

## Screening for atrial fibrillation in dental practices: a qualitative feasibility study

A Mughal<sup>1</sup>, AO Hassan<sup>2</sup>, R Moreno<sup>3</sup>, D A Lane<sup>4,5</sup>, GYH Lip<sup>4,5</sup>, R Harris<sup>6</sup>, C Weir<sup>7</sup>

<sup>1</sup>Aesthetic Dental Care, Leeds, United Kingdom, Leeds; <sup>2</sup>Institute of Applied Health Sciences, University of Aberdeen, United Kingdom & Department of Orthodontics, Liverpool University Hospitals NHS Foundation Trust, United Kingdom; <sup>3</sup>Institute of Dentistry, University of Aberdeen, United Kingdom; <sup>4</sup>Liverpool Centre for Cardiovascular Science at University of Liverpool, Liverpool John Moores University and Liverpool Heart & Chest Hospital, Liverpool, United Kingdom; <sup>5</sup>Danish center for clinical Health Services Research, Department of Clinical Medicine, Aalborg University, Aalborg, Denmark; <sup>6</sup>Department of Public Health, Policy and Systems, Institute of Population Health, University of Liverpool, United Kingdom; <sup>7</sup>Institute of Applied Health Sciences, University of Aberdeen, United Kingdom



### INTRODUCTION & AIMS

- Atrial fibrillation (AF) is the most common type of irregular heartbeat, <sup>1</sup> especially in older adults.
- Nearly 1 in 10 people aged 75 and above have AF.<sup>2</sup>
- Most people with AF do not have symptoms and are unaware they have it, discovering it incidentally during visits to the GP or hospital for a different reason.
- Having AF increases the risk of having a blood clot or stroke.<sup>3</sup>
- Identifying AF early allows for timely treatment, which can reduce the risk of stroke and heart attack.
- To increase detection of AF, GP practices now use hand-held devices that measure pulse and record heart rhythm in 30 seconds.<sup>4</sup>
- Pharmacies and other community settings have also started screening for AF, making detection more accessible.<sup>5</sup>

**Aim:**  
To evaluate the feasibility and acceptance of screening patients for AF in a dental practice setting.

### METHOD

**Study Design:** A prospective qualitative research study conducted at a large mixed NHS (National Health Service) and private General Dental Practice in the North West of England.

**Sampling:** Purposive sampling was used to recruit a diverse range of dental staff for data collection.

**Staff Interviews:** We plan to interview dental staff to gather their perspectives on the practicality of AF screening during dental visits, focusing on whether they believe it can be successfully integrated into practice and positively received by patients and the public.

**Staff Feedback:** We will explore staff attitudes towards their potential involvement in screening, identifying any anticipated challenges and logistical concerns that might arise from implementing AF screening in dental practices.

#### Data collection:

**Pre-interview questionnaires:** Participants completed a demographics questionnaire and received an overview of AF characteristics, including risk factors such as age, hypertension, heart failure, previous stroke, and diabetes.

**Flipped Interview Approach:** Pre-interview questions were shared with participants several days in advance to facilitate reflective responses.

**AF Screening Tool:** Information on the use of a handheld electrocardiogram (ECG) device for AF screening was provided.

**Interview Process:** Semi-structured, face-to-face interviews were conducted, audio-recorded, and transcribed verbatim. Interviews continued until thematic saturation was achieved, with no new themes emerging. The participant journey is illustrated in Figure 1.

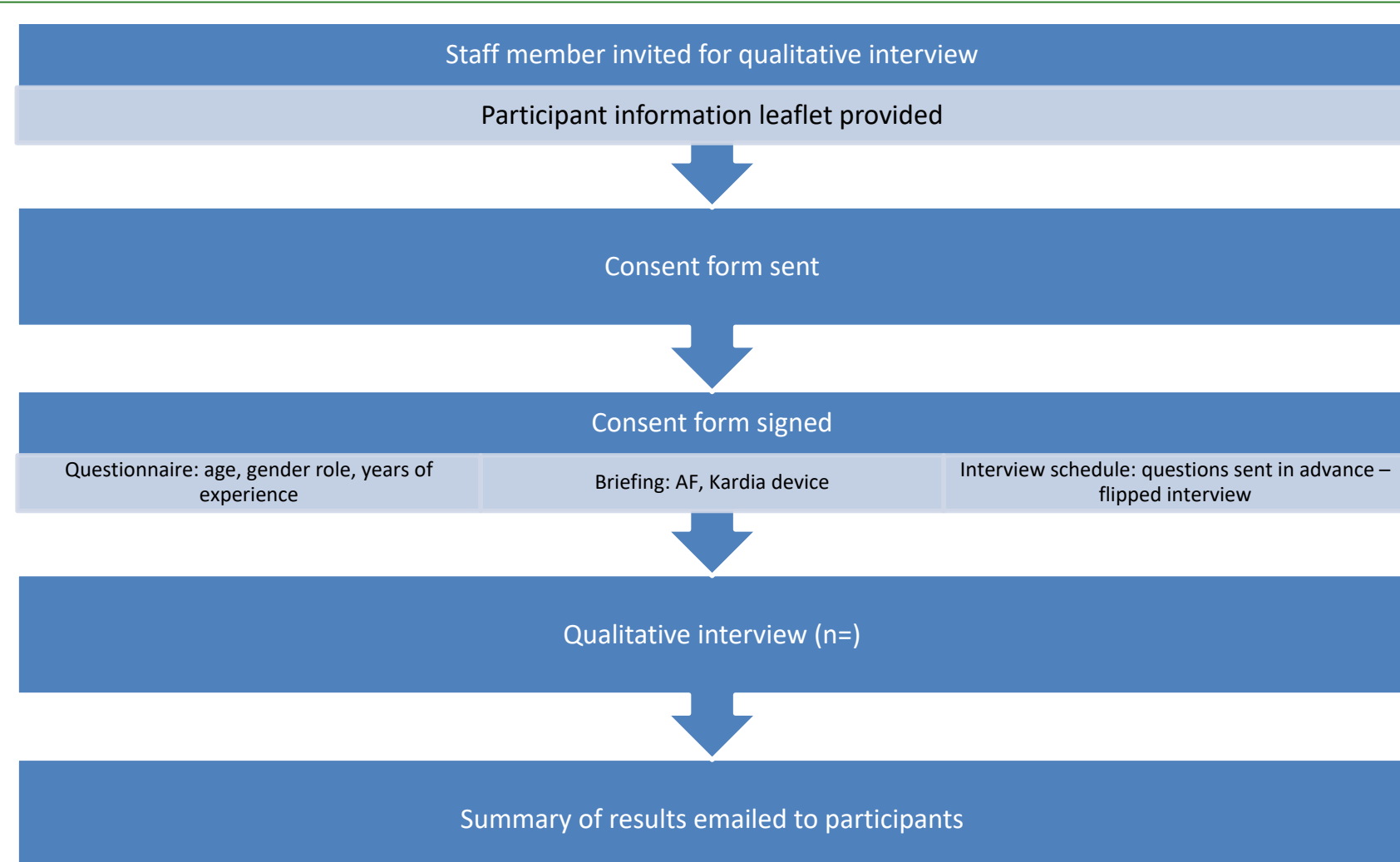


Figure 1: The participant journey

### RESULTS & DISCUSSION

- 14/52 (33%) participants who expressed an interest in the study were invited for interview, with 11 attending.
- Participants included NHS and private dentists, dental therapists, dental nurses, and managers with up to ten years of dental experience.

#### Four key themes identified:

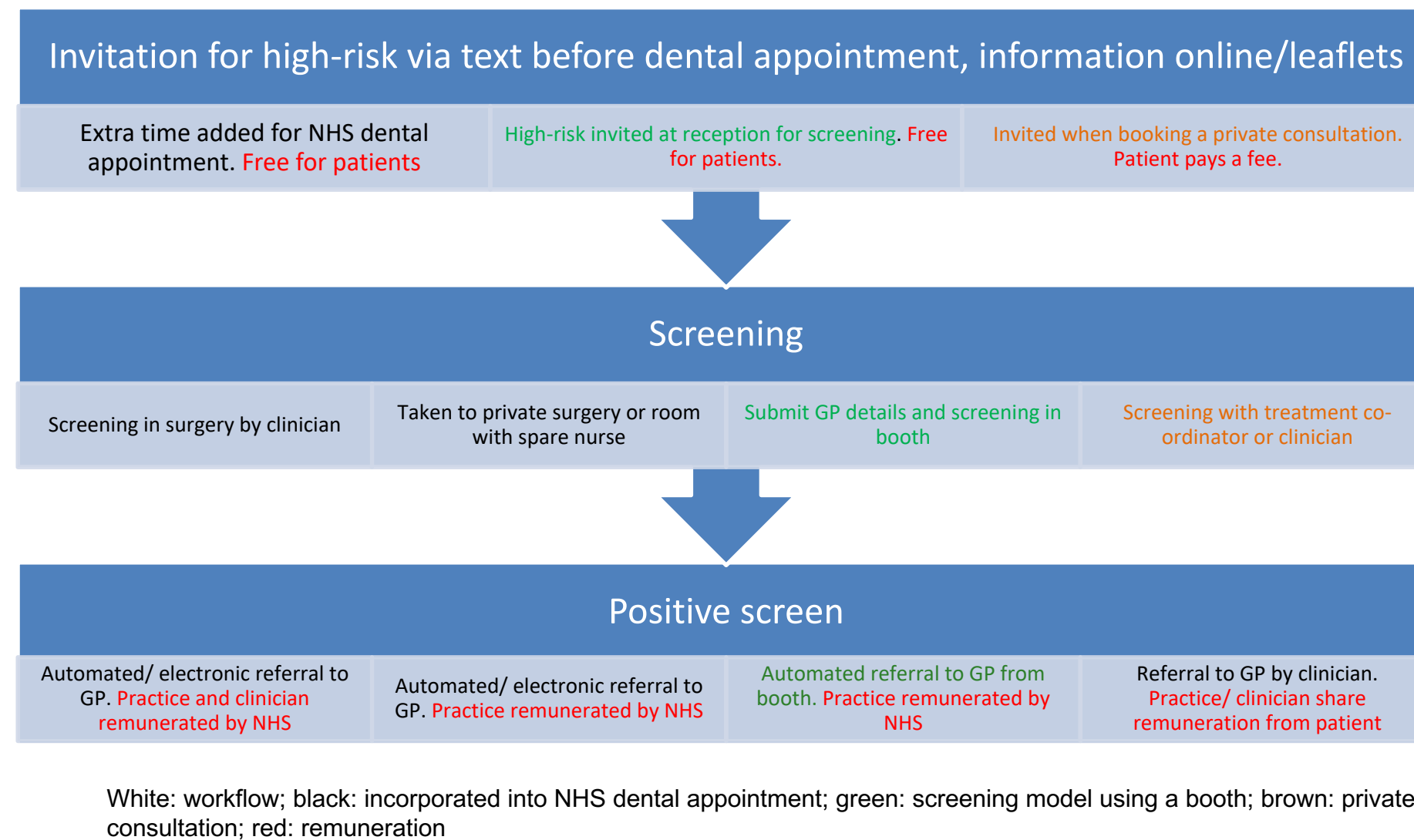
**Acceptability:** non-clinicians responded positively, appreciating the chance to develop new skills. However, 4 out of 7 clinicians felt there were major barriers about time and remuneration. All participants were in agreement that diagnosis would be achieved through a referral to their GP and not from screening.

*"I think it's a brilliant idea. I think it's extremely straightforward and I don't think it's going to take a huge amount to implement it. I think especially knowing the information that I've been given in the briefing about the percentages and the number of people that potentially have atrial fibrillation that don't know that makes it much more important for me" (P10)*

**Attitudes to screening:** 56 benefits were identified such as the dental practice having regular access to patients compared to GPs, versus 76 barriers, including increased workload, cost and administrative demands.

**Screening methodology:** The ECG device was perceived as simple, quick and hygienic. Participants suggested incorporating screening into dental visits, targeting patients at high risk.

**Implementation:** Training was seen as essential, ideally hands-on, expert-led, and during work hours. Some proposed holding screenings during lunch to reduce financial impact. Proposed models shown in Figure 2 were discussed.



White: workflow; black: incorporated into NHS dental appointment; green: screening model using a booth; brown: private consultation; red: remuneration

Figure 2: Possible models of screening for AF in a dental practice setting

### CONCLUSIONS

Overall, participants viewed AF screening in dental practices as a good concept, though concerns arose regarding time constraints, remuneration and potential patient anxiety. As the first study exploring AF screening within dental practices, further research and pilot programs within different dental settings are needed to refine screening methods that address these barriers, whilst evaluating the role of dental professionals.

### DECLARATION OF INTEREST

DA Lane has received investigator-initiated educational grants from Bristol-Myers Squibb (BMS) and Pfizer, has been a speaker for Bayer, Boehringer Ingelheim, and BMS/Pfizer and has consulted for BMS and Boehringer Ingelheim, all outwith the current study. DA Lane is co-investigator of the AFFIRM project on multimorbidity in AF, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 899871. GYH Lip is a consultant and speaker for BMS/Pfizer, Boehringer Ingelheim, Daiichi-Sankyo, Arthro. No fees are received personally. GYH Lip is a National Institute for Health and Care Research (NIHR) Senior Investigator and co-principal investigator of the AFFIRM project on multimorbidity in AF, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 899871. The authors have no other relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript apart from those disclosed.

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