

**SYMPOSIUM ON MALARIA PREVENTION AND CONTROL IN
MOBILE AND HARD TO REACH POPULATIONS
PARAMARIBO, APRIL 6-8, 2022**

**Lesson Learned from Malaria Eradication in Indonesia:
Strengthen One Health Approach is the Key Point**



Authors

Shafia Khairani
Randi Sagasiousman

Affiliations

Veterinary Medicine Program, Faculty of Medicine, Padjadjaran University
Biology Vaccine Institute, Indonesian Military Health System

INTRODUCTION

Malaria, a vector-borne disease, is most prevalent and become a problem in tropical and subtropical countries including Indonesia. Although the Annual Parasite Incidence has decreased in the last decade, this figure has tended to stagnate since 2014. With the COVID-19 pandemic, it is feared that this stagnant figure will continue if there is no new approach or intervention.

In Indonesia, Malaria cases in 2018 were 202,176 and increased to 250,628 cases in 2019 along with the Covid-19 pandemic. Additionally, in the period 2008-2015, there were 418 cases of malaria knowlesi in Indonesia with the largest distribution in the Kalimantan region. The emergence of zoonotic cases also needs attention together, so it is absolutely necessary to strengthen the One Health Approach in malaria eradication efforts.

OBJECTIVE

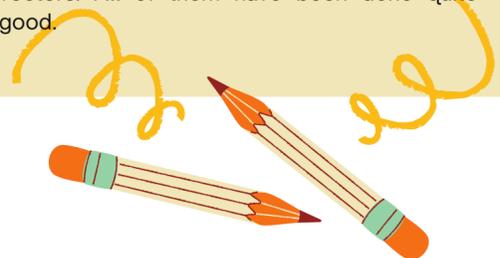
To understand malaria eradication efforts in Indonesia over the last decade and what kind of innovations can be applied in the future.

METHODOLOGY

Two electronic databases, i.e., Google Scholar and PubMed, were searched for relevant studies published between 2010-2021. The search terms used for this review included "Malaria eradication, Indonesia, One Health Approach". The language was restricted to Indonesia and English.

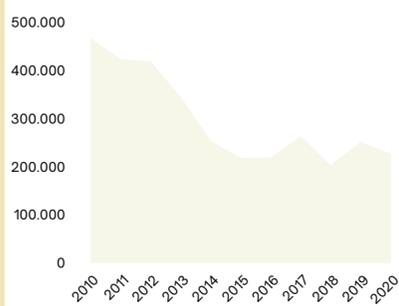
RESULTS

There are several attempts done by the Indonesian government including 1). increasing the distribution and wide-scale use of long-lasting insecticide-treated bed nets, 2). promoting indoor residual spraying applications in high-risk areas, 3). encouraging active surveillance, tracing in border area followed by digital-based case mapping, 4). examine the possibility of zoonotic transmission from animals to humans around forest areas, as well as 5). controlling malaria vectors. All of them have been done quite good.



ANALYSIS

The high number of malaria cases in Indonesia is caused by several factors, including: 1). The complex life cycle of Plasmodium, 2). the existence of complex and diverse vector species in Indonesia, 3). high rates of transmission in forest and mountainous areas, and 4) control of malaria in border areas that is not yet optimal. This is a burden for malaria control in Indonesia. Therefore, the Indonesian government together with researchers, health workers, influencers, digital creators, and the society, work together to implement and strengthen the One Health approach in various lines, so that it has a greater impact.



Tren Malaria Cases in Indonesia (malaria.id)



Communication, Cooperative, Coordination and Collaboration

CONCLUSION

An integrated One Health approach, including the involvement of digital innovators, together with collaboration from various sectors and multidisciplinary fields urgently needed and served as the key point for high-impact malaria eradication in society.

Related literature

- Lubis, I. N. D., Wijaya, H., Lubis, M., Lubis, C. P., Divis, P. C. S., Beshir, K. B., & Sutherland, C. J. (2017). Contribution of Plasmodium knowlesi to multispecies human Malaria infections in North Sumatera, Indonesia. *Journal of Infectious Diseases*, 215(7), 1148-1155.
- Nurcahyo, W. (n.d.). Potensi dan Ancaman Zoonosis Malaria.
- Scott, J. (2020). Proposed Integrated Control of Zoonotic Plasmodium knowlesi in Southeast Asia Using Themes of One Health. *Tropical Medicine and Infectious Disease*, 5(4), 175.
- <https://www.malaria.id/en>

