusion F protein vaccine approved for the prevention of lower respiratory tract disease (LRTD) caused by RSV in individuals ages 60 years and older.
- Arexvy is an adjuvanted recombinant stabilized prefusion glycoprotein F vaccine approved for the prevention of lower respiratory tract disease (LRTD) caused by RSV in individuals ages 60 years and older.

https://www.cdc.gov/vaccines/vpd/rsv/downloads/hcp-fact-sheet-older-adult-patients-508.pdf

Monoclonal Antibody for RSV Protection

- One dose of Nirsevimab (BEYFORTUS) for infants aged < 8 months born during or entering their first RSV season
- One dose of Nirsevimab (BEYFORTUS) for infants 8-19 months at increased risk for severe RSV disease and entering their second RSV season
  - Chronic lung disease of prematurity who required medical support any time during the 6-month period before the start of the second RSV season
  - Severe immunocompromise
  - Cystic fibrosis who have either manifestations of severe lung disease or weight-for-length <10th percentile
  - American Indian or Alaska Native

- Coadministration of Nirsevimab with other age appropriate vaccines is recommended.

Nirsevimab (Beyfortus) Administration

- Administered as IM injection using single dose pre-filled syringe

- Dosed by weight/age
  - 50 mg if < 5 kg (<11 lb)
  - 100 mg if ≥ 5 kg (≥ 11 lb)
  - 200 mg (2x100mg) for high risk children entering second RSV season

Maternal RSV Vaccination

- Abrysvo (Pfizer) vaccine recommended at 32-36 weeks gestation, using seasonal administration (Sept-Jan)
- Intended to prevent lower respiratory tract disease and severe lower respiratory syncytial virus in infants from birth-6 months of age
- May be administered at the same time as other recommended vaccines

Clinical Considerations for Maternal RSV Vaccine and Nirsevimab in the Infant

Either maternal vaccination or use of nirsevimab in the infant is recommended to prevent RSV lower respiratory tract infection, but administration of both products is not needed in most situations.

Resources

- Iowa Immunization Program: https://hhs.iowa.gov/immtb/immunization/vaccine
- General Best Practice Guidelines for Immunization: https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html
- Pink Book: https://www.cdc.gov/vaccines/pubs/pinkbook/index.html
- CDC Vaccine Storage and Handling Toolkit: https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html
- Package Inserts and FDA Product Approvals: FDA Product Approval: View All (immunize.org)
- Immunize.org: http://www.immunize.org/
- ACIP Recommendations: https://www.cdc.gov/vaccines/acip/recommendations.html#meeting-recommendations
- Vaccination Related Syncope- Information for Healthcare Personnel: Vaccination-Related Syncope: Information for Healthcare Personnel (immunize.org)

Resources

- Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023–24 Influenza Season: https://www.cdc.gov/mmwr/volumes/72/rr/pdfs/rr7202a1-H.pdf
- CDC Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States: https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html
- Use of Respiratory Syncytial Virus Vaccines in Older Adults: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023:https://www.cdc.gov/mmwr/volumes/72/wr/mm7229a4.htm
- Use of Nirsevimab for the Prevention of Respiratory Syncytial Virus Disease Among Infants and Young Children: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023:https://www.cdc.gov/mmwr/volumes/72/wr/mm7234a4.htm
- Respiratory Syncytial Virus (RSV) Immunizations: https://www.cdc.gov/vaccines/vpd/rsv/index.html
- ACIP presentation, Updated Clinical Considerations for use of both nirsevimab and RSVpreF vaccine: https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-09-22/07-Mat-Peds-Jones-508.pdf

Thank You

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Laboratory Influenza Surveillance in Iowa

Jeff Benfer, Molecular Biology Supervisor, SHL

Overview

- All labs that do influenza testing throughout the state play an important role in influenza surveillance and the ability for the CDC to develop vaccine recommendations and detect novel flu strains and antiviral resistance.

- The specimens that labs submit to SHL, we submit a strategic subsampling based on geographic distribution throughout the state of those specimens every two weeks for sequencing.

State Hygienic Laboratory and Iowa Department of Health and Human Services Influenza Surveillance Testing Guidance 2023/2024

- All Labs- submit ONE positive flu specimens per week to SHL for PCR and subtyping

- Also submit up to TEN positive COVID per week for sequencing (sequencing results not reported back to submitting facility)

SHL influenza/ SARS-CoV-2 surveillance testing and sequencing serves the following purposes:

- Demonstrates predictive value and accuracy of other tests
- Novel virus detection and monitor for variants of interest or concern
- Contribute samples to CDC and WHO- antiviral resistance, vaccine strain selection and match to current vaccine
- Surveillance testing is provided at no cost and is partially supported by the Centers for Disease Control and Prevention

Contact Iowa HHS or SHL for guidance in the event of an ILI outbreak.

Purpose of specimens submitted to SHL

- The goal for this is to have consistent low/moderate levels of specimen submission over the course of the entire respiratory season for subtyping and further characterization.

- Additionally, we are especially interested in flu positive patient specimens if unusual illness or exposure to animals. The goal/purpose of this is to potentially identify novel or increase virulence influenza viruses.

- We also want flu B positives this again this season because flu B/Yamagata may be extinct and it's very important to conduct lineage typing to detect potential B/Yamagata lineage viruses.
  - It may have undergone considerable evolution since the last one was analyzed.
  - There is a challenge for diagnosis of influenza B/Yamagata due to the live attenuated influenza vaccine (LAIV), which has a Yamagata component. If it is known that the patient recently had LAIV, do not submit.

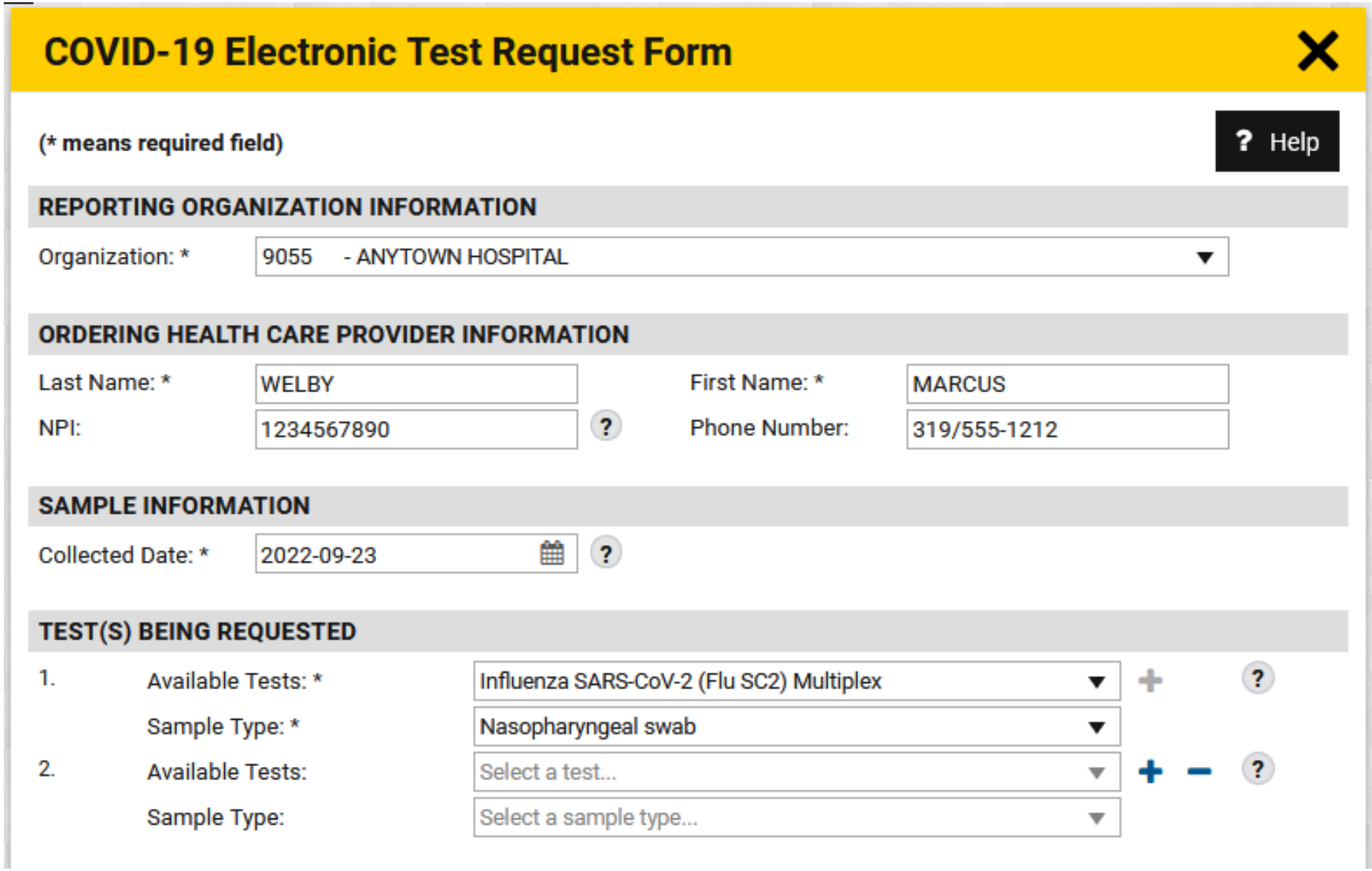
For Flu Surveillance testing this year SHL will use:

- CDC Flu/SC2 combination aka multiplex PCR test (other methods for COVID testing will remain - Saliva at Home, Panther, PCR)
  - Continue to use those routes if you are using for COVID diagnostic/screening

- Specimens submitted for influenza PCR testing will also receive a COVID PCR result
  - If positive for Flu A they will be reflexed to Flu A subtyping (H3, H1, or possible variants)
  - If positive for Flu B they will be reflexed to Flu B genotyping (Victoria, Yamagata)

Ordering collection kits

www.shl.uiowa.edu


COVID-19 Electronic Test Request Form
(* means required field)
Help
REPORTING ORGANIZATION INFORMATION
Organization: *
9055 - ANYTOWN HOSPITAL
ORDERING HEALTH CARE PROVIDER INFORMATION
Last Name: *
WELBY
First Name: *
MARCUS
NPI:
1234567890
Phone Number:
319/555-1212
SAMPLE INFORMATION
Collected Date: *
2022-09-23
TEST(S) BEING REQUESTED
1.
Available Tests: *
Influenza SARS-CoV-2 (Flu SC2) Multiplex
Sample Type: *
Nasopharyngeal swab
2.
Available Tests:
Select a test...
Sample Type:
Select a sample type...

Specimen Collection

- Do not send specimens used for other testing because they may contain a lysis buffer that could react negatively.

- Preferred Specimen Types:
  - *Nasopharyngeal (NP) Swab*
  - *Combination Swabs*

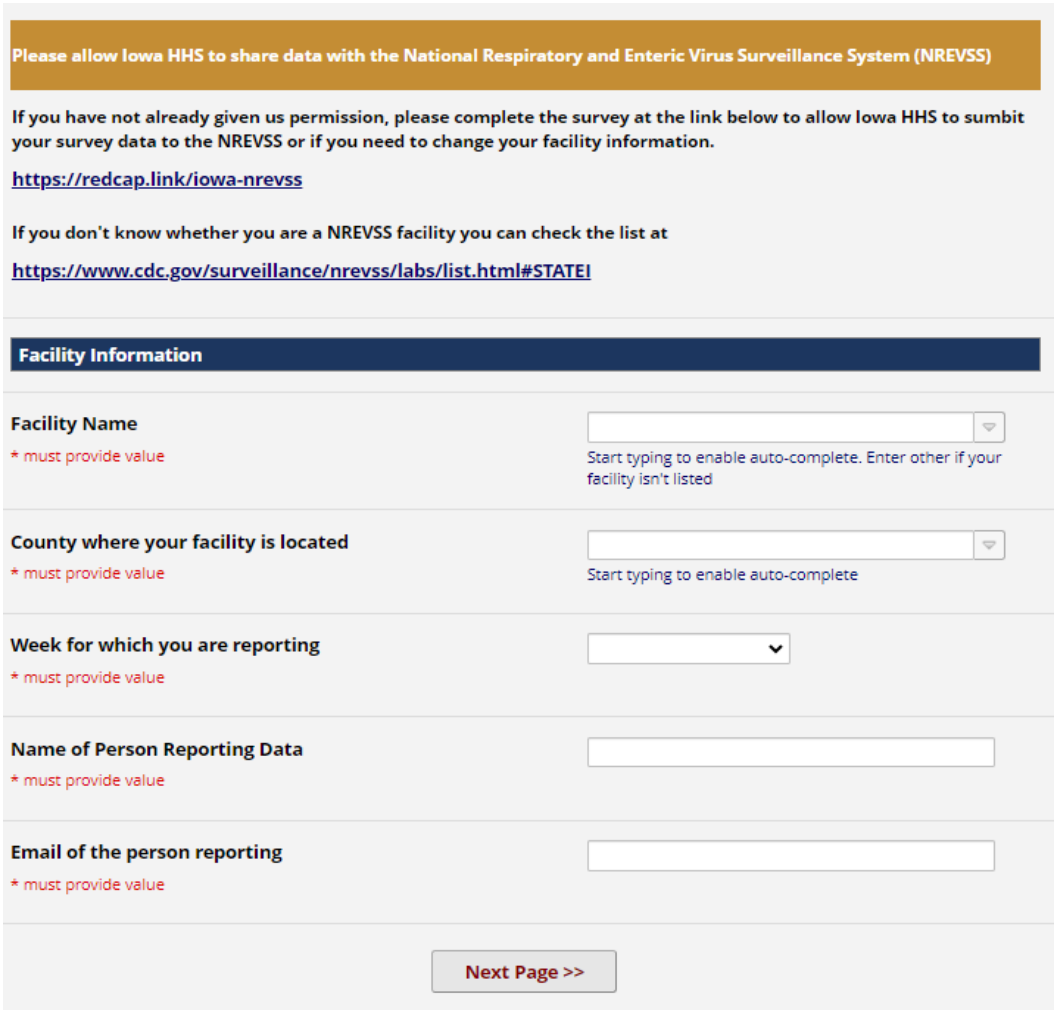
Specimen Collection Cont.

- Specimens for testing should be collected within three days of onset of symptoms.
- PCR is a very sensitive test and precautions should be taken to not cross-contaminate specimens.
- Wear gloves and change before and after collecting specimen.
- Avoid contact with environmental surfaces.
- Fold printed eForm in half and place in the side pocket of biohazard bag (not inside biohazard with specimen).
- Make sure the specimen tube contains two identifiers - name and DOB is enough.
- Send via courier (most already have in place with COVID testing) or can mail in a styro container with ice pack.

Iowa Respiratory Survey-Submitting Your Labs Test Results

- Iowa Respiratory Virus Test Results - Clinical Laboratories
- Contact Kris Eveland at (319) 335-4279 or Kristofer-eveland@uiowa.edu if you are interested
- SHL will send you a link to the public survey
  - Each week, we'll send you the combined results from the previous week
- Benefit
  - Situational awareness - what's circulating in your local area
  - Data is used by Iowa HHS for the weekly respiratory virus report.
  - Positive predictive value of rapid influenza tests relies on prevalence in your local community
- We need COVID-19 data now that negatives are not reportable
- We need more labs around the state for better geographic representation

Iowa Respiratory Survey



Please allow Iowa HHS to share data with the National Respiratory and Enteric Virus Surveillance System (NREVSS)

If you have not already given us permission, please complete the survey at the link below to allow Iowa HHS to sumbit your survey data to the NREVSS or if you need to change your facility information.

https://redcap.link/iowa-nrevss

If you don't know whether you are a NREVSS facility you can check the list at

https://www.cdc.gov/surveillance/nrevss/labs/list.html#STATEI

Facility Information

Facility Name
* must provide value
Start typing to enable auto-complete. Enter other if your facility isn't listed

County where your facility is located
* must provide value
Start typing to enable auto-complete

Week for which you are reporting
* must provide value

Name of Person Reporting Data
* must provide value

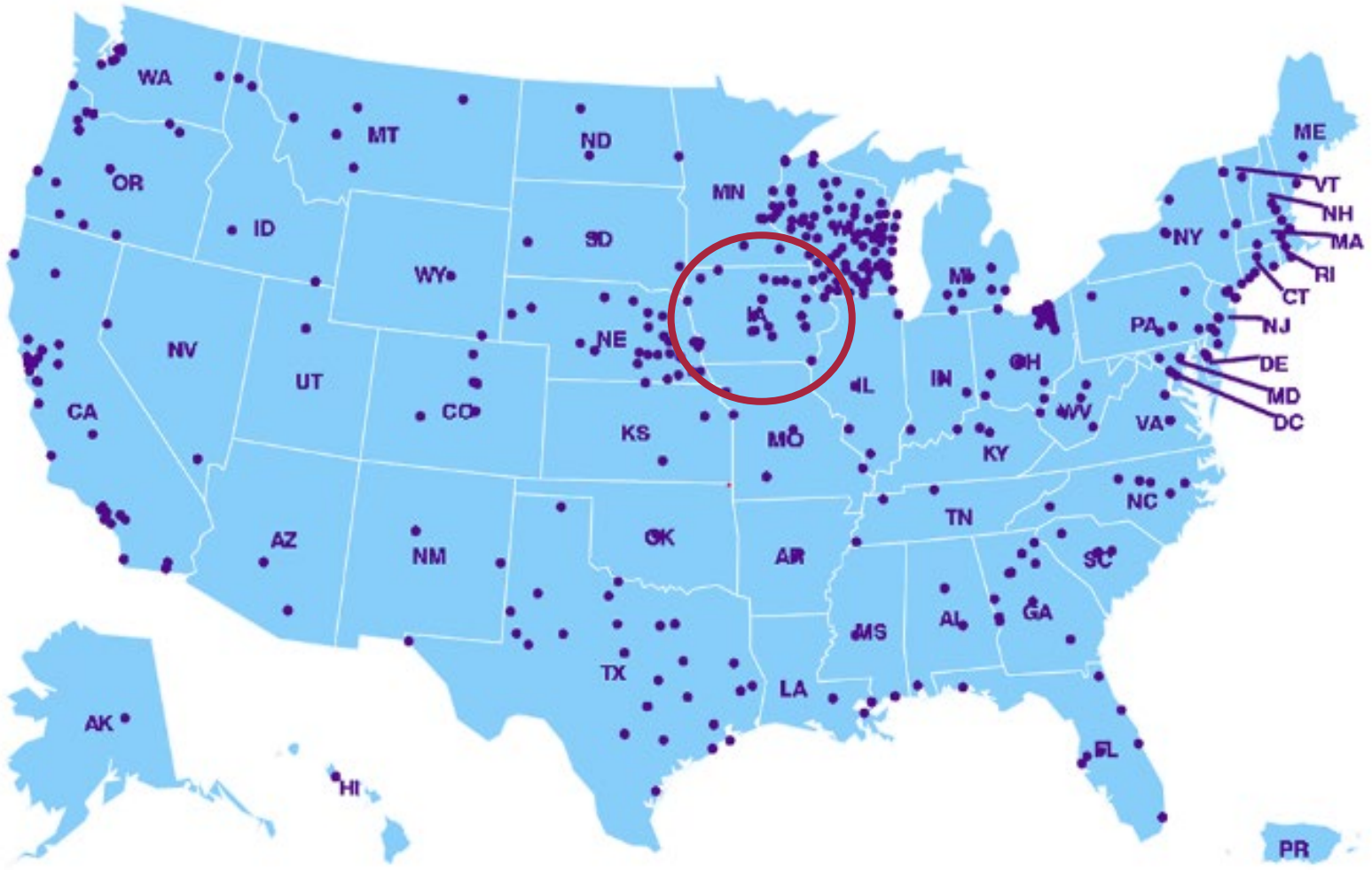
Email of the person reporting
* must provide value

Next Page >>

Please give Iowa HHS permission to pass your weekly lab totals to NREVSS:

https://redcap.idph.state.ia.us/surveys/?s=49LDNXMYFC

Thank you for participating in NREVSS!



Laboratory Contact Information

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SHL general phone: 319-335-4500

THANK YOU FOR PARTICIPATING!!!

Continuing Education Unit (CEU)

Session CODE: 439-008-23

Here is a brief summary describing how to use the ASCLS CE Organizer:

- Go to http://ceorganizer.ascls.org/

Select either the Member or Non-Member log-in box.

a. **ASCLS members** will log in using the same username and password used to enter the Members Section of the ASCLS website.

b. **If you are not an ASCLS member**, and do not have an account in CE Organizer already, click the "Register Here" link to create a username and password.

- Once logged in, click on **Claim Credit.**
- In the list of **Other P.A.C.E. Programs** click on **"439 State Hygienic Lab of the University of Iowa.**
- You will be asked to fill out a survey and then have the ability to download your certificate.

If you have questions, please email Laina Edwards at laina-edwards@uiowa.edu