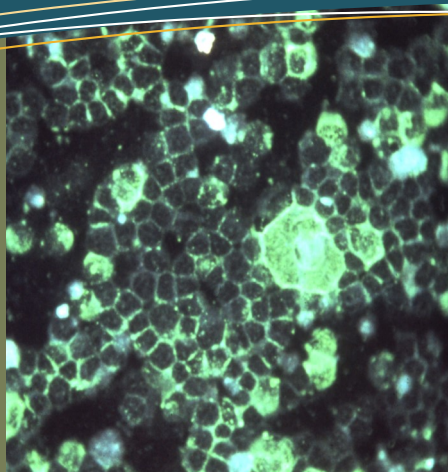


California Emerging  
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### This issue:

- Under Surveillance XXVIII
- Influenza severity by serotype
- New Staff Introductions

## BREAKING NEWS

**The California Emerging Infections Program announces that it has received approval for five years beginning in 2024.**

### In Summary: Under Surveillance XXIII

On November 15<sup>th</sup>, 2023 CEIP hosted its 23<sup>rd</sup> annual Under Surveillance symposium, which brought together local, state, and national experts on emerging and re-emerging infectious diseases for discussion with local healthcare providers, laboratorians, and public health staff. This year's conference included four presentations with seven speakers.

- Dr. Chad Crain and Elisabeth Burnor, epidemiologists at the California Department of Public Health (CDPH), discussed the future of wastewater surveillance and its applications in future emerging infectious diseases beyond COVID.
- Dr. Lekshmi Santhosh, professor and critical care physician at the University of California San Francisco, presented on the little-understood condition of long-COVID, alongside CDPH section chief Kalyani McCullough.
- Katherine Lamba, CDPH epidemiologist, and CEIP's epidemiologist, Ryan Buckman, talked through the changing epidemiology of shigellosis—an enteric pathogen identified in 1898 that has, through antibiotic resistance and a changing demographic target, been designated a “serious” public health threat by the U.S. Centers for Disease Control and Prevention. Finally, CDC Medical Officer
- Dr. Michael Melgar discussed the new vaccine for Respiratory Syncytial Virus and the research behind the federal recommendations. For more information on the CDC's RSV vaccination guidelines, please visit the CDC's website for its use [here](#).

CEIP's Under Surveillance symposium continues to provide continuing education units for nurses and microbiologists through our partners, Kaiser Permanente and Contra Costa County Health Services. Be on the lookout for CEIP Presents: Under Surveillance 2024, the date and program for which will be announced in October.

# Influenza Severity by Type and Subtype

On September 25<sup>th</sup>, 2023, the article “Severity of influenza-associated hospitalizations by influenza virus type and subtype in the USA, 2010-19: a repeated cross-sectional study”, was published in *Lancet Microbe* 2023. The paper examines differences in influenza hospitalizations and outcomes based on subtype during the 2010-11 and 2018-19 influenza seasons using FluSurv-Net data. This information could be used to better predict the hospitalization burden and severity of influenza-related hospitalizations based on which types, and subtypes, of influenza virus are in highest circulation during this and future flu seasons.

Among the 104,969 individuals hospitalized for influenza, 57.7% had influenza A H3N2, 24.6% had influenza A H1N1pdm09, and 17.7% had influenza B virus infections. Once hospitalized, 16.7% required ICU admission, 6.5% received mechanical ventilation or ECMO, and 3% died. Individuals with either A H1N1pdm09 or influenza B had higher odds of in-hospital severe outcomes than those with A H3N2. The adjusted odds ratios (aORs) for A H1N1pdm09 versus A H3N2 were 1.42 (95% CI 1.32-1.52) for ICU admission; 1.79 (95% CI 1.60-2.00) for mechanical ventilation or ECMO use; and 1.25 (95% CI 1.07-1.46) for death. The aORs for individuals infected with influenza B versus influenza A H3N2 were 1.06 (95% CI 1.01-1.12) for ICU admission, 1.14 (95% CI 1.05-1.24) for mechanical ventilations or ECMO use, and 1.18 (95% CI 1.07-1.31) for death.

The influenza type with the highest burden of hospitalization was influenza A H3N2. However, both A H1N1pdm09 and influenza B were found to have a higher likelihood of in-hospital severe outcomes than A H3N2. The findings of this study show the differences in severity between the three influenza subtypes examined and demonstrate the importance of individuals taking precautions against the flu, such as receiving an annual flu vaccine, regardless of which subtypes are circulating

Contributed by Brenna Hall, MPH

Read the full Article by Sumner et al.: [Article in Lancet Microbe](#)

Full Citation: Sumner KM, Masalovich S, et al. Severity of influenza-associated hospitalizations by influenza virus type and subtype in the USA, 2010-19: a repeated cross-sectional study. *Lancet Microbe* 2023. Online first Sept. 25 2023. [https://doi.org/10.1016/s2666-5247\(23\)00187-8](https://doi.org/10.1016/s2666-5247(23)00187-8).

Learn more about how CEIP tracks influenza Hospitalization, as well as national efforts by FluSurv-NET below:

**[CEIP FluSurv-NET](#) | [CDC FluSurv-NET](#)**

# A Note for our Clinical Laboratory Partners:

CEIP will be contacting clinical laboratories on a regular basis, **requesting influenza positive specimens from hospitalized patients.**

These clinical respiratory specimens will be submitted to public health laboratories for PCR testing to determine the influenza A subtype or influenza B lineage.

Subtype and lineage information for surveillance cases will enable CDC to **monitor types and subtypes of circulating influenza viruses** to:

- Describe trends in influenza transmission.
- Detect novel influenza virus circulation.

## New Staff Introductions:

### Annette Sanchez:

#### Administrative Coordinator

Hi! My name is Annette Sanchez. I was born and raised in the San Francisco Bay area, and joined the CEIP team in October as the Administrative Coordinator. Prior to joining CEIP, I worked in various patient care settings from dialysis, primary care, specialty, and subspecialty as well as behavioral health. Stepping into Public Health is definitely a change but a change I've enjoyed thus far. During my free time I love spending my time with my husband and two children, baking, and dancing Hula and Tahitian with my daughter. I'm excited to be joining the team and look forward to learning more about CEIP's contributions to our community.



### Deborah Adeyemi:

#### Epidemiologist, HPV-Impact

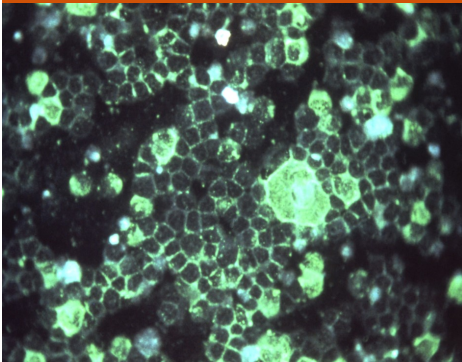
Deborah is thrilled to be joining the HPV-Impact team. Previously, Deborah worked as a Surveillance Epidemiologist with the Georgia Emerging Infections Program in Atlanta, Georgia on health-care associated infections, specifically on the *C. difficile* team. She moved to the Bay Area in August to start her PhD work at UCSF with research interests in perinatal, reproductive, surveillance, and clinical epidemiology, and health disparities and equity. She obtained her MPH in epidemiology from Emory University in 2021. In her spare time, Deborah enjoys watching and listening to true crime documentaries and podcasts, reading/listening to audiobooks, trying new restaurants, and exploring different neighborhoods.





The California Emerging Infections Program (CEIP), a program of Heluna Health, is a joint project of the California Department of Public Health, U.C. Berkeley School of Public Health, and Centers for Disease Control and Prevention, in collaboration with the Alameda County Health Care Services Agency, San Francisco Department of Public Health, Contra Costa County Health Services Department, and the City of Berkeley Health and Human Services Department.

## Cover Image



Photomicrograph of Respiratory Syncytial Virus (RSV) using indirect immunofluorescence microscopy.

Dr. Craig Lyerla, CDC. (1977).

Obtained from the CDC Public Health Image Library.  
(<https://phil.cdc.gov/Details.aspx?pid=3643>)

## We are hiring!

Visit our job postings:

[Heluna Health—Project Coordinator \(MPOX VE\)](#)

[Heluna Health—RESP-NET Surveillance Officer](#)

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