

Health officials want more Zika samples, data from Brazil

February 4 2016, by Maria Cheng, Raphael Satter And Joshua Goodman



In this Jan. 27, 2016, file photo, an *Aedes aegypti* mosquito is photographed through a microscope at the Fiocruz institute in Recife, Pernambuco state, Brazil. The mosquito behind the Zika virus seems to operate like a heat-driven missile of disease. Scientists say the hotter it gets, the better the mosquito that carries Zika virus is at transmitting a variety of dangerous illnesses. (AP Photo/Felipe Dana, File)

Brazil is not sharing enough samples and disease data to let researchers

determine whether the Zika virus is, as feared, linked to the increased number of babies born with abnormally small heads in the South American country, U.N. and U.S. health officials say.

Without viruses from Brazil—the epicenter of the ongoing Zika crisis—laboratories in the United States and Europe are being forced to work with samples from previous outbreaks, and is frustrating efforts to develop diagnostic tests, drugs and vaccines. Scientists tell The Associated Press that having so little to work with is hampering their ability to track the virus' evolution.

One major problem appears to be Brazilian law. At the moment, it is technically illegal for Brazilian researchers and institutes to share genetic material, including blood samples containing Zika and other viruses.

"It's a very delicate issue, this sharing of samples. Lawyers have to be involved," said Dr. Marcos Espinal, director of communicable diseases in the World Health Organization's regional office in Washington.

Espinal said he hoped the issue might be resolved after discussions between the U.S. and Brazilian presidents that included working together on Zika and developing new tools to stop the virus. He said WHO's role was mainly to be a broker to encourage countries to share. When asked whether the estimate of other scientists that Brazil had provided fewer than 20 samples was true, he agreed it probably was.



Paulo Gadelha, president of the Oswaldo Cruz Foundation, Brazil's premier state-run research institute for tropical diseases, speaks during an interview in Rio de Janeiro, Brazil, Wednesday, Feb. 3, 2016. "Until the law is implemented, we're legally prohibited from sending samples abroad," said Gadelha, about sharing Zika virus samples with other countries. "Even if we wanted to send this material abroad, we can't because it's considered a crime. (AP Photo/Silvia Izquierdo)

"There is no way this should not be solved in the foreseeable future," he said. "Waiting is always risky during an emergency."

WHO infectious diseases expert Dr. Sylvie Briand was more circumspect, saying on Thursday in Geneva that it wasn't necessary to have the latest strains because unlike more rapidly mutating viruses like the flu, for which up-to-date samples are needed to make a vaccine, no such shot exists for Zika.

But not all experts were convinced.

"That's crazy," said Michael Osterholm, an infectious diseases expert at the University of Minnesota. "What about developing diagnostics, and tracking virulence of the virus? There's a lot of issues you want to have the most current virus for."



Municipal Health Secretary Daniel Soranz, left, talks with Rio 2016 Director of Medical Services Joao Grangeiro, during a media briefing that included the Zika virus in Rio de Janeiro, Brazil, Tuesday, Feb. 2, 2016. Grangeiro says athletes "will not be at risk at games time." He said organizers are following guidelines by the World Health Organization, which has declared the spread of the mosquito-borne virus an "extraordinary event and public health threat." (AP Photo/Silvia Izquierdo)

The obstacle to sharing emerged last May, when President Dilma Rousseff signed a new law to regulate how researchers use the country's

genetic resources. But the regulatory framework hasn't yet been drafted, leaving scientists in legal limbo.

"Until the law is implemented, we're legally prohibited from sending samples abroad," said Paulo Gadelha, president of the Oswaldo Cruz Foundation, Brazil's premier state-run research institute for tropical diseases. "Even if we wanted to send this material abroad, we can't because it's considered a crime."

The ban does not necessarily mean foreign researchers can't access samples. Some were shared with the United States, including tissue samples from two newborns who died and two fetuses recently examined by the Centers for Disease Control and Prevention. But a U.S. official said that wasn't enough to develop accurate tests for the virus or help determine whether Zika is in fact behind the recent jump in the number of congenital defects.

Given the drought of Brazilian samples, public health officials across the world are falling back on older viruses—or discreetly taking them from private patients.



Cassiana Severino holds her daughter Melisa Vitoria, born with microcephaly at the IMIP hospital in Recife, Pernambuco state, Brazil, Wednesday, Feb. 3, 2016. The Zika virus is spread by the *Aedes aegypti* mosquito, which is well-adapted to humans, thrives in people's homes and can breed in even a bottle cap's-worth of stagnant water. The Zika virus is suspected to cause microcephaly in newborn children. (AP Photo/Felipe Dana)

The U.S. official, who shared the information on condition of anonymity as he was not authorized to speak publicly, said the CDC was relying on a strain taken from a 2013 outbreak in French Polynesia to perfect its Zika tests. U.S. researchers trying to sequence Zika's genetic code have been forced to work with virus samples from Puerto Rico for the same reason, he said.

In England, researchers are using samples drawn from Micronesia, the site of an outbreak in 2007. The French are using samples from Polynesia and Martinique. In Spain, scientists have a Ugandan strain of

Zika supplied by the United States. Even Portugal, Brazil's former colonial master, doesn't have the Brazilian strain; the National Health Institute in Lisbon said its tests relied on a U.S. sample from the 1980s, among others.

Some researchers are bypassing Brazil's bureaucracy by getting samples sent to them for testing by a private lab, said Dr. Jonas Schmidt-Chanasit, an expert on mosquito-borne diseases at the Bernhard Nocht Institute for Tropical Medicine in Hamburg.

"It's almost impossible to get samples from the country," Schmidt-Chanasit told AP, referring to Brazil. "It's not going via official government channels. Our source is simply the rich people who want a diagnosis."



Isabela Cristina, 18, who is six months pregnant, center, looks at her exams as she waits at a bus stop outside the IMIP hospital in Recife, Pernambuco state,

Brazil, Wednesday, Feb. 3, 2016. Isabela Cristina had Zika symptoms and was worried about the health of her baby, but her ultrasound scan and other exams were normal. The Zika virus is suspected to cause microcephaly in newborn children. (AP Photo/Felipe Dana)

In public, health leaders have been eager to boast about their excellent collaboration. WHO's chief, Dr. Margaret Chan, said after Monday's meeting that Brazil and the United States were working "very closely" on studies. When asked about sample sharing, Dr. Anthony Fauci, the director of the U.S. National Institute of Allergy and Infectious Diseases, told AP: "I don't think it's an issue."

Behind-the-scenes, it was another story.

Four officials at the World Health Organization told AP that the Brazilians were starving international partners of up-to-date information.

"WHO has gotten zero from them, no clinical or lab findings," one of the officials said.



The Director of the Pan American Health Organization Dr. Carissa Etienne, center, speaks to the press during the Mercosur Health Ministers summit to address the spread of Zika virus in the region, at the Mercosur building in Montevideo, Uruguay, Wednesday, Feb. 3, 2016. The ministers of 13 countries are meeting to coordinate efforts to fight the spread of the mosquito born virus. (AP Photo/Matilde Campodonico)

All four spoke on condition of anonymity because they were talking without authorization.

Ben Neuman, a virologist at Reading University in England, said thousands of samples—or hundreds at a minimum—were needed to track the virus and determine how it's changing. "Science only works when we share," he said.

The virus sharing problems aren't limited to Brazil, said Gadelha of the

Oswaldo Cruz Foundation.

"This isn't a unilateral issue; it's a global problem," he said.

More than a decade ago, WHO faced a similar problem when Indonesia refused to hand over bird flu samples, arguing that Western scientists would use them to make drugs and vaccines the country couldn't afford.

Lawrence Gostin, director of WHO's Collaborating Center on Public Health Law and Human Rights at Georgetown University, said there are no rules that force governments to hand over viruses, tissue samples or other information.

"If countries don't share, the only repercussions they face are public condemnation," he said.

© 2016 The Associated Press. All rights reserved.

Citation: Health officials want more Zika samples, data from Brazil (2016, February 4) retrieved 25 April 2024 from <https://medicalxpress.com/news/2016-02-health-zika-samples-brazil.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.