

**Seroprevalence of Rift Valley Fever among Febrile Patients at Selected Health Facilities
in Trans Nzoia District, Kenya**

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ABSTRACT

Despite the growing public health impact, arboviruses are poorly understood and controlled. The emergence and re-emergence of Rift Valley Fever(RVF) is of great public health importance. In humans, severe cases experience haemorrhagic fevers, encephalopathy and neurological diseases. The lack of specific treatment or commercial vaccine for humans leaves the establishment of disease surveillance systems as the only recourse. It is against this backdrop that this study was conducted at selected health facilities in Trans Nzoia District with an aim of determining the seroprevalence of RVF. The prevalence was determined by RVF IgG sandwich ELISA and RVF IgM capture ELISA. In addition, samples testing positive for IgG and/ or IgM antibodies were subjected to Plaque Reduction Neutralization Test (PRNT) and real time PCR. A total of 323 participants; males 123 (38.1%) and females 186 (57.6%), were recruited into this study between January and July, 2009. The seroprevalence of RVF IgG and IgM antibodies were 2.2% and 1.9% respectively. Six samples were subjected to PRNT of which three neutralised RVF virus. An additional 4 samples were tested for RVF RNA with none testing positive. Rift Valley Fever virus activity in Trans Nzoia is active although at low levels. There is need to monitor RVF activity to determine the endemic cycle for RVF transmission, vectors involved in maintaining local transmission and mechanisms of re-introduction and transmission as well as invasion in neighbouring regions. In addition, health officials in the area should accentuate the importance for differential diagnosis for febrile cases of unknown aetiology.