LDH Office of Public Health   Infectious Disease Epidemiology

Vector-Borne Diseases

Louisiana Arbovirus Surveillance Summary 2023
CDC Week 49
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This report presents currently available information about arboviral diseases in Louisiana. Cases of human infection and instances of positive mosquito testing can be used to understand the burden, risk, timing, and geographic distribution of arboviral diseases in the state.

Arboviral diseases can be divided into two main categories: imported and endemic. Imported arboviral diseases are instances where individuals test positive for an infection after travelling to another country. These diseases are not typically transmitted within Louisiana and are not circulating in local mosquito populations. The imported arboviral diseases included in this report are chikungunya, dengue, and Zika. Endemic arboviral diseases are infections which occur in Louisiana, such as Eastern Equine Encephalitis, St. Louis Encephalitis, and West Nile Virus. West Nile Virus is the most common arboviral disease in the state and has been actively transmitted since it was first detected in 2002.

Laboratories and health care providers report cases of arboviral diseases to the Office of Public Health under the State Sanitary Code. However, not all cases are able to be detected. Between 80-90% of all WNV cases are asymptomatic, meaning these individuals would not seek testing. Occasionally these asymptomatic cases are detected through blood donation testing (PVD - Presumptive Viremic Donors), who are then interviewed to determine if they developed symptoms. Many symptomatic cases can be mild to moderate flu-like illnesses (West Nile Fever), and might not seek medical care or be tested. Only a small fraction of cases develop neuroinvasive disease (NID), which includes meningitis and encephalitis. People ages 65 and older are at higher risk for NID. Due to the severe nature of these cases, they are consistently detected and reported.

Since such a small percentage of human infections are detected, it is also important to monitor mosquito populations. Every year 20,000-50,000 mosquito pools (aggregate samples of 50+ mosquitoes from the same sample site) from approximately 30 parishes are submitted to the Louisiana Animal Disease Diagnostic Laboratory (LSU - LADDL) for testing. These mosquitos are tested for endemic viruses in order to detect when and where viruses are transmitted.

Contents:

Table 1. Endemic Arbovirus Activity by Parish

Parish	West Nile Virus (WNV)							Eastern Equine Encephalitis (EEE)				Saint Louis Encephalitis (SLE)			
	Mosquito	Avian	Equine	Human				Mosquito	Avian	Equine	Human	Mosquito	Avian	Equine	Human
				NID*	F*	PVD*	Deaths								
Total	**765**	**0**	**4**	**46**	**7**	**11**	**4**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**
Allen	1														
Ascension	18			6											
Bienville				1											
Bossier			1	1											
Caddo	35			1											
Calcasieu	25			2	1										
Cameron	1														
East Baton Rouge	36		1	5		1									
Iberia	17			1	2	1									
Jefferson	31			1											
Jefferson Davis	1														
Lafayette	35			6	1	1									
Lafourche	15			2		2									
Lincoln	9														
Livingston				3											
Orleans	2							1							
Ouachita	306			1		3									
Plaquemines	1														
Pointe Coupee	44		1	1											
Rapides				2											
Richland				1											
St. Bernard	1														
St. Charles	3														
St. John the Baptist	1			1											
St. Martin	26			1		1									
St. Mary	36														
St. Tammany	12			2	1										
Tangipahoa	18					1									
Terrebonne	21		1	1	1						1				
Washington				2											
Webster				3											
West Baton Rouge	70			1	1										
West Carroll				1		1									
West Feliciana										1					

*__NID__ - Neuroinvasive Disease, __F__ - Fever, __PVD__ - Presumptive Viremic Donor (not determined to have symptoms)

Note: Not all parishes collect and test mosquito pools for virus activity. The information provided in this report should be used to infer statewide and regional trends and activity of virus transmission. If a parish is not included on this report, that does not mean that arbovirus transmission is not ocurring in that area. Only mosquito pools tested at LADDL are included on this report.

Figure 1. WNV-Positive Humans Reported in Louisiana, by MMWR Week of Onset 2021-2023
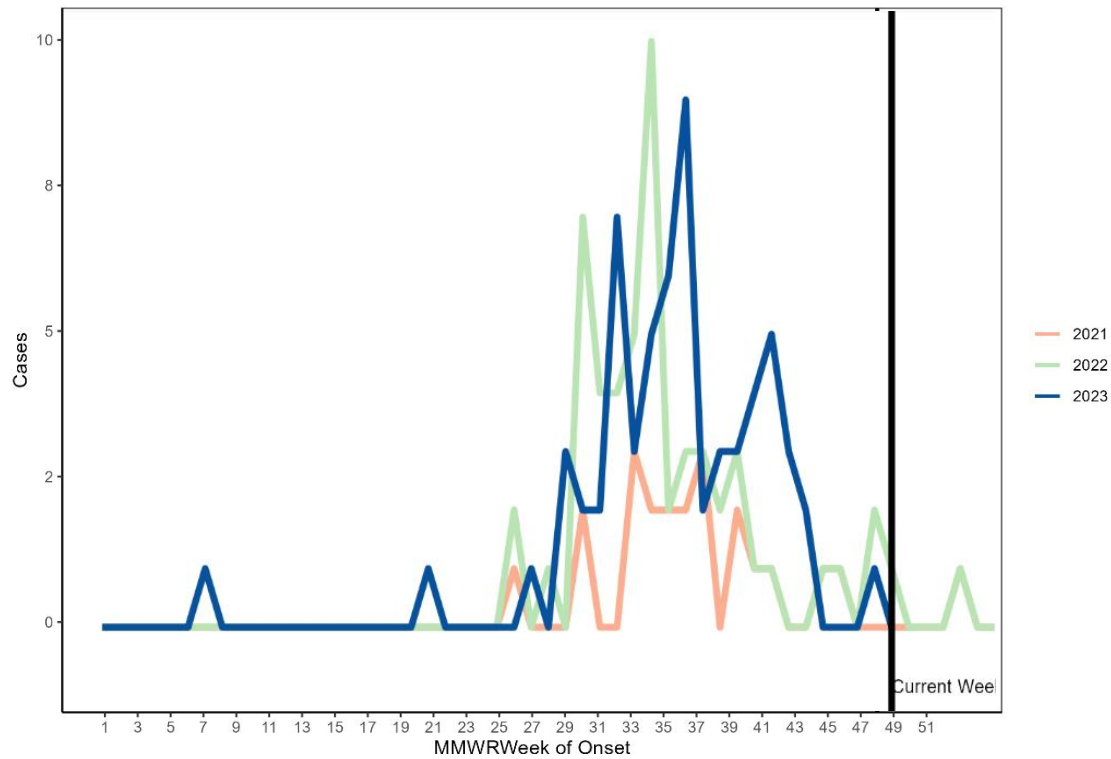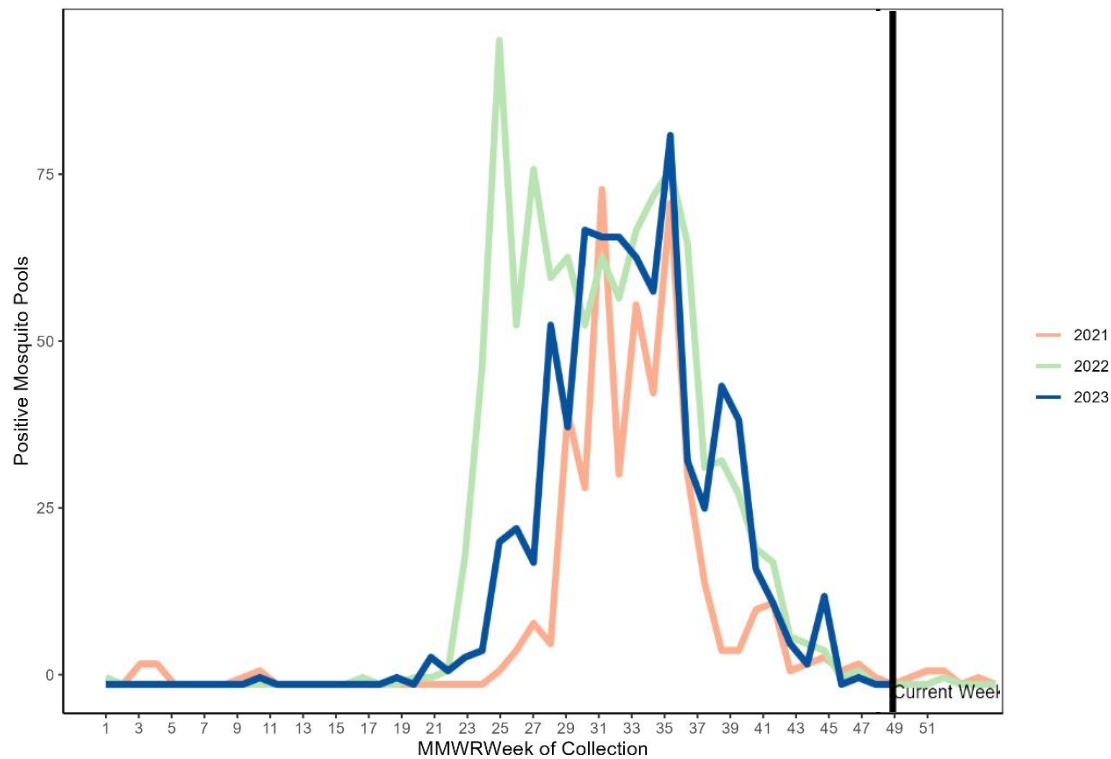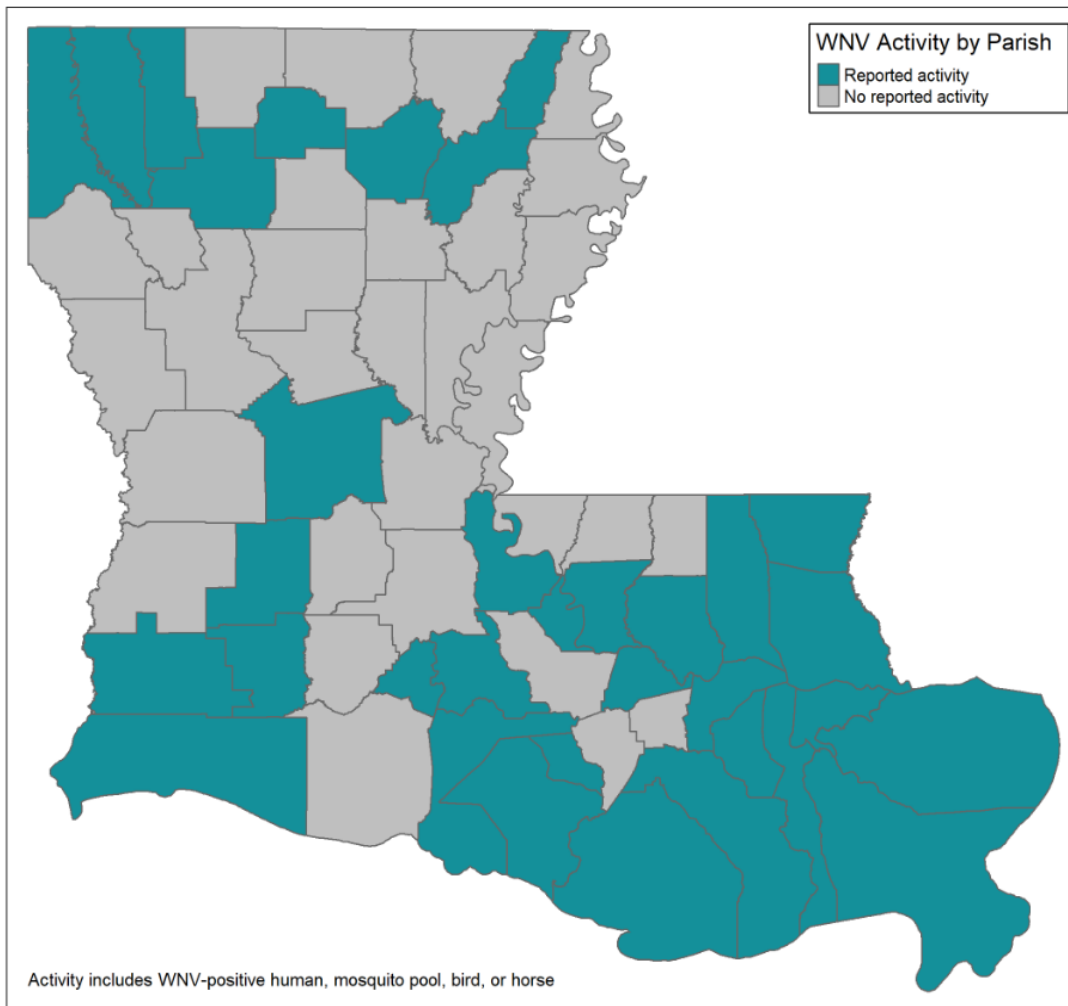

Figure 2. WNV-Positive Mosquito Pools Reported in Louisiana, by MMWR Week of Collection, 2021-2023*

*Due to the time required for mosquito pool collection, transport, and testing; the mosquito data for the most recent week may not be complete at the time of reporting.

Figure 3. Louisiana Parishes Reporting West Nile Virus Activity

Table 2. Imported Arbovirus Activity by LDH Region

Parish	Chikungunya	Dengue	Zika
Region 1		7	
Region 2			
Region 3			
Region 4			
Region 5		1	
Region 6			
Region 7			
Region 8	1		
Region 9		1	
Total	1	9	0

Figure 4. LDH Regional Map