

Smartwatch app shows promise for identifying atrial fibrillation

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For participants without atrial fibrillation, use of a smartwatch

application (app) can identify irregular pulse, which may indicate atrial fibrillation with high positive predictive value, according to a study published in the Nov. 14 issue of the *New England Journal of Medicine*.

Marco V. Perez, M.D., from Stanford University in California, and colleagues examined the ability of an app to identify atrial fibrillation during typical use in 419,297 participants without atrial fibrillation. A telemedicine visit was initiated if a smartwatch-based irregular pulse notification algorithm identified possible atrial fibrillation, and an electrocardiography (ECG) patch was mailed to the participant.

The researchers found that 0.52 percent of participants received notifications of irregular pulse during a median of 117 days of monitoring. Atrial fibrillation was present in 34 percent of the 450 participants who returned ECG patches that contained data that could be analyzed and in 35 percent of participants aged 65 years and older. Among participants who were notified of an irregular pulse, the [positive predictive value](#) was 0.84 and 0.71 for observing atrial fibrillation on the ECG simultaneously with a subsequent [irregular pulse](#) notification and for observing atrial [fibrillation](#) on the ECG simultaneously with a subsequent irregular tachogram, respectively. No reports of serious app-related adverse events were observed.

"We believe that these data support the ability of the algorithm to correctly identify [atrial fibrillation](#) in users whom it notifies of irregular pulses," the authors write.

The study was funded by Apple.

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