Medical Xpress

Researchers deliver novel stroke test in pharmacies

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(Medical Xpress)—University of Sydney researchers have examined a unique way to identify the thousands of people at risk of stroke every year, using an ECG test delivered over an IPhone by pharmacists.

The test is quick and accurate, and can quickly and cheaply diagnose unknown atrial fibrillation (AF), a common abnormal heart rhythm that causes a third of all strokes and doubles the chances of premature death.

If this simple test was rolled out to the Australian population aged between 65 and 84, the researchers predict that could prevent 1228 strokes over 10 years, or 122 strokes each year.

Atrial fibrillation often goes undetected and may have no symptoms before causing a stroke, which is sometimes fatal. It is especially common in people aged over 65, and is largely preventable by blood thinning medication.

The University of Sydney study, published in the journal *Thrombosis and Haemostasis* today, screened 1000 people in pharmacies aged 65 years and over and found unrecognised AF in 1.5 per cent of participants.

Paper lead author, Nicole Lowres, said most people found were asymptomatic and all were at significantly increased risk of stroke.

"Unfortunately, many who have AF are unaware and have no symptoms that would lead them to visit their doctor," she said.

"We predicted this finding from our previous systematic review of all screening studies, which found a total incidence of unknown AF of 1.4 per cent in those over 65.

"We also found that AF screening picked up many people (about 5 per cent of all those screened) with known AF (known to their treating doctor).

"Unfortunately almost half of these did not know they had AF, even though most of them were taking powerful blood thinners. This indicates a great knowledge gap in people with this rhythm problem.

"We hope this study will heighten community awareness of the risk to health that unknown AF poses, because we also highlighted a great lack of knowledge of this condition, even amongst people in whom AF is known."

The researchers also did a formal cost effectiveness analysis, and found the cost/benefit ratios of prevention of stroke and increases in Quality Adjusted Life Years (QALY) by screening were well within the range that health providers would find fundable.

Paper senior author, Professor Ben Freedman, said the findings had great significance for whether a screening program for unknown AF could be introduced, and how and where the screening should be done.

"If the screening was extended to the general community, the incremental cost-effectiveness ratio would be $5,988 per Quality Adjusted Life Year (QALY) gained and $30,481 for prevention of one stroke. The method of adjusting life years gained by quality of life, takes into account that people who have had the type of stroke AF produces, would be prepared to trade about five years of their life to have avoided the stroke.

"For health providers, this simple screening test is likely to be cost effective for the prevention of disability and death due to stroke if screening is carried out in otherwise well people aged 65 and over.

"The findings could change clinical practice guidelines on screening for AF, and could form part of health policy for governments or health service providers wishing to reduce the community burden of stroke.

"There will also be an increased recognition of the role health providers like pharmacists could play in screening for serious conditions using novel technology like the iPhone ECG.

"Screening in pharmacies and also in primary care by physicians and nurses to detect unknown AF in those over 65 might become part of routine practice, and could prevent death and disability from stroke.

"When screening becomes more generally available, those over 65 will want to include this as part of their regular health checks."

About the test: Screening is extremely easy - the person just needs to hold the iphone (which has a special case containing a miniaturised ECG recorder) for just 30 seconds, and instantly there is a medical quality ECG with an accurate automated diagnosis available for detection of AF. This then can be transmitted to medical professionals for use during the consultation, and stored in medical records.

Provided by University of Sydney

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