

# Hand, foot, and mouth disease unmasked: Unravelling the patterns of a viral epidemic in Bachok district

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## ABSTRACT

**Introduction:** Hand, foot, and mouth disease (HFMD) is a common disease in East and Southeast Asia, particularly in Malaysia. Primarily affecting children under the age of five, it is generally benign in nature. The Ministry of Health Malaysia reported a notable rise in HFMD cases in 2018, with a nationwide total of 76,446 outbreaks, compared to 29,358 cases in 2017. Similar trends have been observed in Kelantan and Bachok through data surveillance. The objective of this study was to investigate the status of HFMD in Bachok District, including its distribution among different social demographics, clinical and epidemiological patterns, geographical distribution, and trends in incidence. **Material and Methods:** Methods cross sectional study was used with all confirmed cases of HFMD extracted from MOH CDCIS e-notifications system in Bachok during 2018-2022. The extracted data was coded, cleaned & analysed using Microsoft excel. The extracted longitude- latitude were exported to QGIS version 3.3 for analysis. **Results:** Between 2018 and 2022, Bachok's district had a total of 851 HFMD cases, with the Tawang subdistrict having the highest incidence, but no deaths reported, higher occurrence in males (56.1%) than females (43.8%), and children taken care of at home (80.9%) while a smaller percentage (19%) attended playschool or nursery. Majority of cases treated as outpatients (98.8%) due to effective health promotions and SOPs. Cluster cases of HFMD were not alarming, with only three clusters identified over the five-year period, involving a total of eight HFMD cases. The vast majority of cases (99%) were sporadic, indicating that the disease was primarily occurring as individual cases rather than large-scale outbreaks. **Conclusion:** As HFMD situational analysis in Bachok, we should recommend the use of heat maps in every district to have a better view on districts and subdistricts HFMD incidence to focus on health promotions and education to the community. We should act according to the epidemic features of the infectious diseases to formulate a perfect control strategy to prevent the outbreak and prevalence of infectious diseases.