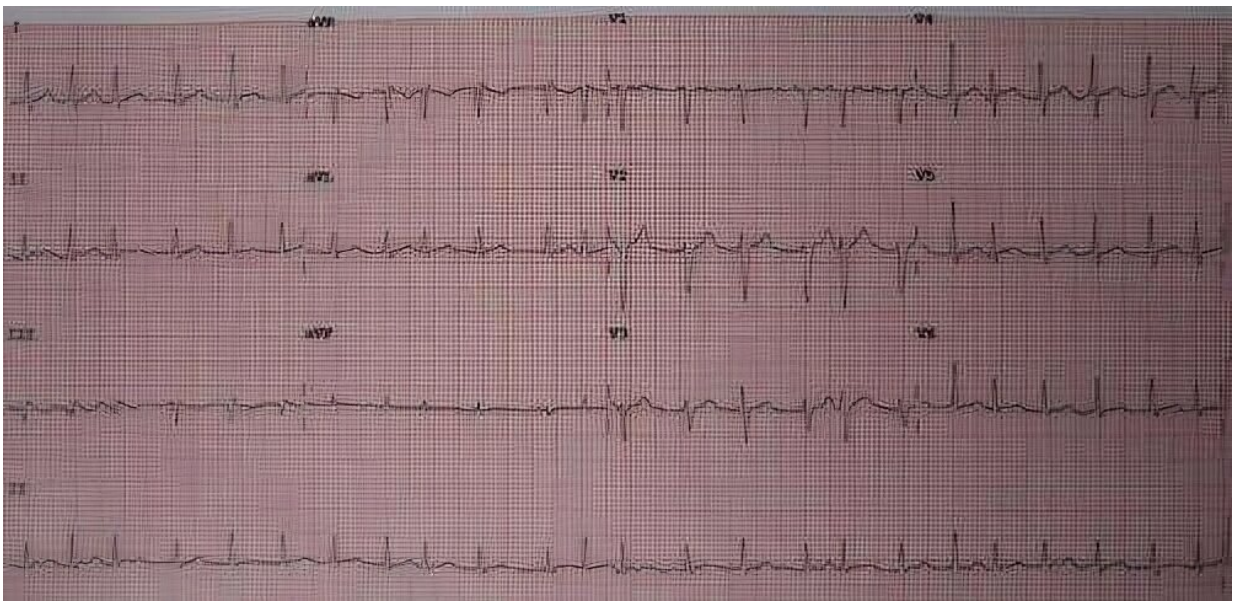
Virtual ward for atrial fibrillation patients could prevent thousands of hospital admissions per year

June 6 2023



A 12 lead ECG showing atrial fibrillation at approximately 150 beats per minute. Credit: James Heilman, MD/Wikipedia/CC BY-SA 3.0

A new virtual ward to safely treat atrial fibrillation patients could prevent thousands of hospital admissions per year, easing NHS pressure, according to new research from the University of Leicester presented at the British Cardiovascular Society (BCS) conference in Manchester.

In the year-long study, patients with a fast heart rate due to atrial fibrillation or atrial flutter that met the necessary safety criteria were sent home with the heart rate-lowering medication they would usually get in hospital, and told to submit daily information using a smartphone app.

Their data, including ECG recordings, blood pressure, oxygen saturation and answers to an atrial fibrillation symptom questionnaire, were closely monitored by specialist doctors and nurses at Glenfield Hospital in Leicester, who made treatment decisions remotely.

The conventional arrangement involves patients being monitored for several days in hospital, adding to the ongoing pressure on the NHS.

Atrial fibrillation is the most common form of abnormal heart rhythm and is believed to contribute to one in five strokes. One in 45 people in the UK are known to be living with the condition.

Professor André Ng, Professor of Cardiac Electrophysiology and Head of Department of Cardiovascular Sciences at the University of Leicester, said, "By using the data patients collect to make treatment decisions on a day-to-day basis, this virtual ward is not simply monitoring patients. It is delivering hospital level care for patients in the comfort of their own home."

"This is a great opportunity to prevent thousands of hospital admissions each year before they've even begun, saving the NHS precious time and money when it needs it most."

During the single-hospital trial between January 2022 and January 2023 there were 118 virtual admissions, 66 of which (55 percent) were "step-up," where the virtual ward was used instead of hospital admission. The other 45 percent were "step-across," where early hospital discharge was

possible thanks to the virtual ward.

As well as 66 "step-up" admissions, 61 re-admissions to hospital were safely stopped, meaning that 127 unplanned hospitalizations were prevented. This saved an estimated 444 days in hospital for patients.

The findings also showed the average heart rate reduced from 124 bpm at when patients were admitted to the virtual ward to 84 bpm when they were discharged. The clinical team also developed and used e-pharmacy measures to ensure they could change patients' prescriptions quickly if needed.

Professor Sir Nilesh Samani, Medical Director at the British Heart Foundation, said, "We've seen time and time again how the pressure on the NHS is compromising heart and circulatory disease care, with constant shortages of hospital beds and long waiting lists for treatments. This trial shows that we can use the latest healthcare technology to ease this pressure and free up space."

"The positive treatment outcomes and high patient satisfaction seen in this study show that we don't have to make compromises when saving time and money on atrial fibrillation treatment. The same approach may be possible and is already being trialed for other heart conditions such as heart failure."

These results are being presented at the BCS conference by research fellow Dr. Ahmed Kotb and advanced nurse practitioner Sue Armstrong.

More information: Conference: www.britishcardiovascularsociety.org/conference

Provided by British Heart Foundation