

# Five-year trend of measles and its associated factors in Kota Bharu district, Kelantan

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## ABSTRACT

**Introduction:** Measles is a highly contagious disease and causes public health concern. Malaysia had started the Measles Elimination Programme since 2004, however, the prevalence of measles in Kota Bharu continues to be increased, showing limited improvement. This study aims to determine the incidence rate and trend of measles as well as factors that are associated with confirmed measles cases in Kota Bharu, Kelantan from 2018 to 2022. **Materials and Methods:** The five-year population-based surveillance data of the Kota Bharu district was extracted from SM2 e-measles. Data was analysed descriptively as numerical (mean and standard deviation) and categorical (count and percentage). Multiple logistic regression was used to examine the relationship between measles and available sociodemographic data. **Results:** A total of 1169 reported measles cases were investigated. The incidence rate ranged from 0.33 to 7.84 per 100,000 population. Out of the reported cases, 7.7 percent were confirmed measles. Confirmed measles cases were significantly associated with a history of contact with measles cases (AdjOR = 0.016, 95% CI: 0.005, 0.050), and incomplete vaccination (AdjOR = 0.447, 95% CI: 0.270, 0.742). **Conclusion:** In Kota Bharu, the occurrence of measles remains at a concerning level, comparable to the national incidence. The risk of contracting measles is higher for individuals who have not received vaccinations and have had contact with confirmed or suspected cases. It is crucial to prioritize the promotion of immunization, as it has proven effectiveness in preventing and eradicating measles.