



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

Nov. 1, 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.

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Recalled Eye Drops

- The [FDA](#) released an alert on Oct. 30 warning consumers, health professionals, ophthalmology and pharmacy to immediately discontinue sale and use of [26 OTC eye-drop products](#).
- The facility that manufactures these products was found to have positive bacterial test results from the critical drug production environment.
- The products are marketed under the following brands:
 - CVS Health
 - Leader (Cardinal Health)
 - Rugby (Cardinal Health)
 - Rite Aid
 - Target Up&Up
 - Velocity Pharma
- Consumers should dispose of these products.
- Adverse events or side effects from these products should be reported to the FDA's MedWatch Safety Program

Malaria

- Most cases of malaria in the United States are after international travel to endemic areas. Typically, about 2,000 cases are identified annually in the United States.
- This year a small number of locally transmitted cases were identified in Florida (7), Texas (1) and Maryland (1). The cases in Florida and Texas occurred in the vicinity of imported cases of malaria. Although no imported case was reported near the case in [Maryland](#), about 10% of imported cases are typically reported from Maryland every year.
- The most virulent strain of malaria is *Plasmodium falciparum*. Although found in multiple parts of the world, it predominates in sub-Saharan Africa. *P. vivax* is more prevalent in South America and Southeast Asia.
- There are over [400 species](#) of *Anopheles* mosquitoes, but less than 40 have been identified as potential vectors for malaria. Most species prefer non-human animal hosts. It is [believed](#) that the *Anopheles* mosquitoes in the United States will only bite humans 30-50% of the time.
- In the United States, *Anopheles* mosquitoes have not been tracked for many years since malaria was considered eliminated in the United States in 1951, and 2023 was the first time in 20 years that local transmission has been reported in our country.
- Although mosquitoes are routinely trapped and tested in the U.S., testing has been limited to the *Culex* mosquito (which transmits West Nile Virus). Most of the country has weather that is too cold for the survival of most *Anopheles* mosquitoes.
- Increasing heat and especially humidity in parts of the United States can increase the territory where mosquitoes can thrive. In addition, many *Anopheles* mosquito species have become resistant to insecticides through so many years of usage.
- The only malaria rapid diagnostic test approved in the United States is the BinaxNow® malaria. This test measures histidine rich protein (HRP 2), which is specific to *P. falciparum* and a common antigen test (aldolase) that detects all Plasmodium species.
- *P. falciparum* with HRP deletion mutations have been identified in multiple areas of the world where *P. falciparum* is the most common malaria species. This can result in a negative *P. falciparum* test with a positive common antigen test.

- A positive BinaxNow® malaria test needs to be followed by a blood smear evaluation by a qualified person. This can confirm the diagnosis, speciate and determine whether there is mixed infection.
 - The BinaxNow® malaria test should not be used alone to rule out malaria in patients who are considered immunologically naïve to the infection.
 - This typically applies to citizens of the United States and other countries where malaria is not endemic. Non-immune individuals may be symptomatic at very low parasite densities which may be below the [limit of detection](#) of 5,000 parasites per µL for this test.
 - In this situation, use both the thick and thin smears and the antigen test in patients with typical symptoms or known history of possible exposure to malaria.
- Each year about 10-30 cases of malaria are identified in pregnant women in the US. Treatment recommendations have been complicated because of differences based on the location where disease was acquired, high pill burden, side effects, contraindications and restrictions during the first trimester.
- Artemether-lumefantrine (Coartem®) has now been recommended by the [WHO](#) for treatment of uncomplicated malaria during all trimesters of pregnancy. The CDC wrote a commentary supporting that decision, which is published in [Clinical Infectious Diseases](#) October 2023.
- **Malaria Take-Home**
 - Although locally transmitted malaria was identified in three different states for the first time in 20 years, the risk of malaria becoming endemic in the United States remains very low with our present efforts. Climate change, a new species of *Anopheles*, and continued mutations in *Plasmodia falciparum* could ultimately impact our situation.
 - The BinaxNow® malaria test is a very good test for the rapid diagnosis of malaria, but false negative *P. falciparum* results are being found in parts of the world because of a mutation in HRP. The test will still report that unspicated malaria is present. All positive results must be confirmed with a blood smear. Blood smears should always be performed to rule out malaria in a person who is anticipated to be immunologically naïve to malaria.
 - Artemether-lumefantrine (Coartem®) is now recommended by the [WHO](#) for treatment of uncomplicated malaria during all trimesters of pregnancy. This significantly simplifies the choice of regimen during pregnancy.

ACIP Meeting Update

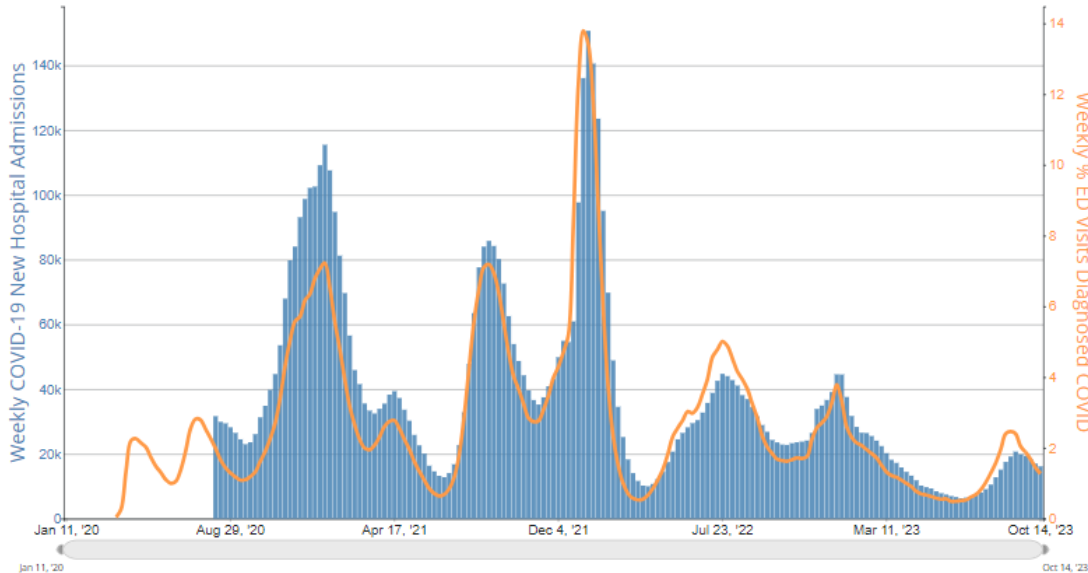
- Between Oct. 25-26, the CDC's Advisory Committee on Immunization Practices [met to discuss policy, safety and efficacy updates](#) to several different classes of vaccines. Highlights include:
 - **Meningococcal:** The committee voted 10-4 to include the pentavalent meningococcal vaccine, Penbraya™ (MenABCWY) as an option for vaccination when both MenACWY and MenB are indicated at the same visit. Those who voted against the recommendation preferred to wait until 2024 to incorporate Penbraya™ when the complete meningococcal immunization schedule will be reviewed.
 - **RSV:** ACIP reviewed the [early safety and immunogenicity data](#) for GSK's RSV vaccine Arexvy™ in adults 50-59 years of age at increased risk for severe RSV disease. If an expansion of FDA approval is granted, CDC will decide on recommendations for use in 2024.

- **COVID-19:** Consideration for additional XBB monovalent COVID-19 vaccine doses in older adults will be discussed by ACIP in February 2024, and future COVID-19 vaccine formula updates will be addressed at the June 2024 ACIP meeting.

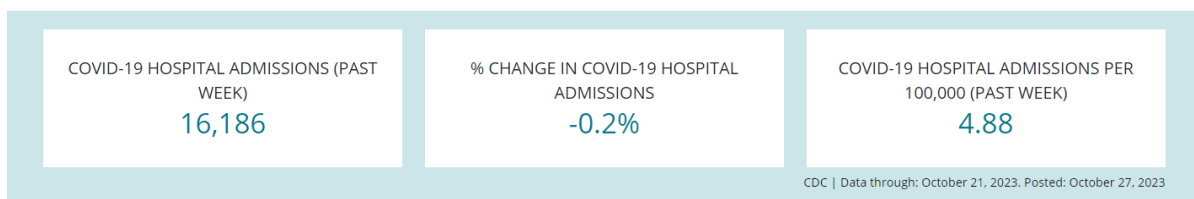
COVID-19

- Hospitalizations in the United States are a surrogate for the virulence of the circulating strain. The graph below and the subsequent table show:
 - Hospitalizations (blue vertical bars) and the percentage of patients being diagnosed with COVID in emergency departments (orange run line) are stable.

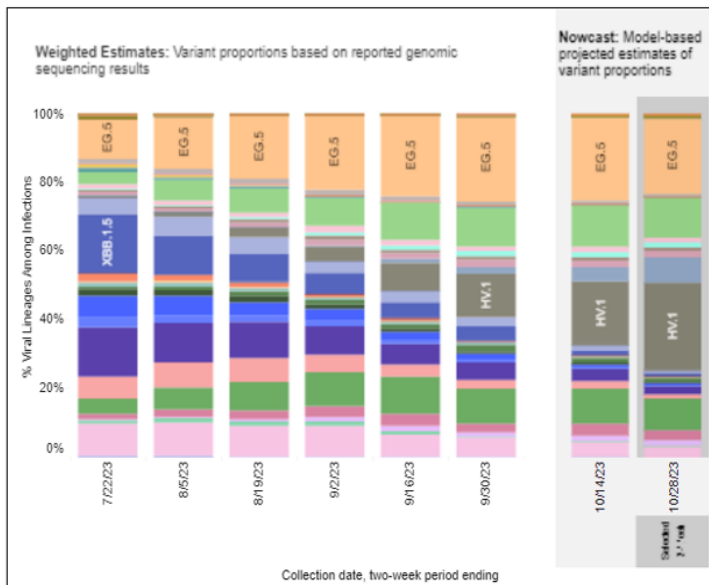
COVID-19 New Hospital Admissions and Percentage of Emergency Department (ED) Visits Diagnosed as COVID-19, by Week, in The United States, Reported to CDC



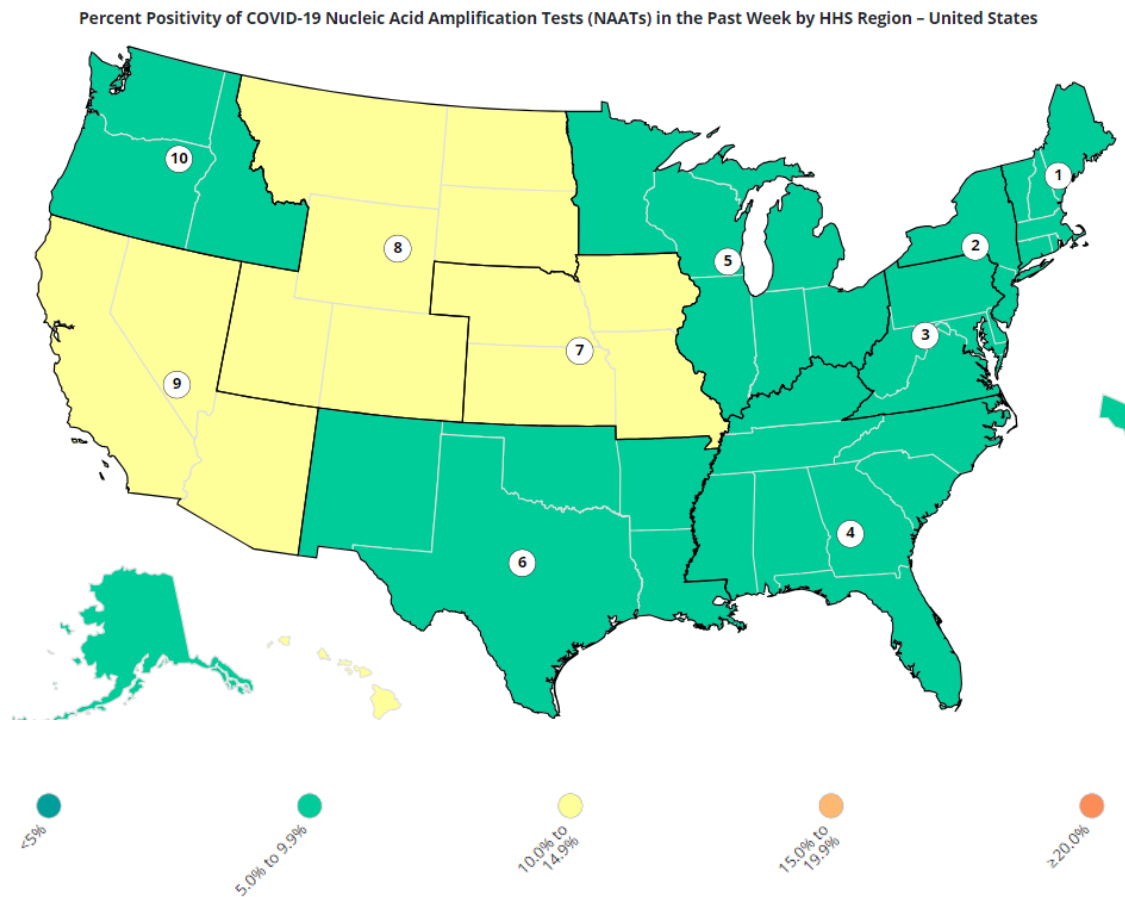
- The CDC tracks hospital admissions per 100,000 county population. Nationally, rates have been essentially unchanged in the last 2 weeks. The admissions percent change in the last week is only -0.2%.



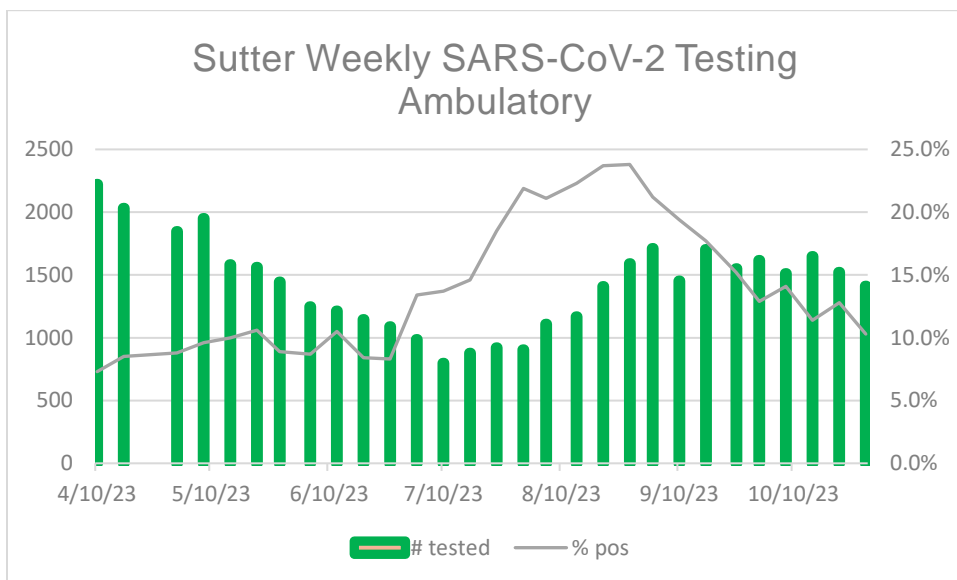
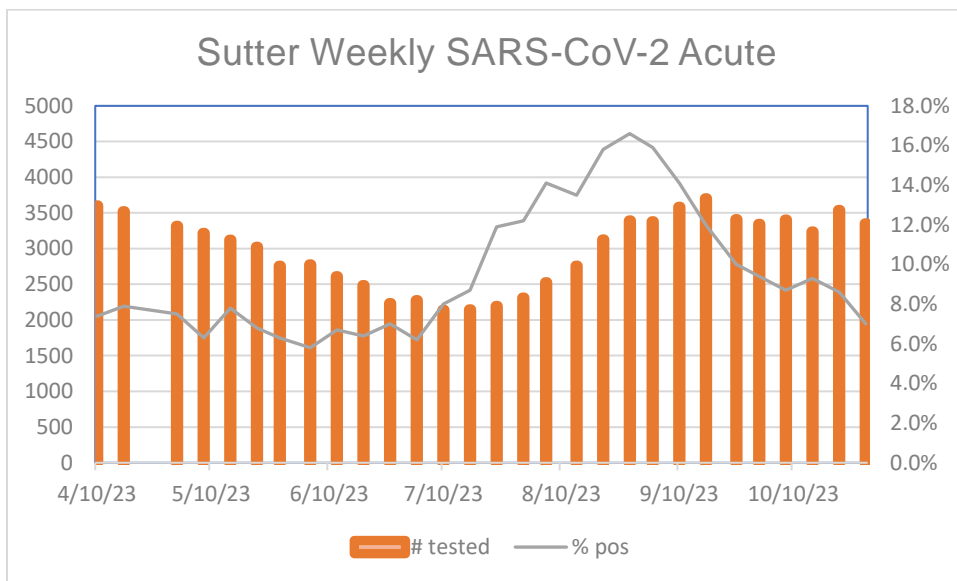
- [National genomic sequencing](#) is updated every 2 weeks by the CDC. The most recent information goes through Oct. 28 (graph below). HV.1 has now displaced EG.5. The top four isolates constitute almost 70% of all sequenced strains. They are all derived from XBB.



- [National](#) molecular test positivity rates by region are demonstrated on the map below. Areas 2, 6, and 10 have now turned green. California (region 9) remains in yellow, which represents a 10-14.9% test positivity rate. Region 9 positivity was 11% last week.



- Updated Sutter testing data below show another decline in positivity rates. They are now in the range of what was seen April through June. Significant levels of testing are being performed in emergency departments and ambulatory environments.



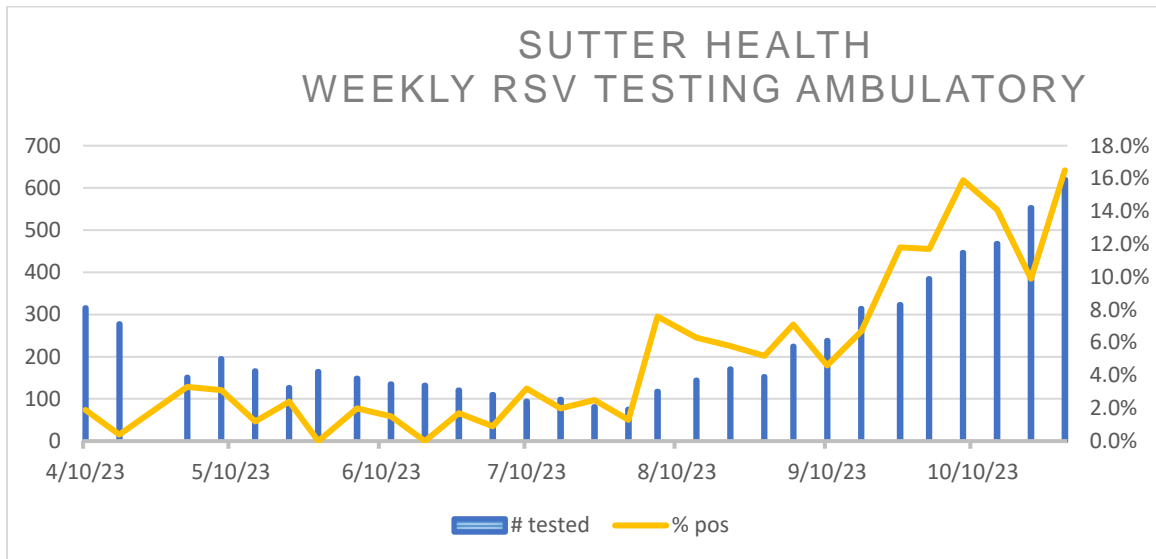
- **COVID-19 Take-Home:**
 - National hospitalizations and emergency department visits are stable, but Sutter Health testing positivity rates are continuing to fall.
 - Although HV.1 displaced EG.5 as the most frequently identified isolate, no special significance is attributed to this.
 - Sutter ambulatory and emergency department positivity rates are 10.3% and 7.0% respectively.
 - The XBB vaccine has significant potential to mitigate a winter outbreak. Don't miss an opportunity to provide this important protection.

- **Related Links**
 - [CDC Caring for Patients](#)
 - [CDC Data Tracker](#)
 - [CDC Latest Updates](#)
 - [CDC Vaccine Information](#)
 - [CDPH Tracking and Vaccination Updates](#)
 - [Sutter Health for Clinicians](#)

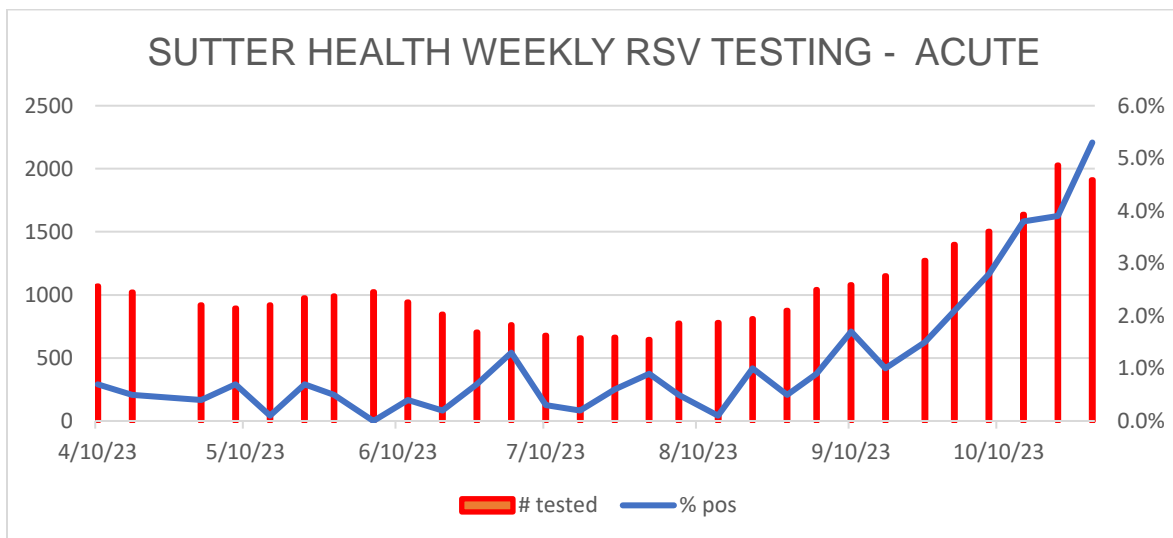
- [Sutter Health for Patients](#)
- [WHO Table of Contents](#)

RSV

- RSV is increasing in California. [Statewide](#), RSV positivity rates were up to 7.4% between Oct. 15-21, compared to 5.8% the prior week.
- RSV is increasing in the ambulatory setting. Positivity rates are now 16.5% for the last week with a significant increase in testing. Rates appeared to decrease for 2 weeks, but they have escalated again.
- See graph below.



- The following graph demonstrates that ED positivity rates are now over 3% for 3 consecutive weeks, most recently at 5.3%.



- RSV results by age are in the following table for the week ending Oct. 29. Positivity rates in children less than 6 years old have increased to 34.6% in the ambulatory environment and 14.9% in the emergency departments.

- Although most of the increased RSV activity continues to be identified in children less than 6 years old, the age range is increasing. There is an increased number of children between 6 years up to 12 years old being identified. In adolescents, 12-17 years old, positivity rates remain less than 3%.
- More disease is starting to be identified in persons 60 years and older. Because of their increased risk, more older persons may start to be hospitalized secondary to RSV. In addition to older age, hospitalizations with RSV are more common in persons with CHF or COPD. Vaccination of high-risk persons can mitigate this risk. See table below.

Location	<6 years old		6 to < 12 years old		≥ 60 years old	
	Number Tested	% Positive (number)	Number Tested	% Positive (number)	Number Tested	% Positive (number)
Ambulatory	228	34.6% (79)	66	18.2% (126)	100	5.0% (5)
Acute (ED)	451	14.9% (67)	107	5.6% (6)	758	2.1% (16)

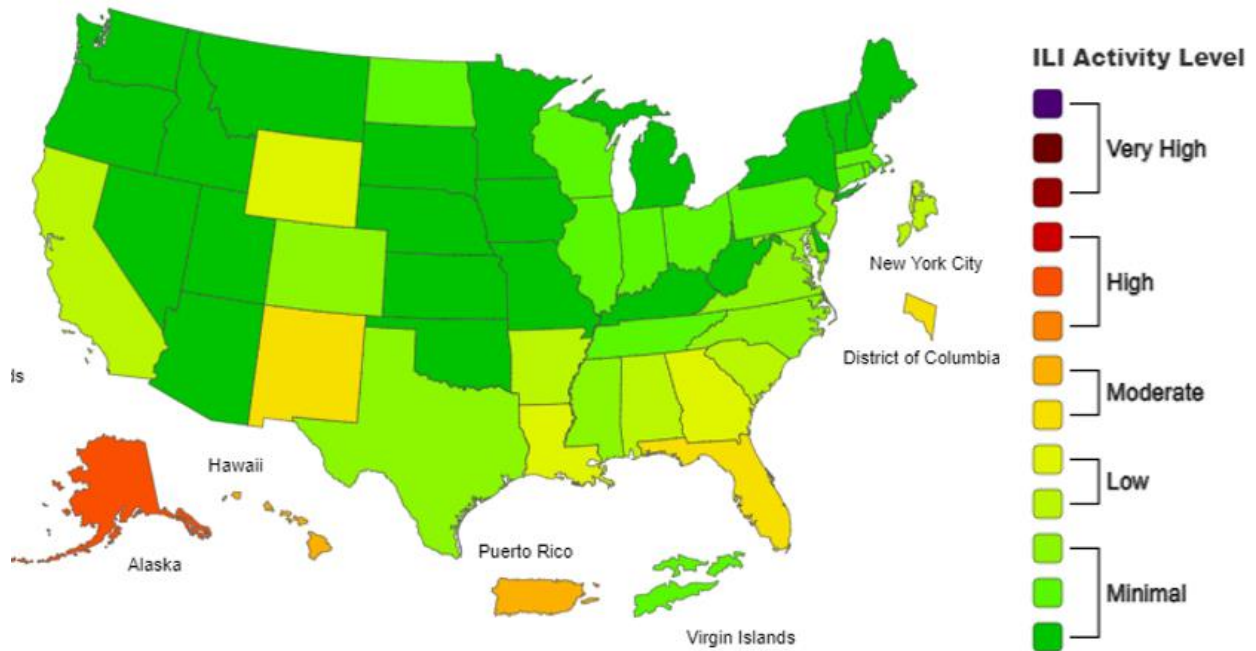
- Within Sutter, Nirsevimab is available in 50 mg doses for infants less than 5 Kg. The 100 mg dose remains in limited supply.
- The Abrysvo™ RSV vaccination administered between 32 through 36 weeks of gestation is an available option that should be discussed with patients during prenatal care.

RSV Take-Home:

- RSV rates are increasing in California.
- RSV detections have increased significantly in the last week. Most recently, one out of every three children ≤ 6 years old tested for RSV in the outpatient environment is positive. Almost 15% are positive in the ED in that age group. More disease is being diagnosed in persons 60 years and older.
- RSV is increasing much more than influenza and COVID at this time.
- In appropriate symptomatic patients, testing should still be performed.
- High-risk patients 60 years and older should be offered the RSV vaccine.
- The Abrysvo™ RSV vaccine should be discussed with patients between 32 through 36 weeks of gestation and administered if birth person consents.

Influenza

- Influenza activity in the United States remains low. The [CDC](#) received 10% less specimens during week 42 compared to week 41. Out of 44,365 specimens tested by clinical labs during week 42 (Oct.15-21), only 750 were positive (1.7%). That is only slightly higher than the 1.3% in the prior week. Influenza A H1N1 dominated.
- Influenza-like activity, the surrogate for influenza used by the [CDC](#), is on the map below.
- Only Alaska reports high activity. Drilling down to the [Alaska Department of Public Health](#), the increased cases reported are actually influenza A.



- [CDPH](#) reports influenza activity in California. The map below shows that activity within our state remains minimal. Statewide positivity rates during week 42 were essentially the same as the national rate at 1.8%.

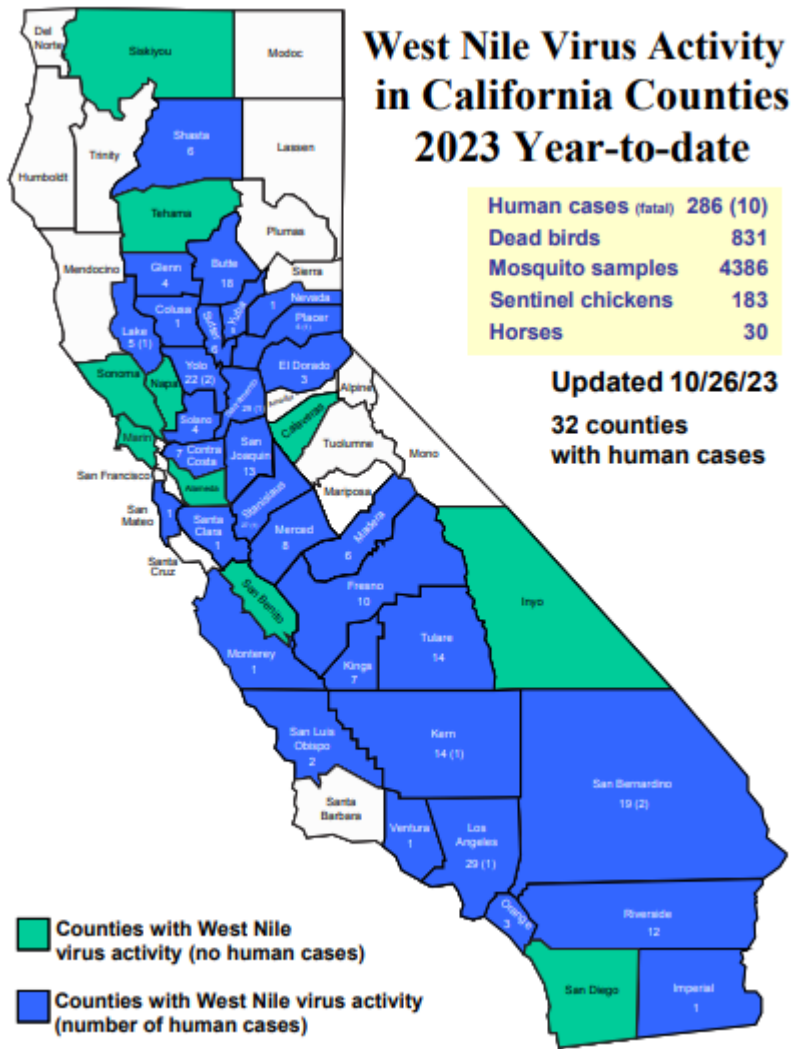


Geographic Area	Activity Level
California Statewide	Minimal
Northern Region	Insufficient data
Bay Area Region	Low
Central Region	Low
Upper Southern Region	Minimal
Lower Southern Region	Low

- **Influenza Take-Home:**
 - Influenza activity remains very low in the United States. Alaska is the only state reporting significant cases of influenza.
 - Positivity rates in California are essentially the same as national rates at 1.8%.
 - It seems we will not have an early influenza season.
 - Vaccination can still decrease the morbidity and mortality of those who do get infected with Influenza.

West Nile Virus (WNV)

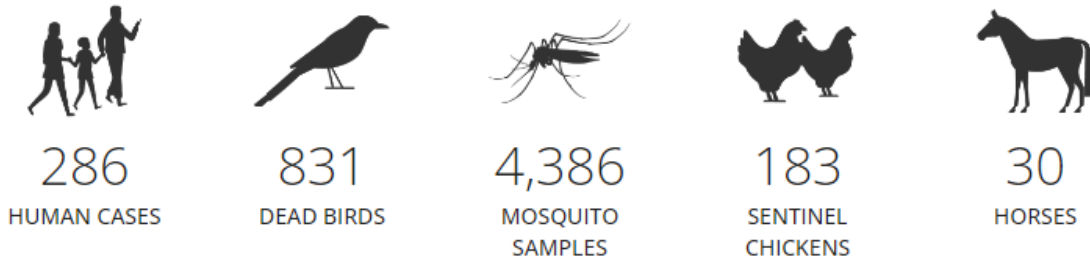
- Cases of [WNV in California](#) are still reported statewide, but numbers are decreasing. The state map below shows counties with reported WNV cases in humans, colored blue. Cases have now been identified in 32 counties. Ten people have now been reported with WNV-related death.
- The counties reporting cases in the last week include Kern, Kings, Los Angeles, Madera, Placer, Sacramento, San Bernardino, San Joaquin, San Luis Obispo, Stanislaus and Yolo. This is the first WNV positive human case from Imperial County this year.



- Year-to-date total for reported cases in humans in [California](#) increased by only 15 in the last week. That is down from 39 new cases two weeks ago.

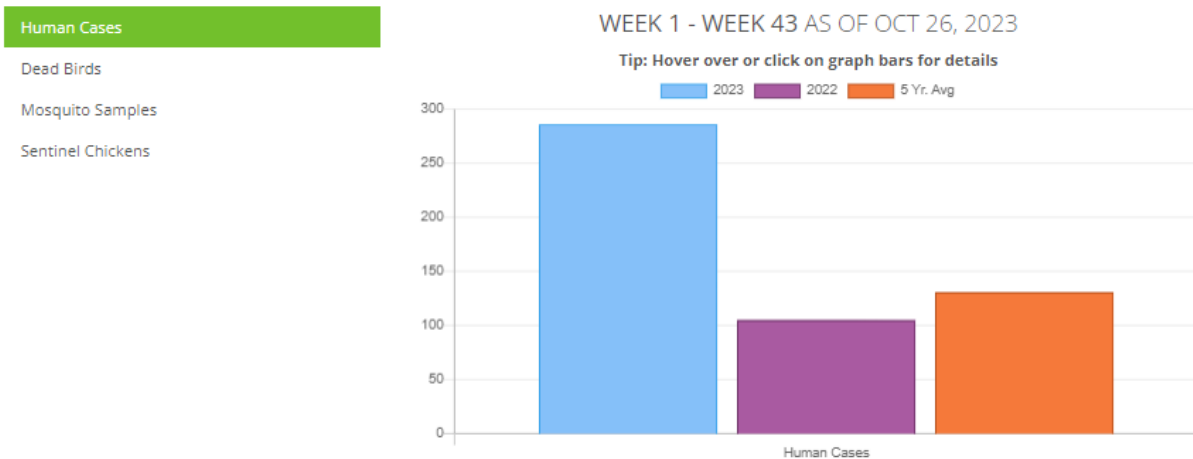
2023 WEST NILE VIRUS ACTIVITY IN CALIFORNIA

LAST UPDATED: OCT 26, 2023 12:44PM PST



- The graph below shows that California in 2023 will finish with more than twice the prior five-year annual average of cases.

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



- **West Nile Virus in California Take-Home Message**
 - Although WNV transmission and reported cases in humans remains widespread throughout California, reported cases are decreasing.
 - Some of the cases may be from delayed reporting.
 - Temperatures are decreasing so it is likely that we are near the end of this WNV season.

Share the Newsletter

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