

Vector-borne diseases during COVID-19

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ABSTRACT

Summary: Dengue, a mosquito borne viral disease, remains a public health threat in Malaysia due to its associated morbidity and mortality. Malaysia is endemic to dengue with the annual incidence hovering between 200 to 400 cases per 100,000 population for the past one decade. Nonetheless, the local dengue case fatality rate has been kept below 0.50% since 2012. Dengue in Malaysia has demonstrated a cyclical trends with four to five years interval between peaks. The last two peaks were observed in 2015 and 2019 and based on the observed cyclical trends, 2020 and 2021 were the years when dengue incidence was expected to be at the lowest level. Coincidentally the COVID-19 pandemic occurred in 2020 and 2021 with concurrent reduction of dengue incidence in Malaysia below 400 cases per week. During the pandemic, people spent less time in non-residential areas due to the movement control order implemented by the government and were less exposed to dengue infection risk. Among the public health measures implemented were closure of schools, closing of public transport system and cancellation of public events. The combined effect of the dengue cyclical trends and the public health measures implemented by the government during the COVID-19 pandemic gave rise to historically low dengue incidence in 2020 and 2021. Malaysia has recorded zero indigenous human malaria since 2018. However, Malaysia continues to report imported human malaria. Currently, most of the malaria cases in Malaysia are zoonotic malaria. During the COVID-19 pandemic, the incidence of zoonotic malaria increased from 2,609 cases in 2020 to 3,575 cases in 2021. The opposite was observed for imported human malaria whereby the number was reduced from 621 cases in 2019 to 111 cases in 2021. However, as the country opens its economy in 2022, imported cases of human malaria have started to increase again.