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The impact of virtual arrhythmia clinics following catheter ablation for atrial fibrillation.

Authors:
M Manimaran¹, D Das¹, P Martinez¹, R Schwartz¹, R Schilling¹, M Finlay¹, ¹Barts Health NHS Trust, Cardiology - London - United Kingdom,

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Introduction:
Mobile health (mHealth) encompasses the use of technology to enhance communication with patients in rural areas, to remotely monitor chronic medical conditions and for various other purposes. One such application of mHealth in cardiology is the development of virtual arrhythmia clinics. This technology could potentially reduce outpatient waiting times, increase acquisition of patient reported outcome measures (PROMs) and improve the accessibility of post-procedure care for patients who need it the most.

Purpose:
A four-month feasibility study was carried out between March and June 2018 to identify whether virtual arrhythmia clinic appointments, delivered through a mobile or tablet device, could be a useful tool for patient follow up post-ablation therapy for atrial fibrillation (AF).

Methods:
Forty patients were recruited post-procedure following catheter ablation treatment for AF. Mobile device ownership was the only inclusion criteria employed in this trial. Patients were instructed to download and register with the virtual arrhythmia clinic app on their own mobile or tablet device. Virtual appointments were conducted using front-facing cameras on devices owned by patients whilst clinical nurse specialists used webcams linked to standard clinic room computers. Patients also completed questionnaires both before and after appointments.

Results:
Patient satisfaction was high, with 68.9% of patients being ‘very satisfied’ with the overall quality of healthcare provided through the virtual clinic. Patients also experienced significant cost savings through using the platform with at least 91.2% of patients saving money on travel costs. The 100% response rate for PROMs questionnaires given through the platform helped identify that 66.7% of patients did not experience significant physical symptoms such as chest pain, shortness of breath or palpitations following ablation therapy. Of the forty patients seen through the virtual arrhythmia, twenty-two patients would not have been seen without being offered a virtual clinic appointment.

Conclusion:
Virtual arrhythmia clinics offer a cost and time-effective option for patient follow-up post-catheter ablation treatment for AF. Positive patient feedback from this study supports the view that patients are keen to adopt virtual clinic appointments due to the significant time and cost savings that it offers. Moreover, the significant patient engagement with online questionnaires both before and after each appointment suggests that mHealth solutions could be a valuable tool for collecting PROMs data. This study has shown that virtual clinics could help hospitals reduce appointment waiting times and increase outpatient clinic capacity.