

Title: Japanese encephalitis prevalence and outbreaks in Nepal and mitigation strategies: an update on this mosquito-borne zoonotic disease posing public health concerns

Author: Ranjit Sah, Aroop Mohanty, Ranjana Rohilla, Ankush Asija, Yub Raj Sedhai, Deepak Chandran, Talha B Emran, Nawfal R Hussein, Anil K Sharma, Kuldeep Dhama

Abstract: Japanese encephalitis virus (JEV), a single-stranded, enveloped RNA virus, is a mosquito-borne flavivirus causing encephalitis, and one of the principal causes of ‘Acute encephalitis syndrome’ worldwide, especially in Asian countries^{1–3}. This vector-borne disease is of high public health concern because of its propensity to cause epidemics and high mortality rate. The first Japanese encephalitis (JE) outbreak was reported in Japan in the year 1871. Since then, the epidemiological trend in Asia, and particularly South East Asia, has been upward. The WHO estimates that around 68 000 JE cases occur worldwide annually, with 75% of the cases in the pediatric age group especially children aged less than 14 years, and ~10 000–20 000 people die annually. JE is of major public health concern in Nepal. The present correspondence article focuses on the JE prevalence and outbreaks in Nepal presents an overview on risk factors associated with JEV transmission and spread, advances in diagnosis and developing vaccines, and salient prevention and control strategies to counter this important disease.

Keywords: Japanese encephalitis virus (JEV), Acute encephalitis syndrome, Mosquito-borne diseases, Flavivirus, Pediatric infections, Epidemiology

DOI: <https://doi.org/10.1097/JS9.0000000000000080>

https://journals.lww.com/international-journal-of-surgery/fulltext/2024/10000/japanese_encephalitis_prevalence_and_outbreaks_in.73.aspx