Atrial Fibrillation (AF) is a heart condition that causes an irregular and often abnormally fast heart rate. It can lead to symptoms like heart palpitations, fatigue and shortness of breath. Lifetime risks for development of AF are 1 in 4 for men and women 40 years of age and older\(^1\), and it causes 25% of strokes. In London alone, as many as 67,000 people could have the condition without even knowing. The aims of the project are early detection of AF and stroke prevention in Hounslow. Hounslow is a diverse community and the aim of the community events was to target hard-to-reach community groups. AF screening events and educational talks were held across the five localities in Hounslow.

The use of an Alivecor device via a Kardia app was used to screen people for AF. The device enables a 1-lead ECG and, after 30 seconds, gives an immediate result of ‘normal’, ‘unclassified’ or ‘possible AF’.

AF is the most common sustained cardiac arrhythmia in the UK, affecting up to 1.4 million\(^2\) people in England, with up to 35% undiagnosed and untreated.

People with AF have a five-fold\(^3\) greater risk of stroke than people without AF.

Without preventative treatment, 5% of patients with AF will have a stroke each year. Anticoagulation treatment reduces the risk of stroke in someone with AF by about two-thirds.

The estimated cost per AF-related stroke is £12,228\(^4\) in the first year excluding social care costs.

In 2015, AF prevalence in Hounslow was 0.9% compared to a higher estimated prevalence of 1.6%, and higher than average AF-related stroke rates.

It was estimated there are 2,200 people with undiagnosed AF in Hounslow CCG. The lower observed prevalence of AF is due to low detection in Hounslow.

SSNAP 2014\(^5\) data for Hounslow CCG, shows that for AF patients not anti-coagulated before their stroke, there was a 47% mortality after discharge and severe disability in 20% after discharge.
Aims

- Community-wide approach to increase AF awareness
- Increase AF detection in at-risk population through use of novel technology
- Increase compliance with NICE AF guidance
- Prevention of AF-related strokes
- Target local areas in Hounslow that show deprivation of AF screening
- Target outreach population in Hounslow

Objectives

- Run AF screening events with community groups as identified through geospatial mapping in order to raise awareness of AF
- Screen populations who are most at risk of having undiagnosed AF
- Recruit project champions from the community who can continue to screen people in these identified populations and ensure the legacy of the project
- To work with patients to obtain feedback regarding the new Ambulatory Care AF pathway service using a patient satisfaction questionnaire
- Provide educational resources in the form of educational talks on cardiac matters and AF to local community groups
- Produce digital postcards, which are educational videos for patients newly diagnosed with AF; contributors to include HCPs and patients

Approach

There are a number of hard-to-reach and vulnerable community groups that include people who have undiagnosed AF in Hounslow. To identify these populations a model of expected vs observed AF patients was produced using NCVIN data. GIS mapping was also used to identify the areas where AF was potentially undiagnosed (figure 1). Following on from this, a map was produced of the various community group locations (figure 2). This map was used to identify which groups should be targeted first, based on the largest variation (biggest difference in ratio) between observed versus expected or potential undiagnosed AF.

(Figure 1)

(Figure 2)

AF screening has been possible using a mobile Electrocardiogram (ECG) device (Alivecor) with the aim to diagnose people in the community with AF. Community AF screening events were held in the following five localities; Hounslow, Feltham, Isleworth, Chiswick and Great West Road (GWR). In particular the Feltham area presented with high proportions of undiagnosed AF.

Educational talks on AF and cardiac matters were also presented to raise awareness among people who previously would not have known anything about this condition. In addition, at the screening events community champions were recruited and trained to use the device and will continue to screen people at various different events in the future. This will be a key element in sustaining the project. Community AF
phone devices will be set up and provided to champions, who will be supported by the project team.
In order to raise further understanding of AF, short clips known as digital postcards were produced. Contributors included HCPs and patients with AF. Access to these videos will be given to community champions and HCPs so they can be shared with people who have been diagnosed with AF to help them understand their condition, what happens next and how patients living with AF manage their condition.

Challenges
- Recruiting large numbers of community champions in a limited time frame
- Security around issuing a device
- Data encryption and restrictions set up
- Some communities requested educational talks to be in different languages
- Time constraints

Outcomes
14 community AF screening events were held, with 619 people from the community being screened in areas of Hounslow. Four people were identified as having a possible AF and referred to their GP for further consultation. In addition 22 community champions from various community groups including Age UK and Tesco have volunteered to undertake training using the Alivecor ECG device and to continue screening in the community.

Conclusion
The community part of the project focuses on patient and public involvement - targeting specific community groups in Hounslow to provide screening for AF. The areas to target were identified by the use of geospatial mapping. Educational talks provided the general public with information on AF and cardiac risk factors. Community champions will continue to screen people for AF in the Hounslow community and support will be provided for them.

Feedback
“Rather than you just coming and talking about it, or them having to go somewhere to sort it out... because when people do that, we don't go. Our time is restricted so it is so good you have brought it here... Nobody has ever done this before, you are the first. It really is excellent”.
Carer screened at screening event on 21st November.

References
5. https://www.strokeaudit.org/

Contact details
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