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The Society for Healthcare
Epidemiology of America

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SHEA & ASM on The Ramifications of Testing – Why Dx Stewardship is Critical

Impact of Blood Culture Practices on Antibiotic Stewardship & HAI Surveillance & Management

- Ep. 1 - Healthcare Onset Bacteremia
- Ep. 2 - Follow-Up Blood Cultures: When Should We Do It?

Existing Public Health Infrastructure for HAI/AR

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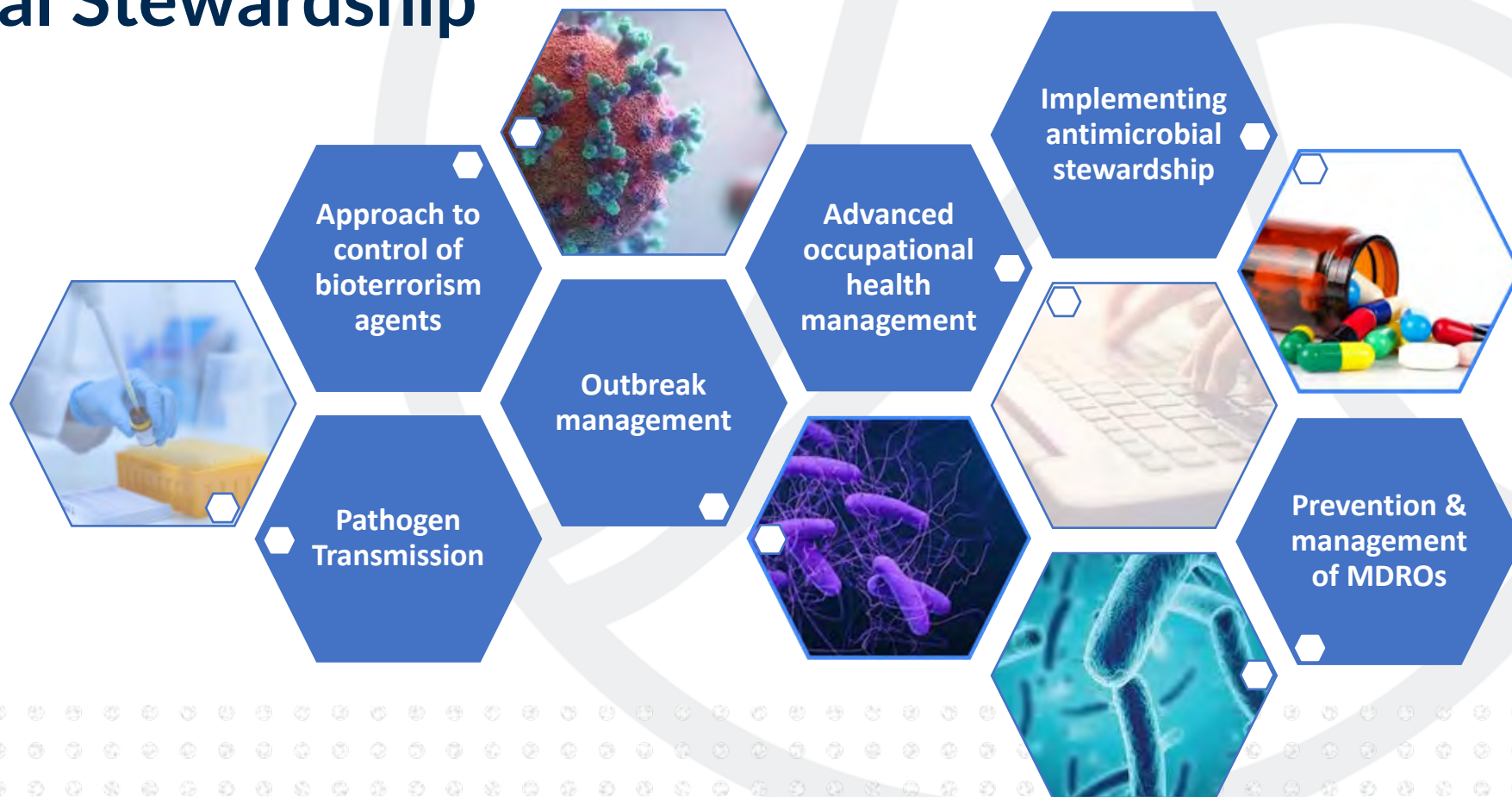


Online ID Fellows Course

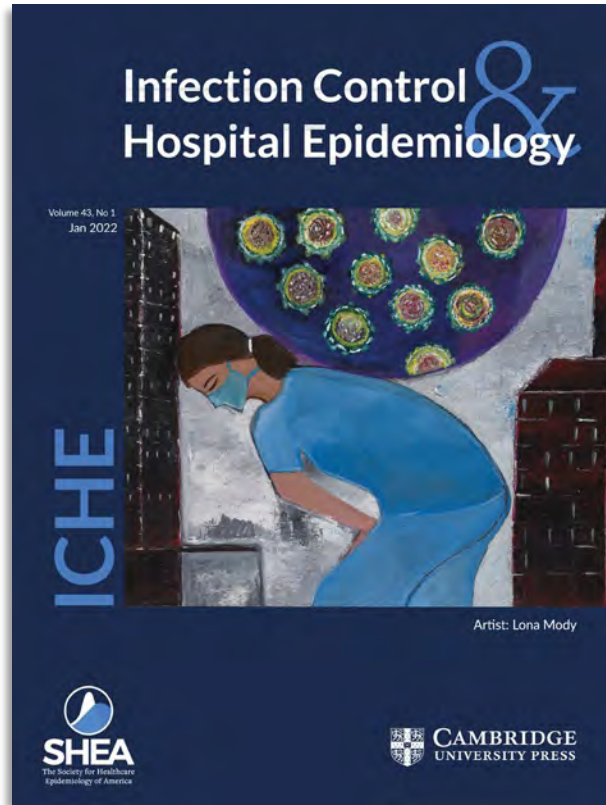
Primer on Healthcare Epidemiology, Infection Control & Antimicrobial Stewardship



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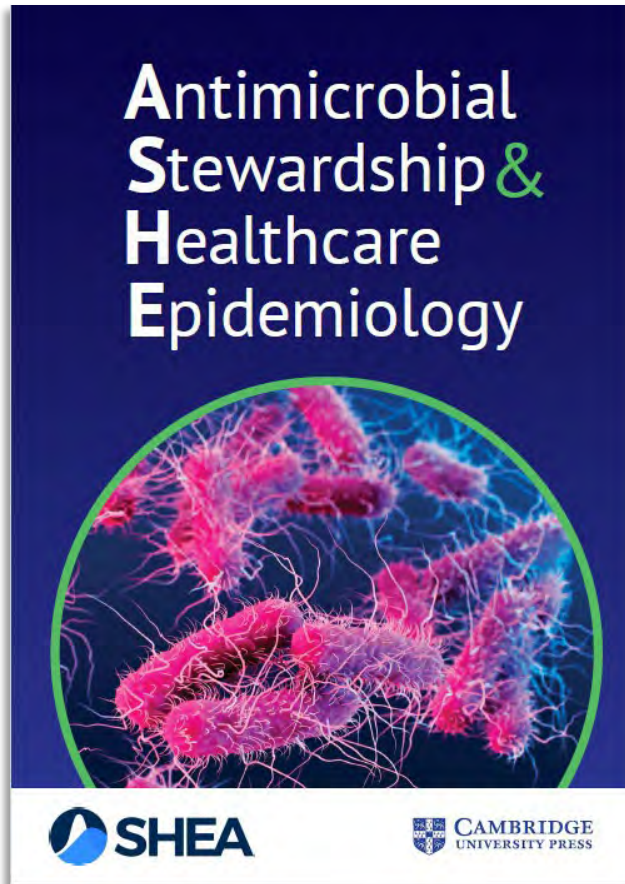
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SHEA Webinar

Town Hall 2024

House Keeping Items



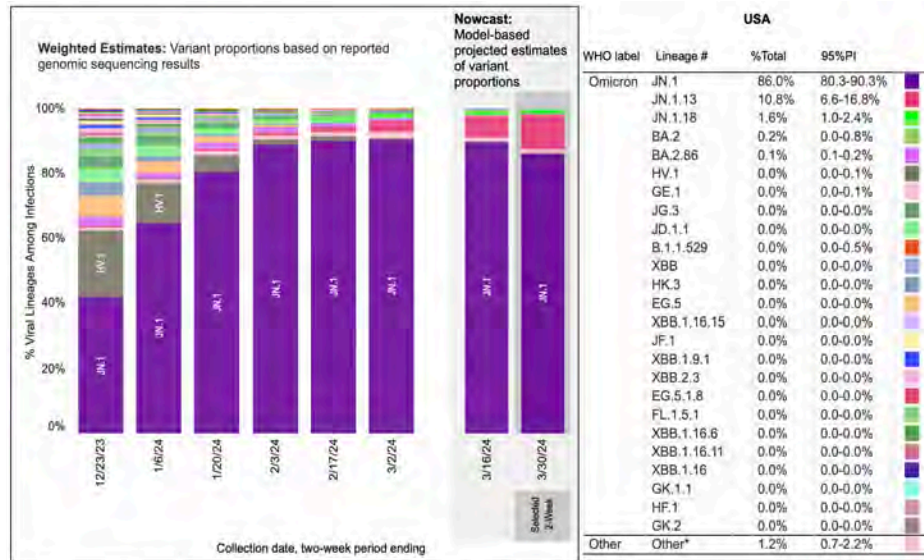
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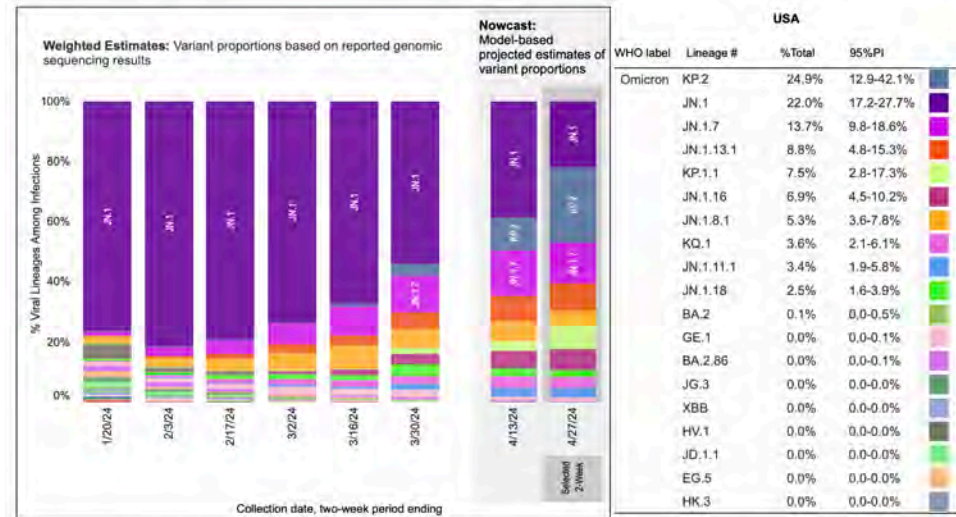
SHEA Town Hall 96
Overview

SARS-CoV-2 VARIANTS, US, CDC



* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one 2-week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all 2-week periods displayed.
 † These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates.
 ‡ While all lineages are tracked by CDC, those named lineages not enumerated in this graphic are aggregated with their parent lineages, based on Pango lineage definitions, described in more detail here: <https://www.pango.network>

Data from 12/10/23 – 3/30/2024

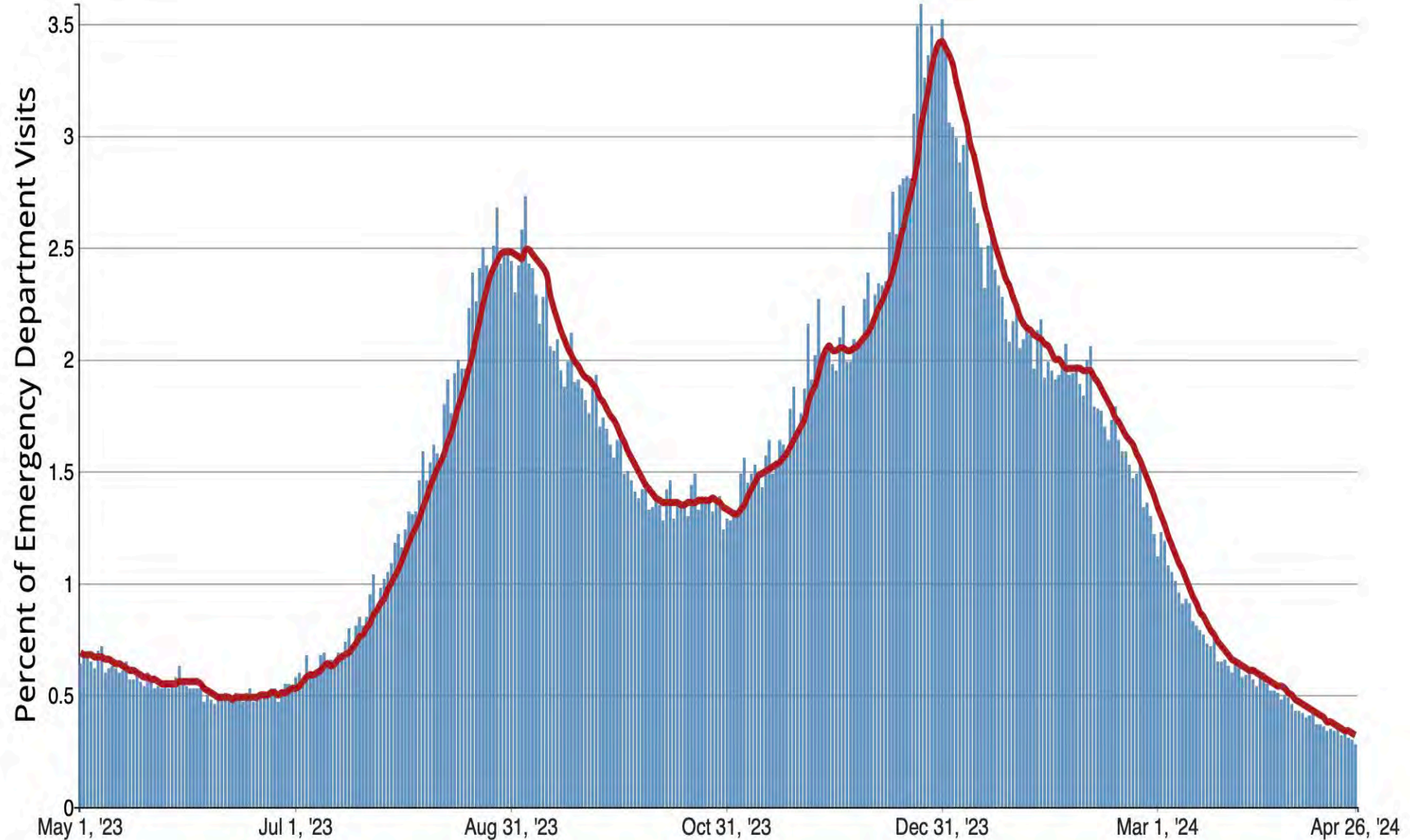


* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one 2-week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all 2-week periods displayed.
 † These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates.
 ‡ KP.2 was aggregated to JN.1 (same spike as JN.1), but recombinants are always difficult. While all lineages are tracked by CDC, those named lineages not enumerated in this graphic are aggregated with their parent lineages, based on Pango lineage definitions, described in more detail here: <https://www.pango.network/the-pango-nomenclature-system/statements-of-nomenclature-rules/>

Data from 4/14/2024 – 4/27/2024

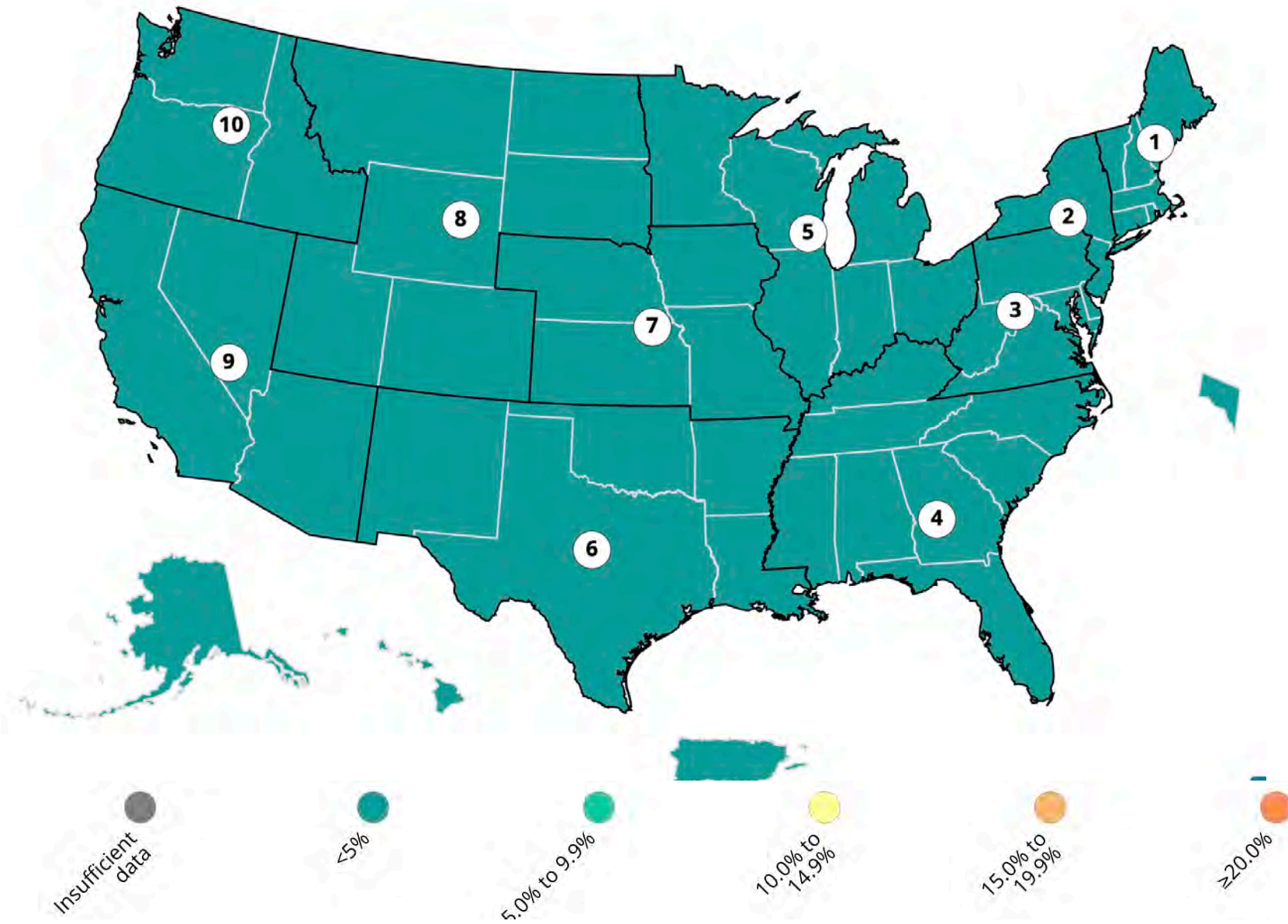
<https://covid.cdc.gov/covid-data-tracker/#variant-proportions>

EMERGENCY DEPARTMENT VISITS DUE TO COVID-19



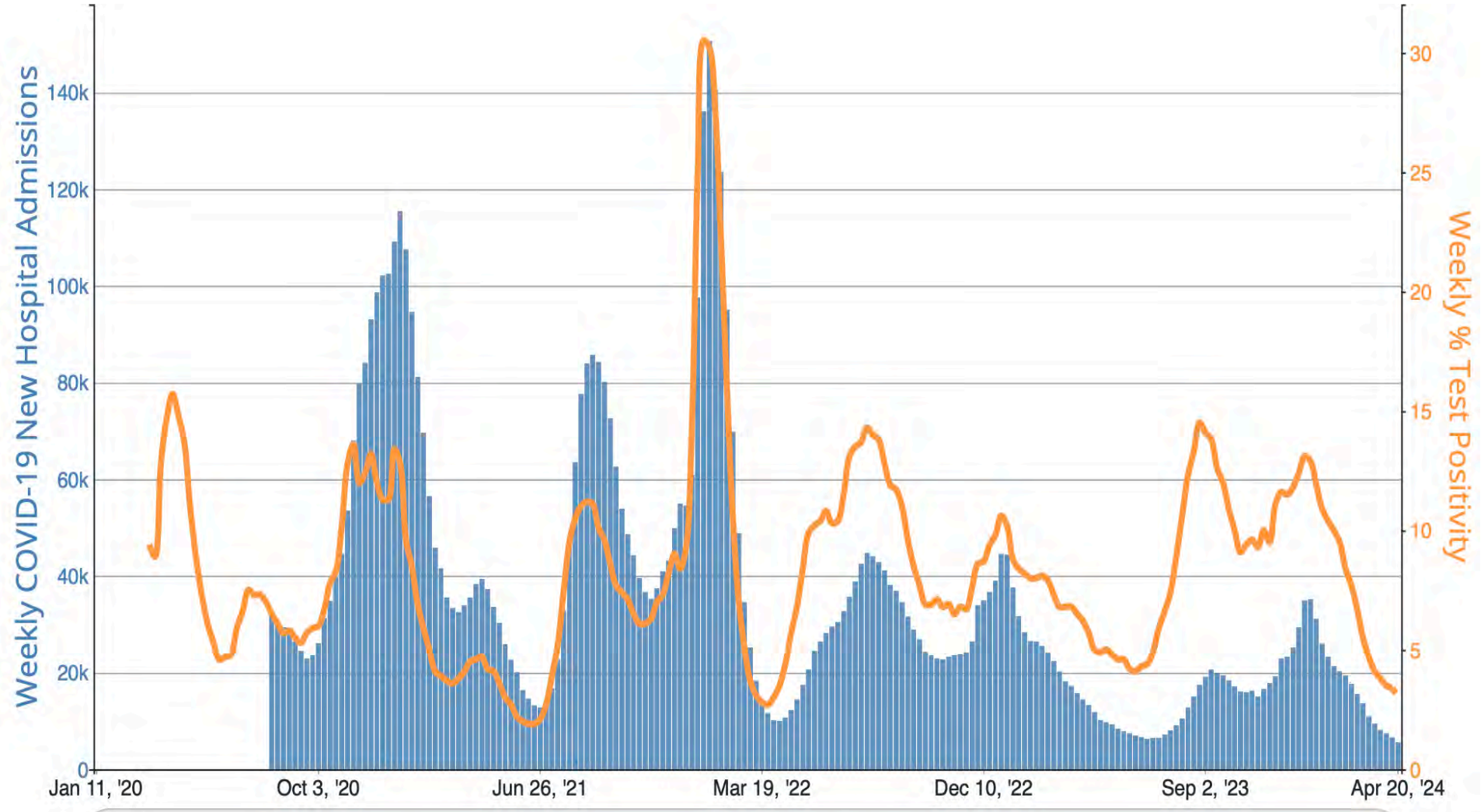
Source: CDC https://covid.cdc.gov/covid-data-tracker/#ed-visits_all_ages_combined 5-4-2024

COVID-19 TEST POSITIVITY RATES



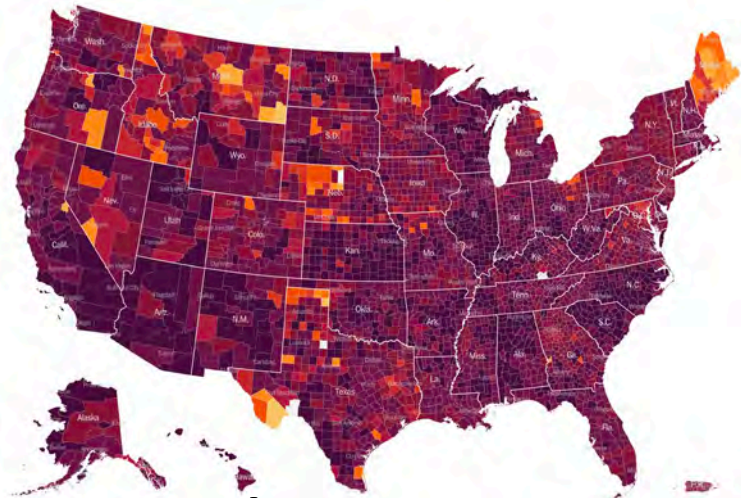
Source: CDC https://covid.cdc.gov/covid-data-tracker/#maps_positivity-week 5-4-2024

COVID-19 HOSPITAL ADMISSIONS AND RATES OF TEST POSITIVITY

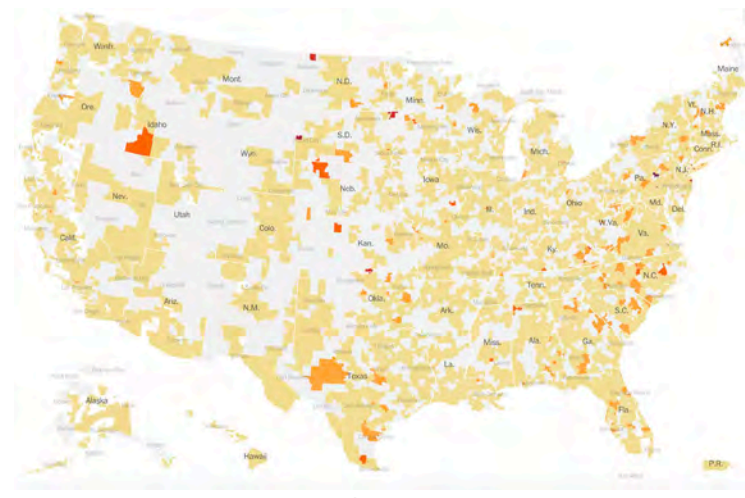


Source: CDC https://covid.cdc.gov/covid-data-tracker/#trends_weeklyhospitaladmissions_testpositivity_00
5-4-2024

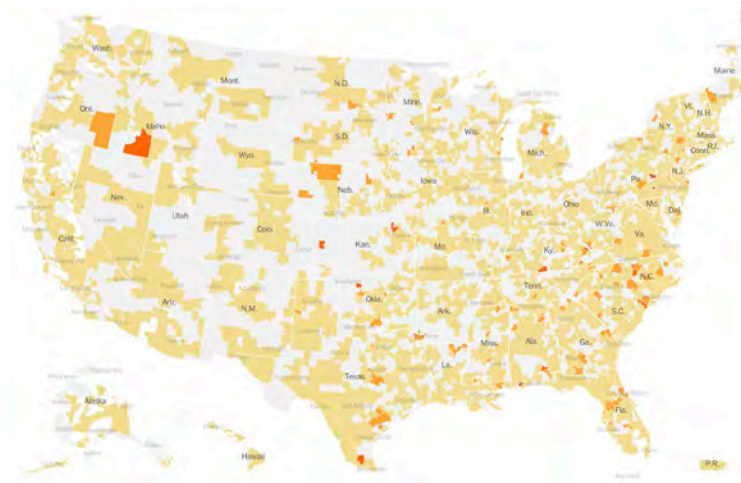
US COVID-19 HOTSPOTS



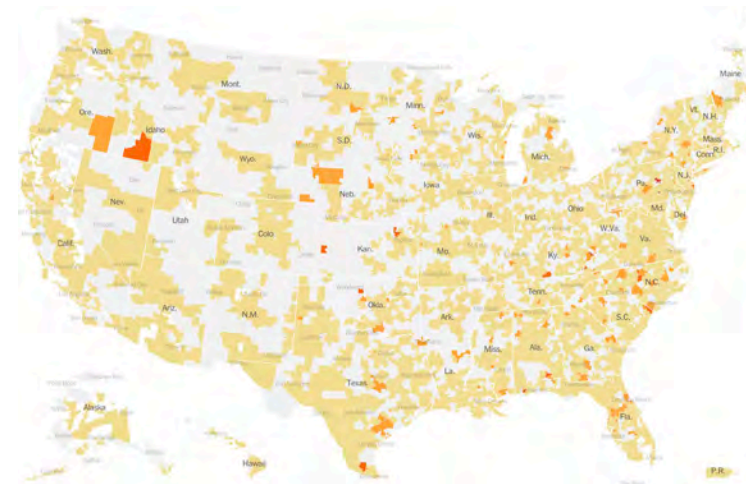
February 6, 2022



March 6, 2024



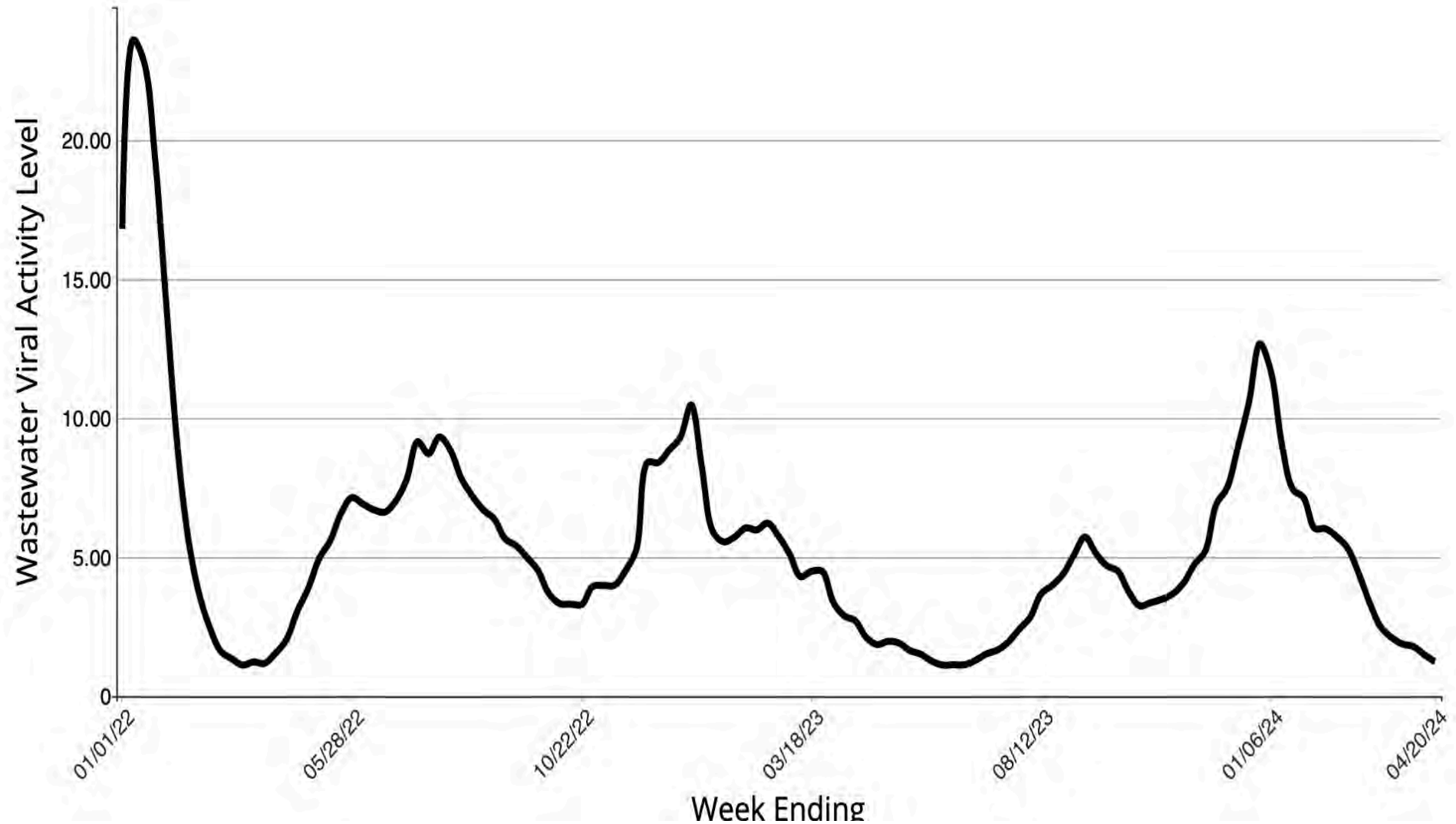
April 6, 2024



May 4, 2024

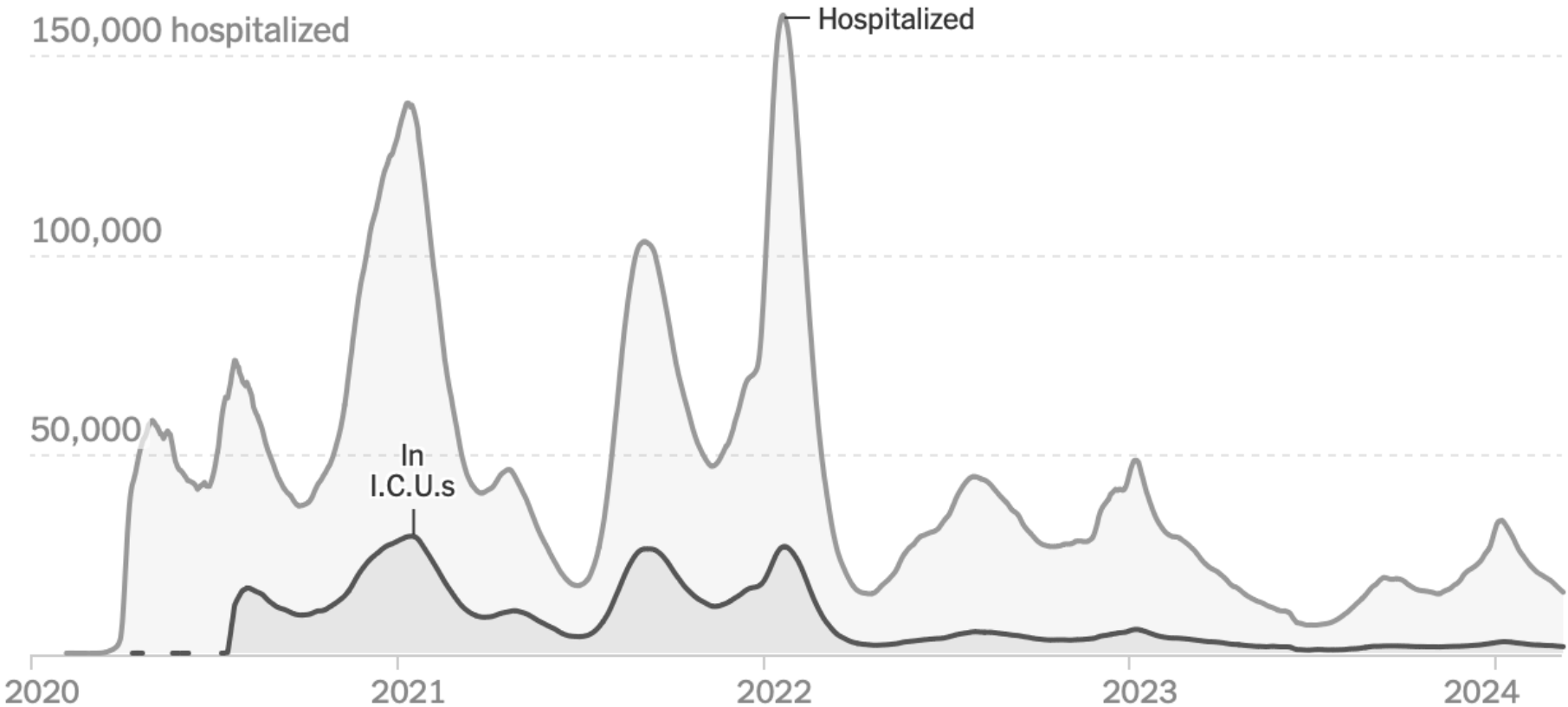
Source: New York Times <https://www.nytimes.com/interactive/2023/us/covid-cases.html> 5-4-2024

COVID-19 WASTEWATER VIRAL ACTIVITY



Source: CDC <https://covid.cdc.gov/covid-data-tracker/#wastewater-surveillance> 5-4-2024

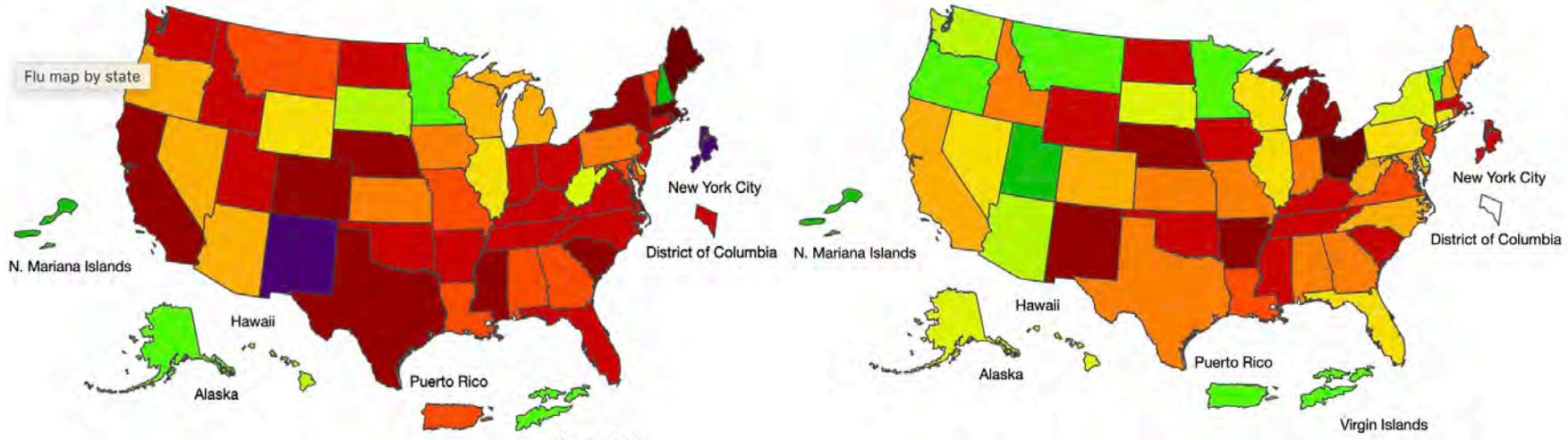
HOSPITALIZATIONS AND ICU HOSPITALIZATIONS FOR COVID-19 IN THE UNITED STATES



Hospitalizations decreased by 58.9 % from our last Town Hall
ICU admissions decreased by 44.9 % from our last Town Hall

Source: https://covid.cdc.gov/covid-data-tracker/#maps_new-admissions-rate-county 5-4-24

INFLUENZA ACTIVITY BY STATE IN THE UNITED STATES



January 8, 2023

March 7, 2024



April 7, 2024

May 4, 2024



Source: CDC <https://www.cdc.gov/flu/weekly/usmap.ntm> 5-4-2024

Today's Emerging Infectious Disease News

1. In late March the **FDA** issued an Emergency Use Authorization for the administration of a new monoclonal antibody, pemvibart, for use in adults and adolescents as preexposure prophylaxis.
2. An **Annals of Internal Medicine** opinion piece provided structured advice for immunocompromised patients trying to decide whether to travel.
3. Another **Annals of Internal Medicine** modelling study found the optimal timing between a first and second dose for children younger than 2 years and adults aged 50 years or older in an annual vaccination campaign to be a vaccination and a booster at 5 months
4. A study in the journal, **Heart**, found that COVID vaccination reduced the risk of post-COVID-19 cardiac and thromboembolic outcomes.
5. A study from CDC published in **JAMA Internal Medicine** found that 22% of adults over 50 admitted with acute RSV infection suffered cardiac complications during the admission,
6. A **Vaccine** study describes the vaccination patterns and up-to-date status of children 19–35 months, from 2011–2021.
7. A paper in **JAMA Network Open** reported that RSV-related hospitalization, intensive care unit use, and short stay use were significantly higher in all age groups in 2021 and 2022 compared with 2015 to 2019.
8. Another paper in **JAMA Network Open** reported that vaccination against SARS-CoV-2 was associated with significant reductions in COVID-19 incidence and hospitalizations

References available in the chat

Today's Emerging Infectious Disease News

8. A study published in **Clinical Infectious Diseases** comparing the severity of Omicron COVID, Influenza and RSV in Sweden found Omicron SARS-CoV-2 infections to be more common and more severe and more so among unvaccinated patients.
9. A paper just published in **JAMA Network Open** evaluated in a cluster randomized trial whether implementing “Stress First Aid”, a peer-to-peer support intervention had a beneficial effect on the well-being of healthcare providers during the pandemic.
10. An editorial accompanying this paper in **JAMA Network Open** emphasizes that continued worsening of the burnout crisis in health care is not inevitable and underscores that workplace-culture interventions such as the one described in the prior paper represents one way of addressing this challenging issue.
11. A data brief in **JAMA** summarized results from a Kaiser Family Foundation poll examining misinformation in healthcare, noting that 95% of those polled reported trusting their personal physicians to provide the right recommendations about health issues .
12. An article from the **Journal of Medical Virology** found that, among participants from the National Basketball Association, lower antibody levels were associated with significantly increased rate of SARS-CoV-2 infection in the highly vaccinated NBA population.
13. A letter to the **New England Journal of Medicine** describes in detail the case of human infection with H5N1 in a dairy farm worker in Texas.
14. A **Lancet Microbe** paper evaluated the safety, tolerability, viral kinetics, and immune correlates of protection in healthy, seropositive UK adults inoculated with SARS-CoV-2 .

Panelists:



Dr. David Henderson
NIH Consultant



Dr. Anu Malani
University of Michigan



Dr. Kristina Bryant
University of Louisville



Dr. David Weber
UNC School of Medicine

AVIAN INFLUENZA, US

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Sanders Distinguished Professor of Medicine, Pediatrics and Epidemiology
Associate Chief Medical Officer, UNC Medical Center
Medical Director, Hospital Epidemiology, UNC Medical Center
University of North Carolina at Chapel Hill



UNC
SCHOOL OF MEDICINE

Disclosures: Consultancy-Pfizer, GSK, PDI, BD, Germitec; Speaker's Bureau-Merck, BD, GAMA

Emergency Preparedness and Response

Emergency Preparedness and Response Home



Highly Pathogenic Avian Influenza A(H5N1) Virus: Identification of Human Infection and Recommendations for Investigations and Response



Dairy farm worker confirmed with HPAI A H5N1 infection

First report of mammal to human transmission of H5N1

Evidence of 1 sequence change associated with viral adaptation to mammalian hosts (PB2 E627K)

No evidence of oseltamivir resistance

Reportedly closely related to 2 existing HPAI A H5N1 candidate vaccine viruses

>900 human infections since 1997 in 23 countries with ~52% CFR

<https://www.cdc.gov/ncird/whats-new/human-infection-H5N1-bird-flu.html>

<https://emergency.cdc.gov/han/2024/han00506.asp>

NOVEL AND VARIANT INFLUENZA, NC DHHS ALERT



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Deputy Secretary for Health
SUSAN KANSAGRA MD, MBA • Assistant Secretary for Public Health
Division of Public Health

To: All North Carolina Clinicians and Laboratorians
From: Zack Moore, MD, MPH, State Epidemiologist
Scott Shone, PhD, HCLD (ABB), Public Health Laboratory Director
Subject: Management of People Exposed to Novel and Variant Influenza (3 pages)
Date: April 11, 2024

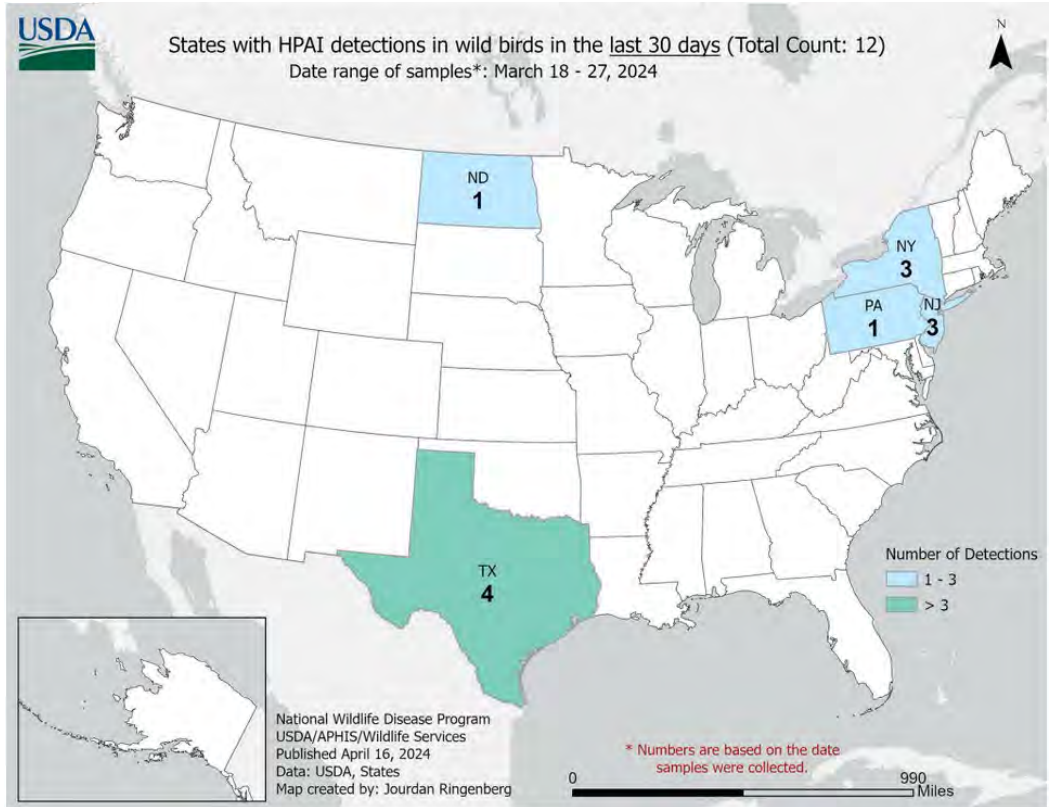
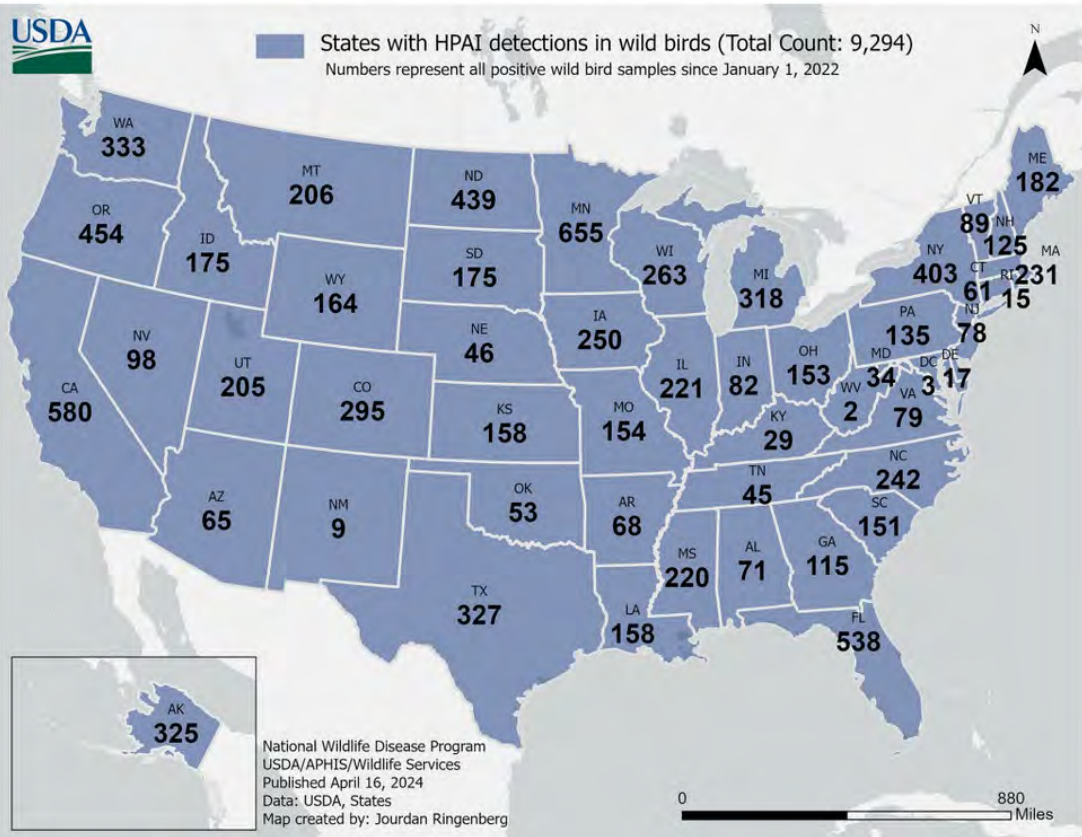
This memo provides guidance to providers for testing and managing people who are potentially exposed to novel influenza A(H5N1) or other novel or variant influenza viruses*.

file:///C:/Users/dweber/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/5XP2AOX3/Provider%20Memo%20Management%20of%20People%20Exposed%20to%20Novel%20and%20Variant%20Influenza.pdf

Confirmed HPAI Detections, 4/16/2024 (H5 clade 2.3.4.4b)

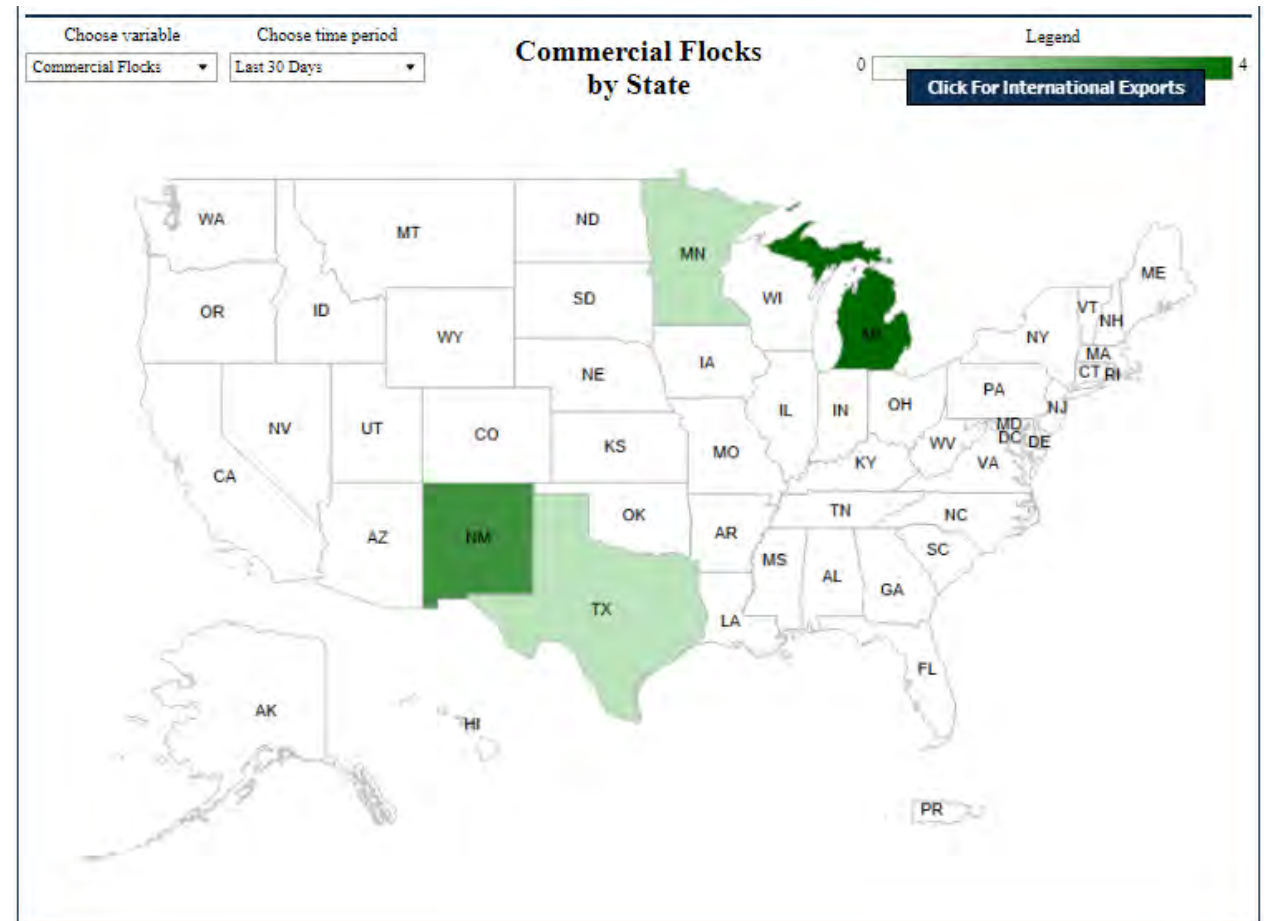
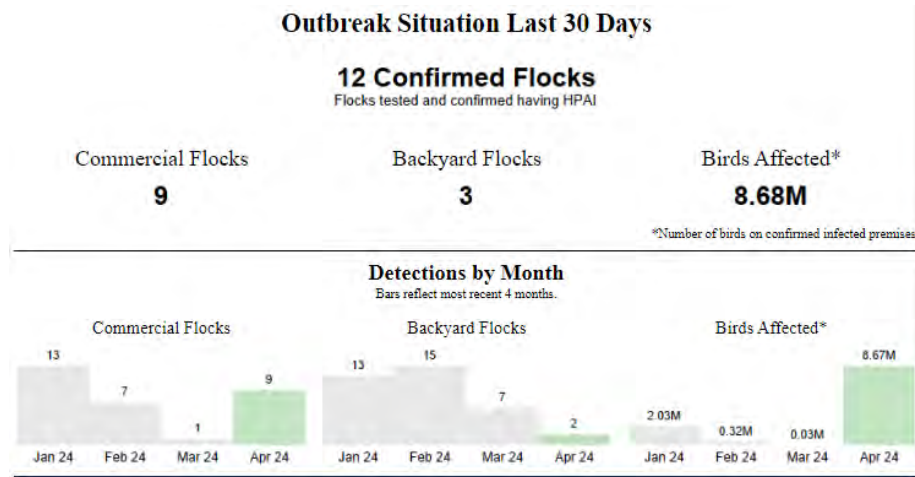
Wild Birds Since 1/1/2022

Wild Birds, March 18-27, 2024



<https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/wild-birds>
<https://www.cdc.gov/flu/avianflu/data-map-commercial.html>

USDA, Confirmations of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks, 4/20/24



Also isolated from:

1. Cattle
2. Cats (3, TX); with death
3. Eggs? (per FDA, low risk)
4. Pasteurized milk (may be PCR positive)
5. Unpasteurized milk?

HIGH PATHOGENIC AVIAN INFLUENZA: FOCUS ON H5N1

- Pathogen(s): Influenza viruses (RNA virus): HPAI – A9N5) and A(H7); **A(H5N1)**, A(H5N6), A(H7N9), A(H7N7), A(H5N8) and others
- Clinical manifestations: Upper and/or lower respiratory illness (fever, cough, rhinorrhea, sore throat), conjunctivitis, headache, arthralgia/myalgia. Complications: pneumonia, ARDS, multi-organ failure (respiratory, and kidney), sepsis, and meningoencephalitis. Sputum may be bloody. Pancytopenia, elevated liver enzymes, and gastrointestinal symptoms were notably evident. Mortality >50%.
- Epidemiology: Reservoir, migratory birds, domesticated birds, >40 mammalian species; incubation, ? (expected, 1-4 days); transmission, direct contact with infected animals (feces or secretions) and possibly aerosols. Rare human-to-human transmission (limited, non-sustained)
- Diagnosis: Consider diagnosis patients with ILI and recent direct or close contact (particularly unprotected exposure, e.g., without use of respiratory protection and eye protection) 1-10 days prior to illness onset to the following birds with known or suspected avian influenza A virus infection. Collect the following specimens for diagnosis: NP swab, and nasal aspirate or wash. Notify health department (test using rRT-PCR). Existing testing for influenza may fail to detect Avian Influenza strains.
- Therapy: Antivirals active against influenza (may be less active against some A(H5N1) and A(H7N9)
- Prevention: Bird owners, hunters, poultry workers, travelers, – follow CDC Guidelines to limit exposure/prevention transmission*; Vaccines available in National Stockpile in case of an outbreak/pandemic for A(H5N9) and A(H7N9); Chemoprophylaxis
- Precautions: Private room; Isolation = Standard, Contact, Airborne with eye protection; Healthcare personnel = N95 respiratory, gowns, gloves; Exposed unprotected HCP, furlough for 10 days

*https://www.cdc.gov/flu/avianflu/prevention.htm#anchor_1647619820462; <https://www.cdc.gov/flu/avianflu/h5n1-human-infections.htm>

<https://www.cdc.gov/flu/avianflu/novel-flu-infection-control.htm>

AVIAN INFLUENZA: EXPOSED HCP, CDC

- HCP who are potentially exposed to patients covered by this guidance should be advised to report any signs or symptoms of acute illness to their supervisor for a period of 10 days after the last known contact with the sick patient.
 - Facilities should consider dedicating HCP caring for these patients to minimize risk of transmission and exposure to other patients and other HCP.
 - Facilities should keep track of all HCP (e.g., clinicians, EVS, food service) who care for or enter the rooms of these patients.
- HCP who develop any respiratory symptoms after any contact with patients covered by this guidance should not report for work. These HCP should notify occupational health services, their supervisor, or other appropriate individual about their symptoms, isolate themselves at home, implement respiratory hygiene and cough etiquette (e.g., wear a facemask), seek prompt medical evaluation, and comply with exclusion from work until they are no longer deemed infectious to others.
- If novel influenza virus A virus infection is suspected, antiviral treatment should be started as soon as possible after symptom onset, especially for HCP with underlying medical conditions that may put them at increased risk for complications of influenza.

AVIAN INFLUENZA: EXPOSED HCP, CDC

- For asymptomatic HCP who have been judged to have had an unprotected exposure (e.g., within 2 meters of a symptomatic patient with novel influenza A virus infection without use of recommended respiratory protection and eye protection), exclude the provider from work until 10 days after their last exposure to monitor for signs and symptoms of respiratory illness.
 - If necessary to ensure adequate staffing of the facility, the asymptomatic healthcare worker could be considered for continuing work if they:
 - Have a negative influenza molecular assay result on upper respiratory tract specimens, **AND**
 - Are started on post-exposure antiviral chemoprophylaxis within 2 days of the exposure, **AND**
 - Wear a facemask for source control. The facemask should be worn at all times while in the healthcare facility during a probable incubation period, e.g., 10 days after the exposure unless in a situation where a higher-level of respiratory protection is indicated (e.g., entering the room of a patient on Airborne Precautions). Antiviral chemoprophylaxis should continue for the duration of the potential incubation period.
- Refer to the CDC web site for the most current recommendations on the use of antiviral agents for treatment and chemoprophylaxis of influenza. Both HCP and patients should be reminded that persons treated with influenza antiviral medications continue to shed influenza virus while on treatment. Thus, hand hygiene, respiratory hygiene and cough etiquette practices should continue while on treatment.
- Facilities and organizations providing healthcare should: Implement sick leave policies for HCP that are non-punitive, flexible and consistent with public health guidance (e.g., policies should allow and encourage HCP who may have infections due to agents covered by this guidance to stay home, unless hospital admission for isolation and treatment is recommended). Ensure that all HCP encompassed by these policies are aware of the sick leave policies. Provide employee health services consistent with those recommended in the Guideline for Infection Control in Healthcare Personnel.

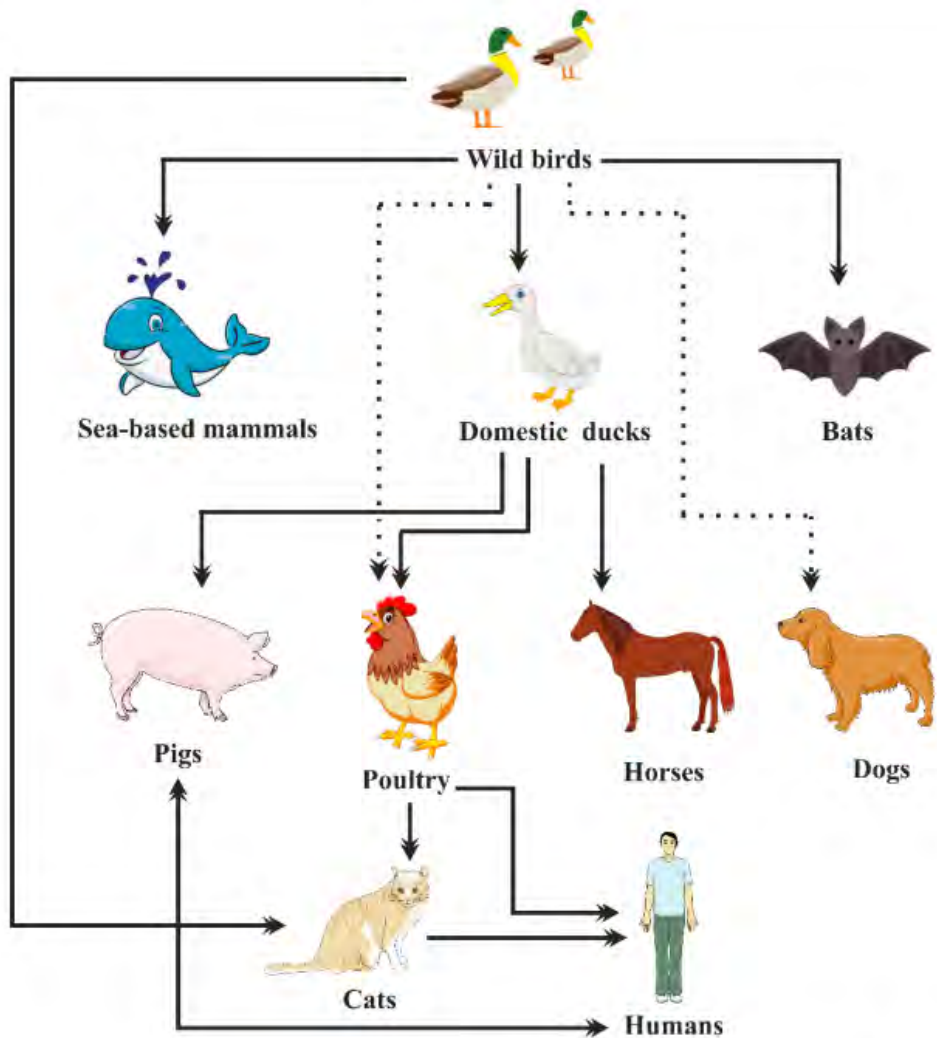


Figure 5. Emergence of influenza A virus from reservoirs of wild aquatic birds. Wild bird influenza viruses can spread to marine animals and domestic free-range ducks via water or fomites. Transmissions to other avian species (such as poultry) can result from contaminated water, domestic ducks or directly from wild birds. Dogs and cats are other household animals that are susceptible to influenza virus infections. Influenza virus can also be transmitted from poultry to humans, who can also acquire it from cats. Transmission that avoids a domestic duck intermediary is represented by dashed lines.

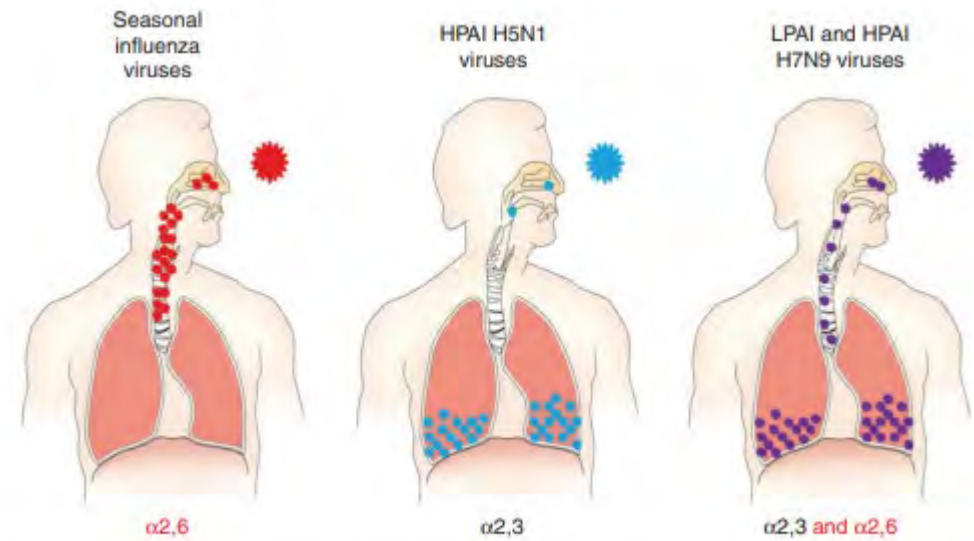
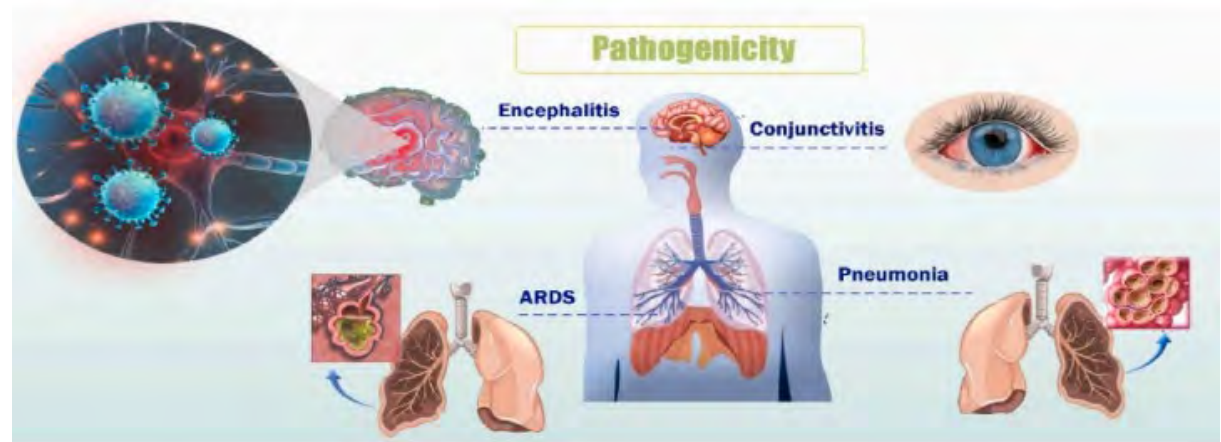


Figure 3. Airway tract tissue tropism illustration and the receptor-binding profiles of seasonal influenza viruses, avian H5N1 viruses, and influenza A(H7N9) viruses.



Wang D, et al. Cold Spring Harb Prospect Med 2021;11:a038620
Charostad D, et al. Travel Med and Infect Dis 2023;55:102638

AVIAN INFLUENZA

CDC, March 2024

- The panzootic of HPAI A(H5N1) viruses in wild birds has resulted in outbreaks among commercial poultry, backyard bird flocks, and spread to infect wild terrestrial and marine mammals, as well as domesticated animals.
- Sporadic human infections with HPAI A(H5N1) virus have been reported in 23 countries since 1997 with a **case fatality proportion of >50%**, but only a small number of H5N1 cases have been reported in humans since 2022. Most human infections with H5N1 virus have occurred after unprotected exposures to sick or dead infected poultry.
- There is no evidence of sustained human-to-human H5N1 virus transmission, and limited, non-sustained human-to-human H5N1 virus transmission has not been reported worldwide since 2007.
- HPAI A(H5N1) virus infection has been reported in wild mammals such as foxes, bears, seals, and sea lions, and in domesticated animals, including pets such as cats and dogs, farmed mink and foxes, and livestock such as goats and cows. In the United States, HPAI A(H5N1) virus detections in mammals have been reported in more than 20 states.

CDC, 1 April 2024

- A person in the United States has tested **positive** for highly pathogenic avian influenza (HPAI) A(H5N1) virus (“H5N1 bird flu”), as reported by Texas and confirmed by CDC. This person had exposure to dairy cattle in Texas presumed to be infected with HPAI A(H5N1) viruses. This is the second person reported to have tested positive for influenza A(H5N1) viruses in the US. A previous human case occurred in 2022 in Colorado.
- H5 bird flu is widespread among wild birds in the U.S. and globally. These viruses also have caused outbreaks in commercial and backyard poultry flocks, and sporadic infections in mammals. HPAI in dairy cows was first reported in Texas and Kansas by the USDA on March 25, 2024.
- H5N1 has been detected in NC poultry and cattle.

UNC-MC

- Our 4plex and RPP tests would identify H5, but not differentiate it from other influenza types. 4plex doesn't type at all, so we would never pick it up by that test.
- Micro Lab reviews all influenza A that does not subtype daily – if appropriate, sent to State Lab for identification.
- In summary, an H5N1 human case could easily be missed based on testing alone.
- If the clinical team has epidemiologic reasons to suspect a novel influenza strain (and the patient tests positive for fluA), then **contact Dr. Miller (Micro Lab)** so it can send to the state lab.

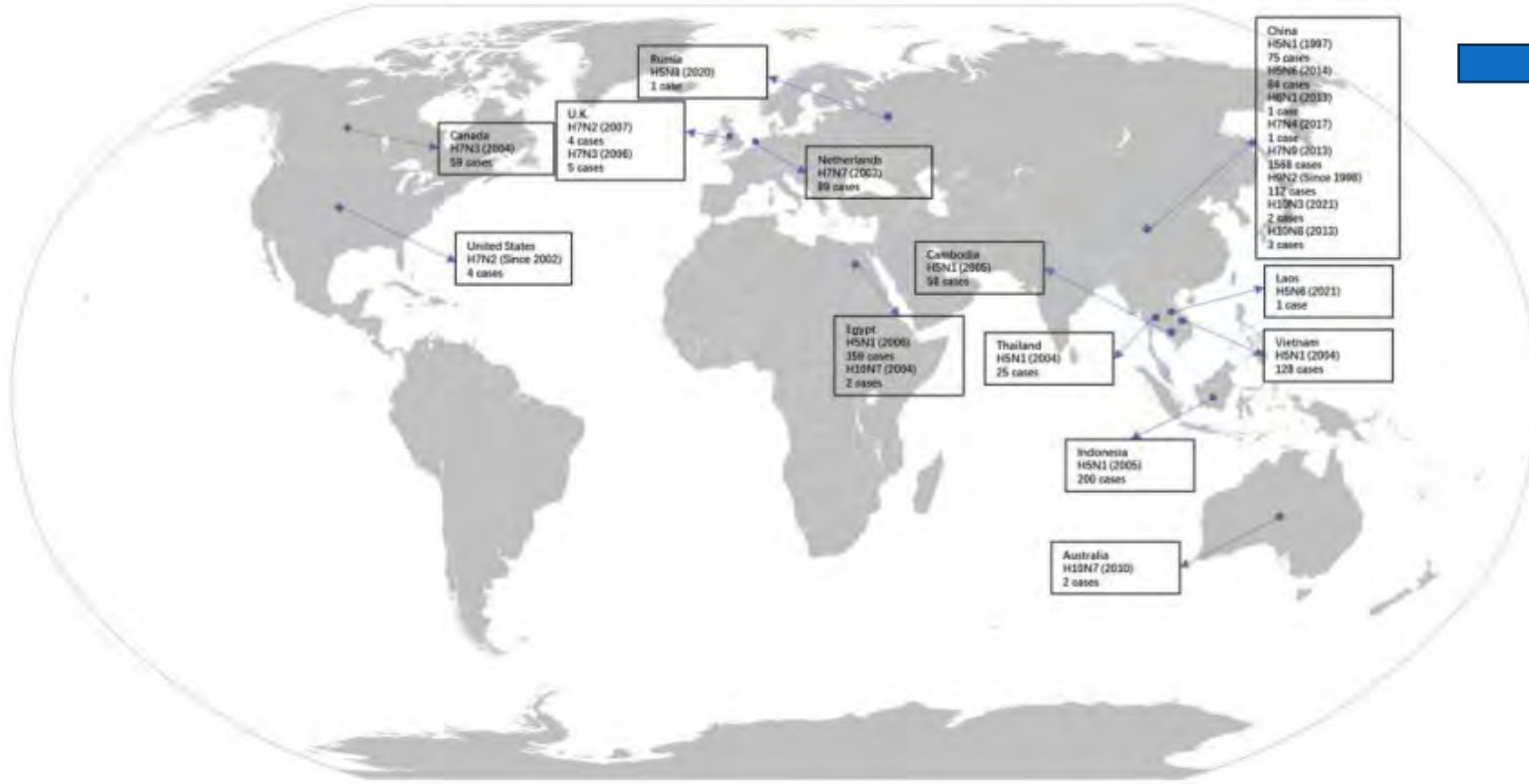
Recent Changes in Patterns of Mammal Infection with Highly Pathogenic Avian Influenza A(H5N1) Virus Worldwide

We reviewed information about mammals naturally infected by highly pathogenic avian influenza A virus subtype H5N1 during 2 periods: the current panzootic (2020–2023) and previous waves of infection (2003–2019). **In the current panzootic, 26 countries have reported >48 mammal species infected by H5N1 virus; in some cases, the virus has affected thousands of individual animals.** The geographic area and the number of species affected by the current event are considerably larger than in previous waves of infection. The most plausible source of mammal infection in both periods appears to be close contact with infected birds, including their ingestion. Some studies, especially in the current panzootic, suggest that mammal-to-mammal transmission might be responsible for some infections; some mutations found could help this avian pathogen replicate in mammals. H5N1 virus may be changing and adapting to infect mammals. Continuous surveillance is essential to mitigate the risk for a global pandemic.



Figure 1. Geographic location of mammal species affected by highly pathogenic influenza virus A(H5N1) in previous waves of infection, 2003–2019 (A), and in the current panzootic, 2020–2023 (B).

GLOBAL DISTRIBUTION OF AVIAN INFLUENZA, 1997-2023



Subtypes	Reported Human Infections	H5N1/HPAI/LPAI	Affected Area
H5N1	Over 890 cases since 1997	HPAI	Worldwide
H5N6	Over 80 cases since 2014	HPAI	China, Laos
H5N8	One case in 2020	HPAI	Russia
H6N1	One case in 2013	LPAI	China
H7N2	8 cases since 2002	LPAI	U.K. and U.S.
H7N3	64 cases since 2004	HPAI/LPAI	U.K. and Canada
H7N4	One case in 2017	LPAI	China
H7N7	Over 90 cases since 2003	HPAI/LPAI	Netherlands
H7N9	Over 1500 cases since 2013	HPAI/LPAI	China, Malaysia, and Canada
H9N2	Over 100 cases since 1998	LPAI	China, Bangladesh, Cambodia, Egypt, India, Oman, Pakistan, and Senegal
H10N3	2 cases since 2021	LPAI	China
H10N7	3 cases since 2004	LPAI	Egypt and Australia
H10N8	3 cases in 2013	LPAI	China

CONCLUSIONS

- Highly Pathogenic Avian Influenza generally an attribute of Influenza A, H5 and H7 subtypes
 - However, multiple avians strains have been described in recent years around the world
 - HPAI moves worldwide via migratory birds (e.g., ducks and geese)
 - Many different mammals have been infected
 - Human-to-human transmission rare
 - Current US outbreaks in cattle herds and poultry flocks
 - 1 case in a human recently (TX) – presented only with conjunctivitis
- Concerns
 - Clinical identification of cases (epidemiologic link to cattle or poultry useful)
 - Ability to obtain rapid lab identification; concern raised for influenza A, nontypeable
 - Ability to rapidly appropriately isolate patient (All room; PPE including N95 respirator, gown, gloves, and eye protection)
 - Exposure of family members of source case, other patients, HCP
 - Ability to rapidly provide antiviral PEP to exposed HCP



Preparing for Highly Pathogenic Avian Influenza A(H5N1)

May 5, 2024

Anurag Malani, MD, FSHEA, FIDSA

Trinity Health - The Healthcare System



26

States

1.3M*

Attributed Lives

123K

Colleagues

8.3K

Employed Physicians and Clinicians

26.6K

Affiliated Physicians

88

Hospitals

17

Clinically Integrated Networks

135

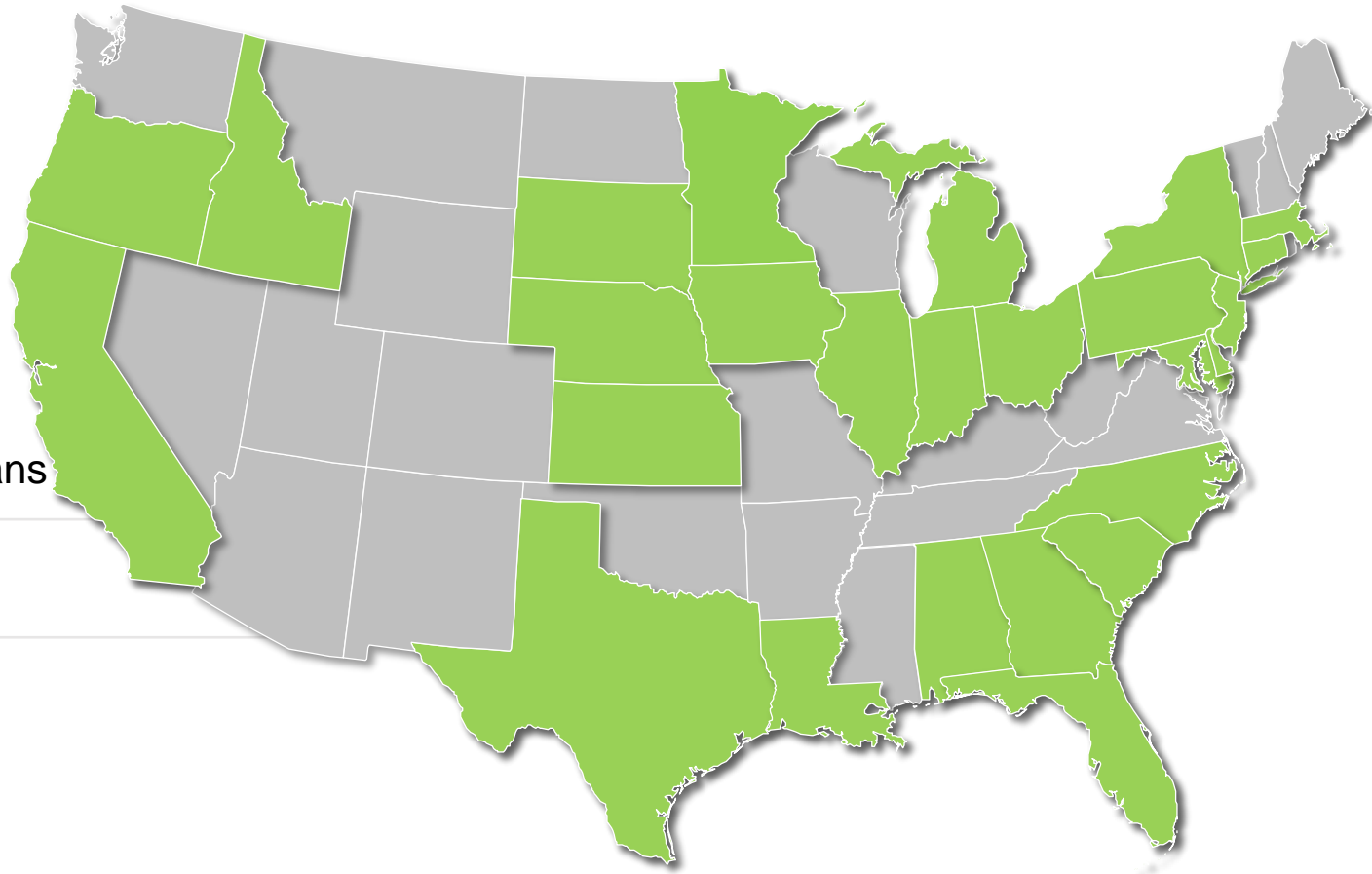
Continuing Care Locations

24

PACE Center Locations

136

Urgent Care Locations



Organizational Structure

- System Infection Prevention and Control Committee
 - Mostly centrally coordinated (some central IP resources)
- System Antimicrobial Stewardship Committee
 - ID leaders across country (regional representation) + some central pharmacy resources
- System Clinical Care and Advisory Group for COVID-19 (appropriately renamed to Seasonal Respiratory Viruses)
- Significant variation in local resources – Common Theme
- EPIC (and other EMR) optimization challenging

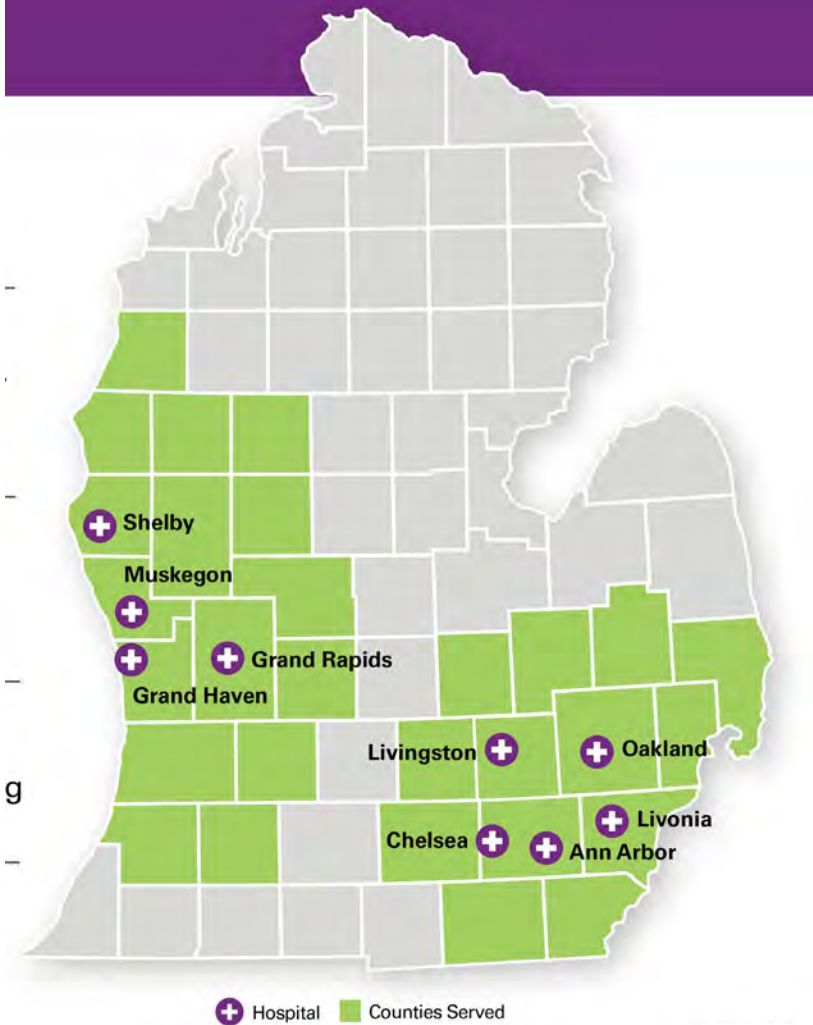
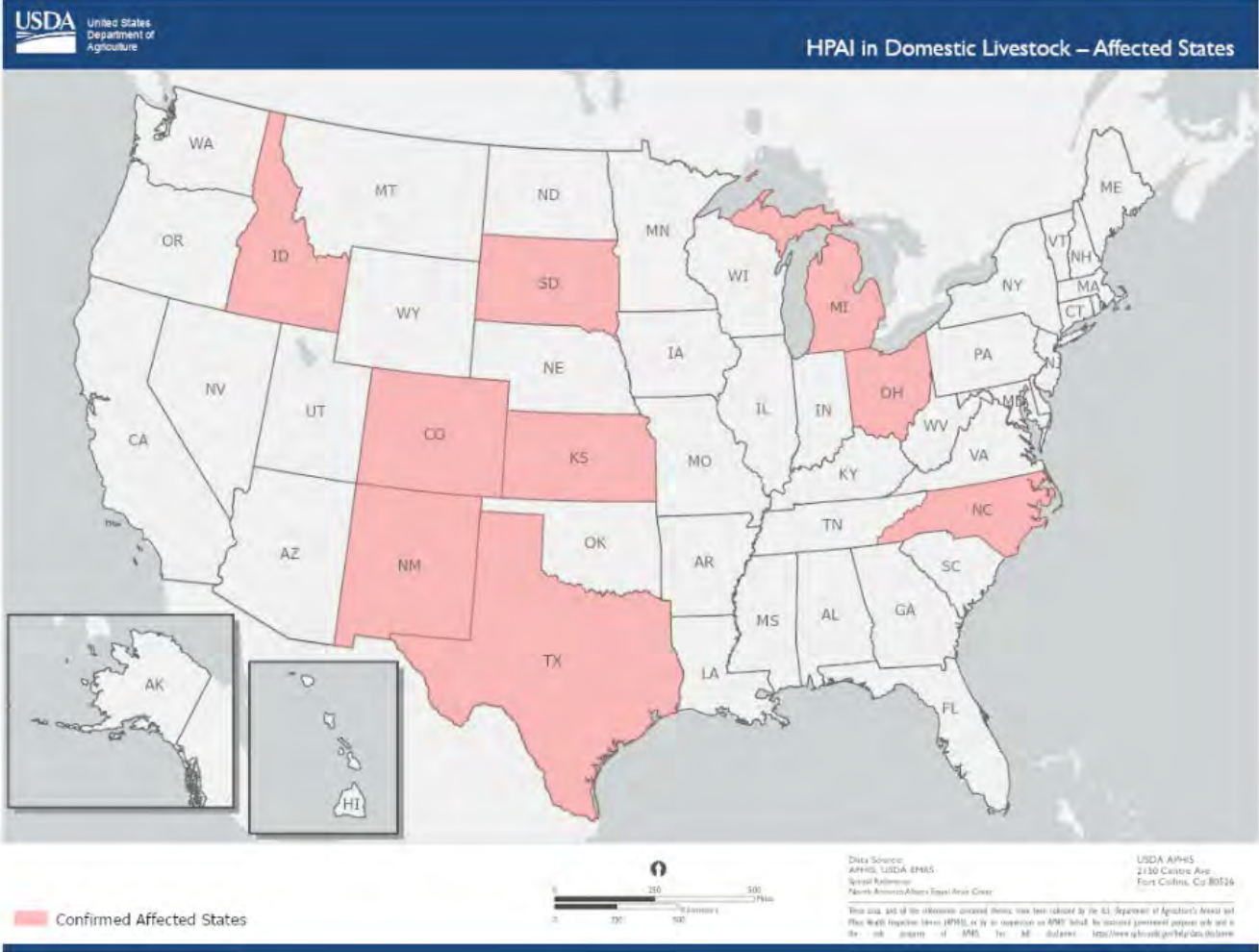
How Are We Preparing for Highly Pathogenic Avian Influenza A(H5N1)?

- Transparency: dynamic and rapidly evolving
- Reassurance: public/human risk is low at this time
- Use the Playbook - recent experience/education with Measles (and exposures) very helpful and timely
 - Triage with exposure history critical
 - Signs at ED presentation
- Assure method for laboratory testing with public health
- Education for front line providers

Provider/Nursing Education



Confirmed Cases of HPA1 A (H5N1) in Domestic Livestock



Summary Recommendations for Highly Pathogenic Avian Influenza A(H5N1)



Contain

- **Isolate**, provide mask to patient, and place patient in **Airborne Infection Isolation Room (AIIR)**.
- If an AIIR room is unavailable, place patient in a private room and close the door.

Protect

- Initiate & maintain **Enhanced Airborne and Contact Precautions**.
- Don PAPR or N-95 respirator with face shield, gown & gloves to enter the room.

Notify

- Notify Infection Prevention of rule-out H5N1 case: Haiku SJAA Infection Prevention On-Call group or call 734-712-3158.
- Infection Prevention will notify public health department.

Identify

- Order nasopharyngeal Cepheid 4-in-1 PCR (LAB8198).
- Collect **nasopharyngeal and oropharyngeal swabs and conjunctival swab if conjunctivitis present**. Place in M4 viral transport media. Order a miscellaneous lab test (LAB000) for "Influenza A (H5N1)".
- Notify Microbiology Lab that PCR swab(s) will be sent. Lab will complete MDHHS paperwork and scan results into chart when available.

Treat

- **Initiate empiric antiviral treatment** as soon as possible.
- Do not delay treatment while waiting for laboratory testing results.



- Highly Pathogenic Avian Influenza (HPAI) virus outbreaks occur among poultry sporadically in the US. The current outbreak A(H5N1) involves both cattle and poultry with several states, including Michigan.
- Although human infections with HPAI A(H5N1) virus are rare, having unprotected exposure to any infected animal or to an environment in which infected birds or other animals are or have been present can pose a risk of infection.
- Most human infections with H5N1 virus have occurred after unprotected exposures to sick or dead infected poultry. There is no evidence of sustained human-to-human H5N1 virus transmission, and limited, non-sustained human-to-human H5N1 virus transmission has not been reported worldwide since 2007..
- Monitor patients having exposure risk for acute respiratory illness (ARI). ARI is generally defined as the presence of two or more signs or symptoms such as fever, cough, runny nose or nasal congestion, or sore throat).



- **Mild illness:** cough, sore throat, eye redness or eye discharge such as conjunctivitis, fever or feeling feverish, rhinorrhea, fatigue, myalgia, arthralgia, and headache
- **Moderate to severe illness:** shortness of breath or difficulty breathing, altered mental status, and seizures

References

[MDHHS_HPAI_Monitoring_Protocol_FINAL_2022Feb.pdf \(michigan.gov\)](#)

[Highly Pathogenic Avian Influenza A\(H5N1\) Virus in Animals: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations | Avian Influenza \(Flu\) \(cdc.gov\)](#)

Emergency Department Overcrowding



Putting It Together

- Lessons learned from recent respiratory viral season/COVID-19 helpful for **triage/management**
- **Exposure history** critical (certain geographic areas more likely and occupational risk for presentation)
- Public risk low
- Commercial laboratory testing expected to detect (not specific strain identification, may be “indeterminant”)
- Influenza vaccines no protection against HPA1 A(H5N1)
- Therapeutics – seasonal influenza antiviral treatments (neuraminidase inhibitors) effective
- Continued readiness posture