



National Center for Immunization & Respiratory Diseases



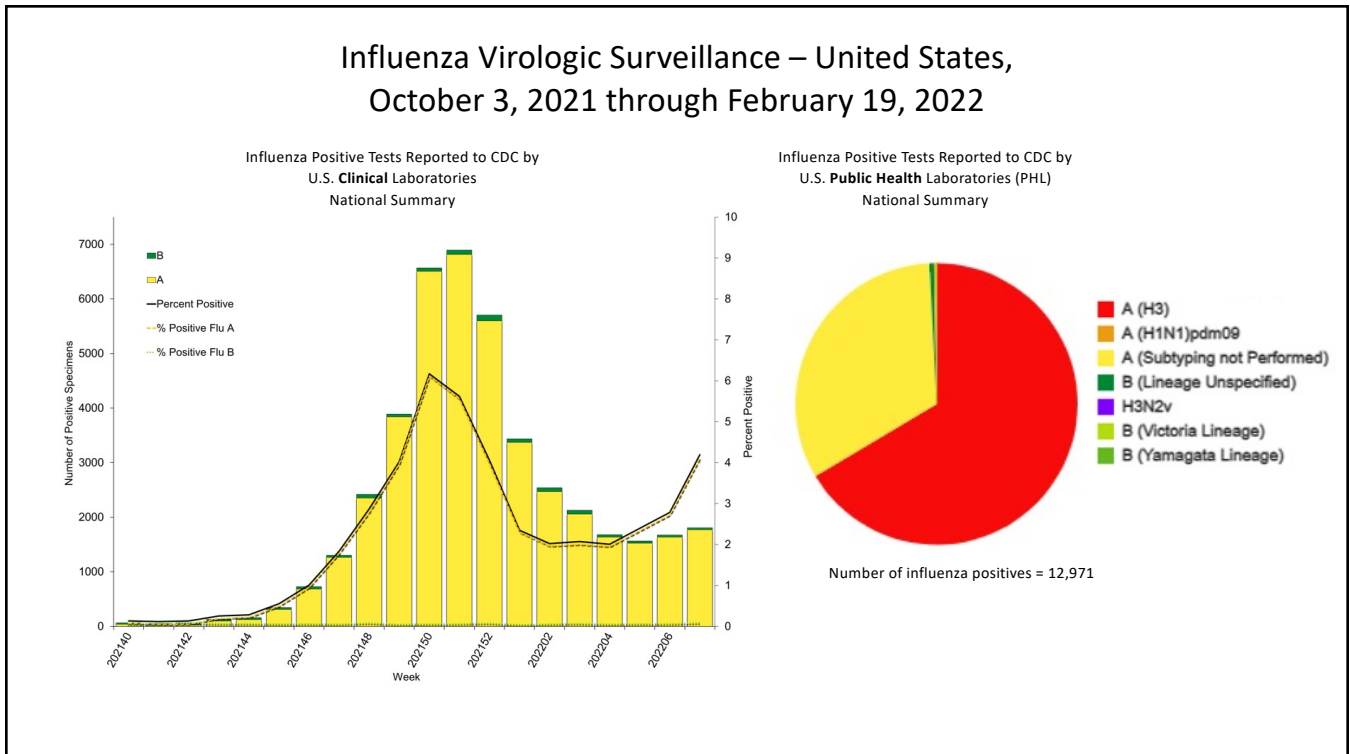
Influenza Activity in the United States 2021 – 2022 Season

Data through the week ending February 19, 2022 (week 7)



<https://www.cdc.gov/flu/weekly/index.htm>

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Influenza Virologic Surveillance – United States, October 3, 2021, through February 19, 2022

Virus Subtype or Lineage	Genetic Characterization				
	Total No. of Subtype/Lineage Tested	HA Clade	Number (% of subtype/lineage tested)	HA Subclade	Number (% of subtype/lineage tested)
A/H1	3				
		6B.1A	3 (100%)	5a.1	2 (66.7%)
				5a.2	1 (33.3%)
A/H3	618				
		3C.2a1b	618 (100%)	1a	1 (0.1%)
				1b	1 (0.1%)
				2a	0
				2a.1	0
				2a.2	616 (99.8%)
		3C.3a	0	3a	0
B/Victoria	20				
		V1A	20 (100%)	V1A	0
				V1A.1	0
				V1A.3	9 (45.0%)
				V1A.3a	0
				V1A.3a.1	0
				V1A.3a.2	11 (55.0%)
B/Yamagata	0				
		Y3	0		

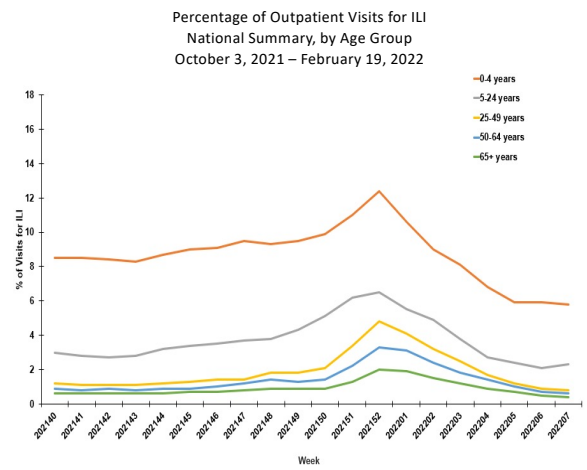
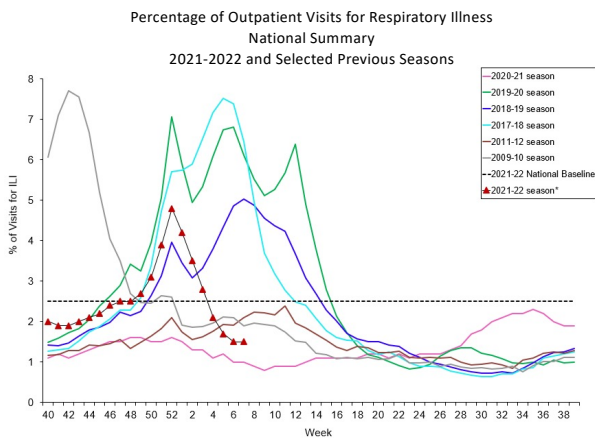
Antigenic Characterization		
Virus	Number Tested	Number (%) antigenically similar to vaccine reference virus
A/H3N2	58	2 (3%) similar to cell-grown reference virus
		18 (31%) similar to egg-grown reference virus
A/H1N1	2	1 (50%) similar to cell-grown reference virus
		1 (50%) similar to egg-grown reference virus
B/Victoria	13	11 (85%) similar to cell-grown reference virus
		11 (85%) similar to egg-grown reference virus
B/Yamagata	0	

No antiviral resistance virus detected.

- Oseltamivir, Peramivir, Zanamivir: 658 tested
- Baloxavir: 650 tested

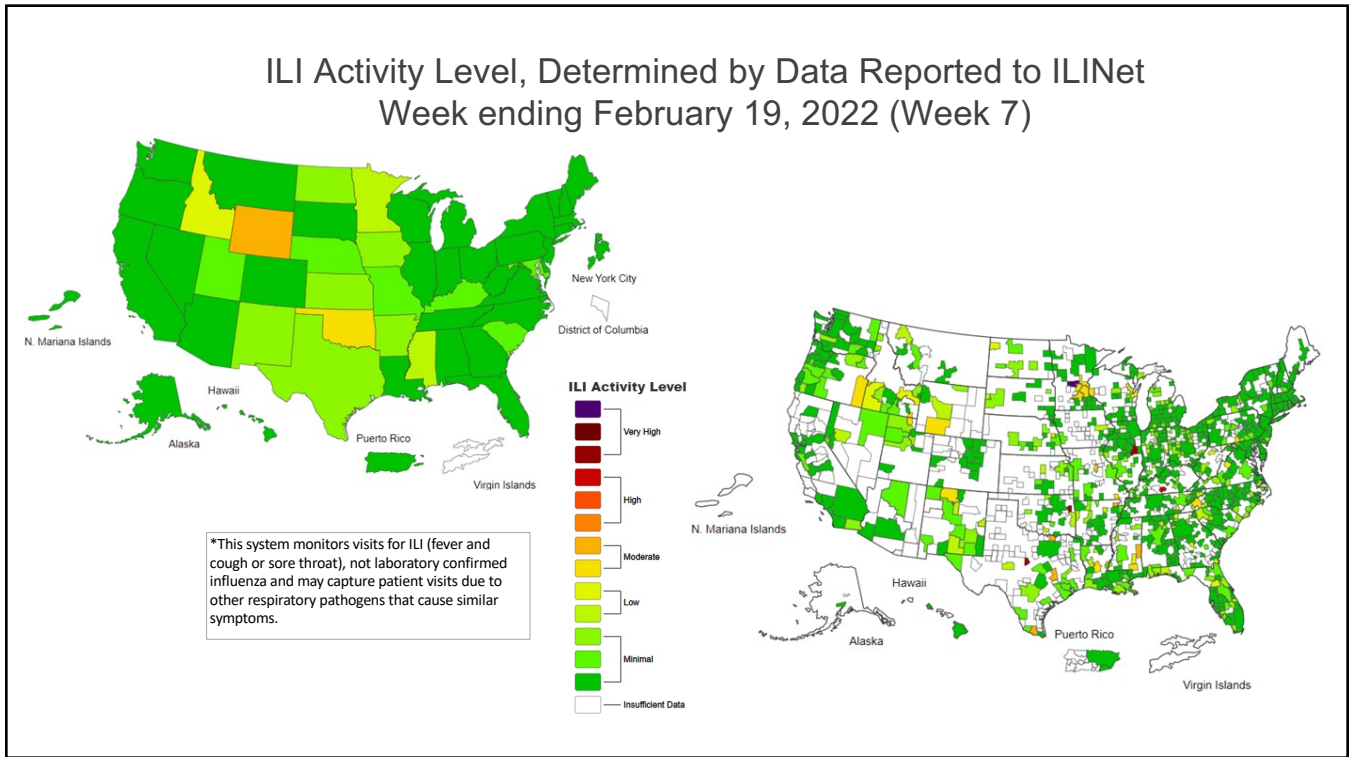
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Outpatient Visits for Respiratory Illness, Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)

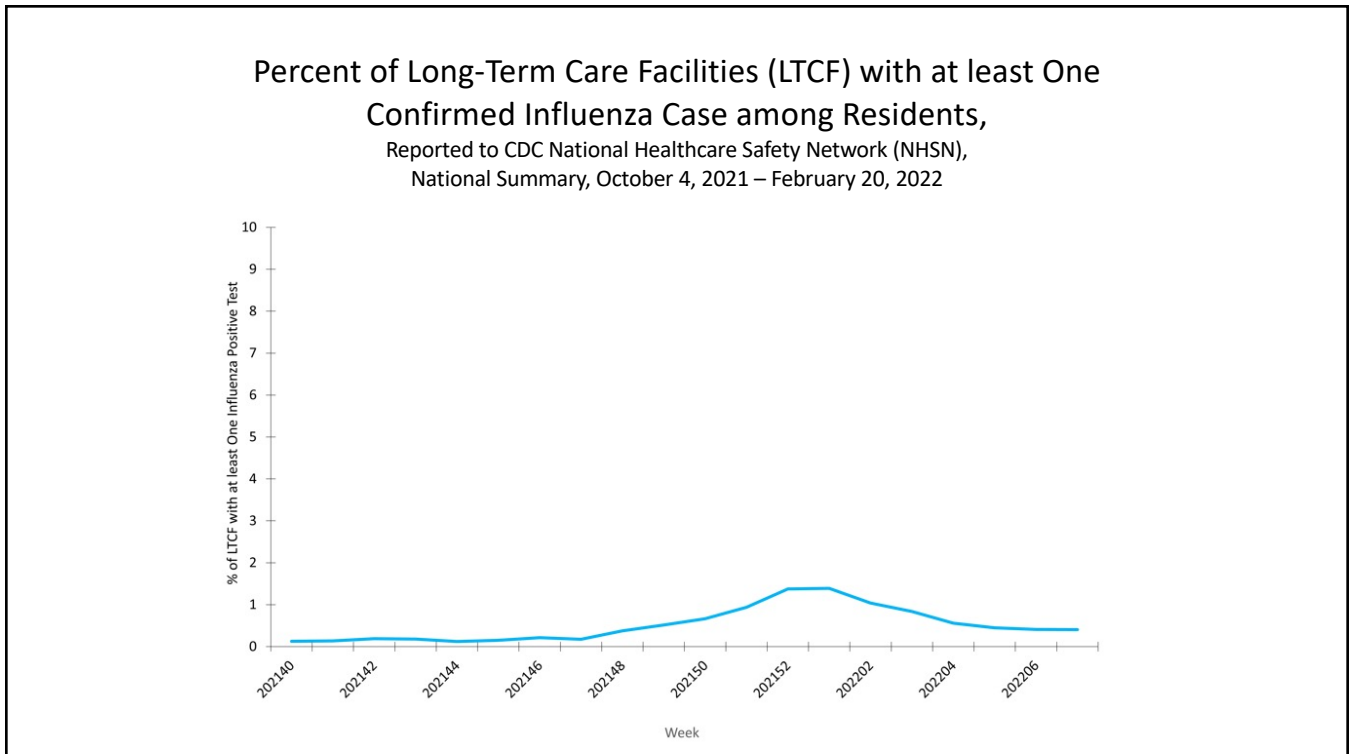


*This system monitors visits for respiratory illness that includes fever plus cough or sore throat (referred to as ILI,) not laboratory confirmed influenza, and may capture patient visits due to other respiratory pathogens that cause similar symptoms.

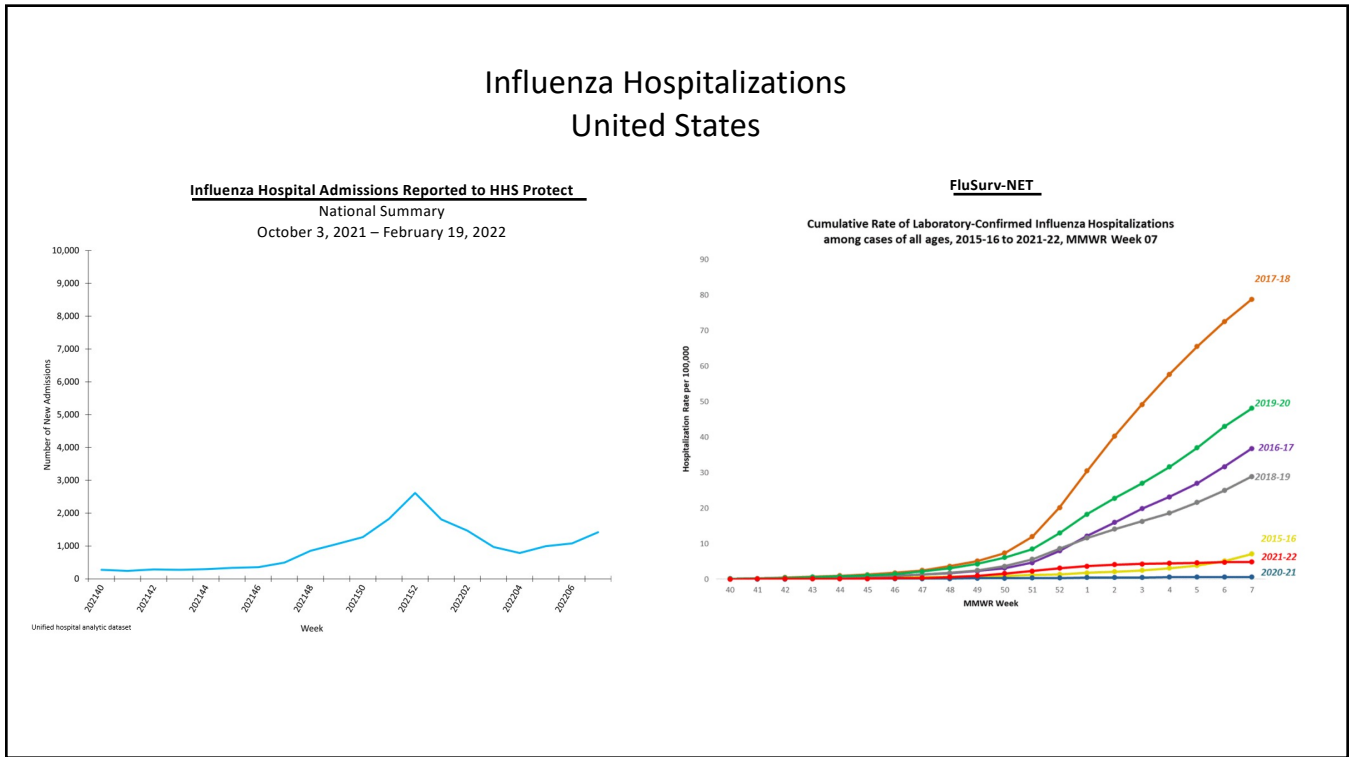
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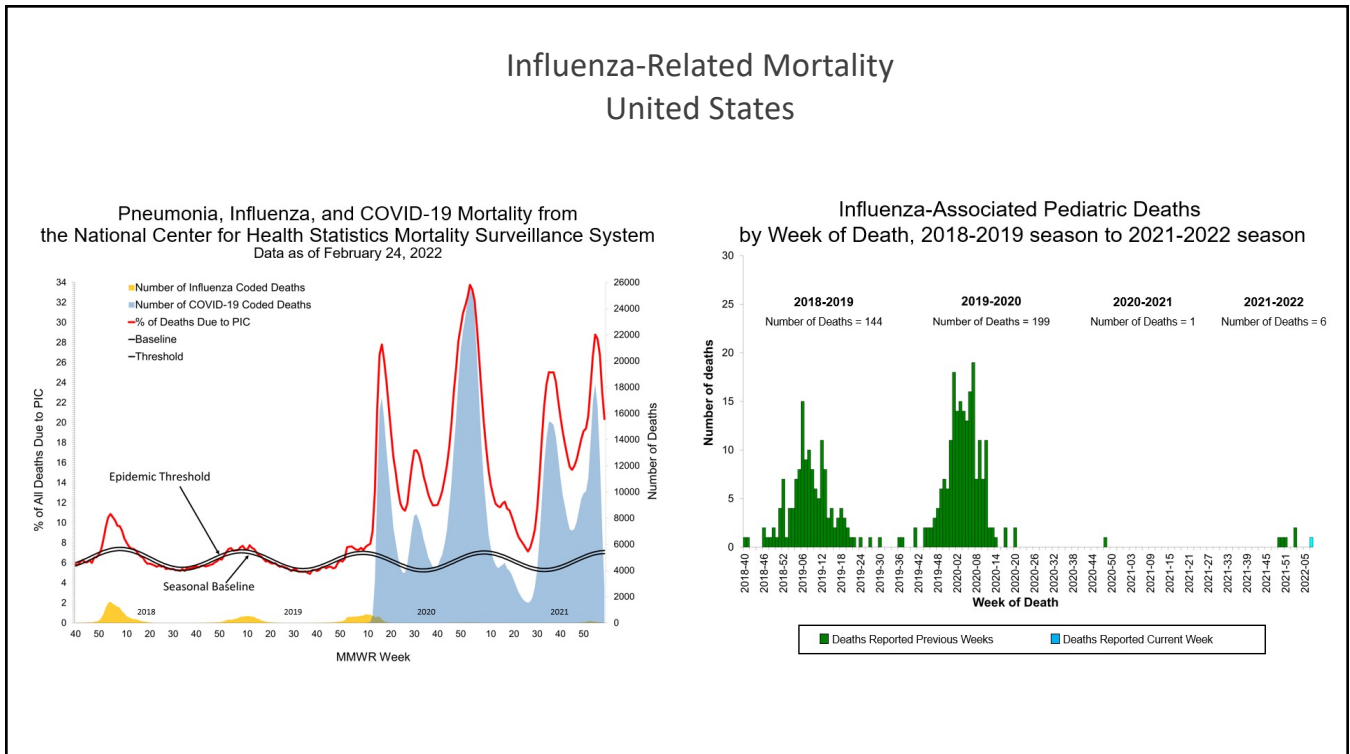
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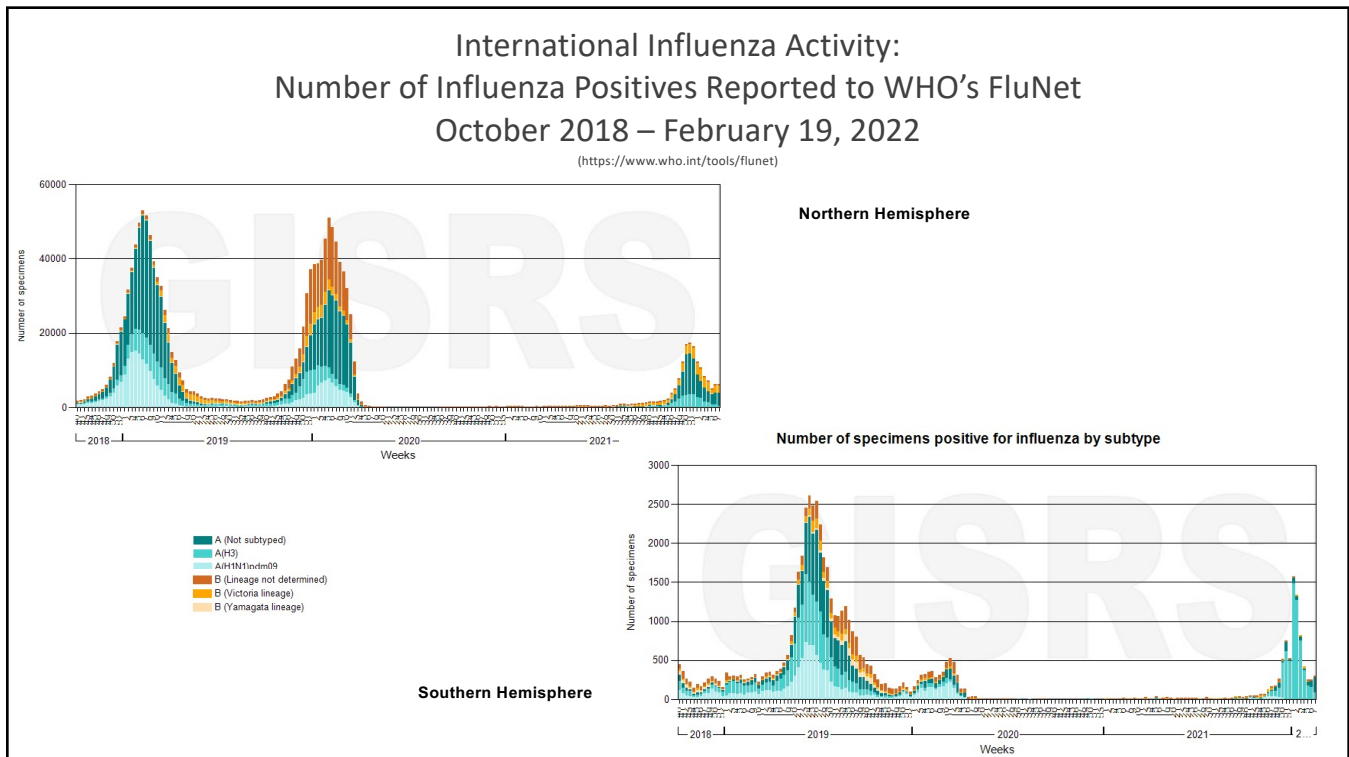
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WHO Influenza Vaccine Strain Recommendations for 2022-2023

- **A/H1N1 – no change**
 - Egg-based vaccines: A/Victoria/2570/2019 (H1N1)pdm09-like virus
 - Cell-based vaccines: A/Wisconsin/588/2019 (H1N1)pdm09-like virus
- **A/H3N2 – change for N. hemisphere vaccine, same as S. Hemisphere vaccine**
 - Egg-based vaccines: A/Darwin/9/2021 (H3N2)-like virus
 - Cell-based vaccines: A/Darwin/6/2021 (H3N2)-like virus
- **B/Victoria - change for N. hemisphere vaccine, same as S. Hemisphere vaccine**
 - Egg and cell-based vaccines: B/Austria/1359417/2021 (B/Victoria lineage)-like virus
- **B/Yamagata – no change**
 - Egg and cell-based vaccines: B/Phuket/3073/2013 (B/Yamagata lineage)-like virus
- FDA's VRBPAC meets today to make the strain recommendations for influenza vaccines licensed in the U.S.

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Highly Pathogenic Avian Influenza (HPAI) A(H5N1): Current Situation in the U.S.

- Multiple detections of HPAI H5N1 in birds in the U.S. in 2022
 - Mostly on the east coast
 - Wild birds - 13 states
 - Commercial poultry and backyard flocks - 9 states
- No human cases in the U.S.
 - Rare human infections with similar viruses have occurred in other parts of the world
 - No sustained human to human transmission
 - Require close, prolonged and unprotected exposure to infected birds or an environments that they have contaminated.
- Viruses are from clade 2.3.4.4b
 - Spreading widely among birds in other parts of the world
 - Wild birds carry the virus without getting sick
 - Domestic poultry get very sick/often die

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HPAI A(H5N1): Multi-agency and Multi-jurisdictional Response is Ongoing

- Following existing response plans
- USDA and Dept of Interior – leads for investigation/response in birds
- CDC - lead for human health
 - Working closely with USDA – information exchange/dissemination, updating guidance,
 - Working with state partners to monitor for infections in exposed people (farmers, cullers, those investigating the bird outbreaks)
 - Testing anyone with respiratory symptoms (no HPAI H5N1 infections identified)
 - Monitoring the virus for any concerning changes and their potential impact
 - Frequently sharing information with public health partners – CSTE, APHL
 - Sharing information for the general public
- Affected states - manage the response in their state
 - Department of Agriculture and Department of Health
 - Monitor exposed people and arrange for testing if needed
 - Informing clinicians, veterinarians, backyard flock owners etc.

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HPAI A(H5N1): Ready to Ramp up Response If Necessary

- Ongoing pandemic influenza planning and preparedness activities have prepared us to respond quickly if anything changes.
 - Existing diagnostic tests can detect these viruses
 - More than 100 PHLs in all 50 states have and are used to using the diagnostic tests
 - Mechanisms to report PHL test results to CDC electronically exists
 - Novel influenza A infection is a nationally notifiable condition
 - Case definitions, case report form and reporting mechanism already exist and are used routinely
 - An existing H5 candidate vaccine virus is well matched to this H5
 - Virus is susceptible to influenza antiviral agents
 - IRAT – tool to assess the potential pandemic risk of novel influenza A viruses
 - Risk of emergence and public health impact

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HPAI A(H5N1): Take Home Points

- No human infections with HPAI H5 in the U.S. at this time
- Risk to general public is low
- Risk to poultry workers, outbreak responders and waterfowl hunters may be increased as wild bird and poultry outbreaks continue
 - A human case may occur
 - Sporadic human cases of infection with similar H5 viruses have been reported in other countries but no sustained human to human spread
 - Severity of illness varies from asymptomatic to severe
- We are prepared in the event the response needs change
- It is safe to eat properly handled and cooked poultry
- More information
 - CDC: <https://www.cdc.gov/flu/avianflu/avian-flu-summary.htm>
 - USDA: <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/avian-influenza/2022-hpai>

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