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Zika virus outbreak

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The World Health Organization (WHO) declared Zika virus and its associated complications a Public Health Emergency of International Concern (PHEIC) in February 2016. Zika virus infection, transmitted by the Aedes mosquito, can result in severe health conditions, most notably neurological disorders such as congenital Zika Syndrome (which includes microcephaly) and systemic neurological complications such as Guillain-Barre syndrome. In the years since the PHEIC declaration, the global research community has introduced 45 prophylactic vaccine candidates, as well as several candidates' therapeutics for the virus infection itself, some of which have progressed into human clinical trials. Meanwhile, mathematical modelling is being used to predict where and when future Zika outbreaks may occur. While there is not yet a vaccine for the virus, important information regarding its transmission and mechanism of infection has been elucidated; for example, it has been determined that rates of transmission tend to be highest in the early morning and late afternoon/early evening, since the Aedes mosquito is most active during those hours. Studies in animal models have produced promising results of vaccines for the purpose of preventing maternal-fetal transmission and also generating immunity in the mother and other clinical and translational methods for developing vaccines and therapeutics for the virus are currently being investigated.

Biography

Nuha Algarzae is serving as a Research Assistant at Georgetown University Hospital, she performed an integral research-focused role in conducting intake interviews, administering surveys, completing data collection and managing all aspects of study coordination, research and data acquisition regarding Zika Virus, Yellow Fever, and MERS in collaboration with the lead researcher. As a performance-driven, process-focused and proactive, public health management professional, and an aspiring Global & Community Health professional.