



Philadelphia Department of Public Health
Division of Disease Control

JAMES W. BUEHLER, MD
 Health Commissioner

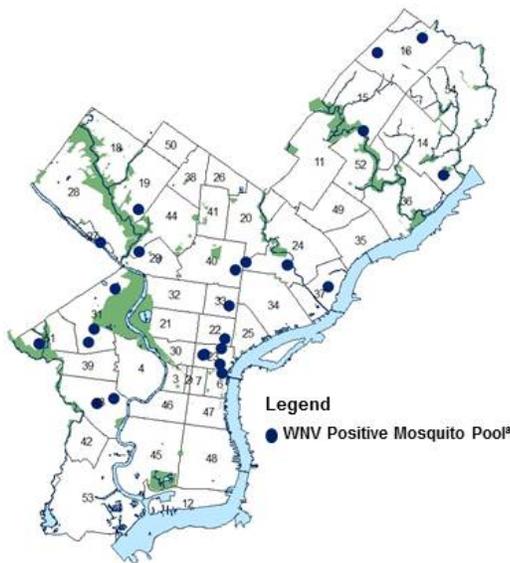
CAROLINE C. JOHNSON, MD
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2015 Philadelphia Arboviral Activity Report
August 10, 2015

During Morbidity Week 30, the Philadelphia Department of Public Health (PDPH) continued to identify mosquito pools infected with West Nile Virus (WNV) including newly identified positive pools in the Northern Liberties neighborhood and surrounding areas. The WNV mosquito pool positivity rate for Morbidity Week 30 reached 33%, which marked a weekly high for this season and increased the cumulative positivity rate to 7%. To date, no human cases have been reported in the City during the 2015 season.

From May through October, the Philadelphia Department of Public Health (PDPH) in collaboration with the PA Department of Environmental Protection conducts mosquito management activities throughout Philadelphia, which entails surveillance and identification of mosquito pools, testing pools for WNV, and control activities (eliminating breeding sites, larviciding catch basins, ground spraying, etc.). Targeted treatments to control adult mosquito populations will be applied to areas with WNV positive pools as needed.

**West Nile Virus Mosquito and Human Case Surveillance, Philadelphia PA,
 Morbidity Week 30 and Cumulative 2015 Season Update**



^aThree sites tested positive 2-4 times.

	Week 30 (7/26-8/1)	2015 Season (5/1-8/1)
Mosquito Pools Tested	30	411 ^a
WNV Positive Pools	10	30
Humans Tested ^b	2	17
Human WNV Cases	0	0

^a411 mosquito pools at 258 different mosquito trapping sites

^bTesting among case reports received by PDPH only

State and National WNV Activity Reports

- [Pennsylvania Department of Health](#)
- [Centers for Disease Control and Prevention](#)

WNV Testing and Reporting Requirements for Human Surveillance in Philadelphia:

- Collect CSF (from symptom onset–day 8) and serum (day 8–14) from patients with unexplained encephalitis or meningitis for WNV IgM testing.
- Report suspected and confirmed WNV infections (neuroinvasive or non-neuroinvasive illness) and encephalitis cases to PDPH by telephone at 215-685-6740 (or 215-686-4514 after hours). Reports also may be faxed to 215-238-6947.

Advise your patients to:

- Use repellent with DEET (≥20% to also prevent tick bites), Picaridin, or oil of lemon eucalyptus when outdoors, especially during peak mosquito hours (dusk and dawn).
- Regularly check and remove standing water outside their home (e.g., unused pools, tires).
- Keep well-fitted screens on windows and doors.
- Report mosquito problems and dead bird sightings to the PDPH Vector Control Program's Mosquito Complaint hotline at 215-685-9027.

Travel-Related Arboviral Infections: Chikungunya Virus and Dengue Virus

With its recent emergence in the Americas, chikungunya virus infection has quickly become another significant source of travel-related arboviral infection among Philadelphia residents along with dengue virus, the most common arboviral infection worldwide. Both infections can cause febrile illness in travelers returning from tropical and subtropical regions, with polyarthralgia also occurring in most with chikungunya. Dengue infections can progress to more severe illness (hemorrhagic fever or shock syndrome) that can be fatal.

Chikungunya virus and dengue virus are spread by *Aedes spp.* mosquitoes, which are daytime biters and found around homes due to their short flight range. *Aedes aegypti*, a principle vector for transmission of both viruses is not found in Philadelphia. *Aedes albopictus* (Asian tiger mosquito) are present and active during warmer months in Philadelphia. PDPH will continue to assess the presence of *A. albopictus* in Philadelphia and closely monitor human surveillance data to promptly identify local transmission should it occur.

Chikungunya and Dengue Infections, Philadelphia, 2011—2015

Year, n	Travel-Related Arboviral Infections ^a	
	Chikungunya	Dengue
2015 ^a	2	1
2014	42	0
2013	0	11
2012	0	1
2011	0	1
Median Age (Range), y	42.5 (5—78)	(15—79)
Female, n (%)	35 (80)	6 (43)
Foreign Born, n (%)	31 (70)	4 (29)
Hospitalized, n (%)	8 (18)	11 (79)
Death, n (%)	0 (0)	1 (7)

^aPreliminary year to date data for 2015.

Worldwide Distribution Reports

- [Chikungunya](#)
- [Dengue](#)

Prevention:

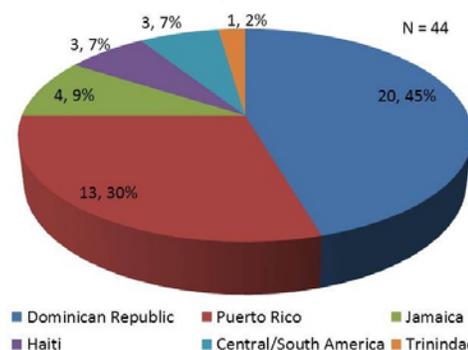
- Advise patients traveling to tropical/subtropical regions to take mosquito-bite prevention measures.
- Have those at risk for severe disease (>65 years, persons with underlying conditions, women late in pregnancy) consider not traveling.
- Advise cases to stay indoors and avoid mosquitoes for the first 7 days of illness.

Treatment:

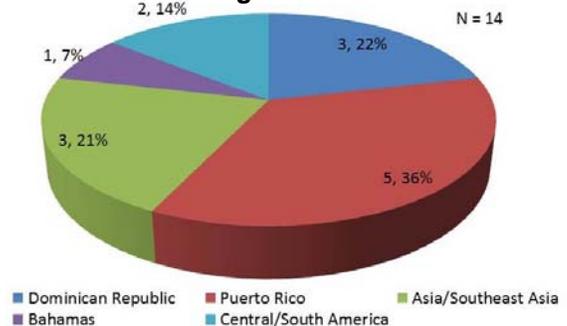
- Manage chikungunya as dengue with acetaminophen recommended for initial treatment.
- If dengue has been ruled out, narcotics or NSAIDs may be considered to manage pain due to chikungunya.

Travel Destinations

Chikungunya Cases



Dengue Cases



Testing and Reporting:

- If either chikungunya or dengue is suspected, collect serum and test for both pathogens.
 - Order PCR between day 1 and 8 of illness
 - Order IgM & IgG if ≥ day 4 of symptom onset
- Testing is available through the Pennsylvania Department of Health's Bureau of Laboratories and Focus Diagnostics. Quest Diagnostics and LabCorp also will forward orders to Focus.
- Report suspected and confirmed infections to PDPH by telephone at 215-685-6740 (215-686-4514 after hours) or fax at 215-238-6947.

Online Resources:

- [CDC Dengue Clinician Guide](#)
- [CDC Grand Rounds: Dengue and Chikungunya in Our Backyard](#)