



Influenza and other Respiratory Viruses Update-- 2020

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Learning Objectives

- Review of influenza basics.
- Review of the 2019-2020 influenza season.
- Influenza vaccine updates.
- Review laboratory issues related to diagnosis and surveillance.
- Describe why specimens and testing data is vital for public health programs.
- Discuss surveillance strategy for 2020-2021.



Influenza

The latest information

www.cdc.gov/flu/index.htm

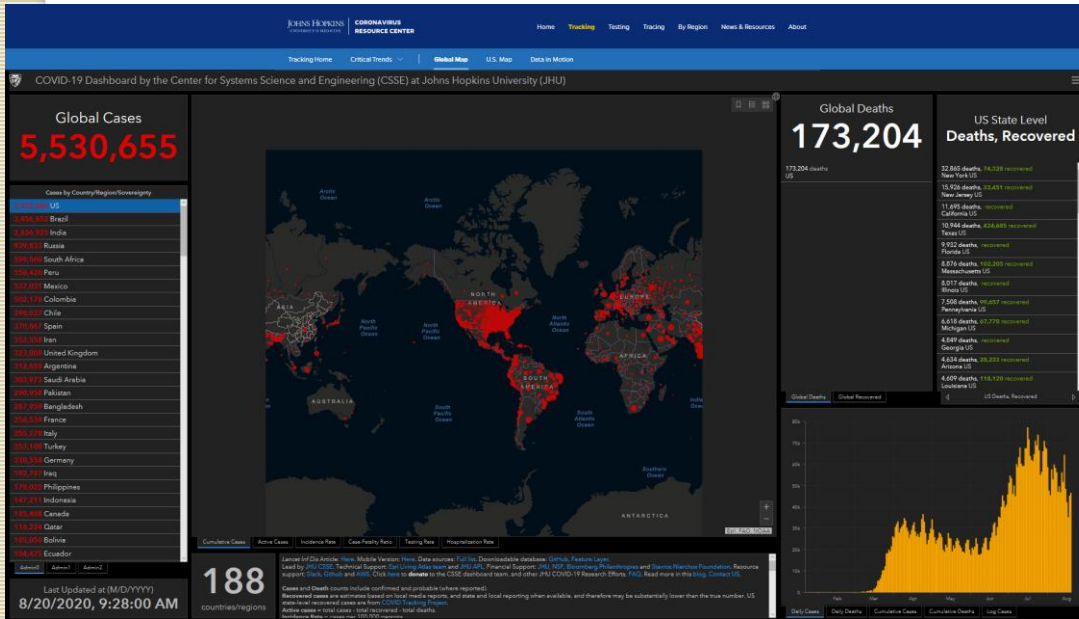
The screenshot shows the CDC website's 'Influenza (Flu)' page. At the top, there's a search bar and a navigation menu. The main content area includes a large banner titled 'HOW DOES FLU MAKE YOU SICK?' with a video player and a 'COUGH' icon. Below the banner are several sections: 'Prevent Flu', 'Symptoms & Diagnosis', 'Treatment', and 'Flu Activity & Surveillance'. A 'Flu Report' button is visible. To the right of the main content, there's a section titled 'The elephant in the room!' with a cartoon elephant illustration. A red arrow points from the 'Flu Report' button to this section.

The elephant in the room!



Current SARS-CoV-2 Impact

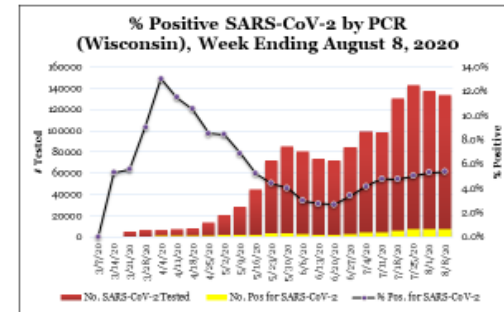
<https://coronavirus.jhu.edu/map.html>



<http://www.slh.wisc.edu/wcln-surveillance/surveillance/>



Current SARS-CoV-2, Wisconsin Week Ending



WISCONSIN STATE LABORATORY OF HYGIENE - UNIVERSITY OF WISCONSIN



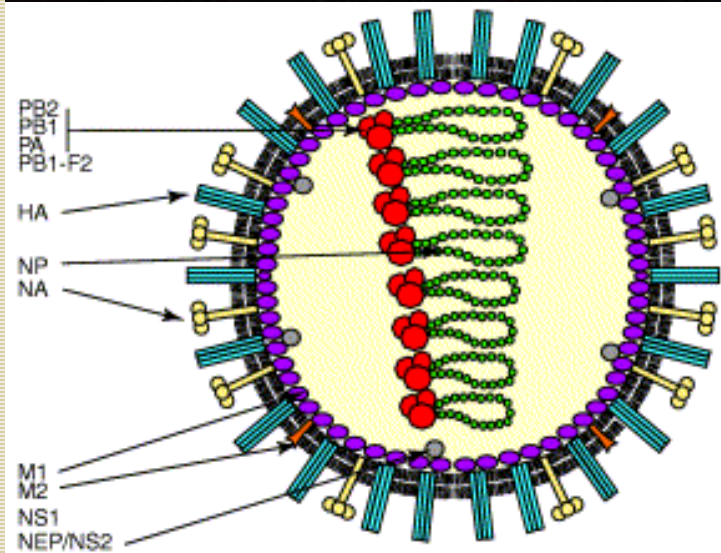
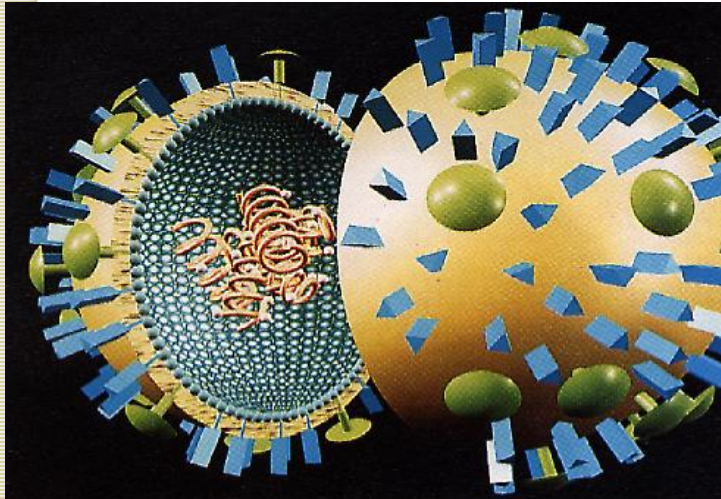
Why should we still worry about flu?

- Significant morbidity and mortality
- Clinical and epidemiological (age, seasonality, risk groups) overlap with COVID-19
- Vaccines and treatments available
- Recent very severe seasonal flu epidemics
- Ongoing threat of novel flu emergence and pandemics.

...and don't forget the impact of a host of other respiratory pathogens

Influenza Virus Basics

“Changeability is its hallmark”



- Influenza **types** A, B, C and D
 - A and B are major human pathogens
- Negative-sense **segmented RNA genome**
 - 10 major proteins
- Two major surface proteins of A and B viruses: **Hemagglutinin (HA)** and **Neuraminidase (NA)**
 - Nomenclature
 - Role in pathogenesis
 - Defines **subtypes**

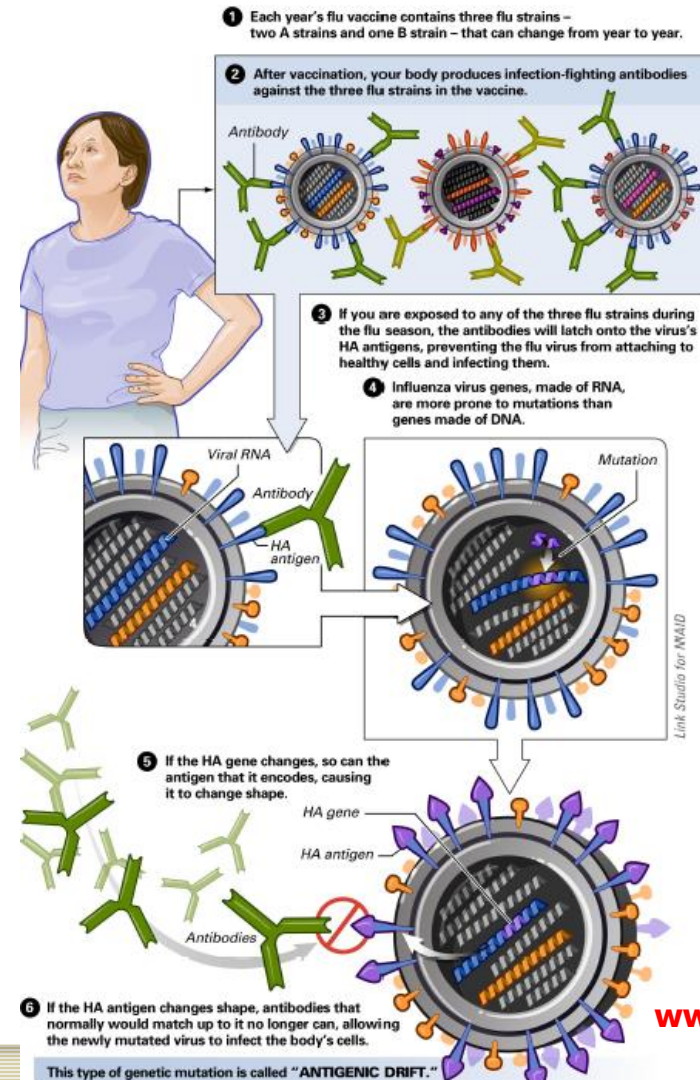


The Changeability of Influenza

Antigenic Drift → *Seasonal Influenza*

Antigenic Drift

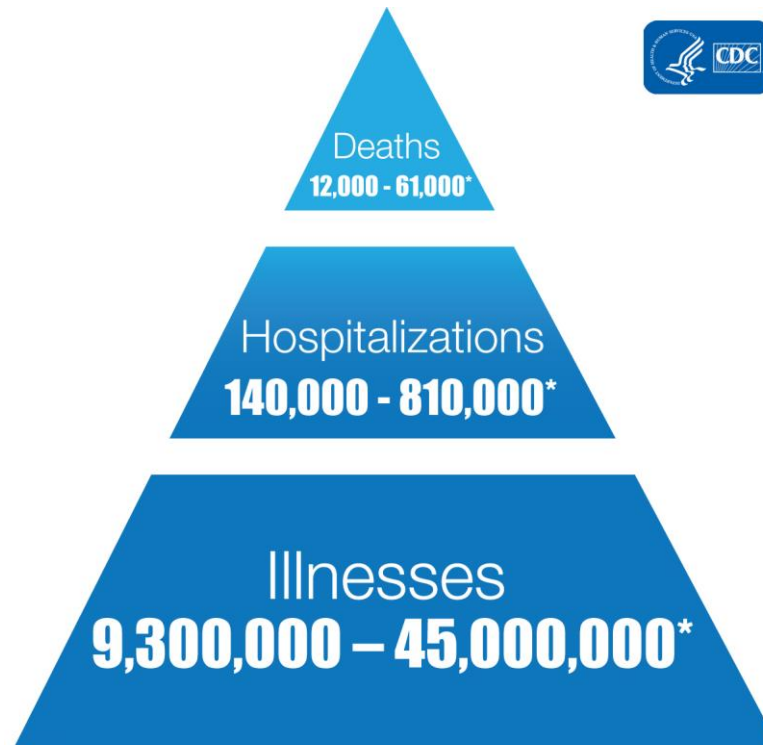
Manifests in HA and NA as a result of continuous and gradual accumulation of point mutations in the HA and NA genes within a subtype



www.cdc.gov/flu



The Annual Impact of Seasonal Influenza



**In a given season,
5-20% of community may
experience illness**

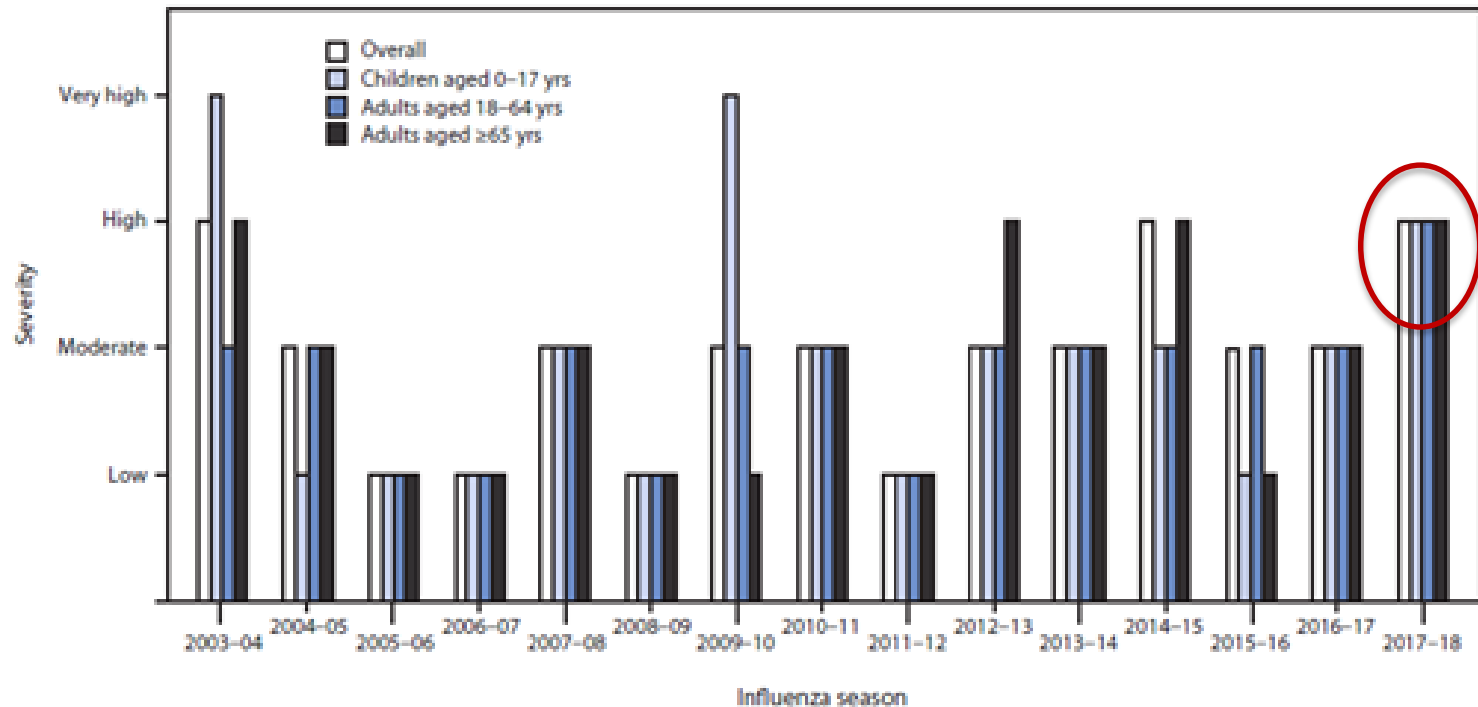
*The top range of these burden estimates are from the 2017-2018 flu season. These are preliminary and may change as data are finalized.



Influenza in the U.S. :2003-18

Overall Influenza Season Severity

FIGURE 3. Influenza season severity classification,* by age group and season — United States, 2003–04 through 2017–18 seasons†



* CDC began using a new method in 2017 to classify influenza season severity using three indicators: the percentage of visits to outpatient clinics for influenza-like illness (ILI) from ILINet, the rates of influenza-associated hospitalizations from FluSurv-Net, and the percentage of deaths resulting from pneumonia or influenza from the National Center for Health Statistics. This method was applied retrospectively, going back to the 2003–04 influenza season. <https://www.cdc.gov/flu/professionals/classifies-flu-severity.htm>.

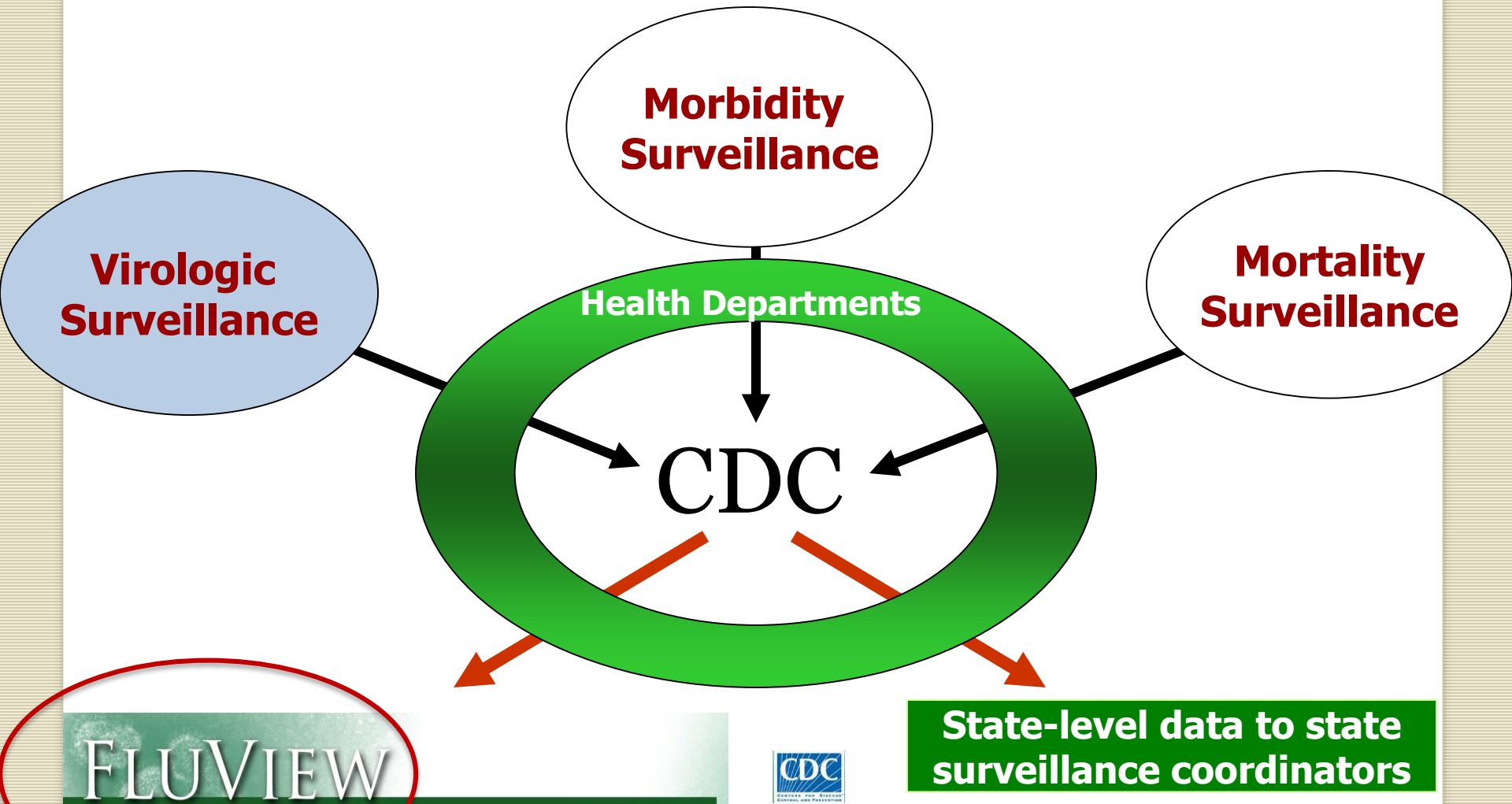
† As of June 1, 2018.

**MMWR June 8,
2018, Vol. 67/No.22**



U.S. Influenza Surveillance

www.cdc.gov/flu/weekly/overview.htm



State-level data to state surveillance coordinators

Influenza Virologic Surveillance



How we monitor the virus

- Provide situational awareness

- **Clinical lab testing data**  **CDC**
Via PHL or directly

Detect novel or reassortant viruses

- Inform vaccine strain selection

Detect and monitor antiviral resistance

- **Specimens/isolates from clinical labs**  **PHL**  **NIRC**  **CDC**

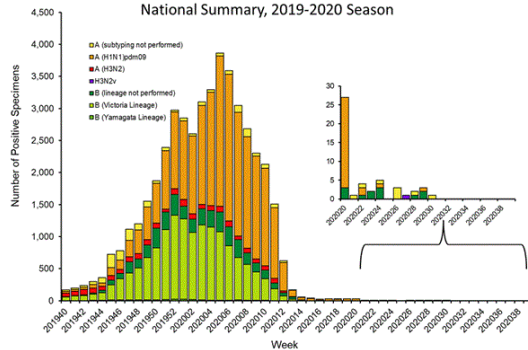




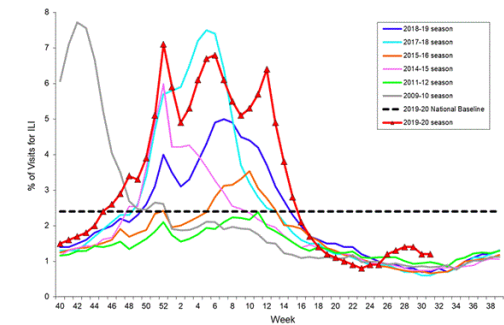
The 2019-20 Influenza Epidemic

Key Virologic and Epidemiologic Indicators

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2019-2020 Season



Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2019-2020 and Selected Previous Seasons



2019-2020 U.S. Flu Season: Preliminary Burden Estimates

[Español](#)

CDC estimates* that, from **October 1, 2019**, through **April 4, 2020**, there have been:

39,000,000 – 56,000,000

flu **illnesses**



18,000,000 – 26,000,000

flu **medical visits**



410,000 – 740,000

flu **hospitalizations**



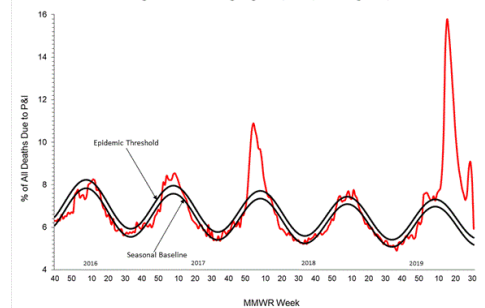
24,000 – 62,000

flu **deaths**



NOTE: The week of April 4 was the last week in-season influenza burden estimates will be provided for the 2019-2020 season.

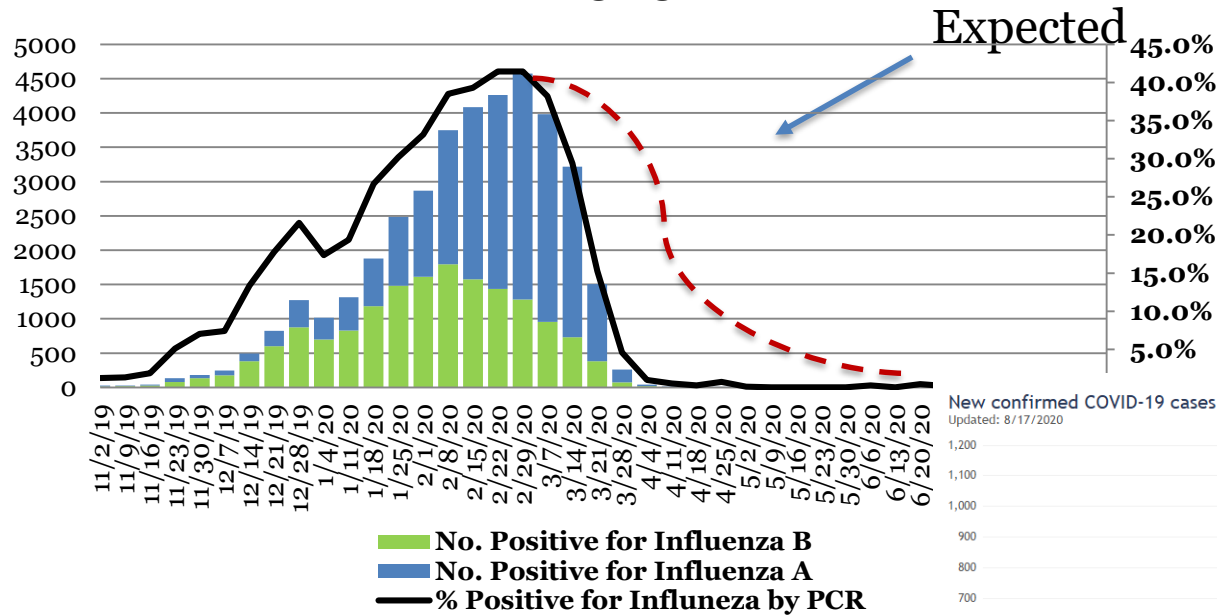
Pneumonia and Influenza Mortality from the National Center for Health Statistics Mortality Surveillance System Data through the week ending August 1, 2020, as of August 6, 2020



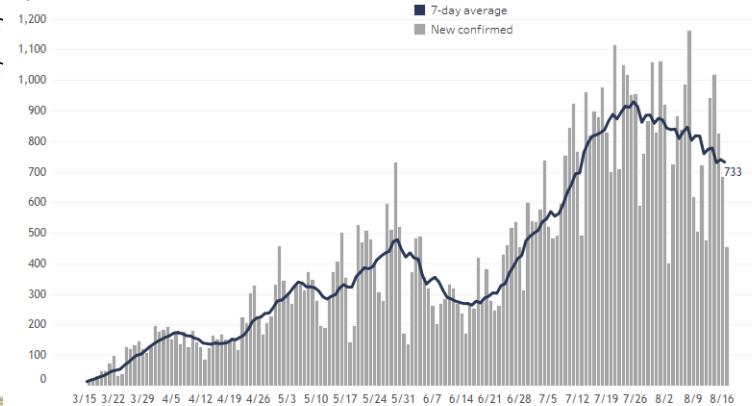


2019-2020 Seasonal Influenza Activity, Wisconsin

% Positive for Influenza by PCR (Wisconsin), Week Ending August 8, 2020



New confirmed COVID-19 cases by date confirmed, and 7-day average
Updated: 8/17/2020

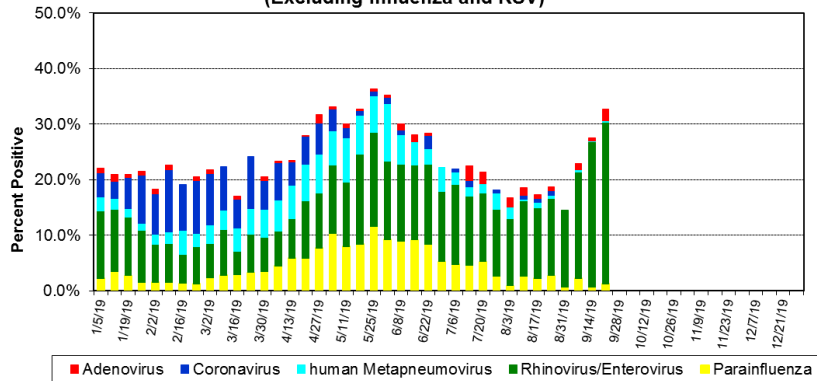




2019-2020 Seasonal Respiratory Virus Activity, Wisconsin

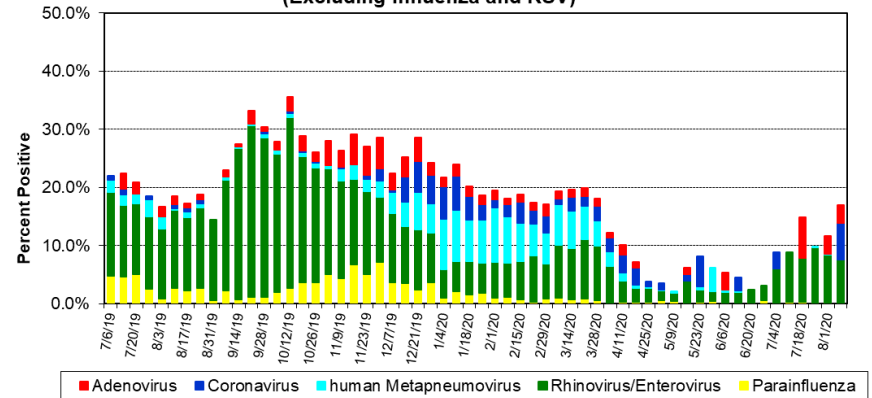
2019

Positivity of Respiratory Specimens by PCR at Wisconsin Laboratories (Excluding Influenza and RSV)



2020

Positivity of Respiratory Specimens by PCR at Wisconsin Laboratories (Excluding Influenza and RSV)



Influenza – Prevention and Treatment

<http://www.cdc.gov/flu/professionals/index.htm>



CDC Centers for Disease Control and Prevention
CDC ACIP Spring/Summer Meeting Presentations

Search [Advanced Search](#)

Influenza (Flu)

Seasonal Influenza (Flu)

- Seasonal Influenza (Flu)
- About Flu
- Who is at High Risk for Flu Complications
- This Flu Season
- Prevents Flu
- Flu Vaccines Work
- Symptoms & Diagnosis
- Treatment
- Schools, Businesses & Travelers
- Flu Activity & Surveillance
- Health Professionals**
- Health Care Workers Need A Flu Vaccine
- ACIP Recommendations
- Vaccination
- Information for Clinicians on Influenza Virus Testing
- Information for Laboratories
- Antiviral Drugs
- Infection Control
- Tools for Long-Term Care Employees
- Trainings
- Health Professional References & Resources
- Flu News & Spotlights
- What's New

Information for Health Professionals

The pages listed below offer public health and health care professionals key information about vaccination, infection control, prevention, treatment, and diagnosis of seasonal influenza.

Your flu vaccine recommendation makes a difference.
[Learn more](#) [Print \(U.S.\)](#)

Influenza Data

FLUVIEW Overview and map of current influenza activity in the U.S. [More Information](#)

FLU VaccView Coverage data and past trends of flu vaccination coverage in the U.S. [More Information](#)

Recommendations and Guidance

- [CDC Vaccination Guidance During a Pandemic \(2009-2011\)](#)
- [Information for Laboratories](#)
- [Vaccine Recommendations \(ACIP\)](#)
- [Institutional Outbreaks and Infection Control](#)
- [Clinical Evaluation & Diagnosis](#)
- [Long-Term Care Facilities](#)
- [Antiviral Drugs](#)

Resources

- [Vaccination](#)
- [Training](#)
- [Flu Vaccination Information for Health Care Workers](#)
- [Vaccination Toolkit for Long-Term Care Employees](#)
- [CDC Updates for Health Care Providers](#)
- [How CDC Classifies Flu Severity](#)
- [Patient Education Resources](#)

Additional Resources

- [Transition for Wisconsin and Flu Activity Update](#)
- [Public Health Grand Rounds: Flu Season Update](#)
- [Interim Immunization Recommendations for Individuals Displaced by a Disaster](#)
- [Medical Office Telephone Evaluation of Patients with Possible Influenza](#)
- [Communications to Health Care Providers](#)
- [Toolkit for Long-Term Care Employees](#)
- [Flu Activity and Surveillance](#)

What CDC Does

- [PublicOps](#)
- [Communications Resource Center](#)
- [International Work](#)
- [Outbreak Investigations](#)

Get Email Updates

To receive weekly email updates about Seasonal Flu, enter your email address:



Table 1. Antiviral Medications Recommended for Treatment and Chemoprophylaxis of Influenza

Antiviral Agent	Activity Against	Use	Recommended For	Not Recommended for Use in	Adverse Events
Oral Oseltamivir	Influenza A and B	Treatment	Any age ¹	N/A	Adverse events: nausea, vomiting, headache. Post marketing reports of serious skin reactions and sporadic, transient neuropsychiatric events ²
		Chemo- prophylaxis	3 months and older ¹	N/A	
Inhaled Zanamivir	Influenza A and B	Treatment	7 yrs and older ³	people with underlying respiratory disease (e.g., asthma, COPD) ³	Adverse events: risk of bronchospasm, especially in the setting of underlying airways disease; sinusitis, and dizziness. Post marketing reports of serious skin reactions and sporadic, transient neuropsychiatric events ²
		Chemo- prophylaxis	5 yrs and older ³	people with underlying respiratory disease (e.g., asthma, COPD) ³	
Intravenous Peramivir	Influenza A and B ⁴	Treatment	2 yrs and older ⁴	N/A	Adverse events: diarrhea. Post marketing reports of serious skin reactions and sporadic, transient neuropsychiatric events ²
		Chemo- prophylaxis ⁵	Not recommended	N/A	
Oral Baloxavir	Influenza A and B ⁶	Treatment	12 yrs and older ⁶	N/A	Adverse events: none more common than placebo in clinical trials
		Chemo- prophylaxis ⁵	Not recommended	N/A	

Abbreviations: N/A = not applicable, COPD = chronic obstructive pulmonary disease.



Seasonal Influenza

Vaccine

- **Primary strategy to reduce influenza infections and their complications**
 - **Safe and effective(?); usage rates disappointing**
- 2 options:
 - **Inactivated influenza vaccine**
 - Trivalent and quadrivalent
 - Egg or cell culture grown and recombinant
 - For all age groups \geq 6 months (Universal)
 - Options now include high potency and adjuvanted
 - **Live attenuated influenza vaccine**
 - Licensed for non-pregnant persons aged 2-49 years
- Vaccine is matched to circulating strains of seasonal types A (*2 subtypes*) and B (*2 lineages*) influenza



Influenza Vaccine 2019-20

What was expected....

- A/Kansas/14/2017 A(H3N2)-like
- A/Brisbane/02/2018 A(H1N1)pdm09-like
- B/Phuket/3073/2013-like (B/Yamagata-lineage)
- B/Colorado/06/2017-like (B/Victoria-lineage)

...basically what we got

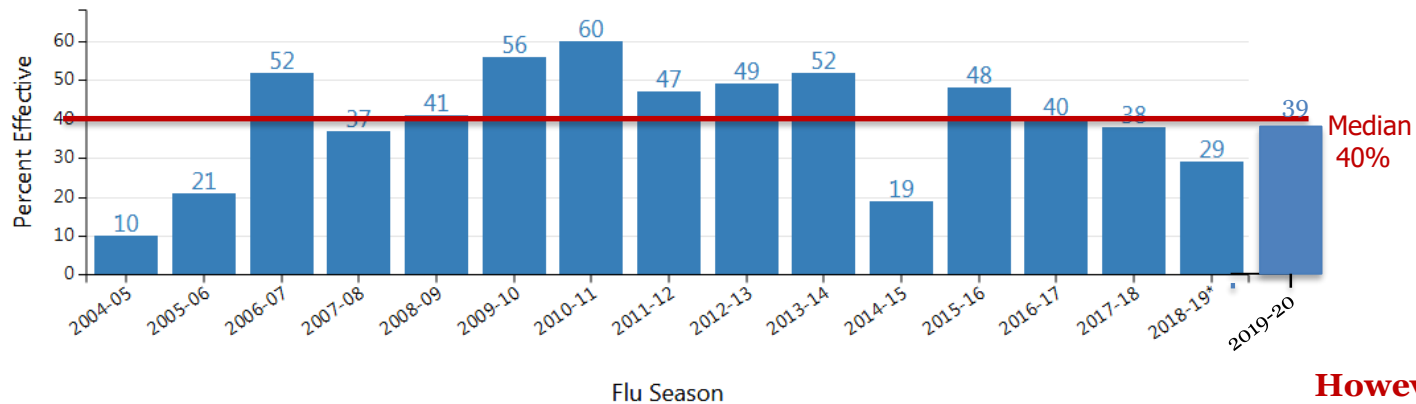


Seasonal Influenza Vaccines

How effective?

<https://www.cdc.gov/flu/vaccines-work/effectiveness-studies.htm>

Seasonal Flu Vaccine Effectiveness



However:

- Prevents office visits
- Prevent hospitalization
- Prevents death

VE= percent reduction of frequency of flu among vaccinated people compared to unvaccinated people



Influenza Vaccine 2020-21

<https://www.cdc.gov/mmwr/volumes/69/rr/pdfs/rr6908a1-H.pdf>

- A/Hong Kong/2671/2019 A(H3N2)-like [egg- based]
- A/Hong Kong/45/2019 A(H3N2) [cell-based and recombinant]
- A/Guangdong-Maonan/SWL1536/2019 A(H1N1)pdm09-like [egg-based]
- A/Hawaii/70/2019 A(H1N1)pdm-09-like [cell-based and recombinant]
- B/Washington/02/2019 (B/Victoria lineage)-like [egg & cell-based]
- B/Phuket/3073/2013 (B/Yamagata-lineage)-like [egg & cell-based]



Influenza Vaccine 2020-21

In light of the SARS-CoV-2 pandemic,
more important than ever to get your
flu vaccine!

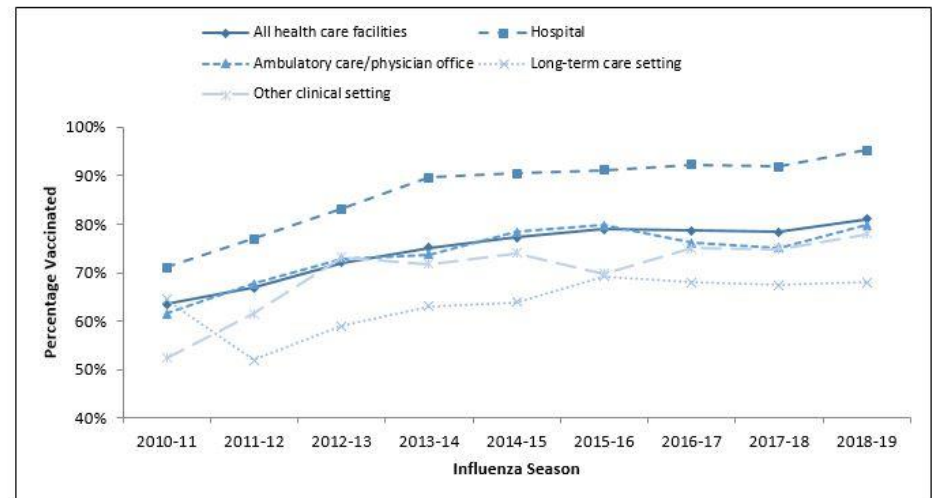
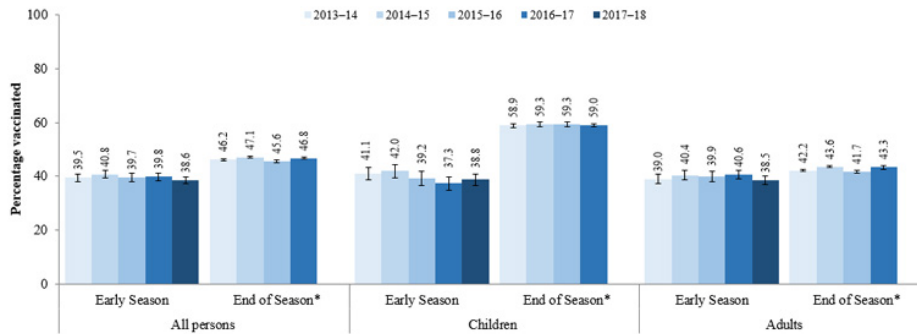


Vaccination Rates---2013-2019

General Population and Healthcare Personnel

<http://www.cdc.gov/flu/professionals/vaccination/>

Early-season and end-of-season flu vaccination coverage estimates, National Immunization Survey-Flu and National Internet Flu Survey, United States, 2013-14 flu season to November, 2017





1918 Influenza Pandemic

100 Year Anniversary of the Great Pandemic



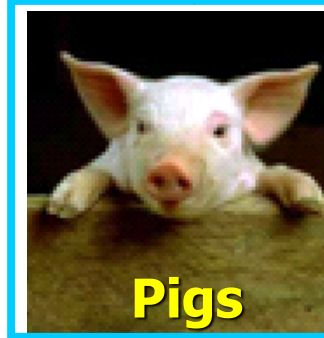
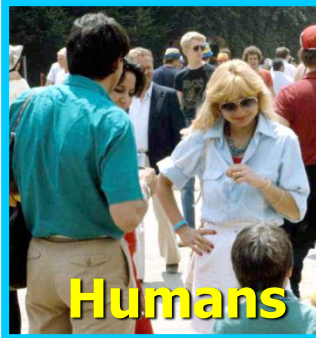
<https://www.cdc.gov/flu/pandemic-resources/index.htm>



Influenza at the Human-Animal Interface

Influenza A

- H1 - H16*
- N1 - N9*



*Bats – H17/18, N10/11





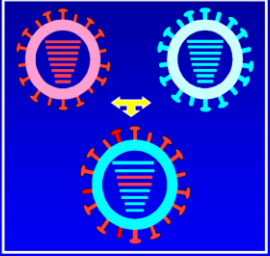
The Changeability of Influenza

Antigenic Shift → *Pandemic Influenza*

www.cdc.gov/flu

Antigenic "shift"

- Associated with pandemics
- Acquisition of novel genes through reassortment
- Appearance of novel influenza A viruses bearing new HA or HA & NA
 - H5N1 in Asia
 - 2009 H1N1

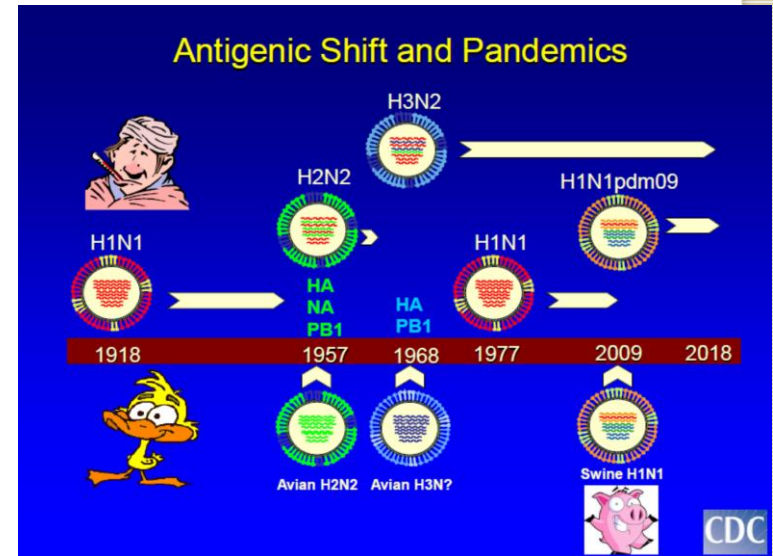


Pandemic Influenza

Replication in Humans



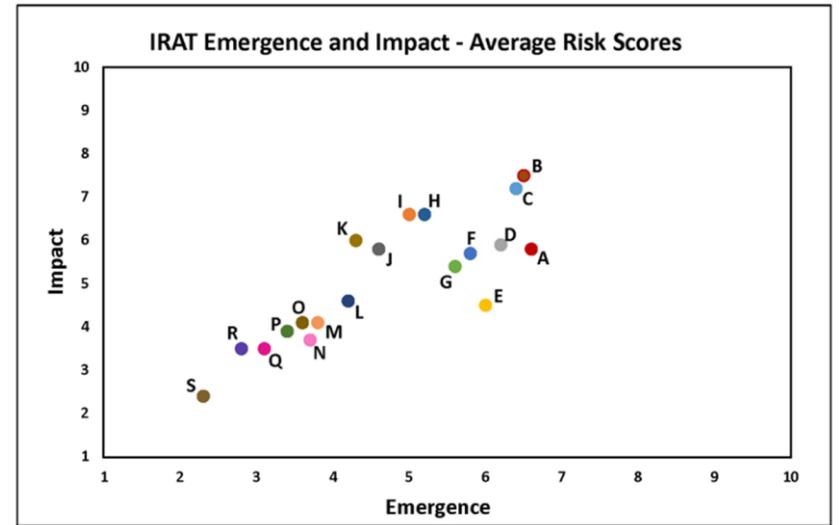
Efficient and sustained human-to-human transmission





A Global Tool for Pandemic Preparedness

- A global public health tool to prioritize pandemic preparedness activities
 - Evaluates risk from novel viruses currently circulating in animals, i.e. in pre-pandemic period
- Assess potential pandemic risk for:
 - Emergence of a novel influenza virus in humans
 - Human-to-human transmission
 - Public health impact
 - Severity
- The IRAT can prioritize readiness activities
 - Diagnostics, reagents, vaccines and antivirals development
 - Stockpiling and deployment
- The IRAT cannot predict the next pandemic strain



CDC. <https://www.cdc.gov/flu/pandemic-resources/monitoring/irat.htm>

- CDC Influenza Risk Assessment Tool (IRAT)
 - Ten elements of the virus, population, and animal/human ecology are evaluated to develop a score

<p>Virus</p>	1. Genomic variation
	2. Receptor binding
	3. Transmission in Laboratory animals
	4. Antivirals and Treatment Options
<p>Population</p>	5. Existing Population Immunity
	6. Disease Severity and Pathogenesis
	7. Antigenic Relationship to Vaccine Candidates
<p>Ecology</p>	8. Global Geographic Distribution
	9. Infection in Animals, Human Risk of Infection
	10. Human Infections and Transmission

<https://www.cdc.gov/flu/pandemic-resources/national-strategy/risk-assessment.htm>

	Virus	Emergence Score	Impact Score
● A	A(H3N2) variant [A/Ohio/13/2017]	6.6	5.8
● B	A(H7N9) [A/Hong Kong/125/2017]	6.5	7.5
● C	A(H7N9) [A/Shanghai/02/2013]	6.4	7.2
● D	A(H9N2) Y280 lineage [A/Anhui-Lujiang/13/2018]	6.2	5.9
● E	A(H3N2) variant [A/Indiana/08/2011]	6.0	4.5
● F	A(H1N2) variant [A/California/62/2018]	5.8	5.7
● G	A(H9N2) G1 lineage [A/Bangladesh/0994/2011]	5.6	5.4
● H	A(H5N1) Clade 1 [A/Vietnam/1203/2004]	5.2	6.6
● I	A(H5N6) [A/Yunnan/14564/2015] – like	5.0	6.6
● J	A(H7N7) [A/Netherlands/219/2003]	4.6	5.8
● K	A(H10N8) [A/Jiangxi-Donghu/346/2013]	4.3	6.0
● L	A(H5N8) [A/gyrfalcon/Washington/41088/2014]	4.2	4.6
● M	A(H5N2) [A/Northern pintail/Washington/40964/2014]	3.8	4.1
● N	A(H3N2) [A/canine/Illinois/12191/2015]	3.7	3.7
● O	A(H5N1) [A/American green-winged teal/Washington/1957050/2014]	3.6	4.1
● P	A(H7N8) [A/turkey/Indiana/1573-2/2016]	3.4	3.9
● Q	A(H7N9) [A/chicken/Tennessee/17-007431-3/2017]	3.1	3.5
● R	A(H7N9) [A/chicken/Tennessee/17-007147-2/2017]	2.8	3.5
● S	A(H1N1) [A/duck/New York/1996]	2.3	2.4



Wisconsin Testing and Surveillance 2020-2021



Possible Impacts of COVID on flu testing

- Lab supply chain shortages and disruptions
- Less staffing resources for flu and other diagnostic testing
- Managing multiple testing platforms
- Coordinating specimen types
- Trend toward testing asymptomatics
- Expanding COVID testing beyond traditional labs
 - “Tack on” flu testing as well




Impacts on surveillance: a PH concern



Excellent Resource

<https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html>

Find on page MMWR No results < > Options

Coronavirus Disease 2019 (COVID-19)  WEAR A MASK. PROTECT OTHERS.

Your Health Community, Work & School Healthcare Workers & Labs Health Depts Cases & Data More

Laboratories

Resources for Labs

- Multiplex Assay for Flu and COVID-19 & Supplies
- Diagnostic Test for COVID-19 Only & Supplies
- Using Antigen Tests**
- Using Antibody Tests
- Reporting Lab Data
- Biosafety for Specimen Handling
- Guidance for Lab Safety Practices
- Pooling Procedures
- Specimen Collection
- Publications
- Antibody Testing At-A-Glance
- Antibody Testing Interim Guidelines


CDC Lab Work +

FAQs

Guidance Documents

Communication Resources +

What's New

 **Get Email Updates**

To receive email updates about

LABORATORIES

Interim Guidance for Rapid Antigen Testing for SARS-CoV-2

Updated Aug. 16, 2020 [Print](#) [Facebook](#) [Twitter](#) [LinkedIn](#) [Email](#) [RSS](#)

Note: Antigen tests can be used in a variety of testing strategies to respond to the coronavirus disease 2019 (COVID-19) pandemic. This interim guidance is intended for clinicians who order antigen tests, receive antigen test results, and/or perform point-of-care testing, as well as for laboratory professionals who perform antigen testing in a laboratory setting or at the point of care and report those results. The purpose of this interim technical guidance is to support the most effective use of antigen tests for different testing situations. This guidance applies to all uses of antigen tests and is not specific to the application of antigen tests to any particular age group or setting. This guidance supplements and is consistent with CDC's [Overview of Testing for SARS-CoV-2](#) guidance.

On This Page

- Definitions of Diagnostic, Screening, and Surveillance Testing for SARS-CoV-2
- Summary Tables
- Rapid Antigen Testing for SARS-CoV-2

Definitions of Diagnostic, Screening, and Surveillance Testing for SARS-CoV-2

[Table 1](#) summarizes the differences between diagnostic, screening, and surveillance testing.

Definition of Diagnostic Testing

Diagnostic testing for SARS-CoV-2 is intended to identify current infection in individuals and is performed when a person has signs or symptoms consistent with COVID-19, or when a person is asymptomatic but has recent known or suspected exposure to SARS-CoV-2. Examples of diagnostic testing include testing symptomatic persons, testing persons identified through contact tracing efforts, and testing those who indicate that they were exposed to someone with a confirmed or suspected case of COVID-19. See CDC's [Overview of Testing for SARS-CoV-2](#). The US Food and Drug Administration's (FDA) [FAQs on Testing for SARS-CoV-2](#) also address diagnostic testing for SARS-CoV-2.

Definition of Screening Testing

Screening testing for SARS-CoV-2 is intended to identify infected persons who are asymptomatic and without known or suspected exposure to SARS-CoV-2. Screening testing is performed to identify persons who may be contagious so that measures can be taken to prevent further transmission. Examples of screening include testing in congregate settings, such as a long-term care facility or a correctional facility, a workplace testing its employees, or a school testing its students, faculty, and staff. See CDC's [Overview of Testing for SARS-CoV-2](#), [Testing Guidelines for Nursing Homes](#), [Interim Considerations for K-12 School Administrators for SARS-CoV-2 Testing](#), [Return to Work Guidance](#), and [Interim Guidance](#)

WSLH Testing Strategy for Influenza and SARS-CoV-2



- Implementing CDC Multiplex PCR assay in September.
- Surveillance testing & outbreak response for suspected influenza or SARS-CoV-2.
- Commercial tests include BioFire, Luminex and Qiagen. Cepheid 4 targets coming soon!
- Many commercial manufacturers developing tests.





CDC Influenza SC2 Multiplex PCR

- Targets include InfA, InfB, SC2 and RP
- Equipment needed: real-time PCR instrument (96well) and NA extraction platform.
- Sensitivity for SC2 improved. Similar for influenza viruses.
- PCR sequences available at:
<https://www.cdc.gov/coronavirus/2019-ncov/lab/multiplex-primer-probes.html>



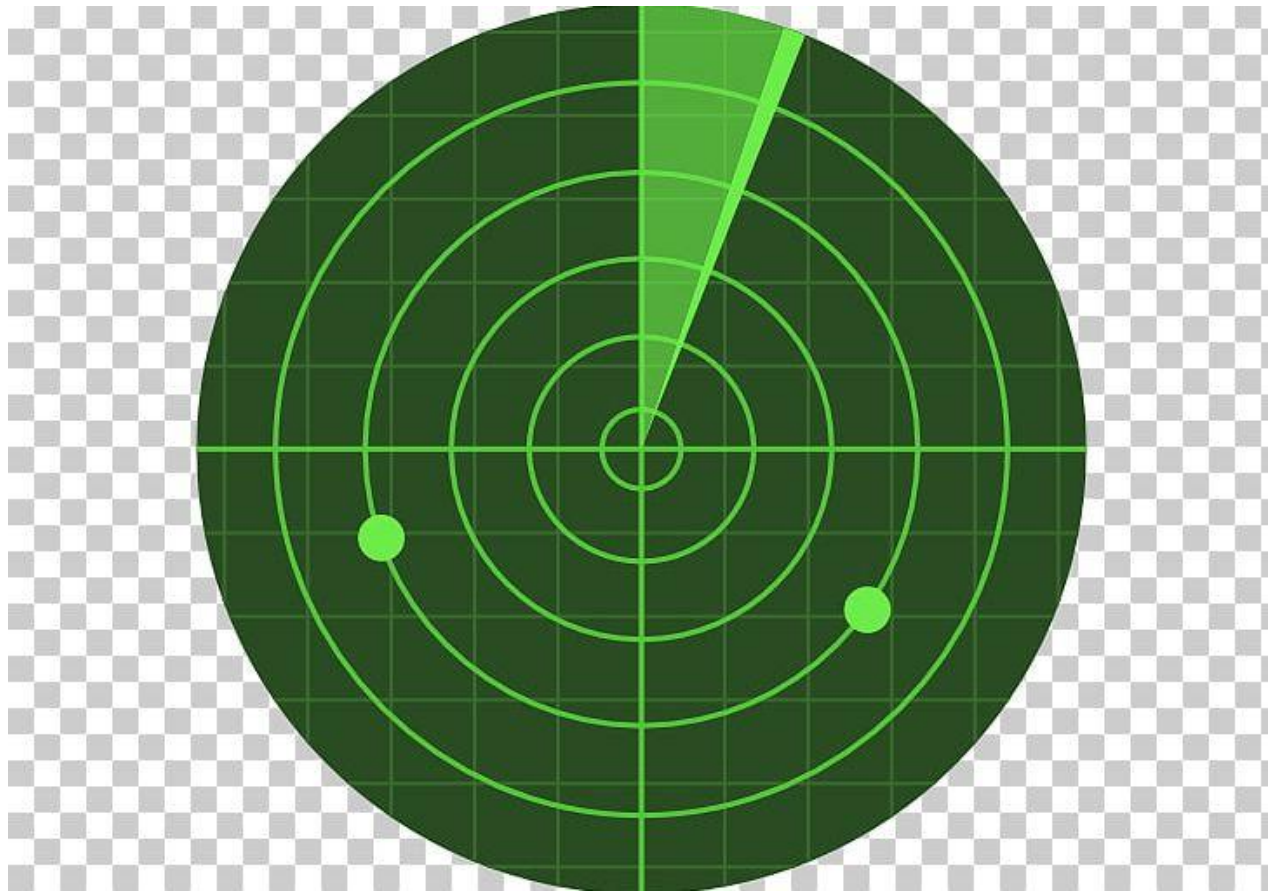
Influenza subtyping changes

2020-2021 Strategy

- Characterize H1 and H3 subtypes.
- Select samples based upon CDC criteria.
- Reduced number.
- Reporting to labs will be RUO.



Viral Monitoring Activities (other than Flu)





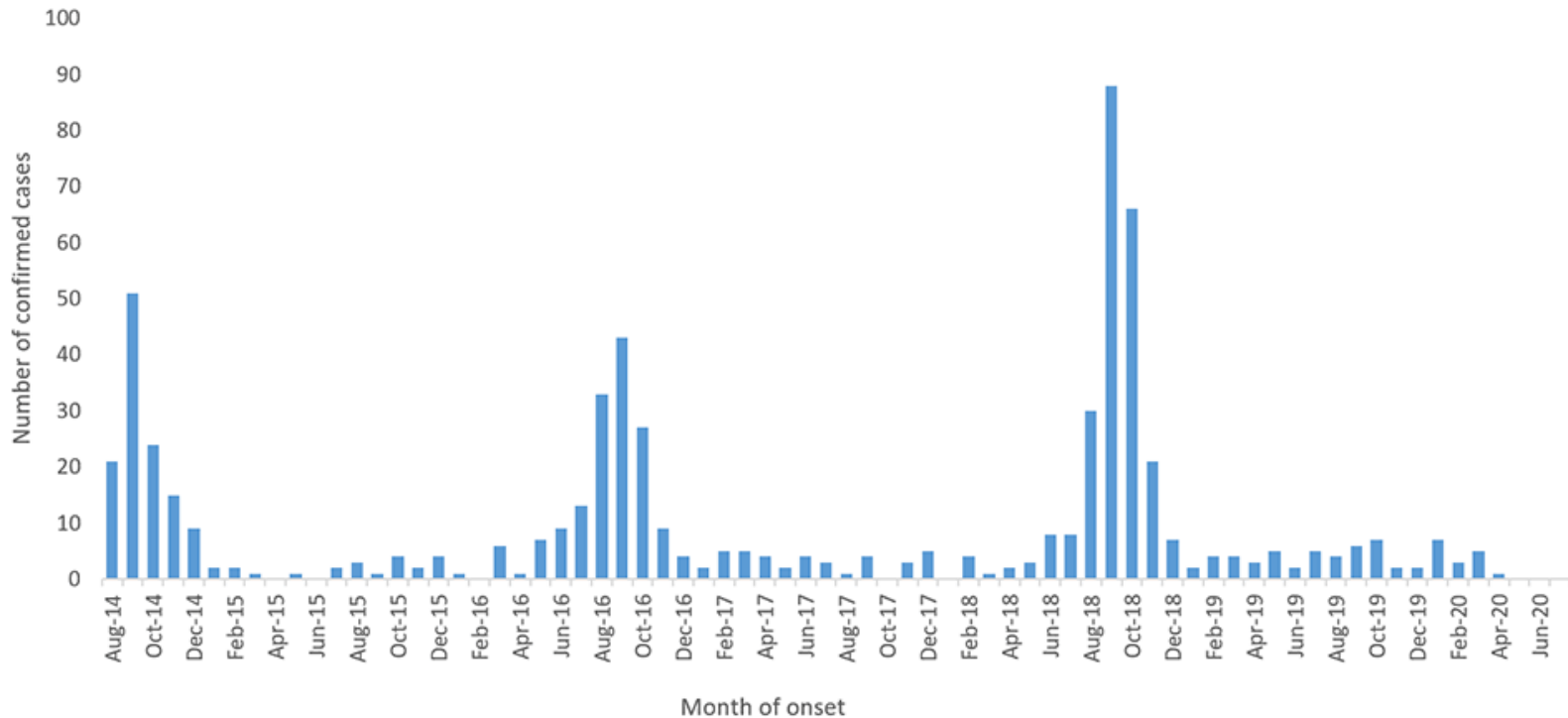
Severe Adenovirus



- Adenovirus outbreak occurred in NJ
 - >24 severe illnesses and 11 deaths
 - Children with compromised immune systems
- University of Maryland
 - Freshman death
- University of Wisconsin



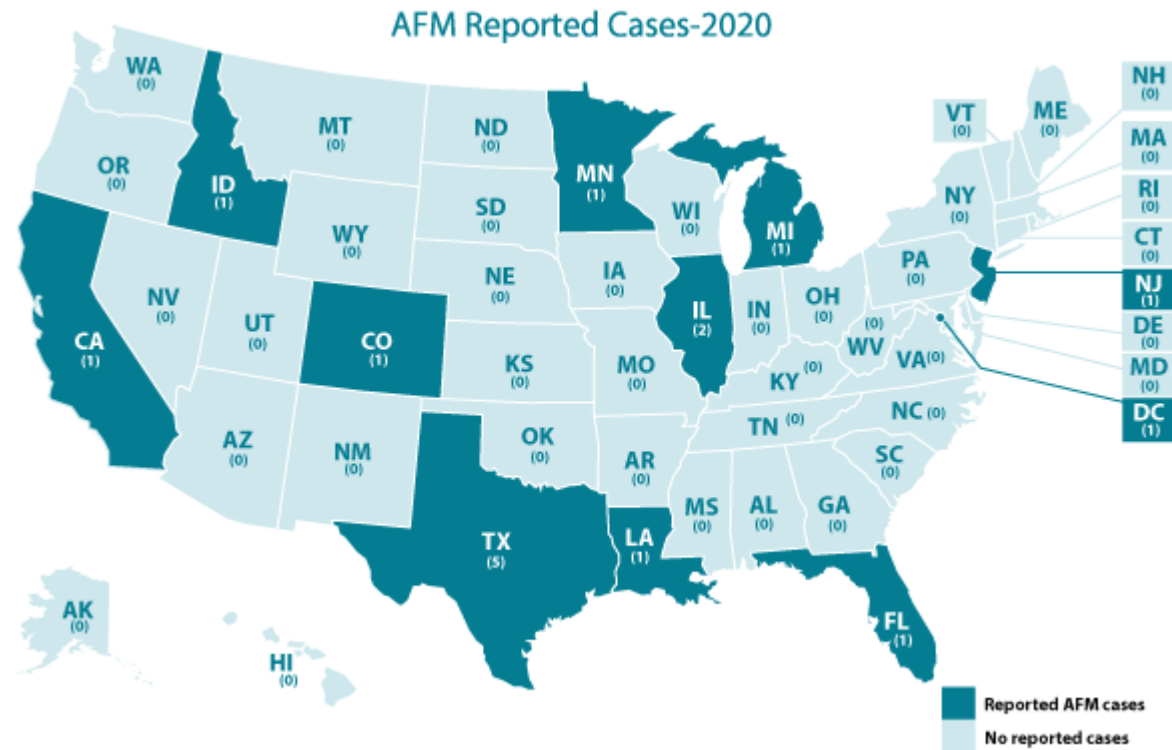
Acute Flaccid Myelitis (AFM)



Source: <https://www.cdc.gov/acute-flaccid-myelitis/cases-in-us.html>



Acute Flaccid Myelitis (AFM)



Source: <https://www.cdc.gov/acute-flaccid-myelitis/cases-in-us.html>



Virus Activity Resources

Wisconsin

- Bi-weekly Laboratory Surveillance Report

Subscribe at: wcln@slh.wisc.edu

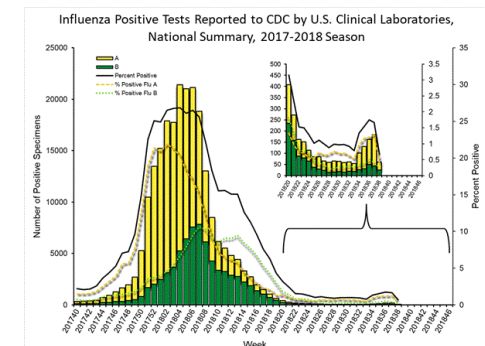
- Virus Activity Graphs

<http://www.slh.wisc.edu/wcln-surveillance/surveillance/virology-surveillance/>



National

- FluView (CDC)
- COVID View (CDC) **NEW!**
- NREVSS (CDC)



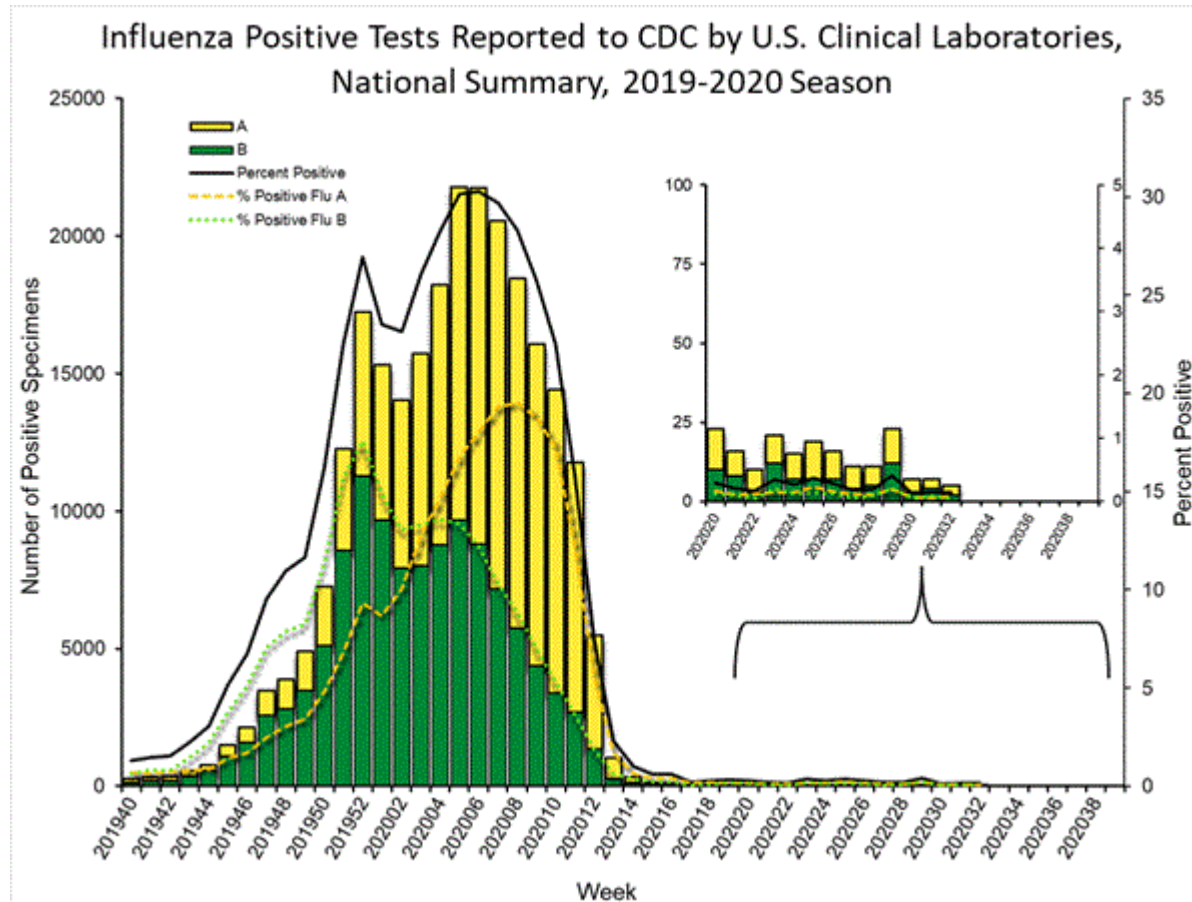


Influenza and non-influenza virus respiratory surveillance





Early..... Influenza season, 2020-2021





WHO Global Influenza Surveillance and Response System (GISRS)—

<https://apps.who.int/flumart/Default?ReportNo=5&Hemisphere=Southern>

Southern hemisphere, 2019

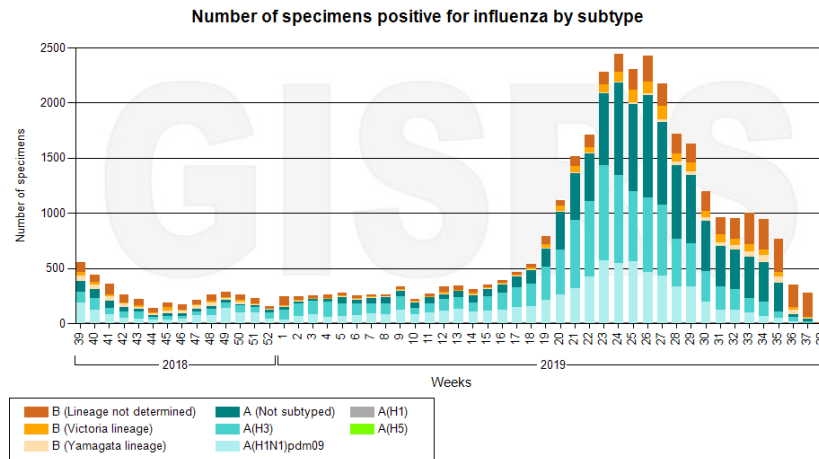
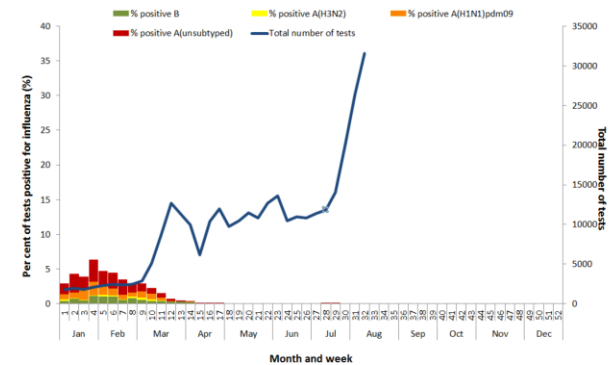
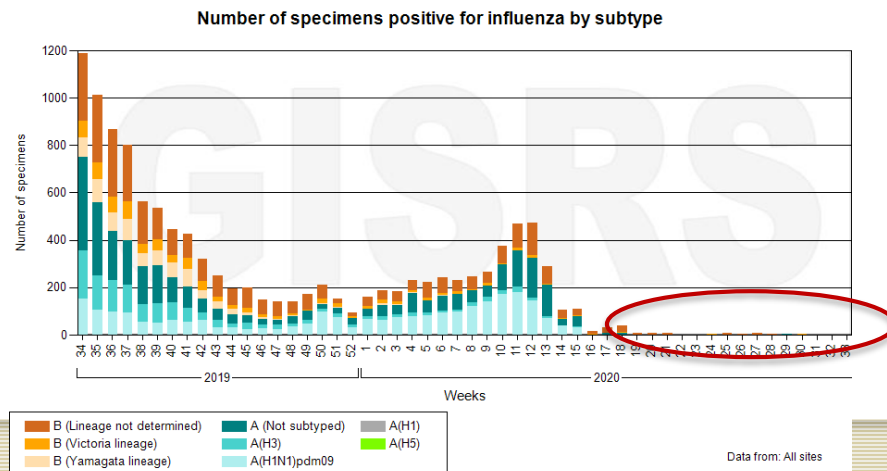


Figure 6. Proportion of sentinel laboratory tests positive for influenza and total number of specimens tested, 1 January to 9 August 2020, by subtype and month and week*



Source: Sentinel laboratories

Southern hemisphere, 2020



Data from: All sites

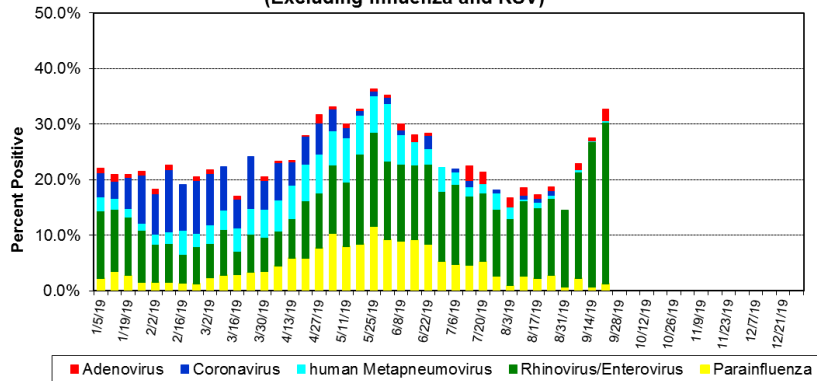
Source: Australian Influenza Surveillance Report No. 9 (2020)



Current Seasonal Respiratory Virus Activity, Wisconsin

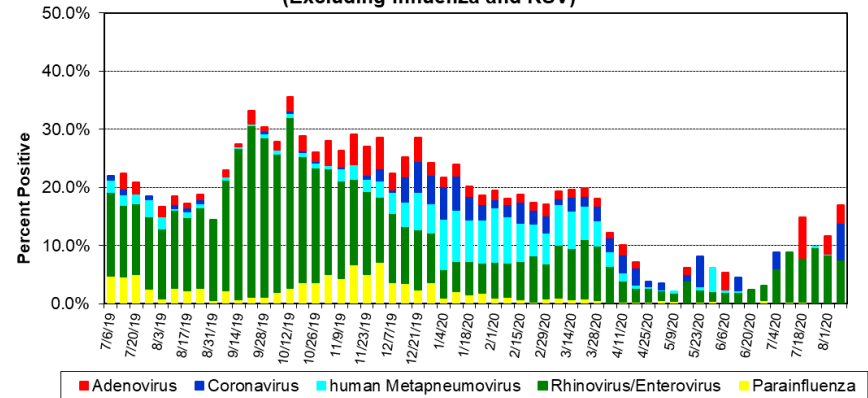
2019

Positivity of Respiratory Specimens by PCR at Wisconsin Laboratories (Excluding Influenza and RSV)



2020

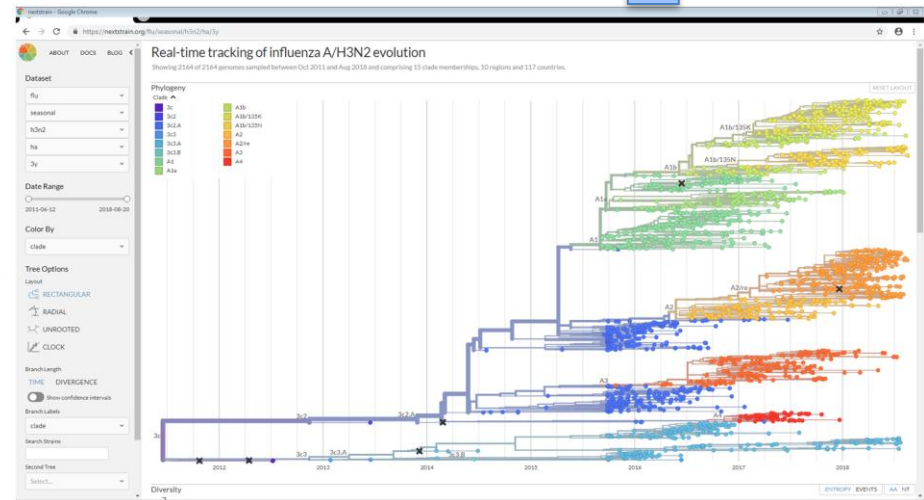
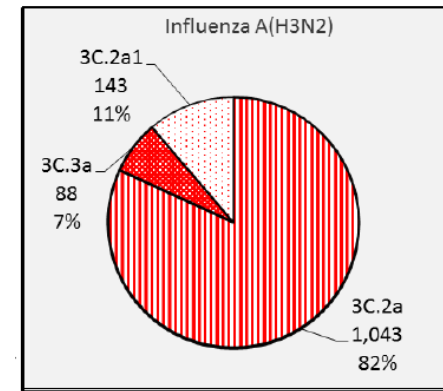
Positivity of Respiratory Specimens by PCR at Wisconsin Laboratories (Excluding Influenza and RSV)





Why is influenza surveillance important?

- Provide specimen/isolates to characterize and inform vaccine strain selection
- Situational awareness
- Antiviral resistance testing
- Detect novel viruses with pandemic potential





Respiratory Pathogen Surveillance

2020-2021 Season



All Clinical Laboratories Performing Influenza Testing

**Please send early season
positive influenza specimens to
WSLH.**

- Early season positives are critical:
 1. Inform vaccine strain selection.
 2. Provide samples to make CVV.



Influenza Surveillance in Wisconsin



Multi-element approach

1. Rapid Influenza Diagnostic Testing (RIDT) Sites
 - Now ~50% of influenza testing in WI
 - Confirmatory testing during periods of low prevalence may be warranted.
 - Please notify WSLH of suspected performance issues (e.g. False positives/negatives)

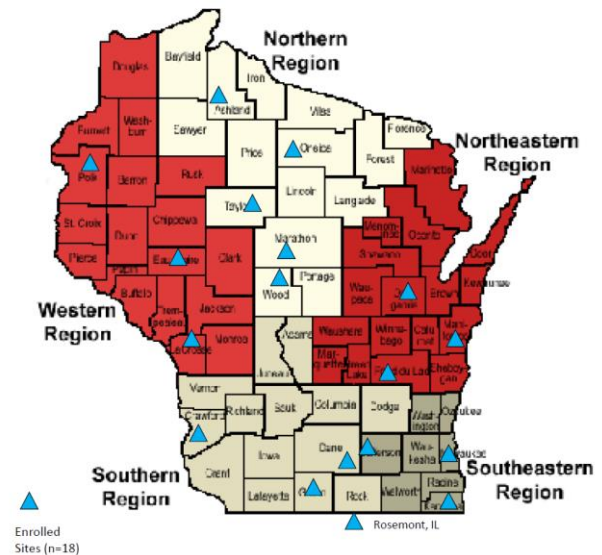
Influenza Surveillance in Wisconsin



Multi-element approach

2. Enrolled Surveillance Sites

- 17 labs in 5 public health regions.
- Provide randomized specimens weekly.
- Provided a “blue” specimen submission form.



Request to continue to submit the first 2 or 3 specimens per week from symptomatic patients with influenza test requests to WSLH.

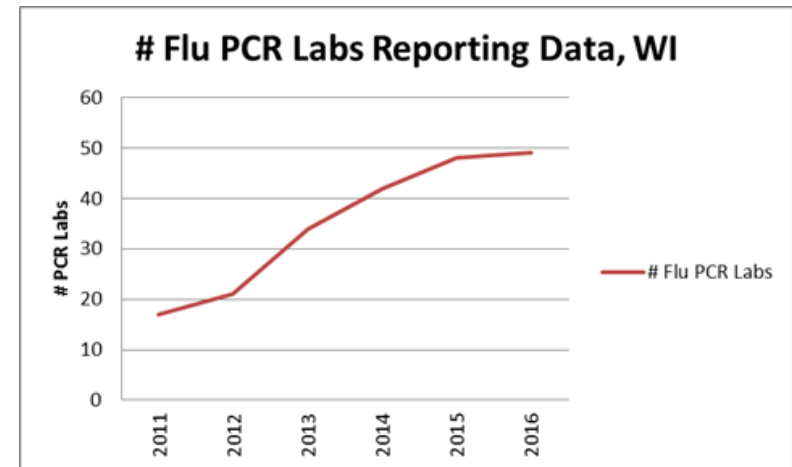
Influenza Surveillance in Wisconsin



Multi-element approach

3. PCR Labs

- “Gold Standard” testing.
- Provide weekly testing data summary reports.
- **Provide early season influenza positive specimens**



Request to report both the number positive and the number tested weekly.

**Send Flu A unsubtypable specimens when subtyping for both 2009 H1N1 and seasonal H3 were attempted (Ct<35).



Influenza Surveillance in Wisconsin

Multi-element approach

4. University Health Clinics

- Monitor severe adenovirus infections.
- Monitor influenza, SCV2 and other respiratory pathogens impacting student health.

Request to up to 3 specimens per week for respiratory pathogen testing and characterization.

Laboratory-based Surveillance



All Clinical Laboratories performing influenza diagnostic testing send positives

After activity increases:

- Send those with international travel histories
- Up to one influenza-related hospitalization per week
- Unusual presentations/results
- Contact with swine/ sick or dead poultry
- Pediatric deaths

Summary of Surveillance Activities



PCR Labs & RIDT Sites

- Early season positive influenza specimens
- Continue to report testing data weekly

Enrolled Regional Surveillance & Student Health Sites

- Send the first 2 to 3 specimens/week

University Health Clinics

- Send up to 3 specimens per week

All labs: Please continue to send all positive influenza specimens.



WSLH has Influenza Surveillance Supplies!!

- Specimen collection supplies
 - VTM and swabs
- Shipping supplies
 - Insulated shippers
 - Cold packs
- Specimen submission forms

Contact our Clinical Orders Department at
800-862-1088

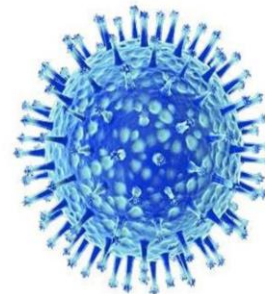


Laboratory-based Surveillance Plan

- Detailed instructions
- Description of surveillance requests other than influenza
- Web-based reporting instructions
- SARS-CoV-2 testing criteria



Laboratory-Based Surveillance
Plan 2019-2020



Information, Forms and
Instructions



Your participation in the Wisconsin surveillance system is **vital** to monitor for emerging novel strains with pandemic potential and other pathogens that impact community health.



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