



SEACO POLICY BRIEF 007

# Awareness about asymptomatic dengue viral infection

South East Asia Community Observatory  
(SEACO):  
Research for a Healthy Community

# This research-based evidence brief highlights potential policy options

## Who are the readers of this Policy Brief?

Policymakers and other stakeholders who are interested in addressing the problem based on research evidence

## Why was it prepared?

To inform stakeholders about health policies and interventions by summarizing the best available research-based evidence about the problem

## What is Research-Based Evidence Brief for Policy?

Research-Based Evidence Brief for Policy generates from the studies implemented by SEACO; an ISO accredited health and demographic surveillance site which acts as a research platform for health-related research

## Full Publication

The research-based evidence describes in detail in the SEACO publication

*Dhanao, A., Hassan, S. S., Jahan, N. K., Reidpath, D. D., Fatt, Q. K., Ahmad, M. P., ... Allotey, P. (2018). Seroprevalence of dengue among healthy adults in a rural community in Southern Malaysia: a pilot study. Infectious Diseases of Poverty, 7(1), 1. <https://doi.org/10.1186/s40249-017-0384-1>*

<https://www.ncbi.nlm.nih.gov/pubmed/29335021>

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## **The Problem:**

In the recent decades, dengue viral infection has become a major public health concern due to a high number of asymptomatic infections which poses a substantial economic and disease burden. Dengue is no longer an urban metropolitan disease; it is gradually spreading in rural district areas. Malaysia has experienced an exponential increase in clinically diagnosed reported dengue cases as the symptomatic dengue incidence increased 11-fold from 2000 to 2014. Dengue has become hyper-endemic in Malaysia with all four dengue virus serotypes co-circulating, with fluctuations of the dominant serotypes over time and location. Henceforward it becomes important to determine the seroprevalence of asymptomatic dengue viral infection in the healthy-looking adult population, especially in a rural district, and to identify the factors associated with seropositivity.

## **Evidence to Support Policy Options:**

The study conducted in the catchment area of the South East Asia Community Observatory (SEACO), especially in the Sungai Segamat sub-district which considered as a hot spot by the Segamat District health department. The study found that the people of the Segamat rural community had a very high previous exposure to the dengue virus; 87% of the study respondents had serological evidence of past infection; though only 13% developed symptoms; remaining did not develop any symptom due to subclinical dengue viral infection. The study also found that sero-positivity increased with age which suggests that the longer a person resides in an endemic area, the higher the chance of being infected by the dengue virus. At the beginning of the study, serological evidence of recent infection found in 11% of participants; and the Chinese Malaysian highly associated with it. It seems that likely there was a recent outbreak with the silent transmission of dengue viral infection in the area that is predominantly populated by the Chinese Malaysian.

## **Recommendations:**

Effective mosquito population control and preventive measure should be undertaken to reduce dengue-related disease burden at the community level, keeping in mind about the potential large reservoir of subclinical/ asymptomatic infection which is unreported and undetected by the official surveillance system. Policymakers need to be aware of asymptomatic dengue infection to strengthen the individual and community level dengue control and preventive measure.