

# SEROPREVALENCE OF NEUTRALIZING ANTIBODIES AGAINST JAPANESE ENCEPHALITIS VIRUS IN HEALTH CARE WORKERS IN BANGKOK, THAILAND

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**Abstract.** Japanese encephalitis (JE) remains an important cause of viral encephalitis in Thailand. Little is known regarding JE serostatus among Thai individuals born before the introduction of JE vaccine in 2001. The study determined JE seroprevalence in health care workers (HCWs) in Bangkok and factors associated with inadequate JE seroprotection. JE serosurvey was carried out using a 50% plaque reduction neutralization test among HCWs during routine annual check-up in 2015. Risk factors for lack of protective JE antibodies were evaluated using a logistic regression analysis. Of 400 HCWs enrolled, 1.5% reported having been immunized with JE vaccine and 80.5% demonstrated adequate JE seroprotection titer with percent seropositivity (geometric mean titer) of 7 (112.48), 82 (211.47), 81 (84.59), and 82 (126.97) among those 21-30, 31-40, 41-50, and 51-60 years of age, respectively. Male gender was the only significant risk factor of inadequate JE seroprotection with adjusted odds ratio (95% confidence interval) of 1.96 (1.02-3.76). The results suggest approximately one-fifth of the general adult population in Bangkok (particularly males) might be at risk of acquiring JE when traveling to JE high endemic areas.

**Keywords:** health care worker, Japanese encephalitis, seroepidemiology, seroprevalence, Thailand

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