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## United States Senate

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Director General Dr. Margaret Chan  
World Health Organization  
Avenue Appia 20  
1211 Geneva 27  
Switzerland

Dear Director General Chan:

As ranking member of the Senate Foreign Relations Africa and Global Health Subcommittee, which has jurisdiction over global health policy, I am writing to inquire about the efforts of the World Health Organization (WHO) to address the growing threat of the mosquito-borne Zika virus.

Zika was recently identified in Brazil in May 2015. The Brazilian government estimates that there are between 400,000 and 1.4 million Zika cases in the country. And since October 22, 2015, when the government introduced a mandatory reporting requirement, nearly 4,000 new cases have been identified. Since this virus was reported in Brazil in May 2015, infections have occurred in two dozen countries, resulting in the Centers for Disease Control and Prevention (CDC) issuing a travel warning for the affected areas with active Zika transmission. Various international health officials have highlighted severe and incredibly troubling clinical manifestations of the Zika virus, including a birth defect known as microcephaly that results in babies' born with abnormally small heads and incomplete brain development, as well as Guillain-Barré syndrome (GBS), a rare and chronic nerve condition.

Because this virus is transmitted by an aggressive mosquito species that occurs worldwide, there is a significant risk for global transmission, particularly in light of the abundance of international travelers who are expected to attend the 2016 Olympics in Rio de Janeiro this summer--further highlighting the urgency of this issue. As we learned during the Ebola outbreak, early identification and intervention is critical. While I am heartened by the WHO's recent announcement that it will convene an emergency meeting on Zika, it is imperative that WHO quickly play a leadership role to assist nations in identifying and containing any outbreaks of the Zika virus.

Although there are no treatments for Zika virus, we do know that the virus is transmitted to people primarily through the bite of an infected *Aedes* species mosquito. These are the same mosquitoes that spread dengue and chikungunya viruses. Therefore, vector control protocols are

incredibly useful to nations combating this and other mosquito borne illnesses. Because this mosquito is an aggressive day biter and is quite abundant, battling the mosquito population can take significant resources and expertise. New and more aggressive techniques may be necessary to win the battle against these mosquitos. Furthermore, given the association between infection with this virus and severe birth defects, pregnant women are of particular concern, however the acute manifestation of Zika virus—fever, rash, joint pain, red eyes---can easily go unidentified and unreported, necessitating the need for enhanced surveillance and clinical management. WHO can play a critical role in disseminating risk information, providing advice to countries on health system preparedness and identifying the conditions for which a formal public health emergency should be declared. Leadership is essential if we are to get out in front of this potential calamity.

While health officials have recently identified the linkage between Zika virus and birth defects, very little is known about the transmission of this virus from mother to child. Even less is known about the transmission of this virus through blood or sexual conduct, though limited studies have indicated that this is a potential route of transmission. Because this virus was long thought to be primarily asymptomatic and rarely fatal, there was very little research devoted to developing vaccines or treatments for infection. It is clear that additional and accelerated research is needed to better understand the etiology of this virus and to develop effective vaccines and treatments that can prevent devastating consequences to babies and families around the world. WHO involvement can certainly be a galvanizing point for accelerating these dire research needs.

One of the key lessons that we learned from the Ebola outbreak is that we must swiftly galvanize global action against emerging crises, while avoiding unnecessary hysteria. As you have stated regarding the rapidly evolving Zika situation “the level of alarm is extremely high”. WHO can play a critical role in ensuring the correct global actions are taken to address this emerging threat of the Zika virus. Please respond by February 15, 2016 with the plans WHO has to address the threat of the Zika virus and how WHO intends to work with other countries to support their efforts to address the risks of this virus.

Sincerely,



Edward J. Markey