NH DIVISION OF Public Health Services
Improving health, preventing disease, reducing costs *for all*
Department of Health and Human Services

Bureau of Infectious Disease Control
Infectious Disease Surveillance Section

2017 Arboviral Surveillance Summary

Summary

The New Hampshire Department of Health and Human Services (NH DHHS) tested human, veterinary, and mosquito specimens for arboviruses in 2017. Testing performed at the NH Public Health Laboratories (PHL) identified:

- West Nile virus (WNV) in nine mosquito batches (groups of mosquitoes).
- WNV in one human.
- Jamestown Canyon Virus (JCV) in three humans.
- Powassan virus (POW) in one human.
- Eastern Equine Encephalitis (EEE) virus was not identified.

Given the continued arboviral activity detected during the 2017 season (July 1 – October 15), NH DHHS encourages communities to maintain heightened levels of mosquito-borne disease education, surveillance, and control during 2018.

Table 1: Specimens Tested and Arboviral Test Results by Year, 2014-2017*

Species	Mosquito Batches			Veterinary			Humans				
	Tested	WNV+	EEE+	Tested	WNV+	EEE+	Tested	WNV+	EEE+	JCV+¥	POW+¥
2014	3,964	1	18	11	0	3	38	0	3	0	0
2015	3,678	2	2	11	1	0	65	0	0	1	0
2016	1,773	1	0	10	0	0	31	0	0	0	1
2017	4,176	9	0	7	0	0	31	1	0	3	1

*Comparison between years must consider variations in surveillance criteria.
¥Testing completed by the Centers for Disease Control and Prevention (CDC).

Human Surveillance

Between January 1 and December 31, 2017, 31 patients were tested for EEE and WNV at the NH PHL.

- No human samples tested positive for WNV.
- No human samples tested positive for EEE.

Additionally, between January 1 and December 31, 2017, 3 patients tested positive for JCV and 1 patient tested positive for POW at the CDC.

Animal Surveillance

Between January 1 and December 31, 2017, 7 veterinary specimens were tested for EEE and WNV at the NH PHL.

- No animals tested positive for WNV.
- No animals tested positive for EEE.

Mosquito Surveillance

Between January 1 and December 31, 2017, 4,176 mosquito batches were tested for EEE and WNV at the NH PHL.

- Nine batches tested positive for WNV in the town of Manchester (2), Keene (1), Nashua (1), Rye (1), Brentwood (1), Madbury (1), East Kingston (1), and Danville (1). The species testing positive were *Culex pipiens/restuans* (2), *Culex restuans* (1), *Culex pipiens* (1), *Culex salinarius* (1), and *Culex melanura* (4).
- No batches tested positive for EEE.
- Mosquito batches were submitted for testing from Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford Counties.

Public Health Threat Declaration

A NH Public Health Threat Declaration based on arboviral activity was not made in 2017.

Regional Risk Levels

- In 2017, the NH DHHS estimated human risk levels for defined "Focal Areas" in the State. "Focal Areas" may incorporate multiple municipalities and are based on integrating mosquito habitat, mosquito abundance, current and historic virus activity, and weather conditions needed to present risk of human disease.
- During the arboviral transmission season, estimated risk levels were announced to the public, local officials, and state partners through email, press releases, postings to the Bureau of Infectious Disease Control (BIDC) and Division of Public Health Services (DPHS) Twitter and Facebook webpages, and postings to the NH DHHS website.
- NH DHHS updated the Risk Map throughout the 2017 season to reflect changes in risk levels. For 2017, risk levels across the state ranged from "Baseline/No Data" to "High" depending on current and historical arbovirus detections.
- For more information on the arboviral test results and to view the final 2017 Risk Map, please visit: http://www.dhhs.nh.gov/dphs/cdcs/arboviral/results.htm.

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