Doctors Ren Nianbao and Xie Guangguo have seen one-fifth of their patients at a rural clinic in China suffer from cardiovascular diseases (CVDs) over the last 20 years. And while CVDs are one of the leading causes of death in China, not all patients are able to receive the preventive care or treatment they need.

Although half of China's population – 650 million people – live in rural areas, over 80% of medical institutions are concentrated in the cities. Rural doctors are overwhelmed, while it can take a family living in the country hours to take a bus to see a doctor.

At the same time, China is experiencing a digital revolution. There are now almost 1.3 billion mobile connections, and almost 80% of rural internet users rely upon a mobile device to connect.

Mobile technology, together with support from doctors like Nianbao and Guangguo, enabled the Chinese government to launch the Wireless Heart Health Programme in 2011, designed to support underserved communities.

Distributing smartphones with built-in ECG sensors and web-based EMR software to community health clinics in rural areas, the Programme is a game changer for Nianbao and Guangguo.

Having previously relied on cumbersome 12-lead electrocardiogram (ECG) machines to screen for CVDs, they can now deploy ECG-sensing smartphones
to conduct quick and accurate heart screenings as well as connect to experts at the Life Care Networks Call Center in Beijing for consultation, who send back diagnosis and recommendations in minutes.

So far, 600 doctors in rural clinics have performed mobile technology screenings on more than 160,000 patients, 1,700 of whom were referred to higher-level clinics for treatment. The programme is now receiving feedback from providers, who say more sensors and improved wireless connectivity will lead to further improvements.

*Image courtesy of Anthony Albright*

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