




Opinion



The need for active and integrated involvement of the community and health professionals in the prevention and control of dengue hemorrhagic fever in Indonesia

 Muhammad Farid Dimjati Lusno,  Setya Haksama, Ririh Yudhastuti, Siti Zubaidah, Abdullah Al Mamun, Abubakar Tarawally, Muhammad Rifqo Hafidzudin Farid,  Heru Santoso Wahito Nugroho

Corresponding author: Heru Santoso Wahito Nugroho, Center of Excellence of Community Empowerment in Health, Poltekkes Kemenkes Surabaya, Surabaya, Indonesia. heruswn@gmail.com

Received: 16 Mar 2024 - **Accepted:** 30 Mar 2024 - **Published:** 16 Apr 2024

Keywords: Dengue fever management, vector control, proactive surveillance, public health strategy

Copyright: Muhammad Farid Dimjati Lusno et al. Pan African Medical Journal (ISSN: 1937-8688). This is an Open Access article distributed under the terms of the Creative Commons Attribution International 4.0 License (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Cite this article: Muhammad Farid Dimjati Lusno et al. The need for active and integrated involvement of the community and health professionals in the prevention and control of dengue hemorrhagic fever in Indonesia. Pan African Medical Journal. 2024;47(185). 10.11604/pamj.2024.47.185.43298

Available online at: <https://www.panafrican-med-journal.com//content/article/47/185/full>

The need for active and integrated involvement of the community and health professionals in the prevention and control of dengue hemorrhagic fever in Indonesia

Muhammad Farid Dimjati Lusno¹, Setya Haksama¹, Ririh Yudhastuti¹, Siti Zubaidah¹, Abdullah Al Mamun¹, Abubakar Tarawally¹, Muhammad Rifqo Hafidzudin Farid², Heru Santoso Wahito Nugroho^{3,&}

¹Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia, ²Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia, ³Center of Excellence of Community Empowerment in Health, Poltekkes Kemenkes Surabaya, Surabaya, Indonesia

&Corresponding author

Heru Santoso Wahito Nugroho, Center of Excellence of Community Empowerment in Health, Poltekkes Kemenkes Surabaya, Surabaya, Indonesia

Abstract

Successful control and prevention of dengue fever requires active involvement from all parties. For this reason, three innovative programs are needed, namely: i) increasing knowledge, attitude and practice (KAP) of the community and health professionals as capital in controlling dengue fever in a sustainable manner; ii) application of "3M Plus" to suppress vector breeding in household settings; iii) promotion of the "Jumantik" program as an effective community empowerment approach to prevent and control dengue fever based on community independence. It was concluded that successful control of dengue fever requires integration of the community and health workers through various innovative programs.

Opinion

In Indonesia, dengue hemorrhagic fever (DHF) is still a public health problem today [1], so of course strategic efforts are needed to solve it, and the best solution strategy is through programs that actively involve all parties, both health professionals and the community itself [2]. However, until now, the integration of various parties in preventing and controlling DHF has not worked well. For this reason, it is necessary to identify various programs that are already running and strengthen them with maximum integration of all relevant parties. The first is optimizing knowledge, attitudes and practices (KAP) regarding DHF control as initial capital to be able to control this disease in a sustainable manner. Community KAP needs to be compiled into a community participation index, so that it can be evaluated carefully on an ongoing basis. Apart from community KAP, the same thing must also be done for health professionals, so it is also necessary to optimize health professional KAP, as a companion to the community in controlling DHF [3]. Second is the optimization of the "3M plus" program (In Indonesian, 3M = *menguras, menutup, mendaurulang*; in English = drain, close and recycle). So, 3M is: i) draining water reservoirs, ii) closing water reservoirs, and; iii) recycling

various items that have the potential to become mosquito breeding grounds. Meanwhile, the "Plus" referred to in this case includes: i) planting plants that can ward off mosquitoes; ii) checking places used for water storage; iii) keeping fish that eat mosquito larvae; iv) using mosquito repellent; v) install wire mesh on windows and ventilation in the house; vi) work together to clean the environment; vii) put used clothes in a closed container; viii) provide larvicide to water reservoirs that are difficult to drain; ix) repair channels and gutters that are not running smoothly [4,5].

It is important to realize that the active involvement of the entire community through the "3M Plus" program is very strategic, because it is the local community who can closely monitor the environmental conditions in which they live. In this way, they become the spearheads of environmental management, especially the eradication of mosquito nests, starting from the household [5]. Third is the mobilization of public health cadres in the prevention and control of DHF through the "*Jumantik*= larva monitors" program. *Jumantik* is the pioneer of DHF control in Indonesia, who has become a leader for other community members in fighting DHF which is a problem to this day. The details of *jumantik*'s duties are: i) planning home visits in his area; ii) educate the public and eradicate larvae; iii) mobilize and supervise the community in controlling DHF; iv) record and summarize the results of larval examination; v) report the results of the larval examination to the community health center; vi) together with the supervisor, carry out monitoring of the local area and mapping of larval inspection results [6]. Controlling DHF is not easy [7,8]. All potential must be optimized to get the expected achievements. As a key to success, the three programs that have been launched by the Indonesian government should be implemented with harmonious and complete integration from both the community and health professionals as supervisors. Thus, it can be concluded that active and integrated involvement of the community and health professionals in various existing programs is a condition for the success of sustainable DHF control in Indonesia.

Competing interests

The authors declare no competing interest.

Authors' contributions

All the authors have read and agreed to the final manuscript.

References

1. Harapan H, Michie A, Mudatsir M, Sasmono RT, Imrie A. Epidemiology of dengue hemorrhagic fever in Indonesia: analysis of five decades data from the National Disease Surveillance. *BMC Res Notes*. 2019 Jun 20;12(1): 350. **PubMed** | **Google Scholar**
2. Pakaya R, Daniel D, Widayani P, Utarini A. Spatial model of Dengue Hemorrhagic Fever (DHF) risk: scoping review. *BMC Public Health*. 2023 Dec 7;23(1): 2448. **PubMed** | **Google Scholar**
3. Lee M, Kang BA, You M. Knowledge, attitudes, and practices (KAP) toward COVID-19: a cross-sectional study in South Korea. *BMC Public Health*. 2021 Feb 5;21(1): 295. **PubMed** | **Google Scholar**
4. Indonesian Ministry of Health. Efforts to prevent DHF with 3M-Plus *Upaya Pencegahan DBD dengan 3M Plus*. Accessed on Mar 16, 2024.
5. Indonesian Ministry of Health. Eradicating mosquito nests with 3M-Plus *Pemberantasan Sarang Nyamuk dengan 3M Plus*. Accessed on Mar 16, 2024.
6. Indonesian Ministry of Health. Technical instructions for implementing eradicating mosquito nests 3M-Plus with the movement of 1 house 1 jumantik. Jakarta: Indonesian MOH. 2016.
7. Adekanmbi O, Iakoh S. A favorable outcome of dengue hemorrhagic fever despite poor prognostic indices: a case report with a mix of classic and unusual clinical and laboratory features. *Pan African Medical Journal*. 2019 Oct 5: 34: 74. **PubMed** | **Google Scholar**
8. Ouoba K, Dori D, Semdé R. Dengue epidemic in Burkina Faso: concerns about the informal use of traditional herbal remedies. *Pan African Medical Journal*. 2024 Feb 19;47(71). **Google Scholar**