Public health challenges: The rising trend of malaria *Plasmodium knowlesi* in Hulu Selangor

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ABSTRACT

Introduction: *Plasmodium knowlesi* is a zoonotic malaria carried by *Macaca fasicularis* and *Maccaca nemestrina*. Humans are infected by *Anopheles* mosquito bites. Hulu Selangor is the largest district in Selangor, with 45 percent of its forest reserves in mountainous terrain and rivers. Apart from the industrial sector and agriculture, eco-tourism is also booming as an economic driver. Hulu Selangor is the most endemic area for malaria *Plasmodium knowlesi* in Selangor. It remains one of the main public health challenges in Hulu Selangor. **Objective:** This study aims to determine the distribution and contributing factors for malaria *Plasmodium knowlesi* in Hulu Selangor. **Materials and Method:** A cross-sectional study using secondary data extracted through the VEKPRO and CDCIS e-notification systems from 2015 to 2023. Data analysis was done descriptively using Excel version 2021. **Results:** A total of 151 Malaria *Plasmodium knowlesi* cases were reported from 2015–2023, with four (4) deaths. The incidence of malaria *Plasmodium knowlesi* in Hulu Selangor in 2023 was 9 per 100,000 population. There was an increasing trend of malaria *Plasmodium knowlesi* from 2015 to 2019. However, the cases decreased dramatically during pandemic COVID-19 (2020–2022), with eight (8) cases in 2022 and increasing to 22 cases in 2023. Majority of cases were male, aged 18–40 years old, Malaysian citizens, and the main sources of infection were at the orchard and camp site, followed by the plantation area. The most common activities related to malaria *Plasmodium knowlesi* infection were recreational (37%), followed by agricultural (18%) and working and staying in malaria-prone areas (17%). **Conclusion:** Malaria *Plasmodium knowlesi* is one of the public health challenges in Hulu Selangor, with an increasing trend post-pandemic COVID-19. Socio-economic and eco-tourism activities contribute to the malaria infection. Therefore, an integrated approach should be applied by relevant agencies to the targeted community to curb malaria cases and prevent malaria mortality in Hulu Selangor.