

## Joint Working

### Executive Summary

<b>Project title</b>	BE-AWARE: Home-Based ECG- Atrial Fibrillation detection with Wireless Ambulatory Recorded ECG
<b>Project partners</b>	Portsmouth Hospitals University NHS Trust Daiichi Sankyo UK Ltd
<b>Start – Finish date</b>	November 2020 – March 2022
<b>Project support</b>	Daiichi Sankyo UK Ltd direct contribution £37,397.52 Portsmouth Hospital University NHS Trust Indirect contribution £37,349

This summary has been written by Daiichi Sankyo with consultation and approval from the Joint Working Group.

### Project summary

All patients (project target n=200) referred to the Cardiology department by their GP with palpitation, pre-syncope and syncope will be considered for inclusion into this project. At telephone consultation, patients with palpitation and pre-syncope will be offered a Kardiamobile (Alivecor) device (instead of conventional ambulatory monitoring like a 24-hour Holter monitor or 5 days cardiac memo). Patients with syncope will be offered a Wellysis S-patch device (as an alternative to subcutaneous implanted Reveal device). Kardiamobile will be activated by the patient at time of symptoms. The device will be returned once symptom-rhythm correlation has occurred or after 3 months. Wellysis S-patch will be worn for 21 consecutive days and then returned by the patient. Both devices connect to a software and analysis of ECG strips will be performed by the project team with a subsequent letter of diagnosis sent to the requesting consultant and GP for further management.

The aim of the quality improvement project is to reduce the time to diagnosis in patients presenting with palpitation, pre-syncope, syncope in comparison to conventional ambulatory ECG monitoring. A further aim is the improvement in AF detection and subsequent management of AF including treatment with anticoagulation to prevent strokes and associated morbidity and mortality. A patient questionnaire will assess patient satisfaction and reported outcome measures.

### Expected benefits to patients, the NHS and Daiichi Sankyo UK Ltd

Expected benefits for the Patient:

- Avoidance of patients to attend the outpatient setting in times of COVID

- Vulnerable and shielded patients will have access to ambulatory ECG monitoring during COVID without face-to-face interaction
- Shorter time to diagnosis of cardiac arrhythmia with S-patch or KardiaMobile in comparison to conventional ambulatory cardiac monitoring
- Avoidance of repeat investigations to detect AF.
- Prevention of stroke, hospitalisation, morbidity and mortality secondary to undiagnosed and untreated AF.
- Improvement of patient experience with novel ambulatory devices in comparison with conventional.

Expected benefits for NHS:

- Able to offer ambulatory ECG monitoring to vulnerable and shielded patients during COVID.
- Higher proportion of AF detection due to prolonged monitoring.
- Shorter time to diagnosis of cardiac arrhythmia with S-patch and KardiaMobile in comparison to conventional ambulatory cardiac monitoring.
- Reduction in cost of repeat investigation due to delay in diagnosis.
- Reduction in cost of outpatient reviews due to remote investigations.
- Financial benefit due to prevention of stroke and subsequent hospitalisation, morbidity and mortality.

Expected benefits for Daiichi Sankyo UK Ltd:

- Higher proportion of AF detection and improvement in patient outcomes
- Pilot project for future joint working projects and sharing best practice
- It is anticipated as part of the project that more patients may be treated with a pharmaceutical product. This may include but is not exclusive to products manufactured by Daiichi Sankyo UK Ltd.
- Journal publication and associated publicity likely resulting in future collaborations and subsequent raise in profile of Daiichi Sankyo UK Ltd.

**Project Outcome:**

- 80%<sup>1</sup> patients achieved Symptom-rhythm correlation i.e when electrocardiographic (ECG) evidence of the patient's cardiac rhythm is obtained at the time of symptoms.
- 14%<sup>1</sup> of patients in whom atrial fibrillation was detected
- 11%<sup>1</sup> of patients were subsequently assessed for starting anti-coagulation
- Reduced time to diagnosis
- 78%<sup>1</sup> patients had no issues with devices used and 75% rated the service as very good or excellent.

The project demonstrates the feasibility of ambulatory ECG monitoring service with high diagnostic yield and excellent patient satisfaction. The frequent detection of Sinus rhythm suggest potential for cost savings if these devices were used in the community and referrals to Cardiology reserved for those with a detected rhythm abnormality.<sup>1</sup>

Ref

1. Sarah Birkhoelzer Ambulatory investigation of palpitation Birkhoelzer.pdf March 2023