World Health Organization: Zika virus “spreading explosively” in Americas

Kate Randall
29 January 2016

Declaring that the Zika virus is “spreading explosively,” the World Health Organization announced it will hold an emergency meeting of independent experts in Geneva on February 1 to decide if the outbreak should be declared an international health emergency.

At a meeting Thursday in Geneva, WHO Director-General Dr. Margaret Chan said the Zika virus was becoming more of a threat. One WHO scientist estimates there could be up to 4 million cases of the virus in the Americas in the next year. Since Brazil reported its first case in May, the virus has now been detected in more than 23 countries and territories in the Americas.

Zika has been linked to birth defects in babies born to infected pregnant women. Chan said that although there was no definitive proof that the virus was responsible for a spike in the number of babies being born with abnormally small heads in Brazil, “The level of alarm is extremely high.” She also noted a possible association between Zika infection and Guillain-Barre syndrome, sometimes resulting in paralysis.

“The possible links, only recently suspected, have rapidly changed the risk profile of Zika from a mild threat to one of alarming proportions,” Chan said. “The increased incidence of microcephaly is particularly alarming, as it places a heart-breaking burden on families and communities.”

Zika is spread by Aedes mosquitos, which also spread dengue and yellow fever. It could also be spread by the Asian Tiger mosquito in the US. There is some evidence that Zika can be transmitted through saliva and semen, although scientists do not believe this to be common. Chan said that this year’s el Niño weather patterns are expected to spread mosquito populations, increasing the Zika threat.

In addition to Zika’s possible link to birth malformations and neurological syndromes, WHO points to other main reasons for concern: potential for further international spread due to the wide geographical distribution of the mosquito vector, lack of population immunity, and the absence of vaccines, specific treatments and rapid diagnostic tests.

WHO was criticized for its slow response to the Ebola outbreak in 2013; nearly 1,000 people died before the agency declared it to be an international emergency. Ashish K. Jha, director of the Harvard Global Health Institute, said, “The most egregious failure was by WHO in the delay in sounding the alarm. People at WHO were aware that there was an Ebola outbreak that was getting out of control by spring ... and yet, it took until August to declare a public health emergency. The cost of the delay was enormous.”

In Brazil, there have been an estimated 500,000 to 1.5 million people infected by Zika as of early January, and nearly 4,000 children have been born with congenital microcephaly, compared to only 150 cases in 2014. Microcephaly is a rare condition that can cause babies to have small heads and severe neurological impairment.

El Salvador has taken the unusual step of advising women to hold off on getting pregnant until 2018, while officials in Colombia and Ecuador have urged women to delay becoming pregnant until the dangers of the virus are better understood.

The US Centers for Disease Control has reported 31 cases of Zika cases in the Continental US among women who have recently traveled to affected regions in Mexico, the Caribbean, Central and South America and other regions outside the US. WHO reports 19 “locally acquired” cases of Zika in Puerto Rico.

The CDC is now advising pregnant women:

“Consider postponing travel to any area where Zika virus transmission is ongoing. If you must travel to one of these areas, talk to your doctor first and strictly follow steps to prevent mosquito bites during your trip.”

Testing for Zika is difficult and there are no commercially produced tests for the virus. In the US, there are only a handful of labs that can diagnose the infection, including one at the CDC, as well as facilities in California, Florida, New York, Puerto Rico and Hawaii.

In Brazil, which is set to host the 2016 Summer Olympics August 5-21 in Rio de Janeiro, the Zika outbreak and spike in microcephaly cases have been concentrated in the country’s poor northeast region. But the southeast, which includes Rio de Janeiro and Sao Paulo, is the second hardest-hit region.

Speaking to the BBC, Lawrence Gostin, a public health law expert from Georgetown University, warned, “With the Rio Olympics on our doorstep I can certainly see this having a pandemic potential.”

Gostin commented before Chan’s announcement, “I’m disappointed that the WHO has not been acting proactively. They have not issued any advice about travel, about surveillance, about mosquito control.”

In addition to the possibility of a pandemic and widespread birth defects, the Zika virus’s spread also carries the potential of widespread economic impacts for the countries affected.

Nuno Antunes, an analyst at Decision Resources Group, told BioPharma Dive: “This will require heavy economic and social efforts; there will be direct expenditures associated with their care, but also a significant economic and social impact as they will require a full-time care taker, most likely a parent who will have to stop working to do so given that these countries are not prepared to offer support to so many children.”

As there is no vaccine, the only present protection against Zika is to avoid the mosquito that carries the virus, a prospect that is much more difficult in poorer regions of the world. Guidelines for avoiding the virus include not travelling to Zika-endemic areas or, if in one of these places, wearing mosquito repellant and long-sleeved shirts, and sleeping in screened-in, air conditioned rooms.

Until recently, there has been little interest on the part of pharmaceutical companies to develop a vaccine for Zika. GlaxoSmithKline and Sanofi are now likely to become involved in international vaccine efforts, seeing the profit-making potential.

Sanofi recently introduced Dengvaxia, the world’s first vaccine against the dengue virus, which killed 22,000 people last year. Dengvaxia was approved for use in Mexico, the Philippines and Brazil last year. According to Bloomberg, Dengvaxia is expected to generate $1.4 billion in revenues for Sanofi by 2020.

Anvisa, the Brazilian regulatory body, has guaranteed priority review to any product contributing to the diagnosis, prevention or treatment of Zika. And Instituto Butantan, the largest biopharmaceutical company in Latin America, announced that it is looking for pharmaceutical partners to collaborate on a vaccine.

However, the development and approval of such a vaccine is a long way off. Scientists at the University of Texas Medical Branch, who have visited Brazil to collect samples and carry out research, are currently analyzing them in laboratories in Galveston in pursuit of a Zika vaccine. They warn that although a vaccine could be ready for testing in two years, it might take another decade for it to be approved by regulators.

Professor Scott Weaver, speaking from inside the Galveston facility, told the BBC that people were right to be frightened by Zika: “It’s certainly a very significant risk, and if infection of the fetus does occur and microcephaly develops we have no ability to alter the outcome of that very bad disease which is sometimes fatal or leaves children mentally incapacitated for the remainder of their life.”