INFECTIOUS DISEASES

Fears of Lax Surveillance if CDC Program Cut

A proposal to stop funneling dollars directly to U.S. surveillance and research for most mosquito and other vector-borne diseases such as West Nile virus and dengue has scientists wringing their hands. They are concerned that if the plan sticks, the country will be ill-prepared to handle new emerging diseases and manage existing ones. The proposal in President Barack Obama's 2011 budget for the U.S. Centers for Disease Control and Prevention (CDC) in Atlanta, combined with a $15.7 million cut for infectious disease work generally, would virtually eliminate the vector-borne program. Currently, CDC funds mosquito testing for a variety of diseases and investigations into patterns of disease spread in the United States.

The budget recommended removing $26.7 million from the vector-borne program, along with $8.6 million from antimicrobial research, and partially offsetting that with an increase of $19.6 million to emerging infectious diseases. Since the cut was recommended earlier this year, several professional groups have urged Congress to override it and continue directing money to vector-borne diseases. If the vector-borne program is eliminated, they argue, CDC would likely respond only when disease surges.

"Everybody's looking for opportunities to save" money, says Ali Khan, acting deputy director at CDC's National Center for Emerging & Zoonotic Infectious Diseases. But although "we do support the president's budget, … if all these dollars are eliminated, there's no doubt this would have a profound effect." As an example of the importance of continued surveillance, some are pointing to the detection of 28 cases of dengue fever in Florida since last fall. These are the first cases in the continental United States since the 1940s, except for a few along the Texas-Mexico border. Although dengue is also raging in Puerto Rico.

Although the cut is a tiny part of CDC's $6.6 billion proposed budget, it has jolted a number of societies into action. The American Society for Microbiology submitted written testimony to Congress last month, as did the American Red Cross and other blood bankers. Other groups focused on epidemiology, public health, and mosquito control have either written to or met with congressional staff. It's not clear yet what impact those objections will have: Congressional appropriators won't finalize the budget until later this year.

Dengue on the upswing. Cases of the disease, transmitted by *Aedes aegypti* mosquitoes, have been rising, but CDC's dengue branch in Puerto Rico is threatened by possible budget cuts.

In the past, the budget has allocated money to vector-borne diseases within the United States as a group and separately to malaria and to Lyme disease; those two are unaffected by the proposed cuts. The vector-borne program is a catchall for many diseases transmitted mostly by mosquitoes, although the list shifts as new conditions surface and some diseases become less common. The current vector-borne program began in 1999 when the first cases of West Nile virus showed up unexpectedly in crows and then people. Its finances have held mostly steady, with occasional cuts in recent years as West Nile cases have dropped in some areas and the virus has faded from public attention. About $13 million of the nearly $27 million is distributed to state and local health departments, and Khan estimates that 100 state employees and 24 at CDC would lose their job if the cuts go through. Most severely affected would be CDC's Dengue Branch in San Juan, Puerto Rico, and another branch of the Division of Vector-Borne Infectious Diseases in Fort Collins, Colorado, which could lose more than half its funding. Rather than allocate money specifically to vector-borne diseases, the 2011 budget recommends a new tack: pooling money for infectious diseases more generally and consolidating the work in one center instead of two.

But many say that removing dedicated funds for vector-borne diseases is shortsighted and could gut the strong surveillance programs that state and local health departments have built, making CDC reactive rather than proactive. "If you're not doing surveillance, … you're going to miss these things until you have a major outbreak," says Laura Kramer, a virologist at the New York State Department of Health in Albany. The current program supports seasonal testing of mosquitoes and other potential vectors, such as ticks, along with testing of dead birds. It has also supported studies into the evolution of West Nile virus and the genetics of the mosquitoes that transmit it.

Justifying all this when there's little illness—West Nile cases plunged last year—leads people to ask, "Why are we doing this?" Kramer says. Although the proposed budget allows money to be funneled back to vector-borne diseases if they resurface, Kramer says that's less efficient than sustaining the program. "The people who have been trained to do the work in the labs and the field aren't going to be there" anymore, she says.

There would be other effects as well. "We rely on [CDC's surveillance] data to mold … our testing policies," says Roger Dodd, vice president of research and development at the American Red Cross in Rockville, Maryland. In times and regions where West Nile is surging, the Red Cross tests every blood unit for the virus rather than pooling blood for a less sensitive test, as it usually does. The Red Cross is also concerned about dengue virus because two transfusion cases have been reported, both in Asia.

Khan says CDC will find money for vector-borne diseases somehow, no matter how the budget shakes out. "This is a priority for us, and we will support" it, he says. "However, we are all very conscious and honest that you can't get all [you need] out of these cuts."

–JENNIFER COUZIN-FRANKEL

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Published by AAAS