

The impact of community mobilization on dengue control in Muallim District, Perak, Malaysia: January until June 2024

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ABSTRACT

Introduction: The dengue incident rate in Perak showed a tremendous increase from 41 to 50 per 100,000 population, accounted for 21.9% increment from year 2023 to 2024 until the same epidemiological week 22 (EW22). The figure portrayed the dengue burden as one of the major public health problems needing multimodal approaches, one health concept and multi-agencies collaboration interventions including community mobilization. **Objective:** The objective of this paper is to analyse the correlation of community mobilization and empowerment as an intervention measure compared to routine control measures in relation to Ovitrap surveillance of dengue vector, the impact of climate change, namely environmental temperature and rainfall variation. **Materials and Method:** A systematic and meta-analysis study performed based on variable data collected from Ovitrap surveillance conducted at Tanjong Malim sentinel centre - the Tanjong Malim Bus station and its vicinity, from EW1/2024 until EW 29/2024. 60 Ovitrap allocated randomly at the bus station and other surrounding designated areas, following which Ovitrap-related indices generated and correlated with environmental variables, community programmes as well as routine control measures. **Results:** The impact of community mobilization, given the instances of Community for Behavioural Impact (COMBI) involvement, health education for the community by Muallim District Health Offices and multi-agencies commitment has showed a reduction in Ovitrap indices from 30.9% during EW21 to 11.67% for EW22/2024. The highest rainfall value at EW16/2024 with 31mm projected a relation with increase Ovitrap indices (OI) at EW18 (14.55%), followed by a further rising OI at EW19 (27.27%). Community mobilization activities and programmes scheduled at EW18 brought down the OI for the sentinel Tanjong Malim public attraction centre. **Conclusion:** Community mobilization programmes play a vital role for the dengue control in Muallim District. The holistic and transdisciplinary approaches are necessary to address this global health issue which is influenced by various complex factors.