ABSTRACT

Temporal and Geographic Patterns of Malaria Prevalence in Indonesia: National Health Surveys, 2007-2023

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Background : Malaria remains a major public health challenge in Indonesia despite substantial progress toward national elimination. Comprehensive evidence describing long-term temporal trends and geographic distribution at the national level remains limited.

Objective : This study aimed to describe temporal trends, geographic distribution, and sociodemographic patterns of malaria prevalence in Indonesia using four nationally representative health surveys conducted between 2007 and 2023.

Research Methods/ Implementation Methods : A descriptive repeated cross-sectional study was conducted using publicly available aggregated data from the 2007, 2013, and 2018 National Basic Health Surveys (Riskesdas) and the 2023 Indonesian Health Survey (SKI). National malaria prevalence, provincial distribution, temporal changes, and prevalence across selected sociodemographic characteristics were summarized descriptively. Geographic distribution was visualized using provincial choropleth maps, while temporal trajectories were examined for selected endemic provinces. Relative percentage changes between 2007 and 2023 were also calculated.

Results : National malaria prevalence declined substantially from 2007 to 2018, followed by a slight increase in 2023 while remaining well below earlier levels. The highest prevalence was consistently concentrated in eastern Indonesia, particularly Papua and neighboring provinces. Although several provinces achieved marked reductions, historically endemic provinces continued to report the highest burden.

Conclusion/Lesson Learned : Malaria prevalence in Indonesia has declined substantially over the past sixteen years; however, the remaining burden has become increasingly concentrated in a limited number of provinces. These findings highlight the importance of geographically targeted malaria control strategies while continuing to address sociodemographic disparities during Indonesia’s transition toward malaria elimination.

Keyword : malaria; temporal trends; geographic distribution; national health survey; Indonesia;