

TAKING GUARD ON ZIKA

Relevant for: Health, Education & Human Resources | Topic: Health & Sanitation and related issues

Every year, several lives across the world are lost or debilitated due to vector-borne diseases such as dengue and chikungunya. In India, the first case of dengue was detected in 1964 in Kolkata, with numbers rising due to a lack of vector control, unplanned urbanisation, climate change and varying immunological reasons. The same holds true for chikungunya, another debilitating mosquito-transmitted disease. After remaining incipient for almost 32 years, chikungunya re-emerged as a deadly infection, in 2006, with more than 1.5 million cases reported in India, and causing deaths or long-lasting physical impairment in millions of individuals around the globe.

While India struggled with the double burden of dengue and chikungunya, a covert virus called Zika sprang into action. Zika was first discovered in monkeys in Uganda in 1947 and remained dormant for several decades. India had gathered its first evidence of Zika in 1954, through a preliminary study conducted by the Indian Council of Medical Research's (ICMR) National Institute of Virology (NIV) in Pune. Limited knowledge suggested that the Zika virus caused a milder form of dengue viral illness: low grade fever, headache and malaise in 20% of infected individuals, whereas 80% of those infected remain asymptomatic.

The African strain of Zika transformed itself and in its new 'avatar', caused major outbreaks in the Yap islands and French Polynesia in 2007 and 2013, respectively. While the world was still oblivious of its potential, Zika became relentless with reports of a sudden, unexplained spike in the number of babies born with microcephaly (small heads) and brain damage in Brazil and other parts of Latin America, baffling public health professionals. Prior to this outbreak, there was very limited research on Zika, with about 15 10-15 articles describing the accidental outbreaks in humans. Today, there are more than 5,000 published research articles, highlighting the urgency to address the situation.

The disease spectrum of Zika ranges from asymptomatic or mild illness to severe birth defects, including brain damage and microcephaly in newborns, and Guillain-Barre Syndrome, a dreaded post-viral neurological syndrome causing partial or complete paralysis in adults. Unlike dengue, Zika can pass through the placenta of pregnant women and infect the foetus, causing severe neurological damage. Unlike dengue, Zika is also transmitted through the sexual route, i.e. having unprotected sex with an infected individual. There is also a risk, of acquisition of Zika after blood transfusion from an infected individual. The complexity of tackling Zika is augmented by the absence of a vaccine or drug to prevent/treat the infection.

Zika was declared a public health emergency by the World Health Organisation (WHO) in 2016. The Ministry of Health and Family Welfare designated the ICMR with the task of setting up human and mosquito surveillance for Zika Virus Disease (ZVD) in India. The first case was confirmed by surveillance by the ICMR, in Ahmedabad, Gujarat, in November 2016. Subsequently, three more cases: two from Gujarat and one from Tamil Nadu were reported through ICMR surveillance. The Gujarat strain was partially sequenced by ICMR-NIV and found to resemble the Zika strains from Malaysia in 1966, which seemed to have relatively low outbreak potential and led to the belief that it may not cause great damage.

However, this was far from the reality. The ICMR's surveillance detected the onset of a major outbreak of ZVD in Jaipur city in September 2018. Its outbreak expanded rapidly and its control became a challenging task. Many pregnant women also tested positive. However, it is critical to understand that the positive number of ZVD cases may be the tip of the iceberg, given the

asymptomatic nature. It is possible that high population mobility resulted in a spread of ZVD to parts of Gujarat and Madhya Pradesh. While Jaipur has not reported new cases since October 29, 2018, reports of sporadic cases have been trickling in from Gujarat. There is also active ZVD transmission ongoing in Bhopal and its neighbouring districts. Genetic sequencing of the Jaipur Zika strain has revealed a close resemblance to the deadly outbreak strain in Brazil. But a sequencing of the Rajasthan Zika strains has shown that the known mutation for microcephaly is not present in these strains. But maintaining a high vigil is a must as the absence of these mutations does not rule out the possibility of microcephaly —the virus may mutate in future or other unknown factors may interplay.

This wakeup call highlights the need for multi-sectoral engagement with implementing agencies to achieve effective vector control, and protect us from ill-health, economic losses and a compromised future.

Dr. Balram Bhargava is Director General, Indian Council of Medical Research (ICMR), New Delhi

Indian doctors are hoping to take advantage of the more favourable way the West is looking at medical cannabis

Our existing notification subscribers need to choose this option to keep getting the alerts.

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

CrackIAS