

West Nile Virus in Nassau County, 2014 – 2024

Figure 1

Cases of West Nile Virus Disease in Nassau County by Year, 2014 - 2024

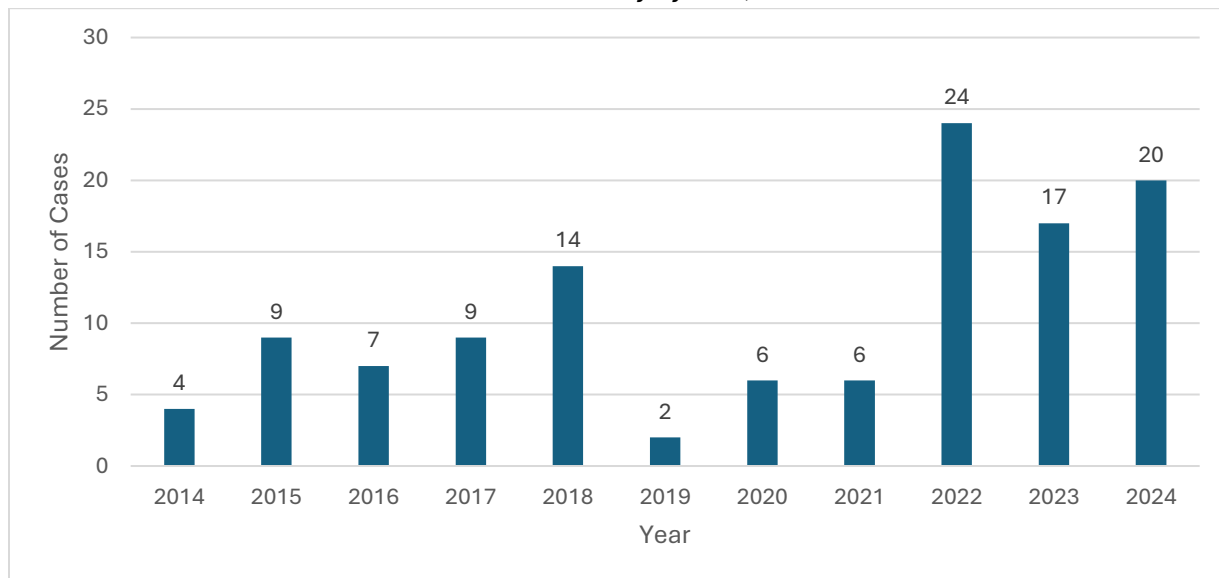


Figure 2

West Nile Virus Disease Rate per 100,000 Population in Nassau County by Year, 2014 - 2024

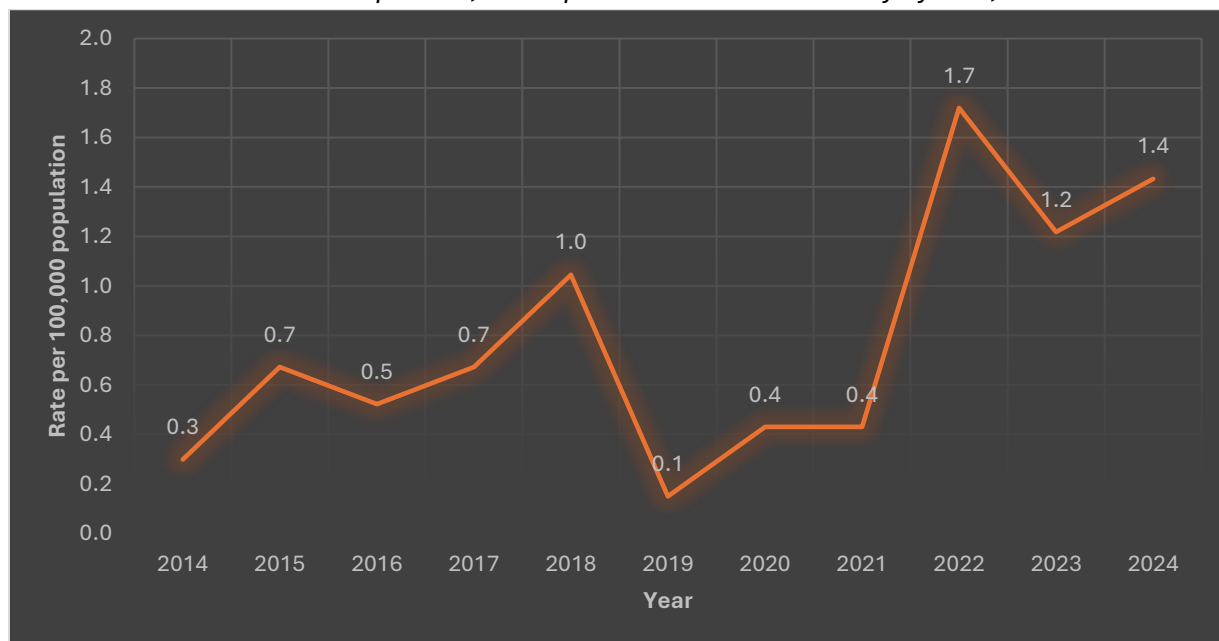


Figure 3

Cumulative Cases of West Nile Virus Disease by Age Group and Gender in Nassau County, 2014 - 2024

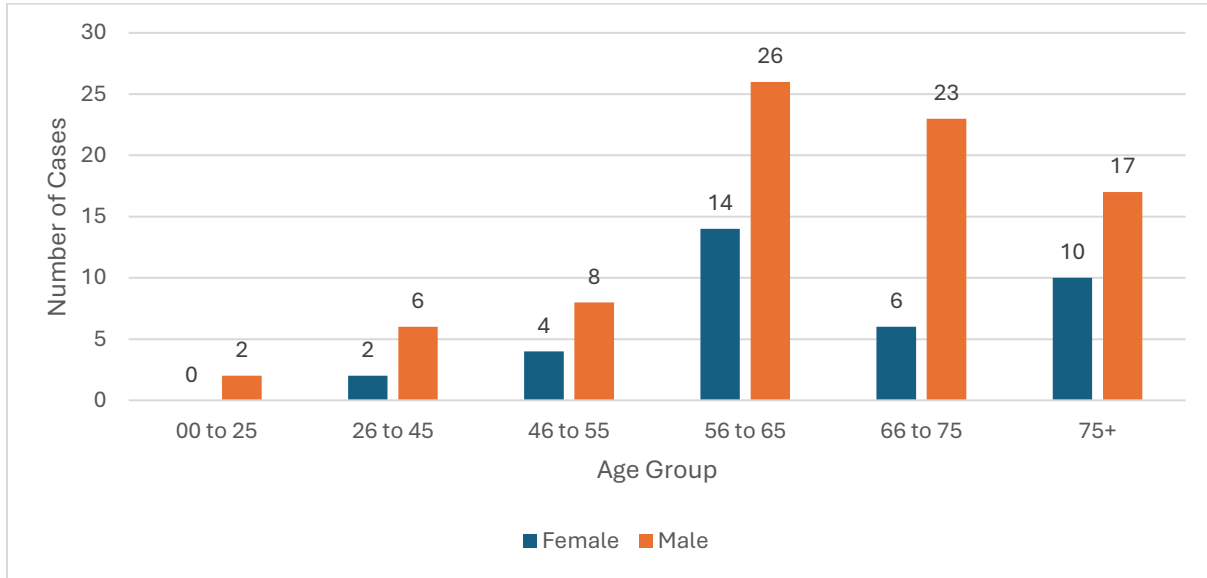


Figure 4

WNV Cases by Month of Diagnosis, Nassau County, 2014-2024

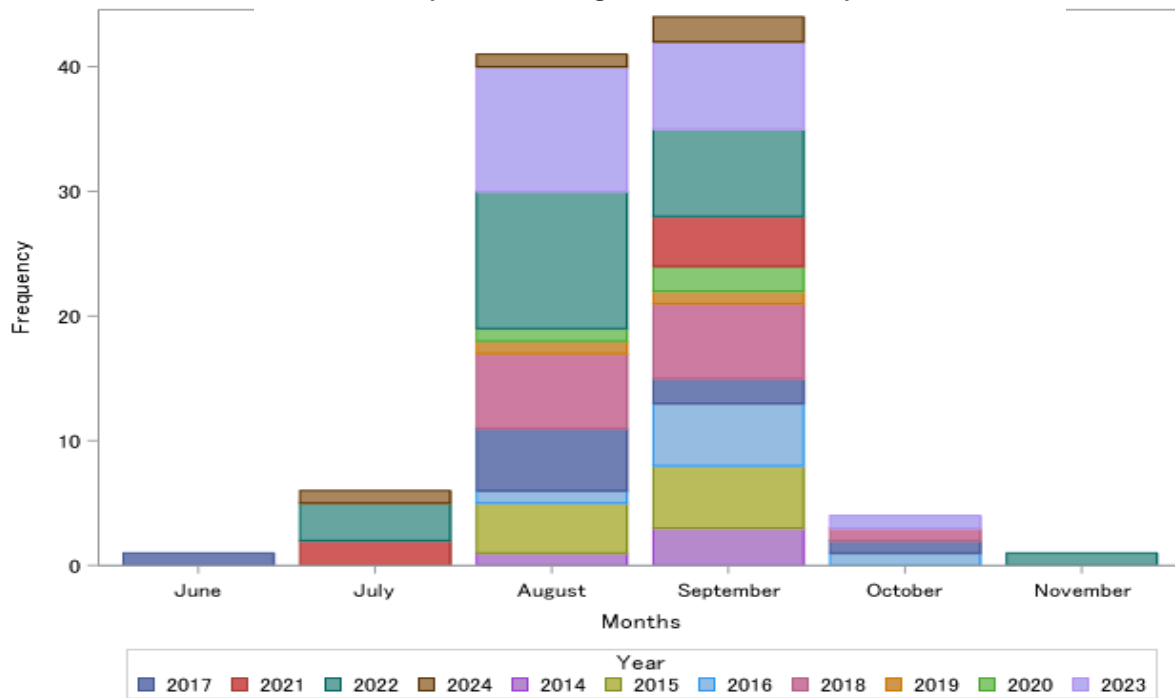


Figure 5

Percent of WNV Cases by Travel Status, Nassau County, 2014 - 2024

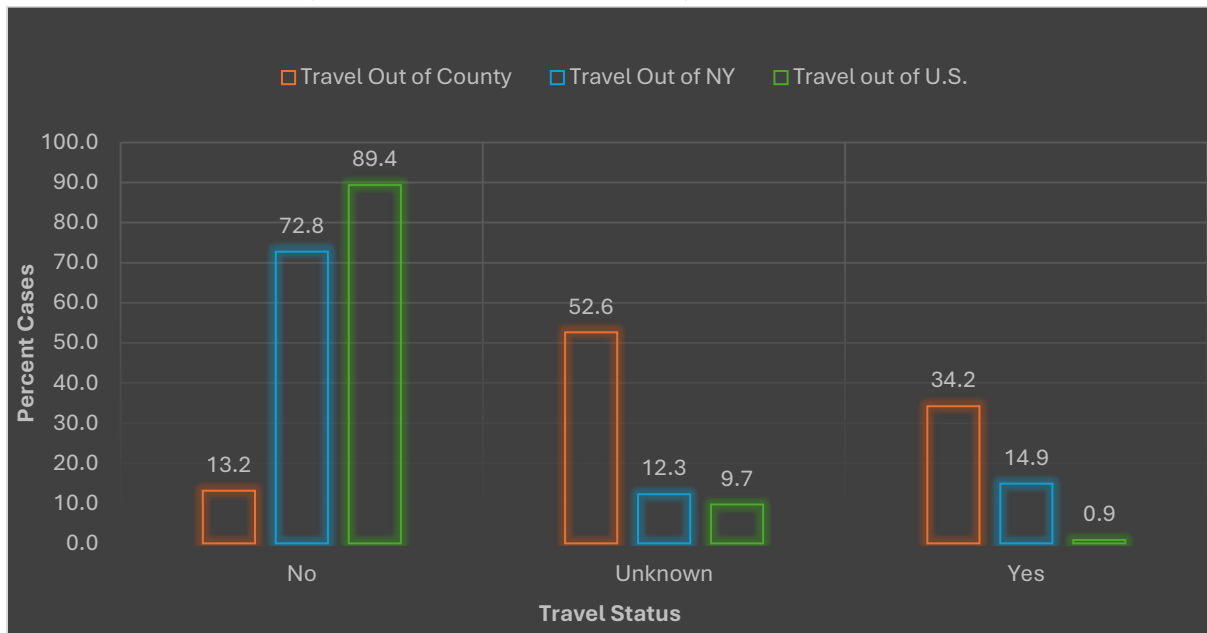
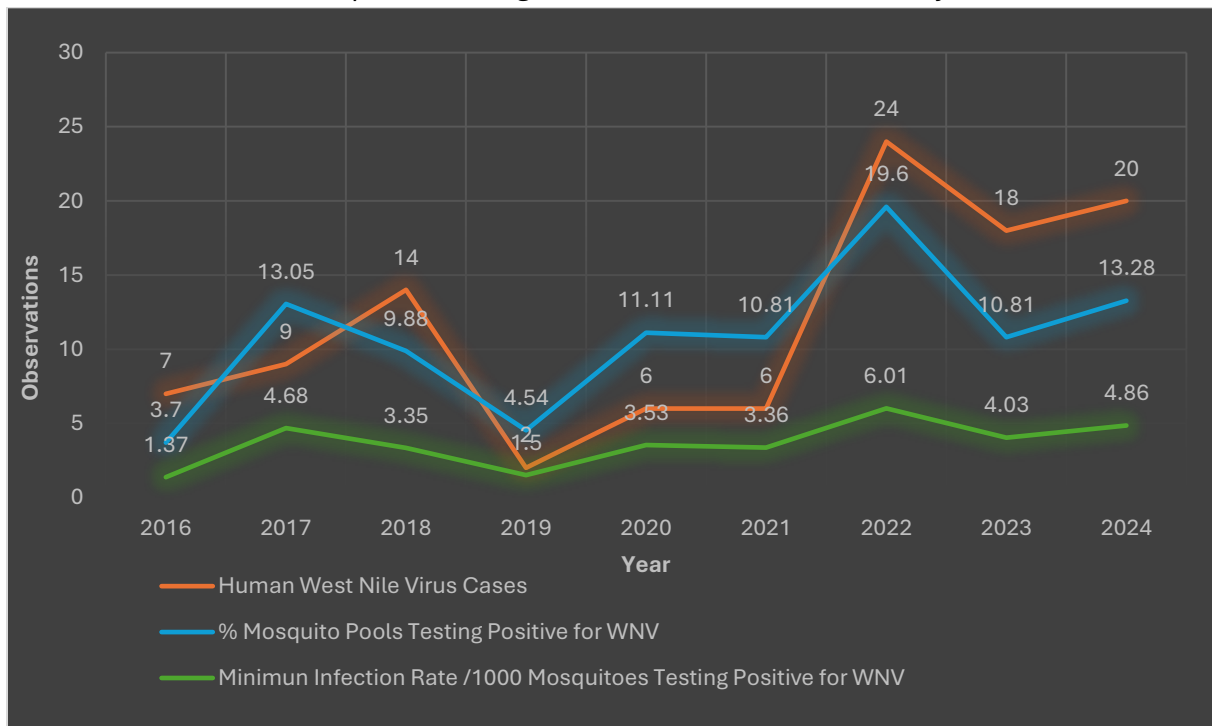


Figure 6

Comparison of Human WNV Cases, Mosquito Pools Testing Positive for WNV, and the Minimum Infection Rate/1000 of Mosquitoes Testing Positive for WNV, Nassau County, 2016 - 2024



Between 2016 and 2024, Nassau County experienced variable number of human West Nile Virus cases, with peaks in 2022 at 24 cases and the lowest in 2019 at just 2 cases. The data indicates that human WNV incidence is influenced by mosquito infection levels, as evidenced by the year-to-year fluctuations. The percentage of mosquito pools testing positive and the minimum infection rate per 1000 mosquitoes testing positive show a clear correlation with the number of human cases.

The highest percentage of mosquito pools testing positive was 19.6% in 2022, while the lowest was 3.7% in 2016. Similarly, the minimum infection rate per 1000 mosquitoes was highest in 2022 at 6.01, and the lowest in 2016 at 1.37. The positive correlation among the variables underscores the importance of monitoring mosquito populations for predictive insights.

In Table 1 below, the data demonstrates the correlation between mosquito infection rates and human WNV cases. This correlation highlights the need for continuous mosquito surveillance and targeted control measures to mitigate human infection.

Table 1

The Strength of Correlation between Human WNV Cases, Percent Mosquito Pools Testing Positive for WNV, and Minimum Infection Rate/1000 Mosquitoes Testing Positive for WNV

Pearson Correlation Coefficients, N = 9 Prob > r under H0: Rho=0				
	Year	Hwnv	MosqposWNV	mininfrate
Year	1.00000	0.62438	0.55274	0.57999
		0.0723	0.1227	0.1016
Hwnv Human WNV Cases	0.62438	1.00000	0.74717	0.79054
	0.0723		0.0207	0.0112
MosqposWNV % Mosquito Pools Testing Positive for WNV	0.55274	0.74717	1.00000	0.97883
	0.1227	0.0207		<.0001
mininfrate Minimum Infection rate/1000 Mosquitoes Testing Positive for WNV	0.57999	0.79054	0.97883	1.00000
	0.1016	0.0112	<.0001	