Abstract: **P6135**

**Improving detection of AF: insights from real world screening programme**

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**Topic(s):**
Public Health

**Citation:**

**Funding Acknowledgements:**
CLAHRC NWL, NHS Hounslow CCG, Pfizer

**Background**
AF related stroke places a significant burden on individuals, carers and health and social care systems. The observed prevalence of AF in populations is often lower than expected and this results in high rates of AF diagnosis at the time of the stroke event. Opportunistic screening for AF in at risk populations is recommended by ESC, however, is often missed due to time constraints and lack of expertise. Technological advancements such as m-health ECG monitors can aid in the diagnosis of AF with improvements in timely risk assessment and initiation of protective anticoagulation.

**Purpose**

The purpose of this study was to determine whether introduction of a suite of m-health tools including electronic patient record based tools and smart phone based ECG recording could improve the rates of AF detection and subsequently reduce the rate of AF related strokes.

**Methods**

The study was conducted in a city region with a population of around 300 000, served by 48 primary care practices. The project involved a three staged approach; education and support for primary care staff, creating an "at-risk" register on primary care electronic patient record for those over 60 or with relevant co-morbidities associated with electronic prompts for screening and a standardized assessment template and the roll-out of smart phone based single-lead ECG monitors to facilitate rhythm checks. The population was followed over a 4 year period to monitor rates of AF diagnosis, anticoagulation and stroke rates.

**Results**

The study population were male (53%), aged between 30-39 (22.4%) and were of white ethnicity (40%). At baseline, in 2014, the prevalence of AF was 0.89 % (2492 individuals). By 2018, this had increased to 1.1 % (3328 individuals) with on average 40 new diagnoses of AF compared to 26 in the baseline period (see figure). Anticoagulation prescription within 30 days of diagnosis increased from 29.80% to 50.00% whilst prescription of antiplatelet monotherapy within same time period decreased from 12.73% to 6.4%. This was also associated with a reduction in the proportion of strokes seen in the population secondary to AF with 35 % (n = 143) of strokes secondary to AF in 2014 and 25% (n =127) secondary to AF in 2017.

**Conclusion**

The study found that implementation of a screening programme across a wide range of primary care practices
led to an improvement in AF diagnosis, management and timeliness of care. This highlights the benefit of using simple methods such as GP educations in conjunction with new technology device to detect AF more effectively and subsequently treat in an appropriate and time-effective fashion. In our population this appears to be associated with real reductions in AF related strokes.