

# As mosquito-borne illnesses threaten U.S., less money spent fighting them

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Study shows funding has dropped 61 percent since 2004.

(HealthDay)—Diseases spread by mosquitos pose a growing threat to the health of Americans, with the risk at its greatest during these hot summer months.

But you wouldn't know that from the amount of money being spent to track West Nile virus, dengue, chikungunya and other illnesses spread by pests like mosquitos, ticks and fleas, a new study reports.

Funding has dropped by nearly two-thirds for state and local surveillance programs aimed at preventing insect-borne diseases, according to a report published online June 10 in the journal *Emerging Infectious Diseases*.

The decrease in funding has led to the partial dismantling of these programs, making it tougher to prevent or respond to outbreaks, said study author Dr. James Hadler, a professor of epidemiology at the Yale

School of Public Health, in New Haven, Conn.

"We can't put out specific information about current or potential outbreaks, and we can't respond as early," Hadler said. "More importantly, we don't know whether we should take action to reduce the mosquito population, to preemptively prevent an outbreak from occurring."

The money has dried up even though insect-borne illnesses are more dangerous than ever to public health, Hadler added.

In 2012, the United States had its worst year for West Nile virus in nearly a decade, he said. The mosquito-borne virus killed 286 people—the most ever in a single year—and caused more than 5,600 illnesses, according to the U.S. Centers for Disease Control and Prevention.

In addition, new viruses spread by bugs have emerged. Chikungunya and dengue viruses emerged in mosquito-infested parts of the United States for the first time in 2014, and cases of tick-spread Powassan virus have grown rapidly in the Northeast and Great Lakes regions, Hadler said.

Despite this, federal funding for programs to track insect-borne diseases has gone from a high of \$24 million in 2004 down to just \$9.3 million in 2012, the authors found—a reduction of 61 percent.

Many states have not stepped up to maintain funding for the programs, resulting in less tracking of insect populations and slower responses to disease outbreaks, Hadler said.

Four out of five states reported that their tracking programs for insect-borne illnesses are currently understaffed, the study found. Epidemiologists, laboratory workers and mosquito-control experts are

needed to keep up with the workload.

That's because funding problems have caused a 28 percent decrease in total staffing for these programs at the state level, researchers found. The number of people working at least half-time on insect-borne diseases fell 41 percent.

This is all part of a "boom and bust" cycle that has developed regarding public health threats in the United States, said Dr. Jeff Duchin, chair of the Infectious Diseases Society of America's Public Health Committee.

A public health threat emerges and the federal government throws a lot of money at it, Duchin said. States use the money to develop programs that will help them deal with the threat in the future.

But then a new health threat comes along, and federal dollars are shifted to respond to that, he said. States don't have either the money or the inclination to maintain full funding for the program aimed at the older threat, and so that program withers on the vine.

"People are laid off and programs are dismantled," said Duchin, who is Health Officer of Public Health—Seattle & King County in Washington. "It's a really bad way to do business. It's not possible to do optimal disease surveillance and prevention when funding continually expands and contracts. We can't maintain a skilled workforce, or the necessary connections with local health departments."

Prior to the West Nile virus outbreaks in 1999, the federal government did not fund tracking of [insect-borne diseases](#), and many states had no surveillance programs in place, the authors said in background information.

In response to West Nile, the CDC issued grants that helped states

improve their ability to control mosquito populations and track mosquito-borne diseases, the authors said. This money also helped track viruses spread by ticks and fleas.

These programs have proven essential, said Dr. Paul Lee, a pediatric infectious disease specialist at Winthrop-University Hospital in Mineola, N.Y.

"To really know the enemy, you need to have the funding to have the proper personnel and equipment available to be able to tell what's going on," Lee said. "The best way to deal with these outbreaks is preemptively. Once the outbreak happens, you've failed, and now you have to play catch-up."

Given the continuing threat posed by insect-borne illnesses, federal and state officials need to reconsider their decision to let this funding lapse, Hadler said.

"We need to figure out how to build our capacity back up again, or decide whether we are willing to live with the consequences," he said. "With global warming, insect-borne illnesses are only going to increase."

**More information:** Visit the [U.S. Centers for Disease Control and Prevention](#) for more on insect-borne infectious diseases.

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