

Epidemiology of America

SAFE HEALTHCARE FOR ALL





The Rapid Response Podcasts



SHEA

COVID-19 Updates: What We Know Now

Releases monthly

Newest Episodes:

- Back to School in 2022
- Monkeypox Update

AVAILABLE ON:









SAFE HEALTHCARE FOR ALL

Music: www.bensound.com

TUNE IN TO THE SHEA JOURNALS PODCASTS





SHEA COVID-19 Resources:





This program is designed to give US hospital epidemiologists who oversee infection control programs the skills, knowledge, and tools to provide effective leadership during facility-level outbreaks and large-scale public health emergencies.

- Simulations
- Tools Kits
- On-demand Webinars
- On-demand Workshop Sessions
- Expert Guidance on Incident Management and HICs, Crisis Strategies, Communication Guidance and Much More

Expiring December 31, 2022

www.ortp.shea-online.org



SAFE HEALTHCARE FOR ALL

Music: www.bensound.com

COVID-19 Real-Time Learning Network



Specialty Society Collaborators:

- American Academy of Family Physicians
- American Academy of Pediatrics
- American College of Emergency Physicians
- American College of Physicians
- American Geriatrics Society
- American Thoracic Society
- Pediatric Infectious Diseases Society
- Society for Critical Care Medicine
- Society for Healthcare Epidemiology of America
- Society of Hospital Medicine
- Society of Infectious Diseases Pharmacists

With funding from the Centers for Disease Control and Prevention, IDSA has launched the COVID-19 Real Time Learning Network, an online community that brings together information and opportunities for discussion on latest research, guidelines, tools and resources from a variety of medical subspecialties around the world.

www.COVID19LearningNetwork.org @RealTimeCOVID19 | #RealTimeCOVID19

Shea /

SAFE HEALTHCARE FOR ALL

Music: www.bensound.com

Prevention 🕑

An online learning module designed with frontline healthcare personnel in mind.

PreventionCHKC.org

FREE using promo code
TOWNHALL



ICHE Journal – Fast Tracking COVID Article Submissions

Infection Control Hospital Epidemiology Artist: Lona Mody

Infection Control & Hospital Epidemiology publishes scientifically authoritative, clinically applicable, peer-reviewed research on control and evaluation of the transmission of pathogens in healthcare institutions and on the use of epidemiological principles and methods to evaluate and improve the delivery of care. Major topics covered include infection control practices, surveillance, antimicrobial stewardship, cost-benefit analyses, resource use, occupational health, and regulatory issues.

www.cambridge.org/iche



SAFE HEALTHCARE FOR ALL

Music: www.bensound.com

ASHE JOURNAL

Antimicrobial Stewardship & Healthcare Epidemiology



High quality articles across the full spectrum of antimicrobial stewardship and healthcare epidemiology.

Exceptional author experience through constructive peer review, competitive turnaround times, immediate online publication, a streamlined production process, and social media promotion.

Global, **open access journal**, bringing the widest possible impact, reach and discoverability of your research.

www.cambridge.org/ashe



SAFE HEALTHCARE FOR ALL

Music: www.bensound.com

SCIENCE GUIDING PREVENTION April 11-14, 2023

SHEA SPRING

SEATTLE, WASHINGTON SHEASpring.org | #SHEASpring2023

SHEA The Society for Healthcar

REGISTER TODAY!

SHEA Webinar

COVID-19 Town Hall Round 84

Music: www.bensound.com

House Keeping Items





- Technical difficulties? Visit: <u>https://support.zoom.us</u>
- Webinar recording, PowerPoint presentation, and references available LearningCE' s <u>Rapid Response</u> <u>Program</u>
- Streaming Live on SHEA's Facebook page
- Zoom Q&A and Chat



SAFE HEALTHCARE FOR ALL

SHEA Town Hall 84 Overview

SARS-CoV-2 VARIANTS, US, CDC



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

REPORTED COVID-19 CASES IN THE UNITED STATES

Cumulative Cases – 102,845,187



Cases decreased by 14% from two weeks earlier

Sources: New York Times 2-12-2023; Johns Hopkins Coronavirus Resource Center: <u>https://coronavirus.jhu.edu/region/united-states</u> 2-12-2023

COVID-19 TEST POSITIVITY IN THE UNITED STATES



Test Positivity increased by 2% from two weeks earlier

Source: New York Times 2-12-2023

US COVID-19 HOTSPOTS



Average daily cases per 100,000 people in past week



CDC COVID-19 COMMUNITY LEVELS



Source – <u>https://covid.cdc.gov/covid-data-tracker/#county-</u> <u>view?list_select_state=all_states&list_select_county=all_counties&data-</u> <u>type=CommunityLevels&null=CommunityLevels</u>

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



Hospitalizations decreased 14% from two weeks earlier ICU hospitalizations decreased 17% from two weeks earlier

Source: New York Times 2-12-23

COVID-19 DEATHS IN THE UNITED STATES Cumulative Deaths – 1,114,371



Sources: New York Times 2-12-23,; Johns Hopkins Coronavirus Resource Center: <u>https://coronavirus.jhu.edu/region/united-states</u> 2-12-23

DAILY COVID-19 VACCINATIONS IN THE UNITED STATES



INFLUENZA ACTIVITY BY STATE IN THE UNITED STATES



This Week's Emerging Infectious Disease News

- 1. A study in the **New England Journal** found that pegylated interferon-Lambda given early in SARS CoV-2 infection was associated with reductions in hospitalization and emergency room visits .
- 2. Another **New England Journal** study found that bivalent boosters were more effective than monovalent vaccine in preventing severe sequelae of Omicron variant infection..
- *3.* A third **New England Journal** study found Omicron BA.1–adapted vaccines had similar safety profiles and induced substantial neutralizing responses against omicron BA.1.
- 4. A **JAMA Network Open** paper describing a cohort of more than 5 million US Veterans found cumulative incidences: of primary vaccination 69.0%; of individuals having primary vaccination plus a first booster 42.9%; and for people who had primary vaccination plus two boosters 9.3%..
- 5. A systematic review published in **The Lancet** found that individuals who had hybrid immunity (i.e., produced by a combination of SARS-CoV-2 infection and vaccination) had the highest magnitude and durability of protection against subsequent infection.
- 6. A study published in **Proceedings of the National Academy of the Sciences** identified phosphorylated CTD-interacting factor 1 (PCIF1) as a potential new target for COVID prevention and treatment.
- 7. An animal study published in **Science** demonstrated the efficacy of a novel protease inhibitor in preventing severe SARS-CoV-2 infection .
- 8. A **Cochrane Review** evaluated the efficacy of physical interventions designed to interrupt or reduce the spread of respiratory viruses.
- **9.** The National Academies of Sciences, Engineering, and Medicine published the proceedings of a workshop on the airborne transmission of SARS-CoV-2.

References available in the chat

Panelists:



Dr. David Henderson NIH Consultant



Dr. Sarah Haessler Baystate Health



Dr. Karen Ravin Nemours Children's Health



Dr. David Weber UNC School of Medicine



SAFE HEALTHCARE FOR ALL

REVOCATION BY FEDERAL GOVEMENT OF COVID-19 PUBLIC HEALTH EMERGENCY (PHE)

David J. Weber, MD, MPH, FIDSA, FSHEA, FRSM (London) Sanders Distinguished Professor of Medicine, Pediatrics and Epidemiology Associate Chief Medical Officer Medical Director, Hospital Epidemiology University of North Carolina, Chapel Hill, NC



Disclosures: Consultancy; Pfizer, Merck, Sanofi, PDI, BD, Germitec, Wellair All drugs/vaccines issues discussed consistent with FDA approvals or authorizations

IMPLICATIONS OF REVOCATION OF COVID-19 PHE

Per news reports, the Federal Government will revoke the COVID-19 public health emergency (PHE) on May 11

- The end of the PHE will impact CDC's data authorities. Under the CARES Act, COVID-19 laboratory test reporting is required to be submitted to CDC (negative and positive results). Will shift to voluntary reporting by states on May 12th. Requirements around hospital reporting to CDC via NHSN are not impacted.
- CDC likely will alter their metrics for assessing impact of COVISD-19 as testing sites and free home kits will be eliminated/reduced (not yet sure on which metrics will be eliminated/altered).
- Reporting of vaccination data will be impacted. DUAs being crafted between the CDC and each jurisdiction for continued vaccination reporting that's not dependent on the PHE. Currently 13 states have NOT signed on, mainly because of data privacy issues (even though PHI is not included in reporting).
- ICATT (Increasing Community Access to Testing) will have major impacts, likely leading to shut down of 50-60% of testing facilities and limiting test-to-treat programs. Includes CVS, Walgreens—regional variability in participation in ICATT.
- FDA: FDA Commissioner issues a separate PHE from HHS. HHS discontinuation of the PHE will NOT impact EUAs currently in place for testing, therapeutics, vaccines. Previously purchased vaccines will continue to be provided at no cost. FDA will separately be working on a process to commercialize products, with deadline not yet set; discussions will likely be product by product. FDA will lose ability to track availability of supplies—may be an issue if there are surges or new pandemics.
- COVID-19 treatment: People with public coverage may start to face new cost-sharing for pharmaceutical COVID treatments such as Paxlovid (unless those doses were purchased by the federal government).



IMPLICATIONS OF REVOCATION OF COVID-19 PHE

Per news reports, the Federal Government will revoke the COVID-19 public health emergency (PHE) on May 11

- CMS: Will no longer reimburse COVID-19 testing. COVID-related waivers (authority of CRNAs, SNF waiver) will no longer be active. CMS currently assessing what waivers will need to be extended. Medicaid will cover tests costs, but there my be clinic visit charges.
- ASPR (Administration for Strategic Preparedness & Response): Will lose capacity to send personnel into the field for COVID-related work.
- ACIP will meet 2/24 to discuss COVID-19 vaccines

Issues

- How can we message that COVID-19 is not gone, despite lifting of PHE status?
- How to communicate the broad spectrum of serious COVID complications (cardiovascular, neurologic, PASC, etc.)
- How to motivate increased uptake of COVID boosters (~16% in eligible persons; ~35% in adults <u>>65</u> years of age.
- Need better estimates of the burden of disease



BIRD FLU UPDATE: FOCUS ON H5N1

David J. Weber, MD, MPH, FIDSA, FSHEA, FRSM (London) Sanders Distinguished Professor of Medicine, Pediatrics and Epidemiology Associate Chief Medical Officer Medical Director, Hospital Epidemiology University of North Carolina, Chapel Hill, NC



Disclosures: Consultancy; Pfizer, Merck, Sanofi, PDI, BD, Germitec, Wellair All drugs/vaccines issues discussed consistent with FDA approvals or authorizations

INFLUENZA TYPE A VIRUSES

- Influenza A viruses are divided into subtypes on the basis of two proteins on the surface of the virus: hemagglutinin (HA) and neuraminidase (NA). There are 18 known HA subtypes and 11 known NA subtypes. In birds, 16 HA and 9 NA subtypes have been identified. (Two additional subtypes, H17N10 and H18N11, have been identified in bats.)
- Influenza A viruses have been detected and are known to circulate in seven different animal species or groups, including humans, wild water birds, domestic poultry, swine, horses, dogs and bats. Equine (horse) influenza A(H3N8) virus routinely circulates and can cause illness in horses, and canine (dog) influenza A(H3N2) virus routinely circulates and can cause illness in dogs.
- Highly Pathogenic Avian Influenza (HPAI): Highly pathogenic avian influenza viruses cause severe disease and high mortality in infected poultry. Include: A (H5) and A(H7) – 90% to 100% mortality in chickens, usually within 48 hours
- Avian influenza A viruses rarely infect people. Five subtypes of avian influenza A viruses are known to have caused human infections (H5, H6, H7, H9, and H10 viruses). The most frequently identified subtypes of avian influenza A viruses that have caused human infections are H5, H7 and H9 viruses. Specifically, A(H5N1) and A(H7N9) viruses have caused the majority of avian influenza A virus infections reported in people, with HPAI A(H5N6) and LPAI A(H9N2) viruses also causing human infections in recent years
- H5N1 viruses: There are nine known subtypes of A(H5) viruses [A(H5N1), A(H5N2), A(H5N3), A(H5N4), A(H5N5), A(H5N6), A(H5N7), A(H5N8), and A(H5N9)]. Sporadic A(H5) virus infections of humans have occurred, such as with HPAI A(H5N1) viruses associated with poultry outbreaks in many countries. Human infections with HPAI A(H5N1) virus have been reported in 19 countries since 2003, resulting in severe pneumonia and death in more than 50% of cases.



Bird Flu Current Situation Summary





H5N1 OUTBREAKS (mammalian animal to animal)

- Background: H5N1 first detected at goose farm in China in 1996; first big poultry outbreak in Hong Kong in 1997 (first documented human death); ~2005 spilled over into migratory birds; new variant (2.3.4.4b) emerged in 2022 (likely less virulent in humans than earlier variants that had human mortality of ~50%)
- New England seals: H5N1, clade 2.3.4.4b [Puruyear W, et al. https://doi.org/10.1101/2022.07.29.501155]
 - Location = MA, ME; Date = January 2022; Bird outbreak peaks, march and June; Beginning in June, seal carcasses (17/29) found to positive for H5N1
- Mink farm: H5N1, clade 2.3.4.4b (mutation T₂₇₁A in PB₂ gene) [Aguero M, et al. Euro Surveill 2023;28(3)]
 - Location = Northwest Spain; Date = October 2022; Single farm (50,000 minks involved); outbreak due to presumed wild bird to mink transmission
 - No mink-to-human transmission
- Wild bears: H5N1 [https://fwp.mt.gov/homepage/news/2023/jan/0117---three-grizzly-bears-test-positive-for-highly-pathogenic-avian-influenza]
 - Location = Montana; Date = Fall 2022; Symptoms = neurologic (blindness, disorientation)
- Wild animals: H5N8 [Floyd T, et al. Emerg Infect Dis 2021;27:2856]
 - Location = UK rehabilitation center; Date = November 2020; Animals = 5 swans, 1 fox, 5 seals; No human infection



INFECTION PREVENTION RECOMMENDATIONS, CDC

- Preventive measures for contact with wild or domestic birds and poultry that look sick or have died¹
 - Wear <u>personal protective equipment</u> (PPE), like disposable gloves, boots, an N95 respirator if available, or if not available, a well-fitting facemask (e.g., a surgical mask), and eye protection.
 - Avoid touching your mouth, nose, or eyes during and after contact with birds or surfaces that may be contaminated with saliva, mucous or feces from wild or domestic birds/poultry.
 - Wash your hands with soap and water after touching birds/poultry.
 - Change your clothes before contact with healthy domestic poultry and after handling wild birds, captive wild birds, farmed birds, and other pet birds. Then, throw away the gloves and facemask, and wash your hands with soap and water.
- Infection prevention in healthcare facilities based on following assumptions²:
 - Lack of an available safe and effective vaccine against novel influenza A viruses associated with severe disease in infected humans [e.g., avian influenza A(H5) or A(H7) viruses]
 - Concern for increased morbidity and mortality among infected patients
 - Few or no confirmed cases in the United States
- Infection prevention: Standard, contact, use of eye protection, and airborne precautions (N95) are recommended for management of
 patients with suspected or laboratory-confirmed novel influenza A virus infection; this includes collection of respiratory specimens.³
- US has H5N1 vaccine stockpiled (National Pandemic Influenza Vaccine Stockpile)
- Identification: (1) Influenza A non-typeable; (2) exposure to ill poultry/wild birds (and other animals)

¹ <u>https://www.cdc.gov/flu/avianflu/spotlights/2022-2023/nearing-record-number-avian-influenza.htm</u>;

² <u>https://www.cdc.gov/flu/avianflu/novel-flu-infection-control.htm</u>; ³ <u>https://www.cdc.gov/flu/avianflu/severe-potential.htm</u>

