

symptom-rhythm correlation and patient experience were evaluated.

**Results** Out of 86 patients 11 were excluded who did not have access to a smart phone to connect to monitoring devices. To date 62 out of 75 patients have completed the monitoring period with KardiaMobile (n=40, 64.5%) and S-patch (n=22, 35.5%). Participants' mean age was 51 years (range 18–89), 70% women, mean ejection fraction 54%, 41% did not take any medication. 45% (28/62) experienced symptoms a couple of times per year. Symptom-rhythm-correlation was achieved in 75.8% (47/62). 66.7% (42/62) were in sinus rhythm, 7.9% (5/62) atrial fibrillation, 34% (21/62) had atrial or ventricular ectopics. Mean duration of symptom-rhythm correlation was 40 days (Kardiamobile) for intermittent palpitations, 12 days (S-patch) for evaluation of pre-syncope or syncope. A small number of patients reported issues with either of the devices: difficulty using software 13% (8/62), difficulty with connection 8% (5/62) and skin irritation from ECG patch 11% (7/62). Patient's overall satisfaction was very good or excellent in 79% (49/62) of patients.

**Conclusion** This project demonstrates the feasibility of using novel devices for the remote investigation of palpitations, pre-syncope and syncope. The short time to diagnosis and high patient satisfaction in patient who often repeatedly present to medical services with intermittent symptoms and subsequent negative conventional Holter monitoring highlights the potential in cost saving through reduction in health care utilization.

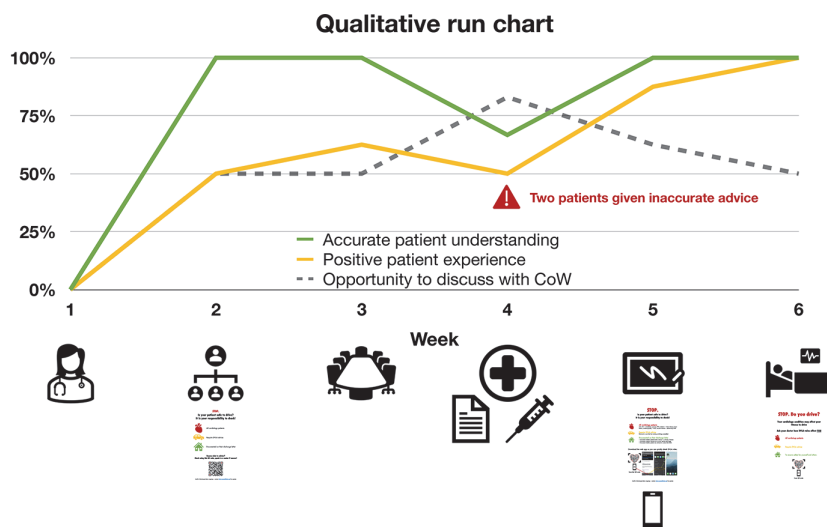
In addition, the Covid pandemic has spotlighted benefits of remote, ambulatory ECG monitors which will become part of the digital future of cardiology. Competing interests: As part of a joint working project Daiichi-Sankyo supported this project with £37,400 to purchase the devices and software license. **Conflict of Interest** NO

**92 QUALITY IMPROVEMENT: DISCHARGE DRIVING ADVICE FOR CARDIOLOGY INPATIENTS**

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**Background** Many cardiac conditions, including electrophysiologic, ischaemic, or heart failure, are characterised by a risk of sudden and disabling symptoms. For this reason, inpatient cardiology admissions can affect a patient's eligibility to drive, according to driver and vehicle licensing agency (DVLA) rules. Appropriate advice has serious patient quality of life, patient and public safety, and medicolegal implications. Despite this, our own experience, and existing data, suggested that provision of advice was often informal, inaccurate, or omitted altogether.



Week	Pts	Question	Plan	Findings
1	1	Can advice delivered by juniors alone be effective?	Juniors to advise patients of DVLA instructions	AF patient - clinically complex, required specialist knowledge, pt resistance
2	2	Is advice delivery led by CoW more effective?	Liaise with CoW to identify patients to advise ad-hoc	Advice better received when delivered by consultant
3	8	Is systematic discharge advice on CoW WR practical?	Pts flagged for DC at board round, DVLA implications checked via poster 1 prior WR	Mostly well-rated by pts, but some uncertainty, most did not to speak to cons
4	6	Does printed info work better? Does model extend to AAU2?	Involve senior and junior nurses, directed to printed guidance	Inaccurate advice on AAU2 x2, paper info lost, mixed CoW/junior engagement
5	8	Does an app work best? Do whiteboard magnets help?	Educate staff on poster 2, downloading app, add magnets to board round	All got advice, from cons, universally clear, app well-received, whiteboard used
6	4	Does a pt poster help?	Print simplified posters for patient areas	All got advice, from cons, universally clear, posters well-received and hard to miss

Abstract 92 Figure 1

**Methods** We conducted a baseline audit of 28 consecutive days of discharge letters against four process measures to establish the frequency and quality of documentation of discharge driving advice for patients discharged from our cardiac care unit. Subsequently, we implemented a quality improvement project (QIP) with prospective patient-centred primary outcome measures. Over six plan-do-study-act (PDSA) cycles, we iteratively designed a standard operating procedure (SOP) for consultant-led discharge driving advice, supported by patient and staff posters, whiteboard magnets and nursing checklists, and a smartphone 'app'. Following the QIP, we audited a second period of 28 consecutive days of discharge letters against the same four process measures to assess lasting change.

**Results** Baseline audit established that, of 115 consecutive patients, 74 had a diagnosis that could affect their driving eligibility. Of these, one (1.4%) had appropriate documentation of discharge driving advice. Qualitative data collected prospectively throughout the QIP showed positive patient experience and accurate patient understanding as new operating procedures were implemented. Repeat audit of 124 consecutive patients following intervention identified 81 patients who had a diagnosis that could affect their driving eligibility, of whom 36 (44.4%) had appropriate documentation of discharge driving advice.

**Conclusion** Discharge driving advice is relevant to most cardiology inpatient admissions, and yet was rarely documented. A simple SOP for consultant-led discharge driving advice was developed using PDSA methodology, which was well-received by patients and, following re-audit, demonstrated a lasting improvement in documented advice.

**Conflict of Interest** None to declare.

93

### REAL WORLD PATIENTS WITH AF AND A HEART FAILURE ADMISSION HAVE DOUBLE THE MORTALITY RATE OF THAT SEEN IN THE APAF-CRT MORTALITY TRIAL

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**Background** Atrioventricular node ablation with cardiac resynchronisation therapy (CRT) reduced mortality and heart failure hospitalisations (HFH) in the APAF CRT mortality trial. They enrolled patients with severely symptomatic AF, a HFH in the previous year, and a narrow QRS. However, trial populations are often not representative of the real-world experience. We wanted to know how our real-world patients compare with the APAF trial population?

**Methods** Hospital records were interrogated for patients admitted with a HFH and AF from April 2018 to December 2019 in a single centre.

**Results** 303 patients were identified. Mean age  $82 \pm 9.5$ , CHA2DS2-VASC score  $5 \pm 1.6$  and Charlson Comorbidity Index (CCI)  $6 \pm 2.1$ . When compared with the trial population, real world patients were older ( $82$  y vs  $73$  y  $p < 0.0001$ ), had more strokes ( $18\%$  vs  $8\%$   $p = 0.01$ ) and more coronary disease ( $43\%$  vs  $30\%$   $p = 0.01$ ). They had less paroxysmal atrial fibrillation ( $30\%$  vs  $40\%$   $p = 0.04$ ), fewer attempts at catheter ablation ( $1.3\%$  vs  $10\%$   $p < 0.0001$ ) and less hypertension ( $59\%$  vs  $73\%$   $p = 0.004$ ) (figure 1). Applying the

Total number of patients	303	
Died on presenting admission (severe comorbidity)	279	24 excluded
Died within 90 days (severe comorbidity)	234	45 excluded
Device with >5% pacing	166	68 excluded
Narrow QRS	124	42 excluded
MI in preceding 3 months	122	2 excluded

**Abstract 93 Figure 1** Trial inclusion and exclusion criteria as applied to our AF and HF cohort. No patients were excluded due to the need for surgical intervention. NYHA 4 and how systolic blood pressure could not be assessed

trial inclusion criteria, 122 (40%) patients would have fulfilled the APAF entry criteria (figure 2). 60 of those patients died, which is double that seen in the control arm of the trial ( $49\%$  vs  $23\%$   $p = 0.006$ ). Median survival from discharge was 211 (204–683) days. A relative risk reduction of 74% in mortality, as seen in the trial, would have resulted in 44 fewer deaths.

Of the 122 patients, 42 (34%) patients had 158 subsequent heart failure hospitalisations, with a median length of stay of 11 days, totalling 2826 bed days. Applying a relative risk reduction in HFH of 23% to our cohort would have resulted in 10 patients not experiencing a further HFH over the 21-month period, saving 89–935 bed days. However, real world patients had more comorbidities. Mean CCI was  $7 \pm 1.9$  and 20% also had severe valve disease. A further 70 (23%) patients had a left bundle branch block  $>120$  ms and 46 (38%) had a device. These patients might also be expected to benefit from an ablate and pace approach but were not included in the trial. Of these, 80 (69%) died and 43 patients had 76 HFH. If the same benefit was seen in these patients, there would be a further 59 fewer deaths and 10 patients not experiencing a further HFH.

**Conclusion** 40% of all patients admitted with HF and AF to our centre met APAF trial criteria. Almost half of total bed-days were used in patients eligible for trial inclusion (47%). However, real-world patients were older with associated comorbidity and frailty, which could explain the significantly higher mortality rate observed in our cohort. The excluded broad QRS and device patients might also benefit from an ablate and pace approach, particularly as they had an even higher mortality rate (69%) and further studies are needed in these patients. Adopting an ablate and pace strategy in this large patient group will increase the demand on electrophysiology and complex device implant services.

**Conflict of Interest** Nil

94

### CLINICAL RESPONSE TO INCIDENT AF IN A TERTIARY HOSPITAL IS DELAYED AND CONSEQUENTIAL

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Atrial fibrillation (AF) is common in hospitalized patients, occurring in c.10% of unselected inpatients. In a vulnerable hospital patient, the development and persistence of AF can precipitate acute hemodynamic decompensation and result in complications including stroke and heart failure. Early management of AF to anticoagulate, rate control or restore sinus rhythm, and manage underlying precipitants mitigates these