

# Village women prove effective at tackling Indonesia's growing killer

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Women from villages in rural Indonesia are playing a key role in detecting and preventing the most common cause of death in Indonesia, cardiovascular disease, with the use of smart phones. Researchers have found that the intervention has resulted in an increase of 14.5% more appropriate use of preventive medicine than normal and a reduction in blood pressure of patients by 41%

The new health intervention, called SMARThealth, was developed by the George Institute in Australia along with researchers from The University of Manchester, and the University of Brawijaya, Indonesia.

SMARThealth works with volunteer [health workers](#) (known locally as kader); local women who have no college education but have experience of infant and [maternal health](#). SMARThealth provides the kader with training on blood sample collection, a smart phone to aid assessment and [data collection](#), and health information specific to cardiovascular care. Data is then shared with qualified health professionals—resulting in a radical shift in the way healthcare is delivered and the potential for improved cardiovascular care.

Dr. Tampubolon's early research in Indonesia demonstrated that nearly 70% of respondents with moderate to high cardiovascular risk lacked access to cardiovascular care. The George Institute's SMARThealth programme uses glucose and lipids from blood samples, to identify those at risk of cardiovascular issues and provide them with information that could help them manage their health.

Although the health workers can easily visit adults with cardiovascular risks, one of the challenges of the project was to ensure that people in villages respected the knowledge of the health workers. This is where the [mobile app](#) and its connection to a digital data cloud played a pivotal role. The data collected by relatively untrained health workers could now be accessed by cardiovascular doctors in Indonesian hospitals to initiate appointments, issue referrals and suggest treatments, such as necessary scans.

This information linked doctors to the health workers' visit, reinforcing the legitimacy and elevating the role of the village health worker. As the app and recommendations were devised by researchers and scientists, all involved felt confident in the information they were getting.

"To see [village](#) women producing scientific information that cardiovascular consultants can actually use, and seeing the [health](#) worker's eyes light up when they realise how useful this has been—that's been an exciting part of the project," said Dr. Tampubolon.

Based on a study involving eight Indonesian villages and 6579 high-risk people in rural Indonesia, initial findings indicate a 14.5 % difference in the use of preventative medication, with 15.5% of individuals in the intervention villages reporting use of appropriate preventive medications compared with 1.0% in the control villages. The uptake of medication to lower blood pressure was 57% vs. 16%.

**More information:** Anushka Patel et al, Association of Multifaceted Mobile Technology–Enabled Primary Care Intervention With Cardiovascular Disease Risk Management in Rural Indonesia, *JAMA Cardiology* (2019). [DOI: 10.1001/jamacardio.2019.2974](https://doi.org/10.1001/jamacardio.2019.2974)

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