Trends of disease outbreaks in Kelantan from 2018-2022: A descriptive study

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ABSTRACT

Introduction: Outbreaks of various infectious diseases have posed significant challenges to public health systems worldwide. This study aims to analyse the trends of outbreaks in Kelantan from 2018 till 2022, a state in Malaysia, in order to gain a comprehensive understanding of the patterns and characteristics of these outbreaks. Understanding these patterns were crucial for effective disease control measures and intervention strategies. **Materials and Methods:** A descriptive study design was conducted, utilizing data collected from multiple sources, including Kelantan Outbreak Registry Data, e-Wabak system, and official outbreak reports. The study period was from January 2018 to December 2022, focusing on the occurrence of outbreaks within Kelantan. Data entry and analysis were done using Microsoft Excel and presented with graphs, numbers, and percentages. **Results:** Over the five-year period, a total of 2,915 outbreaks were reported, with 222(10.1%) outbreaks in 2018, 533(24.3%) in 2019, 445(20.3%) in 2020, 767(34.9%) in 2021, and 228(10.4%) in 2022. Kota Bharu had the highest number of outbreaks, 1,396(63.6%), followed by Pasir Mas with 261(11.9%) and Bachok with 123(5.6%). The most prevalent outbreaks were dengue (1,051 outbreaks (47.88%)), and COVID-19 (845 outbreaks (38.50%)). Majority of outbreaks (1,234 outbreaks (56%)) were detected early within 1 day, and occurred in communities (1,734 outbreaks, 79.00%) with a mean duration of 27 days. **Conclusion:** The study provided an overview of disease outbreaks over a five-year period, highlighting the number and distribution of outbreaks across districts, type of diseases, duration of outbreaks as well as the time frame of outbreak declarations. The findings emphasize the need for effective public health planning and intervention strategies to mitigate the impact of these outbreaks. Further research is recommended to explore specific risk factors, evaluate the effectiveness of control measures, and enhance outbreak preparedness in the state.