



Sent on behalf of William Isenberg, M.D., Ph.D, Chief Medical & Quality Officer, Sutter Health, and Jeffrey Silvers, M.D., Medical Director of Pharmacy and Infection Control, Sutter Health

Emerging Infections Newsletter for Clinicians

Aug. 30, 2023

Written by Dr. Silvers with contributions from Dr. Joan Etzell (Lab), Lisa Rieg (Pharmacy), and Gordon Sproul (Pharmacy). Please use Google Chrome for the best experience.

Topics

1. *Aeromonas* infections after Tough Mudder in Sonoma County
 - a. *Aeromonas* outbreak
 - b. Take-home *Aeromonas*
2. Malaria
 - a. Locally acquired in three states this year
 - b. Take-home on malaria
3. COVID-19
 - a. BA.2.86 (nickname Pirola)
 - i. New, highly mutated variant under monitoring
 - ii. CDC released special update
 - b. Hospitalizations and ED visits
 - c. Testing results
 - i. National rates
 - ii. Sutter data
 - d. Mask
 - e. Take-home on COVID
4. Influenza
 - a. Time to vaccinate
 - b. Coadministration flu and COVID vaccines
 - c. Take-home on influenza
5. West Nile Virus
 - a. Continued uptick in reported cases in humans in California
 - b. Take-Home on WNV
6. Share the newsletter

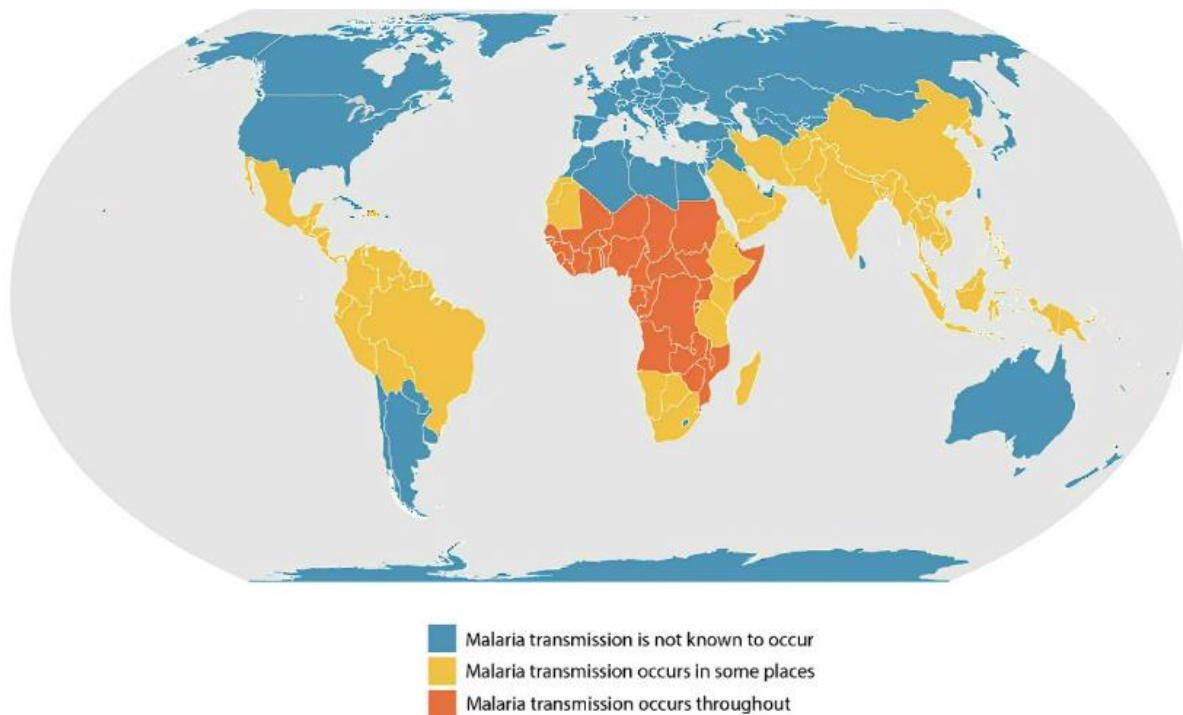
Aeromonas after Tough Mudder Race

- The Tough Mudder is an internationally renowned endurance event that includes distance running interspersed with challenging obstacles that significantly expose the body to mud and water.
- After an event in Sonoma, CA, on Aug. 19 and 20, over 100 participants reported a febrile syndrome with a pustular rash, headache, vomiting and myalgias, beginning within 48 hours of exposure. Most people were treated as outpatients, but a few have required hospitalization. *Aeromonas* has been identified in some cases and is the most likely cause of the outbreak.
- The [Sonoma County](#) Health Department issued notification of the outbreak.
- [Aeromonas](#) are frequently found in freshwater, estuaries, marine environments and sludge, most commonly in warmer months.
- [In humans](#), *Aeromonas* is most frequently associated with acute diarrheal syndromes, wound infections or bacteremia/sepsis. Diarrheal syndromes have ranged from severe cholera-like “rice-water” stools to dysentery with blood and mucus. Studies have varied in their ability to prove *Aeromonas* as the etiology, but that may be due to the species that are isolated. [Cutaneous presentations](#) include cellulitis, pustular lesions and necrotizing fasciitis.
- *Aeromonas* spp. are frequently sensitive to third-generation cephalosporins, tetracyclines, trimethoprim-sulfamethoxazole and fluoroquinolones. Resistance to oral cephalosporins and penicillins are common.
- *Staph aureus* and Streptococcus can cause similar syndromes and treatment should cover those organisms also, prior to culture results.
- **Aeromonas Take-Home Message:**
 - An outbreak of *Aeromonas* infections appears to have occurred in Sonoma County after a Tough Mudder event that extensively involved human exposures to mud and water.
 - *Aeromonas* species can cause a variety of illnesses, predominantly an acute diarrheal syndrome, skin rash, or sepsis. The incubation period is usually 24-48 hours so those who were exposed should either have developed illness already or are unlikely to have any problems.
 - Wound cultures should be obtained, where appropriate. Ask the lab to include evaluation for *Aeromonas*.
 - *Aeromonas* are frequently sensitive to third generation cephalosporins, tetracyclines, trimethoprim-sulfamethoxazole, and fluoroquinolones.
 - Cases associated with this event should be reported to the local health department.

Malaria

- This is the first year since 2003 that locally acquired mosquito-borne malaria has been identified in the United States. Maryland has just been added to the list that included Texas and Florida.
- [Texas](#) reported a single case of *Plasmodium vivax* malaria in June. This was identified in Cameron County, which is in the south-eastern part of Texas, bordering Mexico.
- Seven people within close proximity of one another, were identified with *P. vivax* infections in Florida, starting the end of June, with the last case in mid-July.
- [Maryland](#) reported a single case of *P. falciparum* on Aug.18. *P. falciparum* can cause rapidly developing life-threatening illness necessitating prompt diagnosis and treatment. This was the first locally transmitted case identified in Maryland in over 40 years.
- The last locally acquired infections in California were reported in 1989.
- In 2021, there were an estimated [247 million cases](#) of malaria in the world with over 600,000 deaths. Over 95% of cases were acquired in Africa.

- About 2,000 cases are diagnosed in the United States each year, almost all in immigrants and travelers returning from countries where malaria transmission occurs. The map below shows an approximation of the parts of the world with endemic malaria.

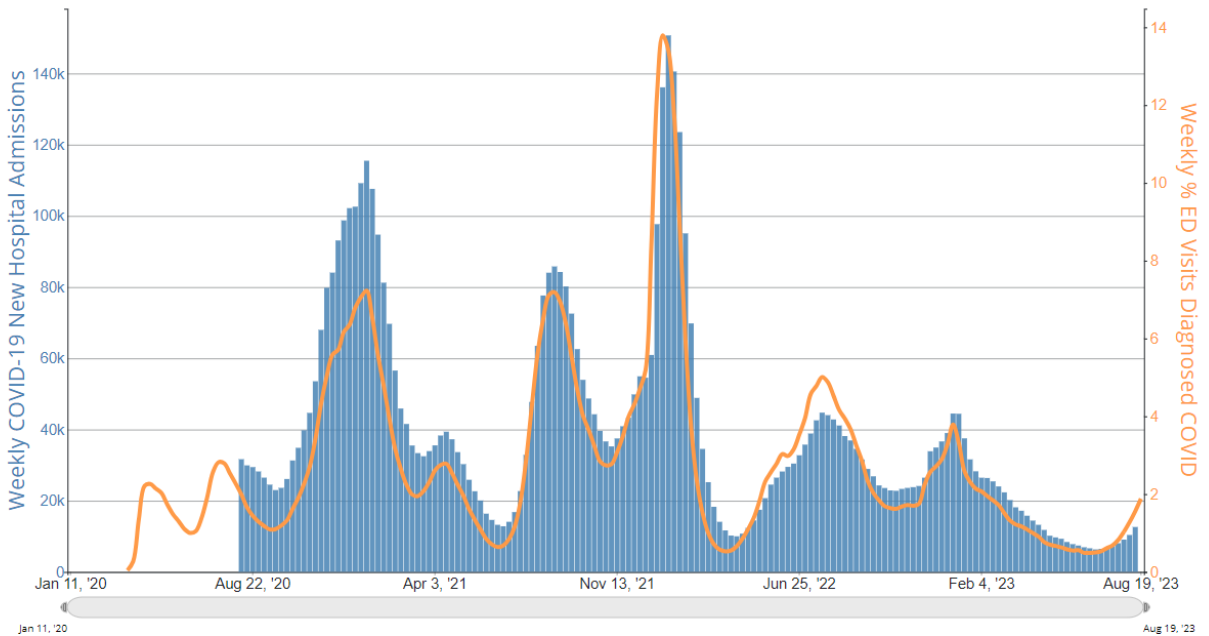


- The incubation period is typically seven to 14 days for *P. falciparum* and 12 to 18 days for *P. vivax* and *P. ovale*, but it can be delayed for weeks to months when antimalaria prophylaxis was taken.
- Consider malaria in persons with undiagnosed fevers, new anemia and thrombocytopenia and a history of international travel to an area where malaria transmission occurs. Although the risk of acquisition in the United States is low, it should also be considered in this same patient population without a travel history.
- **Malaria Take-Home Message**
 - For the first time in 20 years, locally acquired malaria has now been identified in the United States. Unrelated cases have been diagnosed in three states.
 - Consider the diagnosis in persons with undiagnosed fevers, new anemia, thrombocytopenia and a history of international travel to an area with known risk of malaria transmission. It should also be considered in persons with the same presentation without any international travel.

COVID-19

- CDC updated genomic sequencing data is released every 2 weeks and will be updated on Sept.1.
- The graph below and the subsequent table continue to show increasing [hospitalizations](#) and emergency department visits in the United States secondary to COVID. Week-to-week ED visits continue to increase faster than hospital admissions. Hospitalization rates remain low and do not suggest a rapid surge. The potential effect of BA.2.86 is unknown but could range from minimal impact to a major spike in cases.

COVID-19 New Hospital Admissions and Percentage of Emergency Department (ED) Visits Diagnosed as COVID-19, by Week, in The United States, Reported to CDC

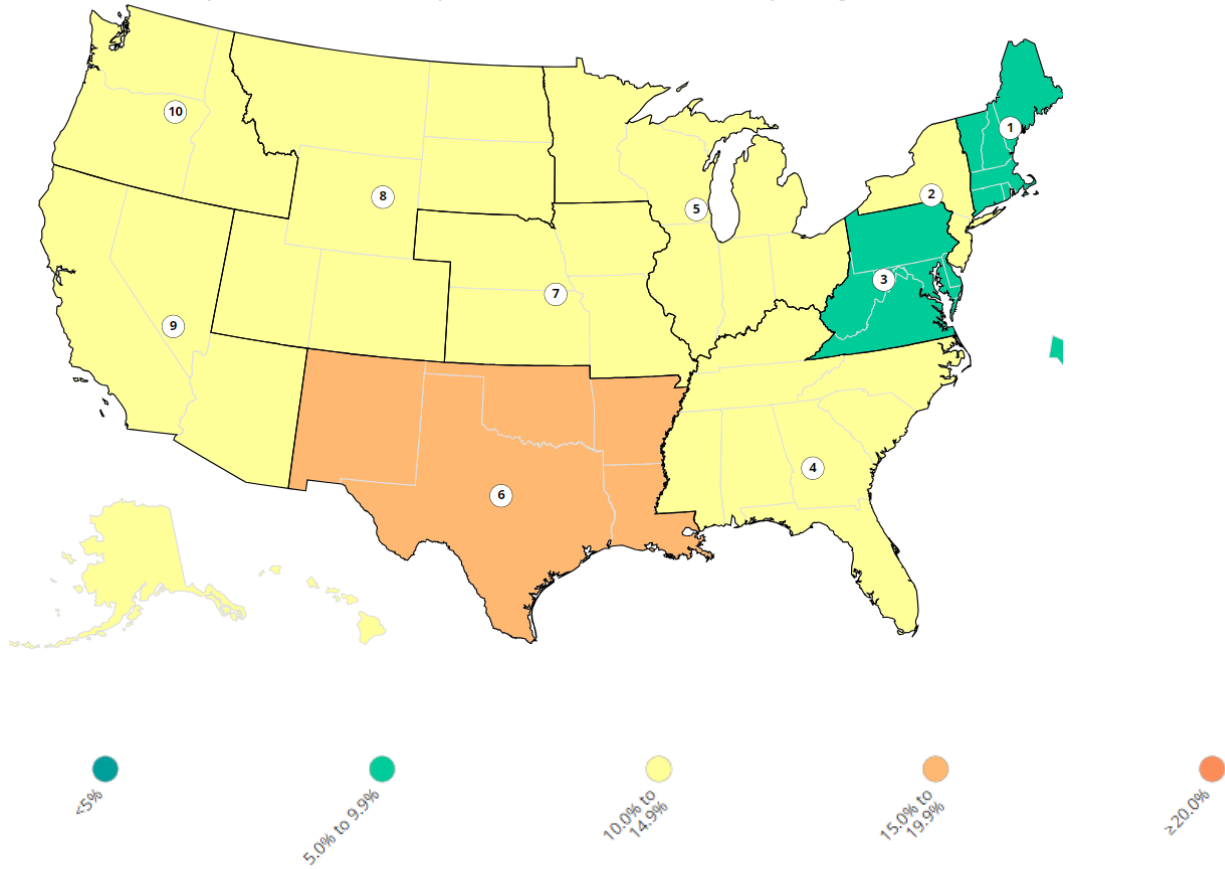


<p>COVID-19 HOSPITAL ADMISSIONS (PAST WEEK)</p> <p>12,613</p>	<p>% CHANGE IN COVID-19 HOSPITAL ADMISSIONS</p> <p>21.6%</p>	<p>COVID-19 HOSPITAL ADMISSIONS PER 100,000 (PAST WEEK)</p> <p>3.8</p>
--	---	---

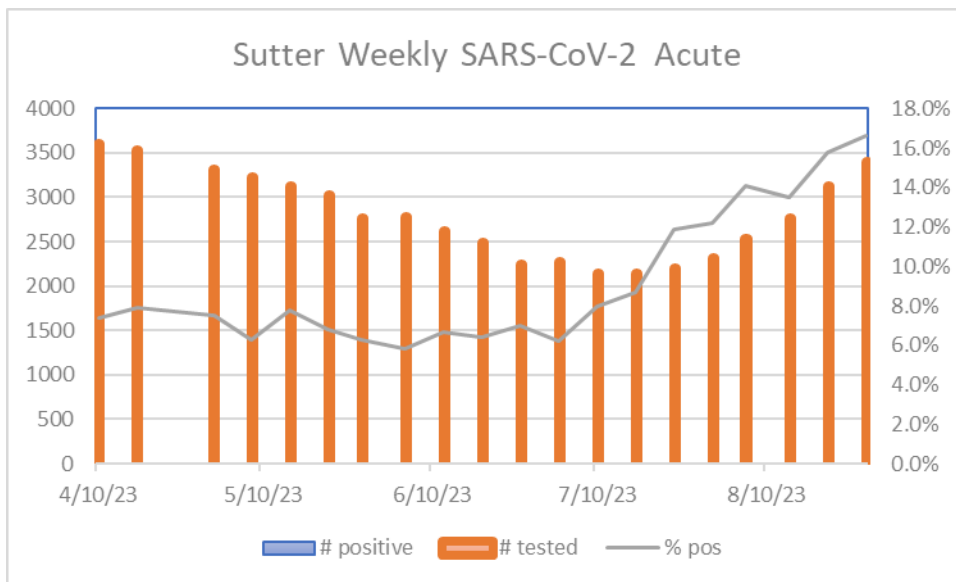
CDC | Data through: August 12, 2023. Posted: August 24, 2023

- [National](#) molecular test positivity rates by region are shown on the map below. Most of the United States is experiencing NAAT (Nucleic Acid Amplification Test) COVID test results above 10%. Region 8 turned yellow in the last week.

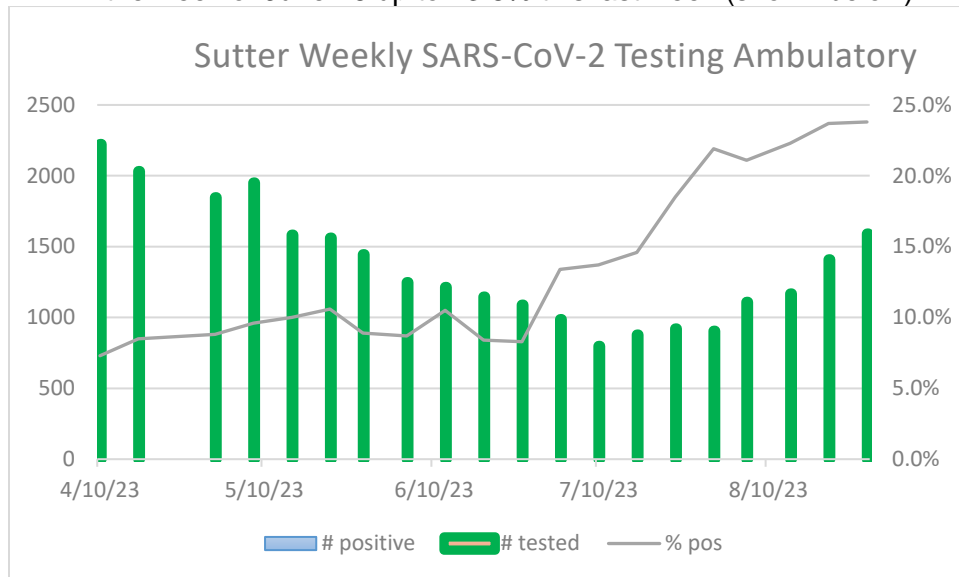
Percent Positivity of COVID-19 Nucleic Acid Amplification Tests (NAATs) in the Past Week by HHS Region - United States



- Updated Sutter data below continues to demonstrate that increased testing is being performed, approaching the rates in emergency departments last seen this past April. Test positivity rates continue to increase and are dramatically higher than rates in the spring and early summer. This supports that COVID is actively circulating, patients are becoming more symptomatic with newer strains, and are seeking medical care.



- Ambulatory positivity rates have rapidly escalated in the last 2 months, going from 8.3% the week of June 26 up to 23.8% this last week (shown below).



- **COVID Take-Home Message:**

- A substantial amount of SARS-CoV-2 is circulating. Many people are symptomatic and seeking medical care. Fortunately, hospitalization rates are not challenging the healthcare system at this time.
- Testing positivity rates continue to increase.
 - National molecular testing positivity rates are more than 10% in almost the whole country.
 - Sutter ambulatory and emergency departments continue to increase testing, and positivity rates are escalating.
- Ambulatory and emergency department positivity rates are 24% and 17%, respectively.
- [BA.2.86 is concerning](#), but data is being collected and the clinical impact of this strain remains unknown.
 - Hospitalizations and emergency department visits have continued to increase for seven consecutive weeks now.
 - This trend could be influenced in the future by another new variant (such as BA.2.86), behavior (social distancing, use of masks/respirators and hand hygiene) and vaccination (availability and uptake of the new monovalent vaccine).
 - The upcoming XBB COVID-19 vaccines have previously demonstrated an immune response against the EG.5 and FL.1.5.1 variants as well as early circulating XBB strains of Omicron. While the protection offered against BA.2.86 is still unknown, we expect more information to be shared during their special ACIP meeting on September 12th.
- Increasing community spread of COVID could negatively impact the workforce.
- **Masking** – Appropriate use of PPE is a highly effective and crucial tool.
- **Sutter-provided procedure masks are strongly recommended and will continue to be readily available for all workforce members, patients, and visitors.**

- **Related Links**

- [CDC Caring for Patients](#)
- [CDC Data Tracker](#)
- [CDC Latest Updates](#)
- [CDC Vaccine Information](#)
- [CDPH Tracking and Vaccination Updates](#)
- [Sutter Health for Clinicians](#)
- [Sutter Health for Patients](#)
- [WHO Table of Contents](#)

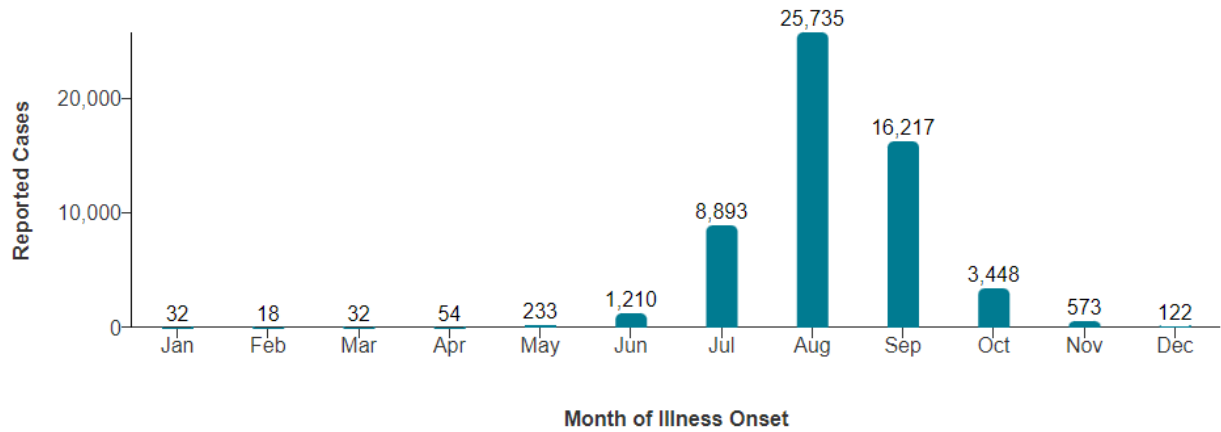
Influenza

- Influenza activity remains at low inter-seasonal levels. Although last season appeared early (the middle of September), a repeat is not anticipated this year. Flu activity typically increases in November in the United States.
 - Time to immunize against Influenza. September and October are good times to get a flu vaccine. Full protection takes about 2 weeks after the vaccination.
 - Everyone 6 months and older in the United States, with rare exception, should receive a flu vaccine every season.
 - Based on data during the latest influenza seasons in the Southern Hemisphere, a good vaccine match is anticipated.
 - This equates to about a 40-50% reduction in influenza infections in vaccinated persons versus unvaccinated.
 - The flu vaccine can be administered at the same time as the COVID vaccine with the following guidance
 - The same arm can be used for COVID and the standard flu vaccine (at least 1 inch apart)
 - For persons 65 years and older receiving the recommended enhanced vaccine, administering the COVID and enhanced flu vaccine in different arms may be preferable.
 - The high-dose and adjuvanted flu vaccines may be more likely to cause local side effects compared to the standard dose flu vaccine. Administering these vaccines in [different arms](#) may reduce the intensity of local arm side effects in one arm.
 - Co-administering the flu and COVID vaccine ensures that people get both of their vaccines. This is helpful in case they are not able to return for the additional vaccine at a later time.
- **Influenza Take-Home Message**
 - Influenza virus is circulating at low inter-seasonal levels throughout the world.
 - The flu season is more likely to start in November rather than begin in mid-September like it did last year.
 - An annual influenza vaccine remains the best way to protect against influenza and associated complications
 - September and October are good times to be vaccinated against the flu.
 - Flu and COVID vaccines can be administered at the same time.

West Nile Virus (WNV)

- WNV activity in California is increasing rapidly. The [CDC](#) graph below shows that August and September are typically the peak months of reported cases nationally.

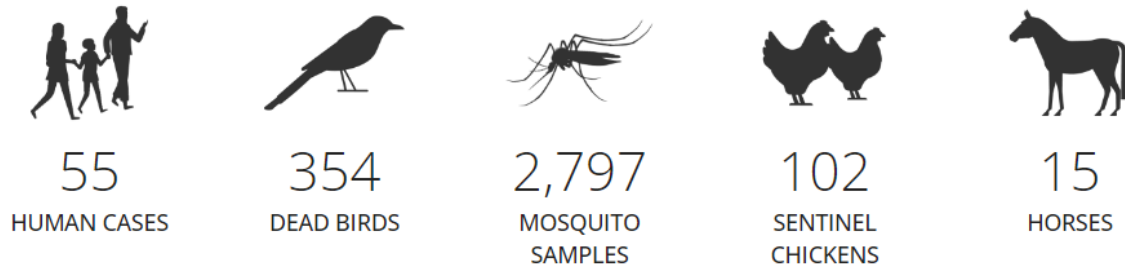
West Nile virus human disease cases reported by month of illness onset, 1999-2022, All disease cases



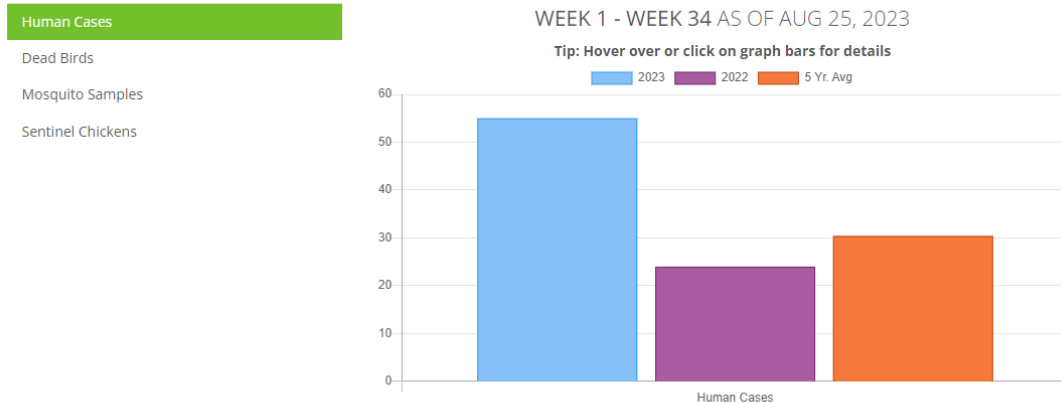
- In the last 2 weeks, year-to-date totals for reported cases in humans in [California](#) increased from 14 to 55 (pictograph below). This is approximately twice the five-year state average looking at calendar week 1- week 34 (graph below pictograph).

2023 WEST NILE VIRUS ACTIVITY IN CALIFORNIA

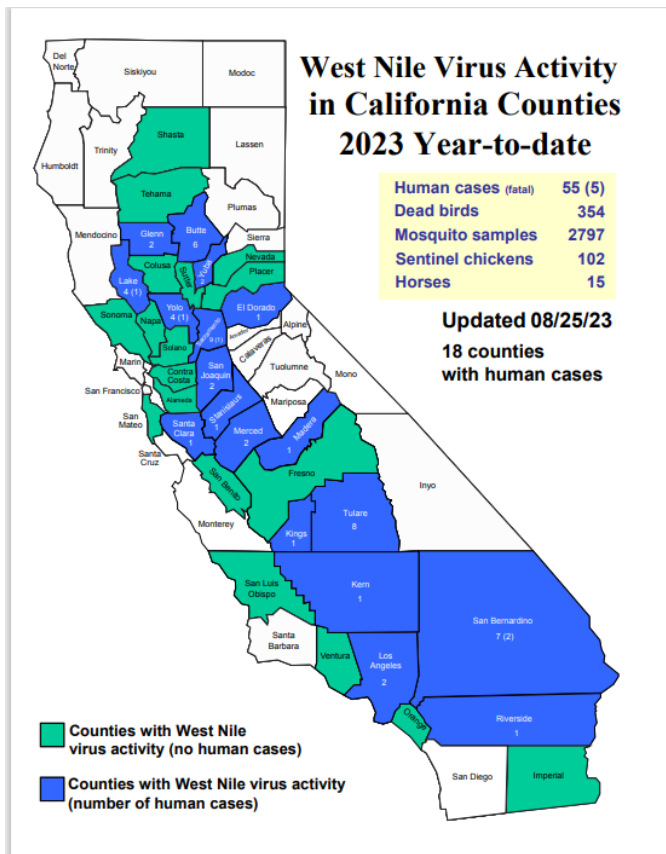
LAST UPDATED: AUG 25, 2023 5:29PM PST



YEAR-TO-DATE (2023) COMPARED TO PREVIOUS YEAR (2022)



The CDPH map below demonstrates the widespread distribution of WNV activity.



- **West Nile Virus in California Take-Home Message**
 - Reported cases of WNV in humans have increased significantly in the last 2 weeks.
 - This is much higher than the year-to-date average seen over the prior 5 years.
 - Numbers are anticipated to continue to increase through September.

Share the Newsletter

Anyone who would like to be added to the Emerging Infections newsletter should send a request to bryan.gardner@sutterhealth.org

This communication is intended for clinicians caring for Sutter patients. If you have questions, please reach out to us at clinicians@sutterhealth.org.

