

Under-five mortality in Kota Bharu district, Kelantan: Factors associated with preventable deaths

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ABSTRACT

Introduction: The definition of under-five mortality, according to the World Health Organization (WHO), refers to the likelihood of a child dying before reaching the age of five, expressed as a rate per 1,000 live births. This is a significant global public health issue, with an estimated 5.2 million children under the age of five dying each year, predominantly in low- and middle-income countries. In Malaysia, the under-5 mortality rate has gradually decreased from 50.5 deaths per thousand live births in 1972 to 7.6 deaths per thousand live births in 2021. However, in Kelantan, the under-five mortality rate was 8.7 per 1,000 live births in 2014, surpassing the target of 6.9 per 1,000 live births. The objective of this study was to determine the under 5 mortality rate in Kota Bharu from 2017 to 2022, as well as to calculate the proportion of preventable deaths among children under five years old and to determine the associated factors contributing to under five mortality in Kota Bharu. **Materials and Methods:** This was a retrospective cross-sectional study utilizing data from "U5MR-N Pindaan 2019" between 1 January 2017 until 31 December 2022. The study was conducted at government health clinics in Kota Bharu district. Multiple variables were considered, including maternal sociodemographic factors, maternal medical factors, children factors, service provider factors with the outcome of preventable death. Descriptive, simple logistic regression, and multiple logistic regression analyses were performed to answer the study's objectives. **Results:** A total of 460 subjects who fulfil the inclusion and exclusion criteria were studied. This study showed that under five mortality rates were around 7 per 1000 per estimated live birth from 2017 until 2022. The proportion of preventable deaths in Kota Bharu accounted for 46% of under-five mortality during the study period. Further analysis using simple logistic and multiple logistic regression done, showed that under five mortality was significantly associated with children age group (Adj. OR 0.388,95 CI:0.214,0.702 ; p 0.002), children gender (Adj. OR 0.645 CI:0.441, 0.943 ; p 0.024), maternal education level (Adj. OR 3.083 CI:1.100 , 8.639 ; p 0.032), maternal comorbidities (Adj. OR 3.100 CI:2.087, 4.604 ; p <0.001), and substandard care (Adj. OR 0.123 CI:0.056, 0.267 ; p <0.001). **Conclusion:** The findings of this research will contribute to a better understanding of the factors influencing under-five mortality especially in Kota Bharu. Hence, policy decisions can be catered accordingly.