ZOONOTIC DISEASES FACT SHEET
SACRAMENTO COUNTY 2023

Zoonotic diseases are spread between animals and humans. They can be caused by viruses, bacteria, and parasites through contact with infected animals, tick or mosquito bites, or eating or drinking something unsafe (e.g. unpasteurized milk, undercooked meat, or contaminated water). This report provides data on zoonotic diseases reported in Sacramento County for the years 2019 through 2023.

In Sacramento County, the total number of reported cases of viral-related zoonotic diseases increased 475.0% between 2019 and 2023 [Table 1]. This surge is due to the drastic increase in West Nile Virus (WNV) cases that was likely a result of greater mosquito populations after the heavy rainfall from the previous winter[1,2]. The greater number of mosquitoes carrying WNV resulted in more human cases of WNV, with a 1225.0% increase between 2019 and 2023. As expected with most mosquito-borne diseases, WNV cases increased during the warmer summer months [Figure 1].

WNV can be a serious disease. In 2023, 45 out of the 53 cases were neuroinvasive, meaning the virus had spread into the central nervous system. Additionally, 84.9% of reported cases required hospitalization [Figure 2], with an average length of stay of nine days, based on available information. The age range of those hospitalized was 27 to 86 years, with the highest hospitalization rates observed in individuals aged 65 years and older [Figure 3]. Two of the cases were fatal.

Table 1. Number of Cases with Viral Zoonotic Diseases, Sacramento County, 2019-2023

Disease	2019	2020	2021	2022	2023
Chikungunya	1	0	0	2	4
Dengue	10	1	3	6	3
West Nile Virus Infection	4	7	6	6	53
Neuroinvasive	4	5	6	6	45
Non-Neuroinvasive	0	2	0	0	8
Zika Virus Infection	1	0	0	0	2
Total	20	15	15	20	115

Figure 1. Number of West Nile Virus Cases by Month, Sacramento County, 2019-2023

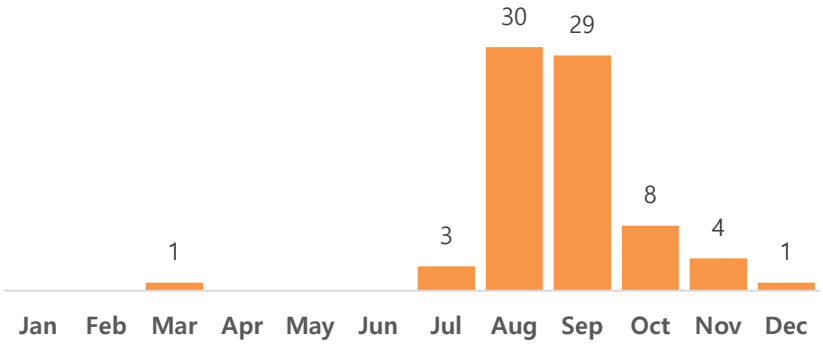
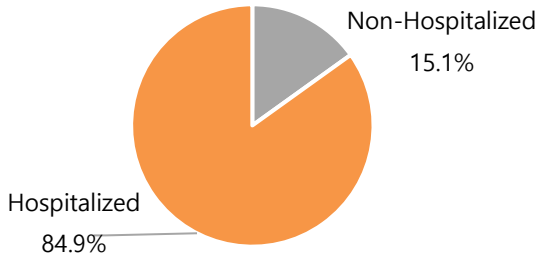


Figure 2. West Nile Virus Cases Hospitalized, Sacramento County, 2023



Note: All disease counts include confirmed and probable cases

Sacramento County – Department of Health Services – Division of Public Health – Epidemiology Unit
Dr. Olivia Kasirye, County Health Officer – Phone: (916) 875-5881 – Fax: (916) 854-9709

ZOONOTIC DISEASES FACT SHEET
SACRAMENTO COUNTY 2023

Travel-related viral zoonotic cases such as chikungunya, dengue, and Zika showed slight variability during the same timeframe. No cases of human hantavirus, rabies, or yellow fever were reported during these five years.

Bacterial-related zoonotic cases showed a varied trend, with an overall 33.3% increase between 2019 and 2023 [Table 2]. Notably, no human cases of plague, relapsing fever, Rocky Mountain spotted fever, or tularemia were reported during this period.

Parasitic zoonotic cases remained relatively stable between 2019 and 2023 [Table 3]. However, it is important to note the persistence of malaria, which continues to account for most of these cases.

Data source: California Department of Finance (DOF), California Reportable Disease Information Exchange (CalREDIE).

Notes: Data are provisional and may be affected by surveillance changes and outbreaks. Case counts may be lower in 2020 and 2021 due to a combination of COVID-19 control measures (including travel restrictions) and reduced access to healthcare, which could result in either a true decrease in cases or an apparent decrease due to surveillance disruptions. Cases are classified per Centers for Disease Control and Prevention (CDC) and the Council of State and Territorial Epidemiologists (CSTE).

References:
1. Environmental Protection Agency.
2. UC Davis

Figure 3. West Nile Virus Cases and Hospitalization Rates (per 100,000) by Select Age Group, Sacramento County, 2023

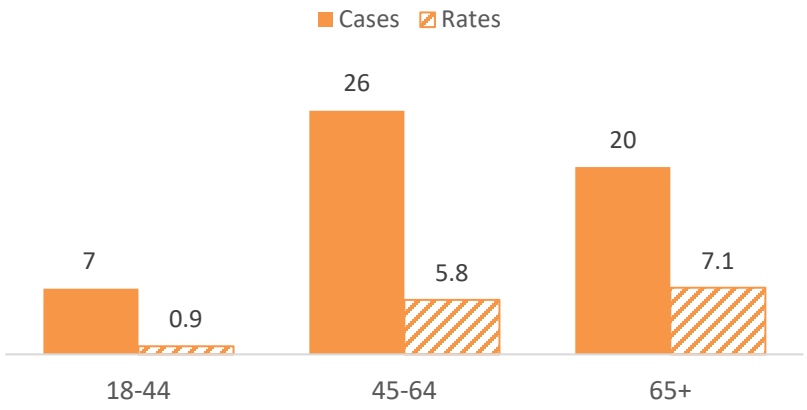


Table 2. Number of Cases with Bacterial Zoonotic Diseases, Sacramento County, 2019-2023

Disease	2019	2020	2021	2022	2023
Anaplasmosis/Ehrlichiosis	0	1	0	0	2
Brucellosis, human	1	1	1	0	1
Leptospirosis	0	1	0	0	0
Lyme Disease	5	4	0	3	5
Q Fever	3	1	4	5	4
Total	9	8	5	8	12

Table 3. Number of Cases with Parasitic Zoonotic Diseases, Sacramento County, 2019-2023

Disease	2019	2020	2021	2022	2023
Babesiosis	1	0	0	0	0
Malaria	11	7	7	9	10
Total	12	7	7	9	10

Note: All disease counts include confirmed and probable cases