

## BEYOND FLOOD VICTIMS: A CALL FOR EXPANDED LEPTOSPIROSIS PROPHYLAXIS IN KULAI DISTRICT

Afiqah Syamimi Masrani  
Kulai District Health Office

Mohd Anwar Shahrir Ahmad  
Kulai District Health Office

Abdul Salam Abd Manaff  
Kulai District Health Office

Ainil Mastura Yahya  
Kulai District Health Office

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### ABSTRACT

*INTRODUCTION: Leptospirosis, a potentially fatal bacterial infection, is a known zoonotic disease that increases during flooding episodes. Doxycycline prophylaxis was offered to flood victims and rescue workers to curb its transmission. Despite this effort, a cyclic rise in Leptospirosis incidence during the monsoon season is still observed. OBJECTIVE: To determine the temporospatial pattern of Leptospirosis in Kulai from 2015 to 2024 and to propose a local guide for offering prophylaxis treatment of Leptospirosis. METHODOLOGY: This cross-sectional study involves Leptospirosis cases registered in Kulai District between the year 2015 to 2024. Descriptive analysis was used to determine the sociodemographic of Leptospirosis cases whilst a time series analysis and geospatial analysis of cases using ArcGIS was used to map the temporospatial distribution of cases. RESULTS: In the 10-year timeframe between 2015 and 2024, 270 cases of Leptospirosis were registered in Kulai with the highest incidence reported in 2018. The mean age is 32.7 years (SD=20.2) and the majority of cases are male (66.3%). A significant difference was seen in the number of cases registered between the monsoon and non-monsoon season ( $P = 0.0267$ ,  $CI = 0.1239$  to  $2.0043$ ). The cases were mostly scattered along the main Kulai road where the majority of housing and economic areas are located and are not flood prone areas. CONCLUSION: Despite the increase in leptospirosis cases during the monsoon season, the cases were not from flood-prone areas. Rather, they persistently cluster along the residential and industrial strip in Kulai. This calls for targeted health promotion and clean-up activities in the area. Advice for prophylaxis treatment against leptospirosis should also be given by all healthcare facilities and not just limited to flood victims or flood rescue workers.*

Keywords: Air pollution, children, respiratory disease, emergency department visit, lockdown

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