



SEACO POLICY BRIEF 001

# Population Monitoring of Blood Pressure

South East Asia Community Observatory  
(SEACO):

Research for a Healthy Community

# This research based evidence brief highlights potential policy options

## Who is this Policy Brief for?

Policy makers and other stakeholders who are interested to address 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 is generated 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 is described in detail in the SEACO publication

*Reidpath DD, Ling ML, Yasin S, Rajagopal K, Allotey P. Community-based blood pressure measurement by non-health workers using electronic devices: a validation study. Global Health Action. 2012;5: 14876*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3386551/>

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## **The Problem:**

Non-communicable diseases, particularly hypertension, are a growing burden in Malaysia. This has led to a need to monitor and screen blood pressure (BP) at the population level. However, qualified health workers are expensive and often unavailable for this purpose. In addition, the current method of mercury sphygmomanometers to measure BP also requires significant training. As a result, many resource-poor communities are deprived of from population-based monitoring and screening of BP.

Due to the situation, an evidence is needed whether community-based, non-health workers can be a replacement of qualified health workers to undertake this responsibility; whether the non-health workers can use electronic, automatic BP monitors which does not need extensive training or qualified health professionals.

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

SEACO conducted a validation study to compare BP measurements taken by trained non-health workers using electronic devices against the results by qualified health workers using mercury sphygmomanometers. The process involved measuring the BP of adult volunteers on four consecutive occasions.

The study found that there was no significant difference in systolic BP readings taken by trained non-health workers using an electronic device and qualified health workers using a mercury sphygmomanometer. For diastolic BP, non-health workers' measurements were on average 5-7 mmHg lower than that of the qualified health workers. Although, a variation of 10 mmHg may be unacceptable in a clinical setting, such variations are adequate for the purpose of population-based health screening and monitoring.

## **Recommendation:**

The study result provides empirical evidence that supports the practice of non-health workers using electronic devices for BP measurement in the community based population screening. So it is recommended to use the trained non-health workers to collect data on blood pressure at the population level when qualified health professionals are unavailable.