

Zika virus: Texas and Florida airports at highest risk to receive infected travelers

Boston and New York airports next on list of US airports with greatest number of passengers arriving from areas with confirmed cases of the infectious disease

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Airports in Florida and Texas are at the highest risk to receive more passengers with the Zika virus in the coming months, according to researchers with a grant from the US Department of Defense.

EcoHealth Alliance, an international conservation group, analyzed all airports in the US by assessing how often passengers trickle in from areas with confirmed cases of Zika virus. They identified 17 airports in 11 states and ranked them according to risk.

“I believe this is something that people should know,” said Andrew Huff, the associate vice-president of group, who oversees efforts to forecast the spread of infectious diseases. “If you know where an infectious disease is, you can take precautions.”

According to their analysis, Logan international airport in Boston, John F Kennedy international airport in New York and two in the Washington DC metropolitan area are next on the list of airports likely to receive those with the fast-spreading virus.

Zika has been recognized as a global emergency by the World Health Organisation because there is an unconfirmed link between the virus, most often transmitted through mosquito bites, and babies born with brain damage. While it's unclear whether microcephaly, a birth defect that stunts a fetus's head from growing, is caused by Zika, the numbers of cases have swollen since it was transmitted in Brazil in 2014.

Now more than 20 countries and territories in the Americas have found Zika transmissions, places where the WHO estimates there will be as many as 4m infections.

Last week the Centers for Disease Control and Prevention confirmed that there are more than 30 cases spread across 11 states in the US, though it will likely release newer numbers this week.

Regarding the riskiest airports, CDC spokesman Ben Haynes said that anything that might help curb the spread of a virus is helpful, but he did not have insight about EcoHealth Alliance's analysis.

“I wouldn’t say anything until CDC has had a chance to look at the science behind it and we make an official recommendation,” he said. “There’s no guidance surrounding domestic travel at this point.”

As of Thursday, the CDC was only warning travelers headed to regions where the virus is more prevalent, especially women who are pregnant or intend to be because of the link to microcephaly, to take precautions.

But Huff said the airport analysis could be used to increase awareness at airports and in cities where his group predicts a lot of potentially Zika-infected travelers.

The software, named Flirt, was funded through a \$2.4m grant from the US Defense Threat Reduction Agency, an arm of the Department of Defense, to help protect the country from outbreaks and threats from infectious diseases. It’s part of the Obama administration’s National Biosurveillance Science and Technology Roadmap.

Flirt, which is an offshoot of its original name Flight Risk Tracker, was initiated with the grant last year and put to the test as Zika emerged. It incorporates where there are confirmed cases and matches it to a global dataset of daily flight routes that land, even if only for a layover, in the US.

“We created a risk-ranking profile and asked the question of Flirt, ‘Which cities are most at risk in the US?’” Huff said.

He said as the virus spread here, they crosschecked the cities where it emerged with their list, and Flirt had anticipated 10 out of 11 of them. Texas has shifted from the No 1 spot, when they first tested their analyses, though it’s unclear why.

Cities in colder climates, he said, where mosquitoes are not able to survive over winter, are at lower risk of an endemic. He said cities close to high risk airports with warmer climates where mosquitoes live year-round, are the most sensitive.

There’s evidence that Zika can be transmitted sexually, passed on through birth and even through blood transfusions. But so far people have been most often infected when a mosquito is carrying the virus and it bites them. And if a person carrying the virus is in the US and is bit by another mosquito that’s able to carry it here, that mosquito will get it and spread it as it feeds on other people.

“If you’re in the middle of Kansas ... you’re at a way lower risk,” he said.

Huff said he is unsure what the DTRA, which was not available for immediate comment, will do with the software. But he said officials there were “very happy” with the outcome of FLIRT’s abilities.

Regardless, Haynes said Zika will continue to spread in the US, it’s just unclear how big of a threat it is. It’s been a week and a half since doctors have been required to report all Zika cases to the CDC, so the agency is incorporating the data it has received since then.

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