

# Factors associated with tuberculosis mortality in Kota Bharu district, Kelantan

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## ABSTRACT

**Introduction:** Tuberculosis (TB) is a communicable disease causing significant morbidity and mortality worldwide, including in Malaysia. It is one of the leading causes of death from a single infectious organism and ranks higher than HIV/AIDS. The study aimed to determine the factors associated with TB mortality in Kota Bharu, Kelantan between 2018 to 2022. **Materials and Methods:** The study design used is a cross-sectional study design. All confirmed TB cases from 2018 to 2022 registered in National Tuberculosis Registry (NTBR) under Kota Bharu district were included. Factors associated with TB mortality were analysed by using simple and multiple logistic regression analysis. **Results:** A total of 1533 TB cases were included in the analysis, from which 224 cases (14.6%) occurred in a period of 5 years. The prevalence of TB death was highest in 2021 (16.4%), while lowest in 2020 (13.7%). Analysis by multiple logistic regression analysis showed that factors significantly associated with TB mortality in Kota Bharu were age 45–64 years old (adjusted OR = 2.83; 95% CI: 1.86, 4.37), > 65 years old (adjusted OR = 7.22; 95% CI: 4.58; 11.6), Far Advanced X-ray (adjusted OR = 6.20; 95% CI: 3.45, 11.1), Moderately Advanced X-ray (adjusted OR = 1.98; 95% CI: 1.44, 2.74), and HIV-positive status (adjusted OR = 8.85; 95% CI: 5.54, 14.2). **Conclusion:** This study found that patients who were diagnosed with TB aged 45 years old and above, having far/moderately advanced chest x-ray and positive HIV had a higher risk for TB mortality. Early ad prompt diagnosis, enhanced screening, and close monitoring should be practiced to reduce TB mortality.