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Dampak COVID-19 Terhadap Pencapaian Eliminasi Malaria Pada Wilayah Endemis Rendah di Indonesia
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ABSTRAK

Latar Belakang: Pandemi COVID-19 menyebabkan disrupsi pada pelayanan kesehatan dan kegiatan program, termasuk program pengendalian dan eliminasi malaria yang ditargetkan selesai pada 2030. Variasi endemisitas, mobilitas penduduk, dan disrupsi sistem kesehatan akibat pandemi berpotensi meningkatkan kasus malaria.
Tujuan: Studi ini bertujuan untuk memahami dampak dan implementasi strategi pada periode pandemi COVID-19 untuk mencapai eliminasi malaria di Indonesia terutama pada kabupaten endemis rendah.
Metode: Penelitian menggunakan *scoping review* dengan kerangka PRISMA 2020 pada lima basis data elektronik dan *mixed-method explanatory sequensial design*. Studi dampak dengan menganalisis tren kasus malaria (2018–2022) di 14 kabupaten endemis rendah serta data COVID-19 dan mobilitas penduduk berbasis *geotagging Facebook* di empat kabupaten di Jawa (Kulon Progo dan Purworejo) dan di luar Jawa (Tanah Laut dan Tanah Bumbu). Studi perubahan dan tantangan dengan survei menggunakan kuesioner baik secara daring dan luring melibatkan 71 pengelola puskesmas dan 129 kader. Studi kualitatif melalui 6 sesi diskusi kelompok terarah (DKT) dan 50 informan wawancara mendalam, dianalisis menggunakan kerangka *Consolidated Framework for Implementation Research* (CFIR) untuk mengidentifikasi perubahan, tantangan, dan strategi adaptasi eliminasi malaria selama pandemi.
Hasil: *Scoping review* yang melibatkan 49 artikel dari 14 negara Asia menunjukkan pandemi COVID-19 berdampak ganda pada malaria, menurun akibat pembatasan mobilitas, namun meningkat di wilayah lain akibat melemahnya surveilans dan *refocusing* anggaran serta SDM. Studi dampak menunjukkan penurunan cakupan penemuan kasus di hampir seluruh kabupaten, diikuti lonjakan kasus dan KLB. Meskipun begitu, 6 dari 14 kabupaten berhasil meraih sertifikasi eliminasi selama pandemi mengindikasikan kapasitas adaptasi program sebagai faktor keberhasilan eliminasi di tengah tekanan sistem kesehatan. Studi mobilitas mengkonfirmasi hubungan mobilitas, skrining malaria, dan positivitas COVID-19 dengan insidensi malaria [IRR 1,25 (95% CI: 1,21–1,30); IRR 2,33 (95% CI: 2,22–2,45); IRR 1,12 (95% CI: 1,08–1,17)]. Namun, hubungan ini bersifat kompleks dan dipengaruhi oleh pola endemisitas setempat. Ketahanan program malaria di Jawa lebih baik dibandingkan luar Jawa, ditopang kelengkapan regulasi, diversifikasi pendanaan, dan *champion* berlapis. Adaptasi di kedua wilayah bersifat *fidelity-consistent*, namun adaptasi Jawa lebih sistematis dan terlembaga. Sedangkan adaptasi di luar Jawa bersifat organik dan bergantung pada inisiatif individu kunci.
Kesimpulan: Pandemi COVID-19 mendisrupsi program eliminasi malaria di wilayah endemis rendah, dengan kapasitas adaptasi program yang ditentukan oleh kelembagaan, kepemimpinan, dan *champion* sebagai faktor penentu ketahanan di tengah krisis. Diperlukan penguatan kelembagaan program secara berjenjang disertai penyusunan rencana kontingensi sebagai bagian ketahanan sistem kesehatan. Adaptasi inovatif yang terbukti efektif selama pandemi sebagai strategi permanen agar dapat berjalan dalam kondisi krisis apapun.
Kata kunci: dampak, COVID-19, eliminasi malaria, endemis rendah, adaptasi.

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ABSTRACT

Background: The COVID-19 pandemic disrupted healthcare services and program activities, including malaria control and elimination programs targeted for completion by 2030. Variations in endemicity, population mobility, and pandemic-related health system disruptions potentially increased malaria cases.
Objective: This study aimed to understand the impact and implementation strategies during the COVID-19 pandemic period to achieve malaria elimination in Indonesia, particularly in low-endemic districts.
Methods: The study employed a scoping review using the PRISMA 2020 framework across five electronic databases and a mixed-method explanatory sequential design. An impact study analyzed malaria case trends (2018–2022) across 14 low-endemic districts, alongside COVID-19 data and Facebook geotagging-based population mobility data in four selected districts in Java (Kulon Progo and Purworejo) and outside Java (Tanah Laut and Tanah Bumbu). A change and challenge study utilized both online and offline questionnaire surveys involving 71 primary healthcare center managers and 129 community health workers. A qualitative study was conducted through 6 focus group discussions (FGDs) and 50 in-depth interviews, and the data were analysed using the Consolidated Framework for Implementation Research (CFIR) to identify changes, challenges, and malaria elimination adaptation strategies during the pandemic.
Results: A scoping review of 49 articles from 14 Asian countries revealed that the COVID-19 pandemic had a dual impact on malaria: declining due to mobility restrictions, yet increasing in other areas due to weakened surveillance, budget constraints, and refocusing of human resources. The impact study demonstrated a decline in case detection coverage across nearly all districts, followed by surges and outbreaks. 6 of 14 districts achieved elimination certification during the pandemic, indicating that program adaptation is a key determinant of elimination success amid health system pressures. The mobility study confirmed associations between mobility, malaria screening, and COVID-19 positivity with malaria incidence [IRR 1.25 (95% CI: 1.21–1.30); IRR 2.33 (95% CI: 2.22–2.45); IRR 1.12 (95% CI: 1.08–1.17)], though the relationships were complex and influenced by local endemicity patterns. Program resilience in Java was superior to that outside Java, supported by comprehensive tiered regulations, diversified funding, and a multi-layered champion ecosystem. Adaptations in both regions were fidelity consistent. However, in Java, the adaptations were more systematic and institutionalised, while adaptations outside Java were organic and dependent on key individual initiatives.
Conclusion: The COVID-19 pandemic disrupted malaria elimination programs in low-endemic areas, with program adaptation capacity determined by institutional capacity, leadership, and champion ecosystems, which were the key determinants of resilience during the crisis. Strengthening program institutionalization at all levels, accompanied by contingency planning as an integral part of health system resilience, is essential. Innovative adaptations proven effective during the pandemic should be institutionalized as permanent strategies to ensure program continuity under any crisis conditions.
Keywords: impact, COVID-19, malaria elimination, low endemic, adaptation