National Center for Immunization & Respiratory Diseases

Influenza Activity Update: 2023-2024 Influenza Season

National Adult and Influenza Immunization Summit
May 16, 2024

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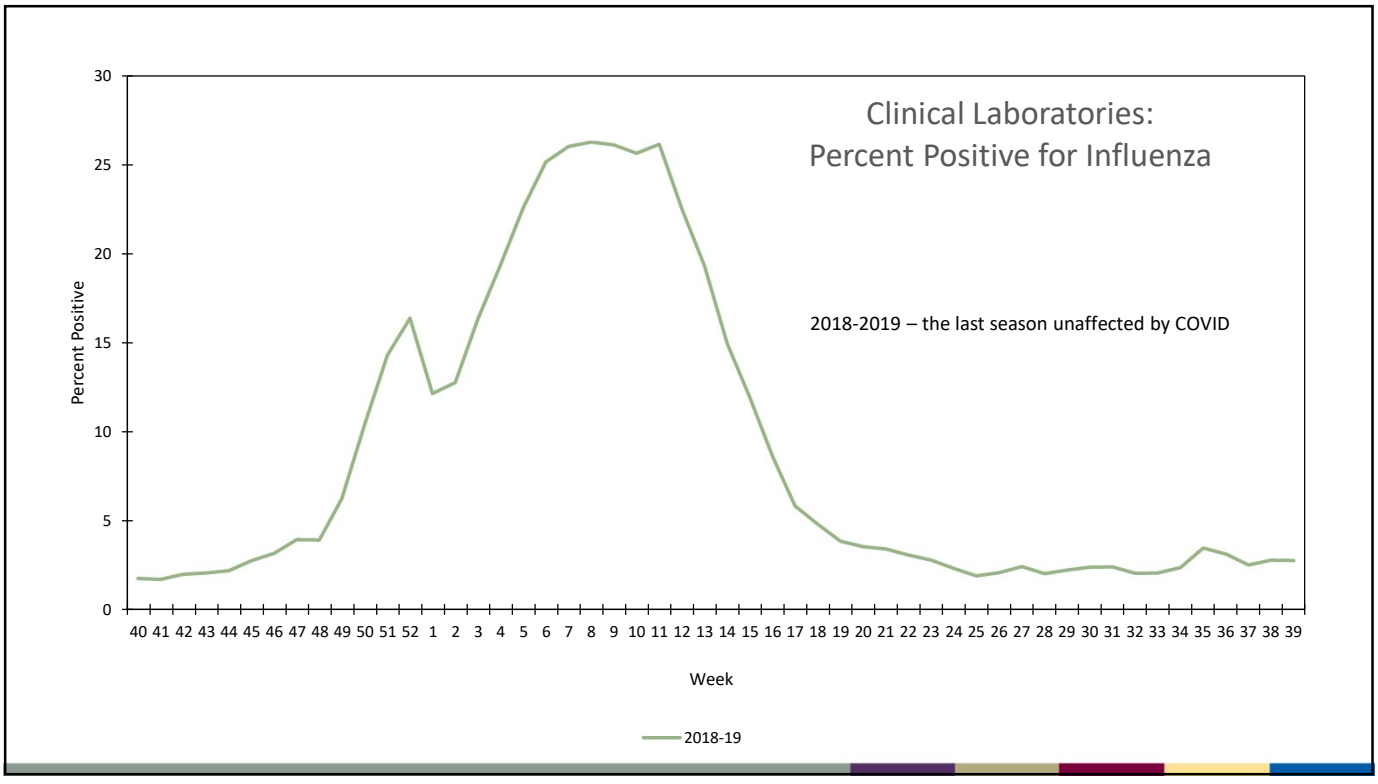
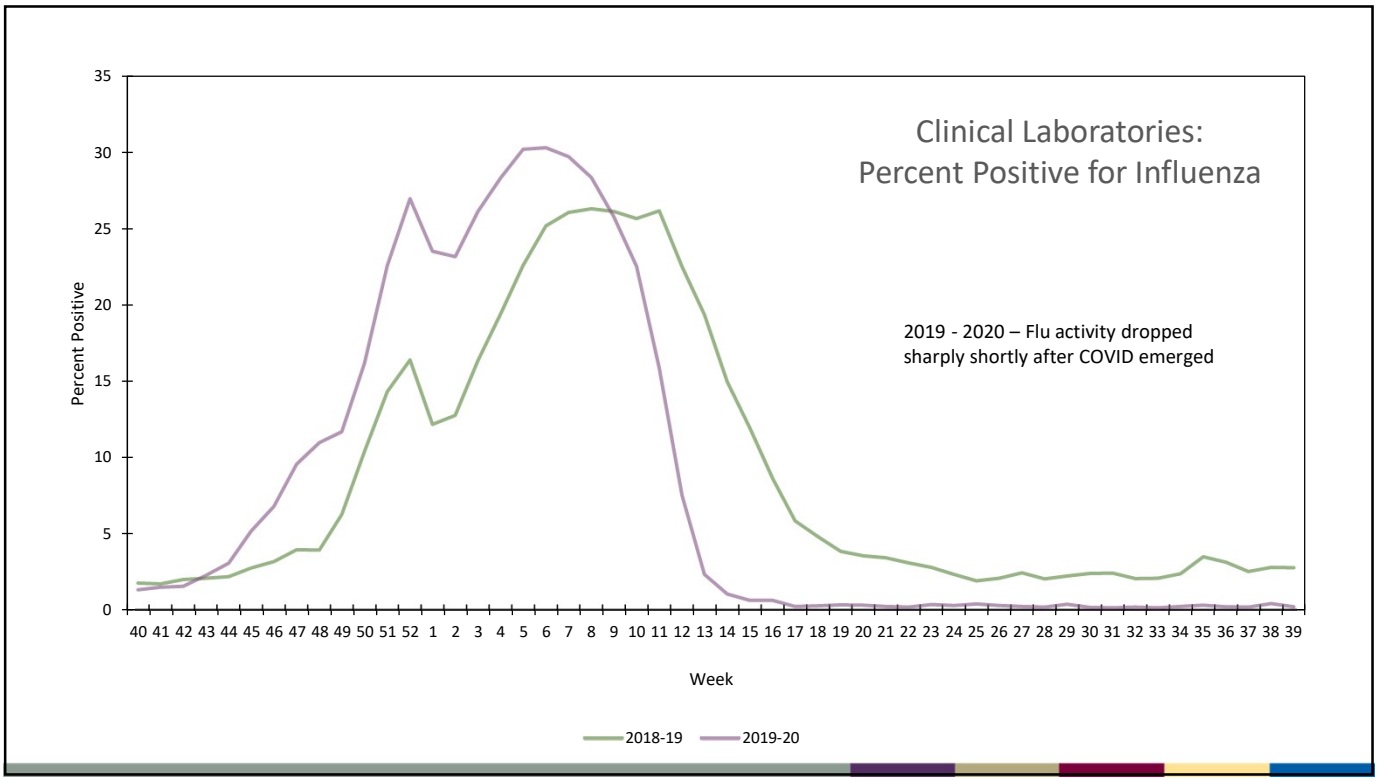
Influenza Division, NCIRD, CDC

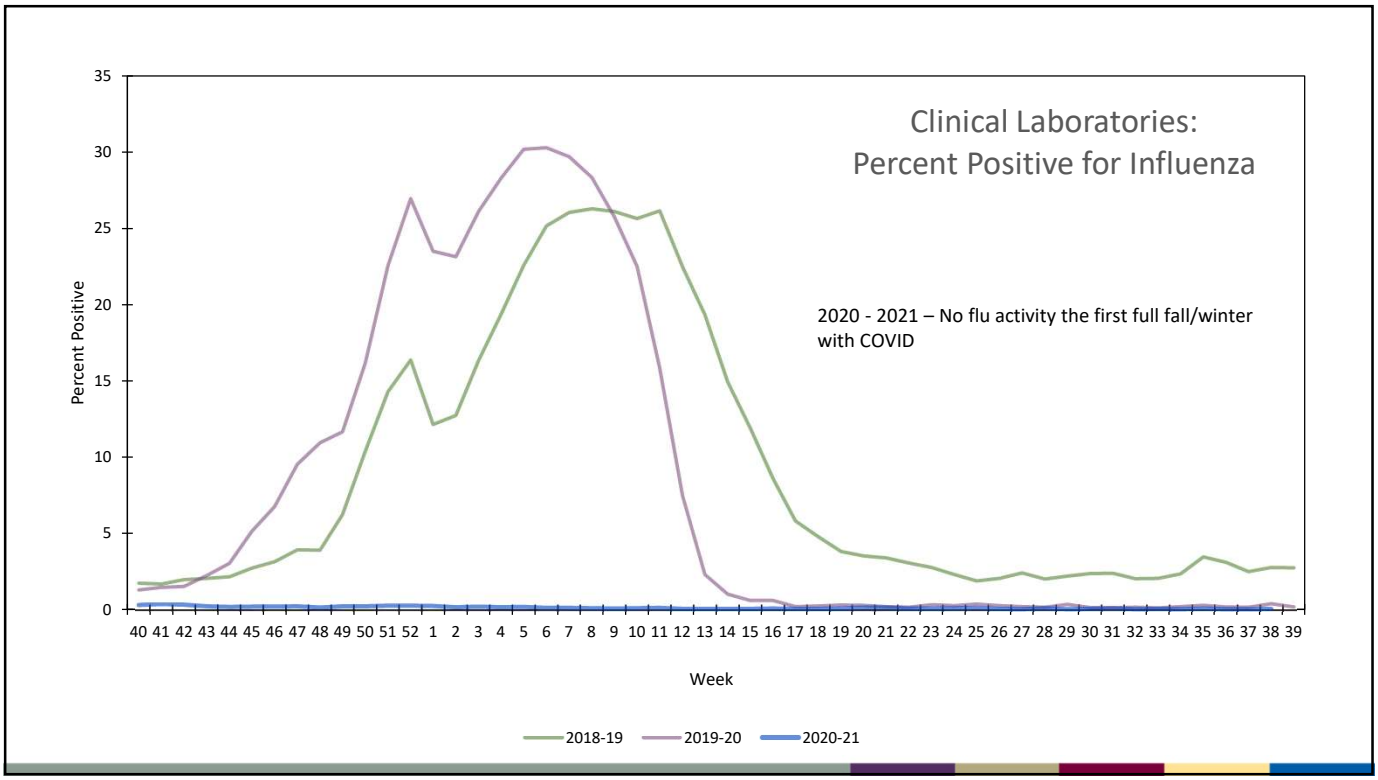
Outline

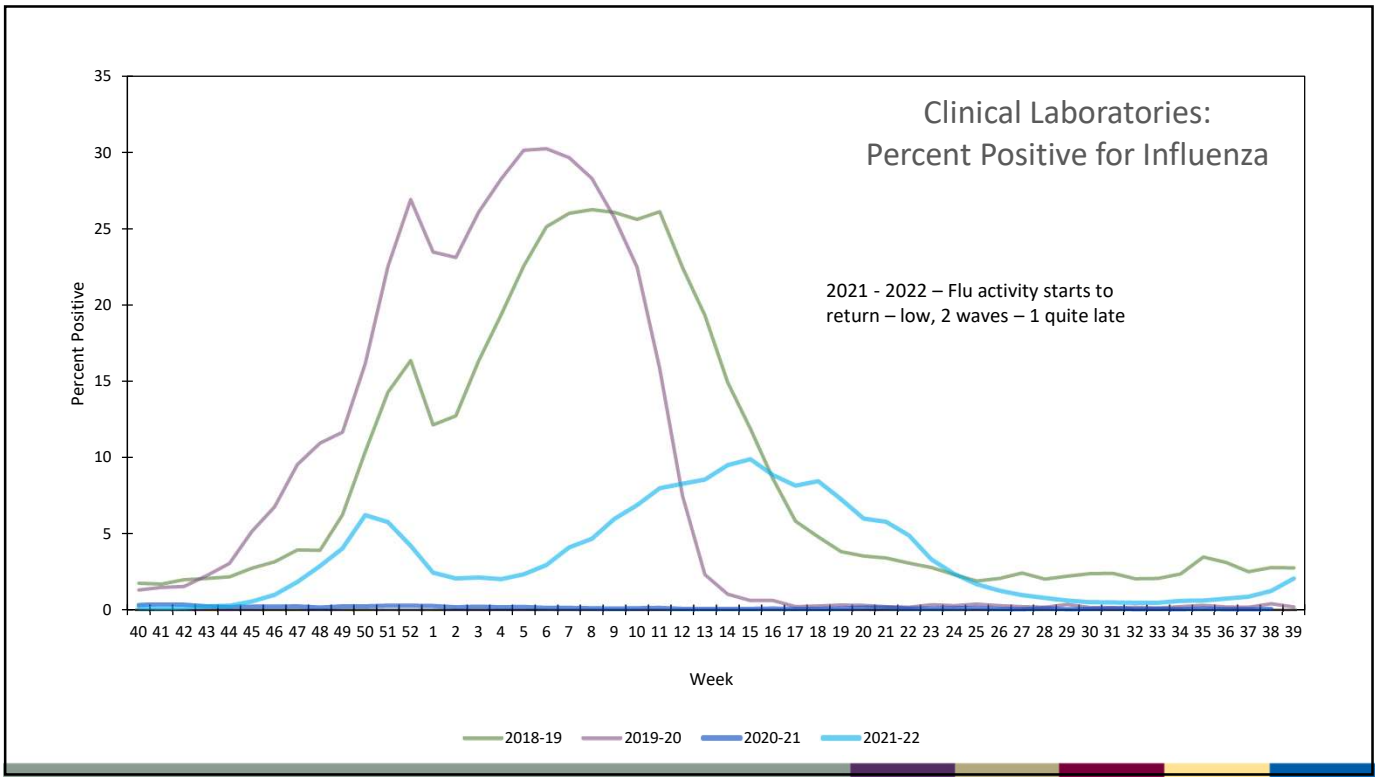
- Flu activity in the COVID era
- 2023-2024 season update
- Highly pathogenic avian influenza (HPAI) A/H5

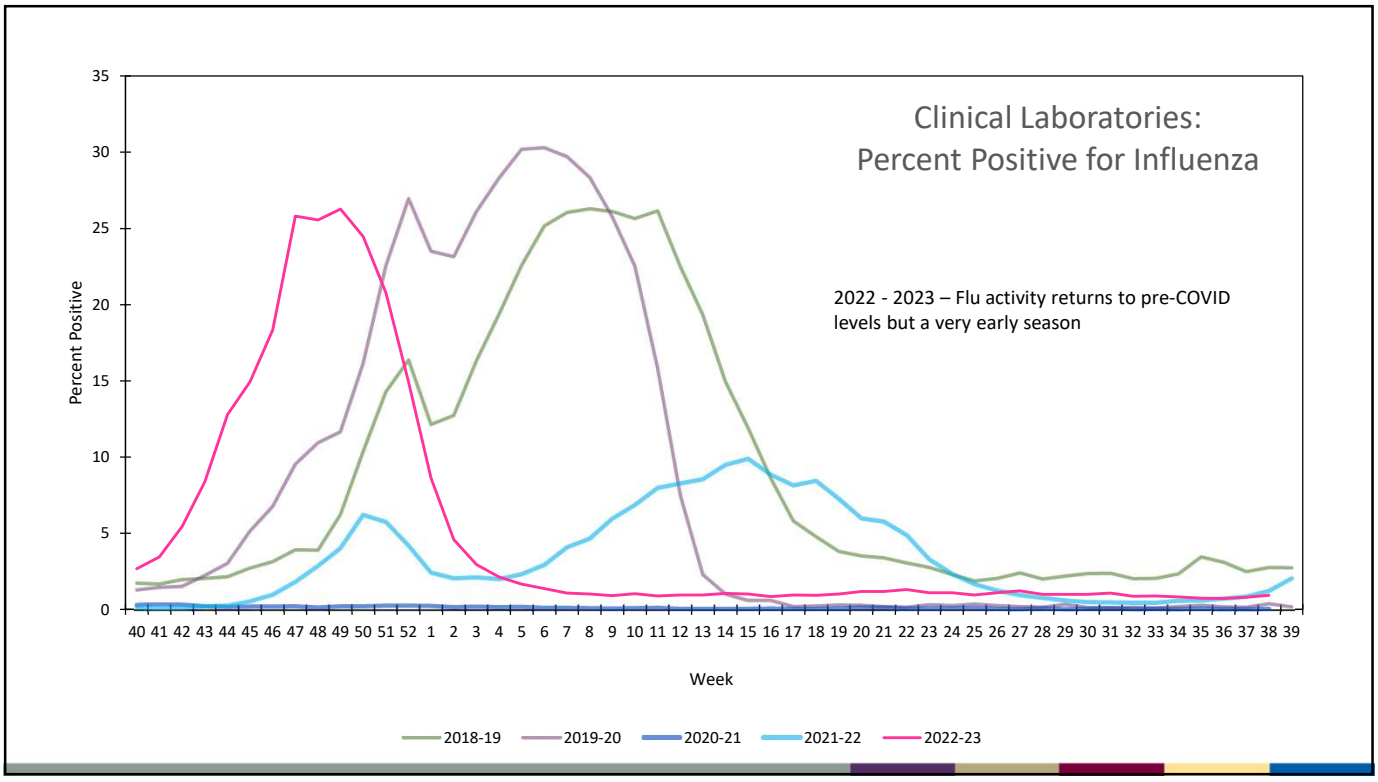
Influenza in the COVID Era

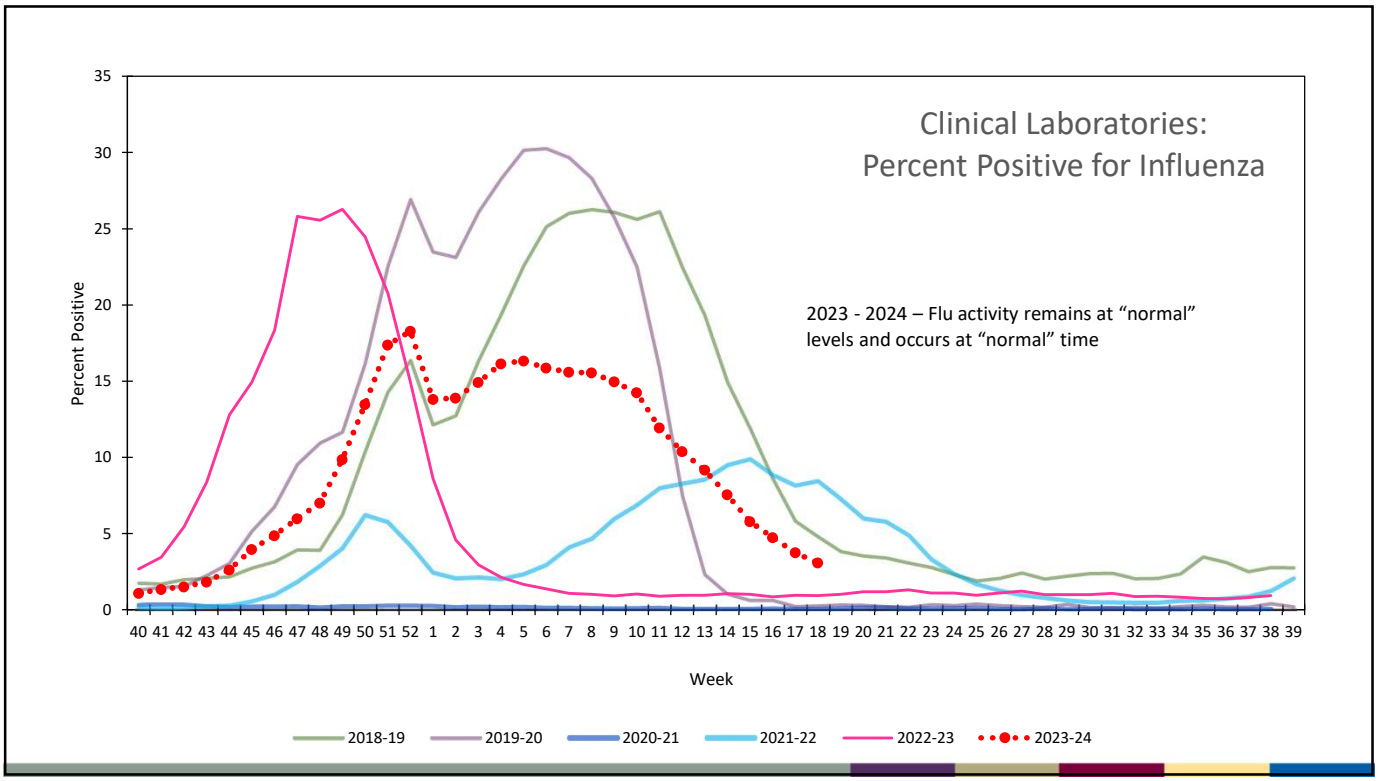



Clinical Laboratories:
Percent Positive for Influenza
2019 - 2020 – Flu activity dropped sharply shortly after COVID emerged
Percent Positive
Week
2018-19
2019-20


Clinical Laboratories:
Percent Positive for Influenza
2020 - 2021 – No flu activity the first full fall/winter with COVID
Percent Positive
Week
2018-19
2019-20
2020-21

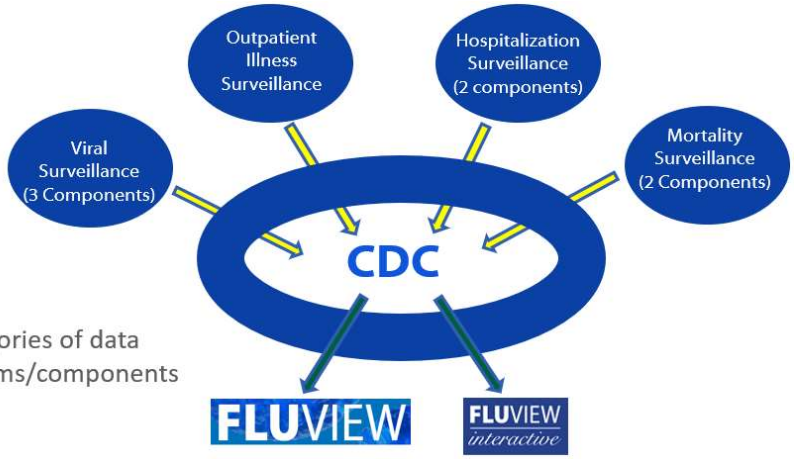

Clinical Laboratories:
Percent Positive for Influenza
2021 - 2022 – Flu activity starts to return – low, 2 waves – 1 quite late
Percent Positive
Week
2018-19
2019-20
2020-21
2021-22


Clinical Laboratories:
Percent Positive for Influenza
2022 - 2023 – Flu activity returns to pre-COVID levels but a very early season
Percent Positive
Week
2018-19
2019-20
2020-21
2021-22
2022-23



2023 – 2024 Influenza Activity

National Influenza Surveillance: 2023-2024 Season

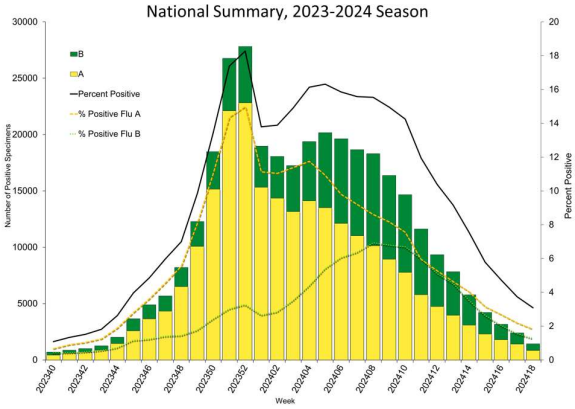


- 4 categories of data
- 8 systems/components

Data are summarized each week and available on FluView and FluView interactive
https://www.cdc.gov/flu/weekly/fluactivitysurv.htm

Clinical and Public Health Laboratories

Influenza Positive Tests Reported to CDC by U.S. Clinical Laboratories, National Summary, 2023-2024 Season



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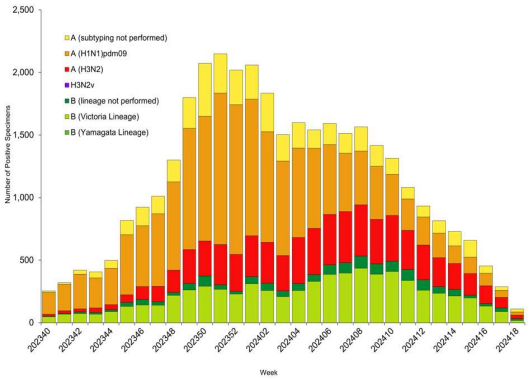
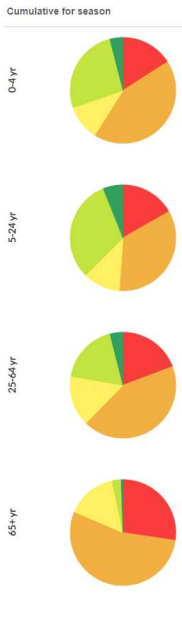


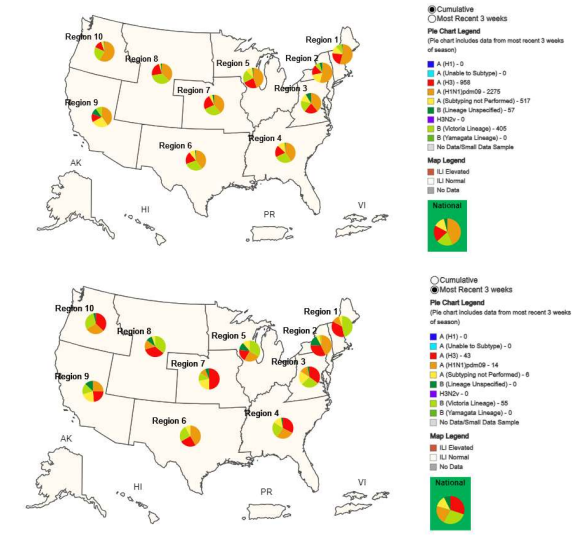


Peak % Positive
- Overall and Influenza A – week 52 (late Dec.)
- Influenza B – week 8 (mid-Feb.)

Data through May 4, 2024; reported to CDC as of May 8.

Regional Variations

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories,



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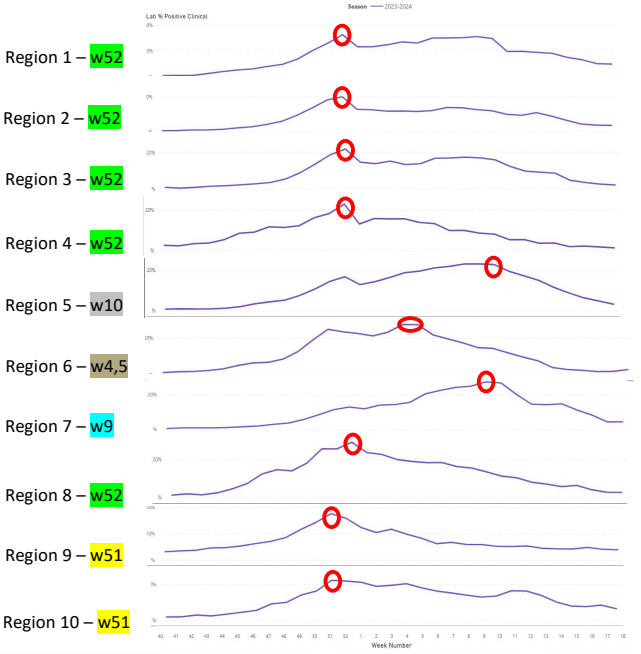

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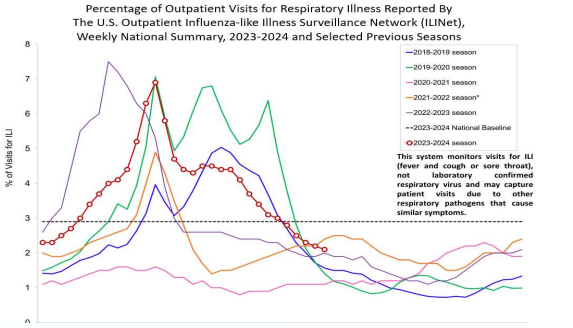
Characteristics of Viruses Collected in the U.S. since October 1, 2023

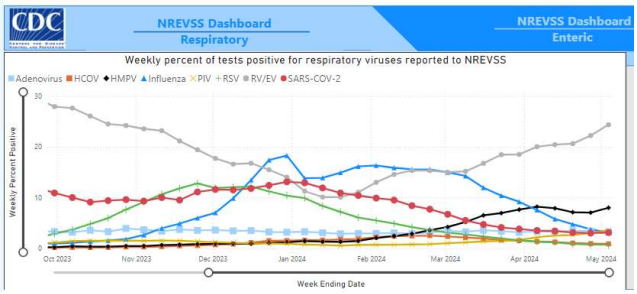
Virus	Genetic Characterization		Antigenic Characterization	
	Number Tested	Clade/Subclade	Number Tested	Similarity to cell-grown vaccine reference virus
A/H1	1,638	23% - 6B.1A.5a.2a	364	100% similar
		77% - 6B.1A.5a.2a.1		
A/H3	1,429	0.1% - 3C.2a1b.2a.2a.1b	349	98% similar
		0.1% - 3C.2a1b.2a.2a.3a		
		99.8% - 3C.2a1b.2a.2a.3a.1		
		0.1% - 3C.2a1b.2a.2b		
B/Victoria	1,190	100% - V1A.3a.2	264	100% similar

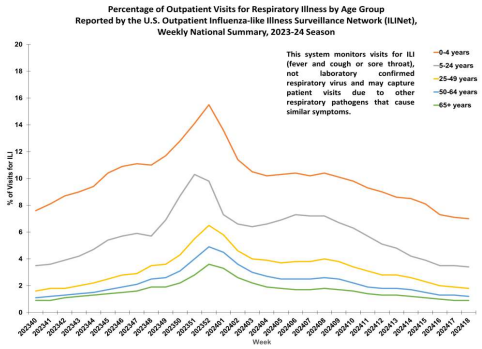
Antiviral Susceptibility		
Medication	Number Tested	Number with Reduced Inhibition/Susceptibility
Oseltamivir, Peramivir, Zanamivir	4,261	2 H1s - reduced inhibition, oseltamivir and peramivir
		1 H1 - reduced inhibition, oseltamivir
Baloxavir	4,139	1 H3 - reduced susceptibility

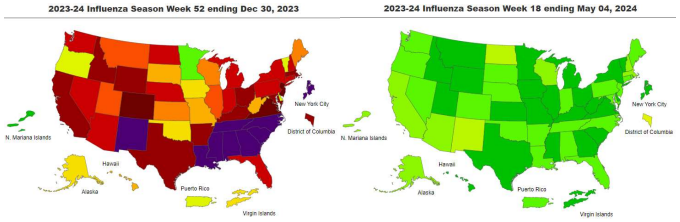
Data through May 4, 2024

Outpatient/ED Respiratory Illness









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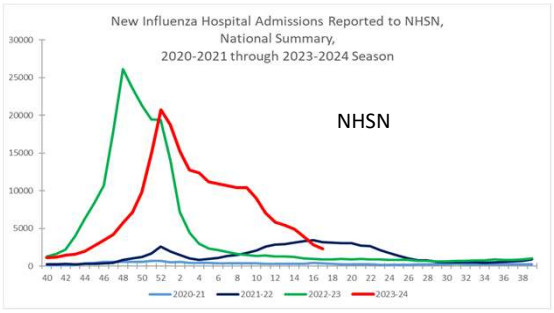
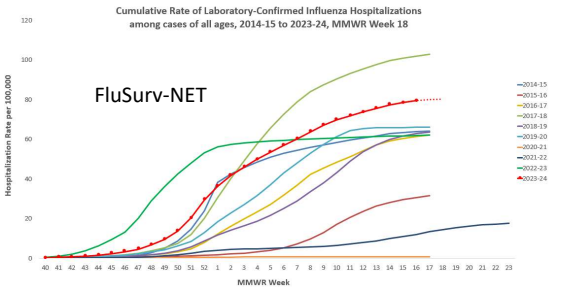
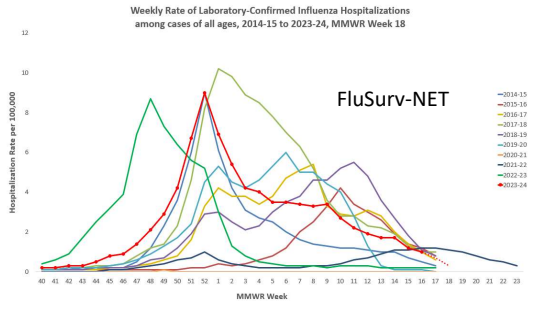
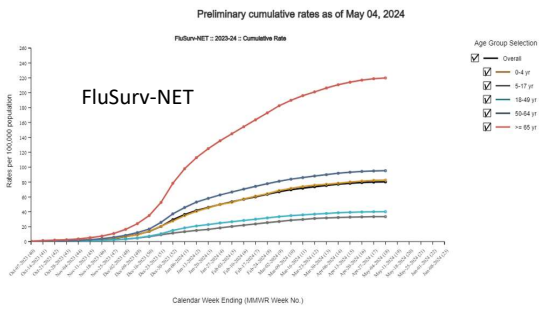
Influenza Associated Hospitalizations









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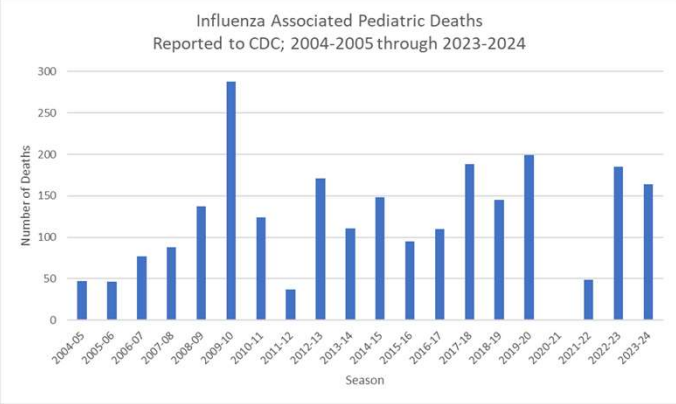
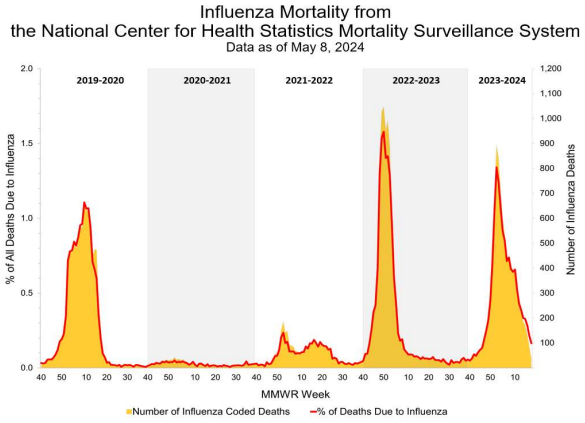
Mortality Surveillance





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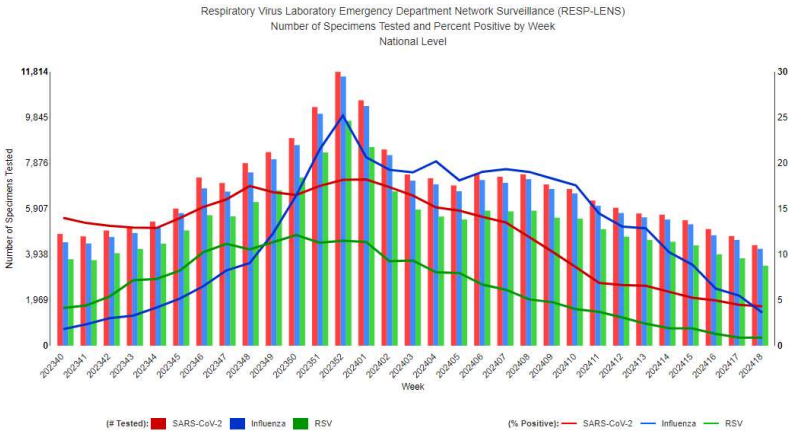
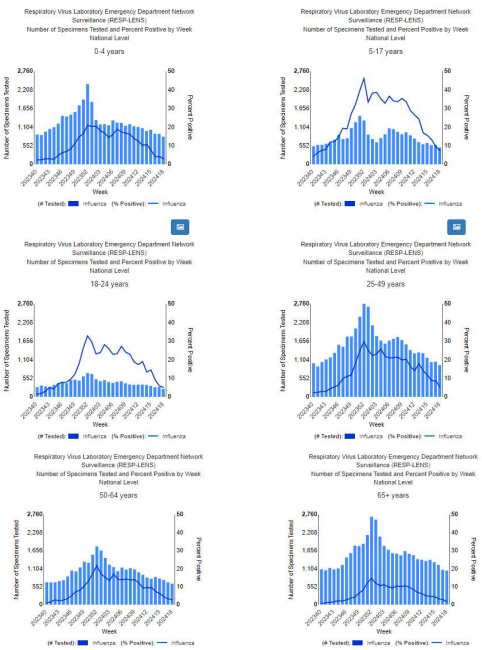
RESP-LENS

Respiratory Virus Laboratory Emergency Department Network Surveillance





https://www.cdc.gov/surveillance/resp-lens/dashboard.html

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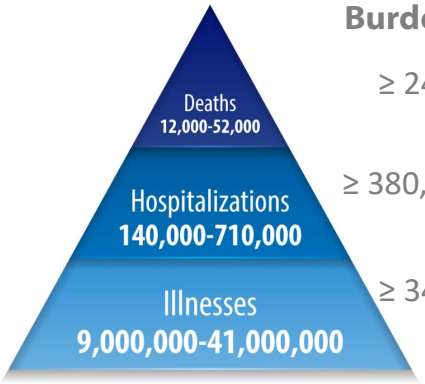
2023-2024 Burden and Severity



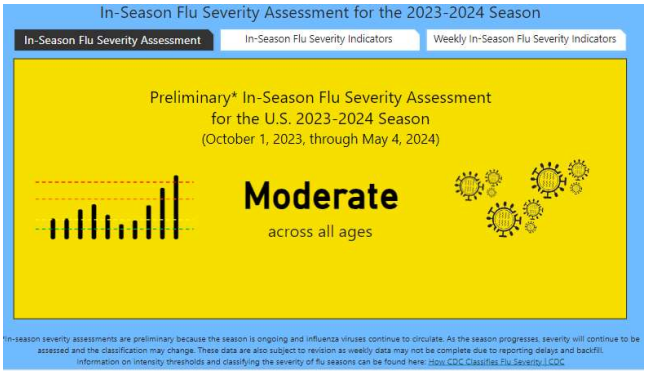
Estimated Range from 2010 – 2023*

2023 – 2024 Burden Estimates

≥ 24,000 deaths

≥ 380,000 hospitalizations

≥ 34 million illnesses



https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm
https://www.cdc.gov/flu/about/classifies-flu-severity-inseason.htm

Data as of May 4, 2024.

https://www.cdc.gov/flu/about/classifies-flu-severity-inseason.htm

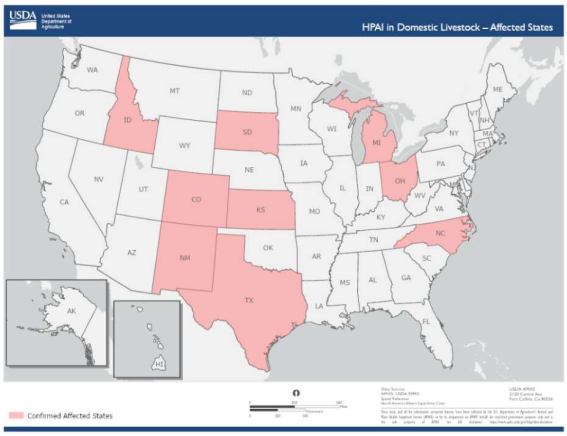
Highly Pathogenic Avian Influenza (HPAI) A/H5

A/H5N1 in U.S. Cattle - 2024


- Dairy cow illness onsets began in early 2024
  - Significant decreases in milk production and quality
  - USDA notified in early March
- March 25: USDA reported HPAI confirmed in cows and milk samples from TX and KS
- USDA has confirmed HPAI in dairy herds on 46 farms across 9 states
  - CO (2), ID (4), KS (4), MI (12), NM (8), NC (1), OH (1), SD (1), TX (13)

Confirmed Cases of HPAI in Domestic Livestock

*Data updated weekdays by 4 pm ET.



USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

CDC Influenza

Highly Pathogenic Avian Influenza (HPAI) Detections in Livestock | Animal and Plant Health Inspection Service (usda.gov)

One A/H5N1 Human Case in U.S. in 2024

U(0

- April 1: State of Texas announced that a person has tested positive for HPAI A(H5N1) virus
  - Direct exposure to cattle presumed to be infected with HPAI
  - Reported eye redness as their only symptom, consistent with conjunctivitis; not hospitalized, recovered
- Respiratory and conjunctival specimens confirmed positive at CDC
  - Clade 2.3.4.4b
  - Circulating globally in wild birds and in the U.S. since late 2021
  - Nearly identical to infected dairy cattle and birds in Texas
- No illness reported in household contacts
- No additional cases of human infection associated with this case
- No human-to-human transmission of HPAI A (H5N1) virus have been identified

CDC Influenza

Health Alert: First Case of Novel Influenza A (H5N1) in Texas, March 2024 | Texas DSHS

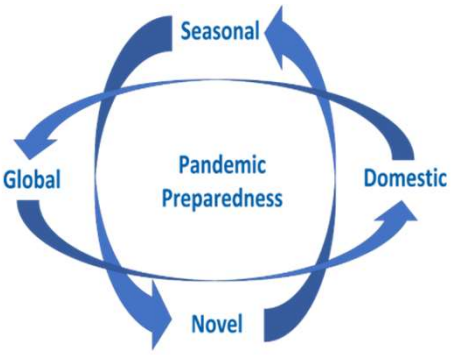
Slide 22

U(0 The CO case in April 2022 only reported "fatigue; very low level of H5 viral RNA was detected in one upper respiratory specimen - likely represents detection of transient environmental contamination and not true H5n1 virus infection

Uyeki, Timothy M. (CDC/NCIRD/ID, 2024-04-08T15:41:43.144

A/H5N1 Response Summary

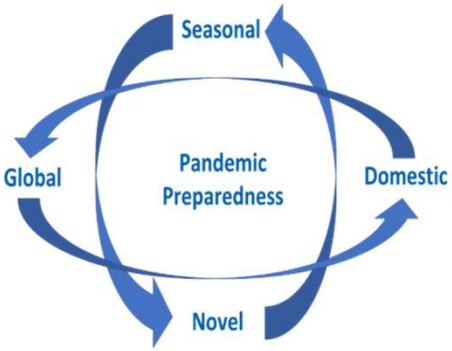
- Overall risk to the general public remains low
  - Greater risk for people with close, prolonged, or unprotected exposures to infected animals, or to environments contaminated by infected animals
- Continued readiness posture
  - Concerning genetic changes in the virus
  - Impact to current diagnostics, treatments, CVVs
- Continued Reassessment of Risk
  - Overall public health risk
  - Potential pandemic risk (IRAT)
- Ongoing One Health collaborations with USDA APHIS, FDA, ASPR, NIAID and USG interagency remains critical



CDC Influenza

What does this mean for influenza surveillance this summer?

- Monitoring those exposed for illness
- Reminding providers to think of flu and ask about animal exposures
- Agricultural fair outreach – swine and cattle
- Maintaining/enhancing virologic surveillance
  - Getting in more specimens
  - Subtyping influenza A positives



CDC Influenza

Thank you!

Any questions?

Alicia Budd
ABudd@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.