

Is mobile ECG the way forward to improve the cardiovascular monitoring in community psychiatry?

Darshana Arakkal, Judit Palankai, Jose Maret

Hammersmith & Fulham Early Intervention Services, West London NHS Trust

Introduction

It is well established that severe mental illness contributes to a reduced life expectancy of up to 20 years. The various contributory factors include increased risk of cardiovascular disease and metabolic syndromes associated with the use of atypical antipsychotics, smoking and substance misuse, hence there is a need for regular physical health monitoring.

We have a robust physical health monitoring system in place which uses high visibility prompts to increase the adherence to guidelines for physical health monitoring. However, the pandemic generated new challenges as our service was dependent on the primary care services and the general hospital for ECG monitoring.

Aim of the study

We aim to improve the cardiovascular monitoring of the patients under the Hammersmith & Fulham Early Intervention Services (EIS) by 5% in 3 months and 20% every year by implementing interventions to promote the general physical health.

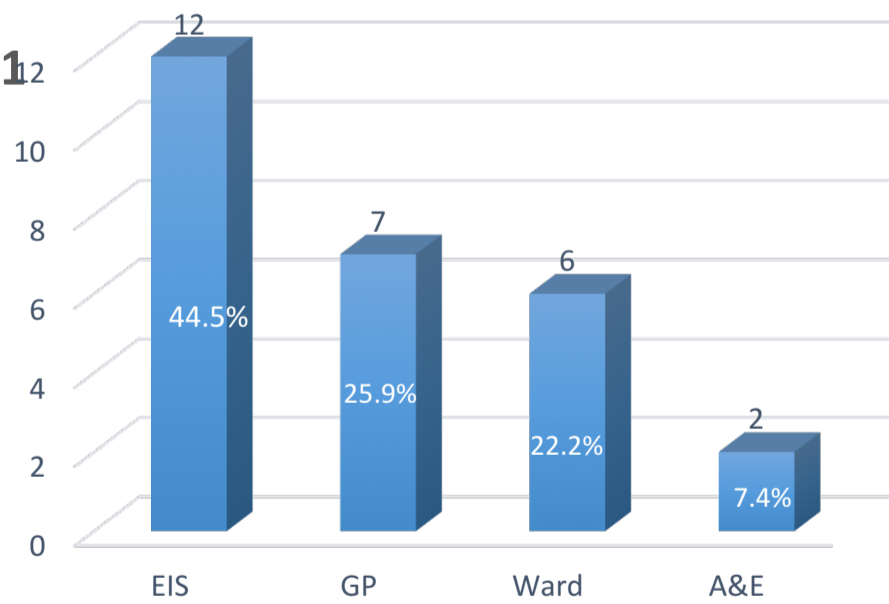
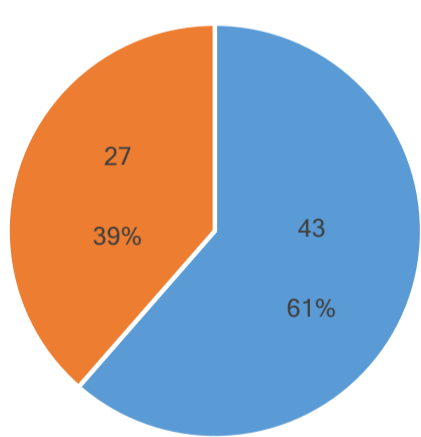
Methodology

A QIP was developed which was registered with the LifeQI project. Retrospective data of 122 patients under the EIS were collated by manual search of the database over a period of 2017 – 2020. The primary care services for each patient was contacted to complete the data.

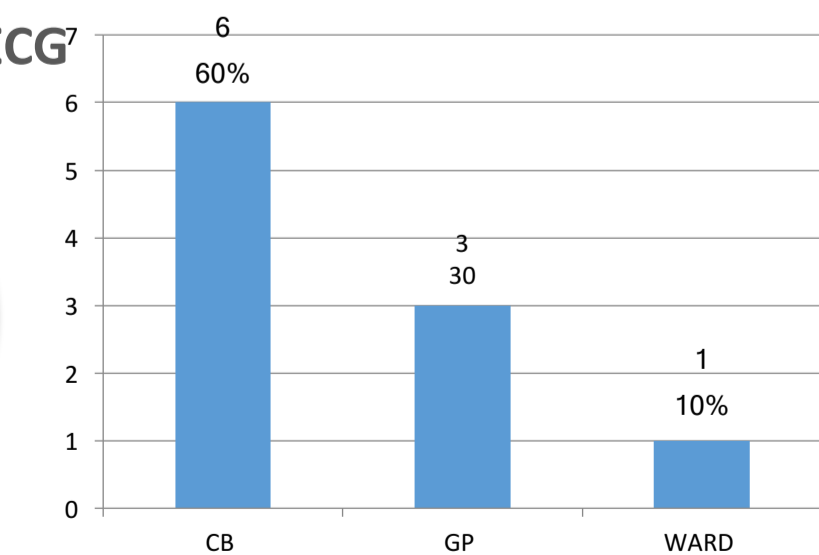
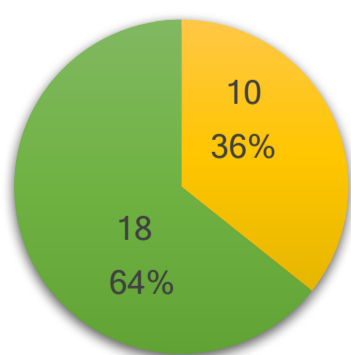
Results of baseline audit

There were 117 patients on antipsychotics under the EIP service. 62% of our service users had a baseline ECG prior to starting an antipsychotic as recommended by the NICE guidance of which 30% was completed by the EIS, 28% on inpatient admission and 22% by the primary service.

ECG monitoring in Year 1

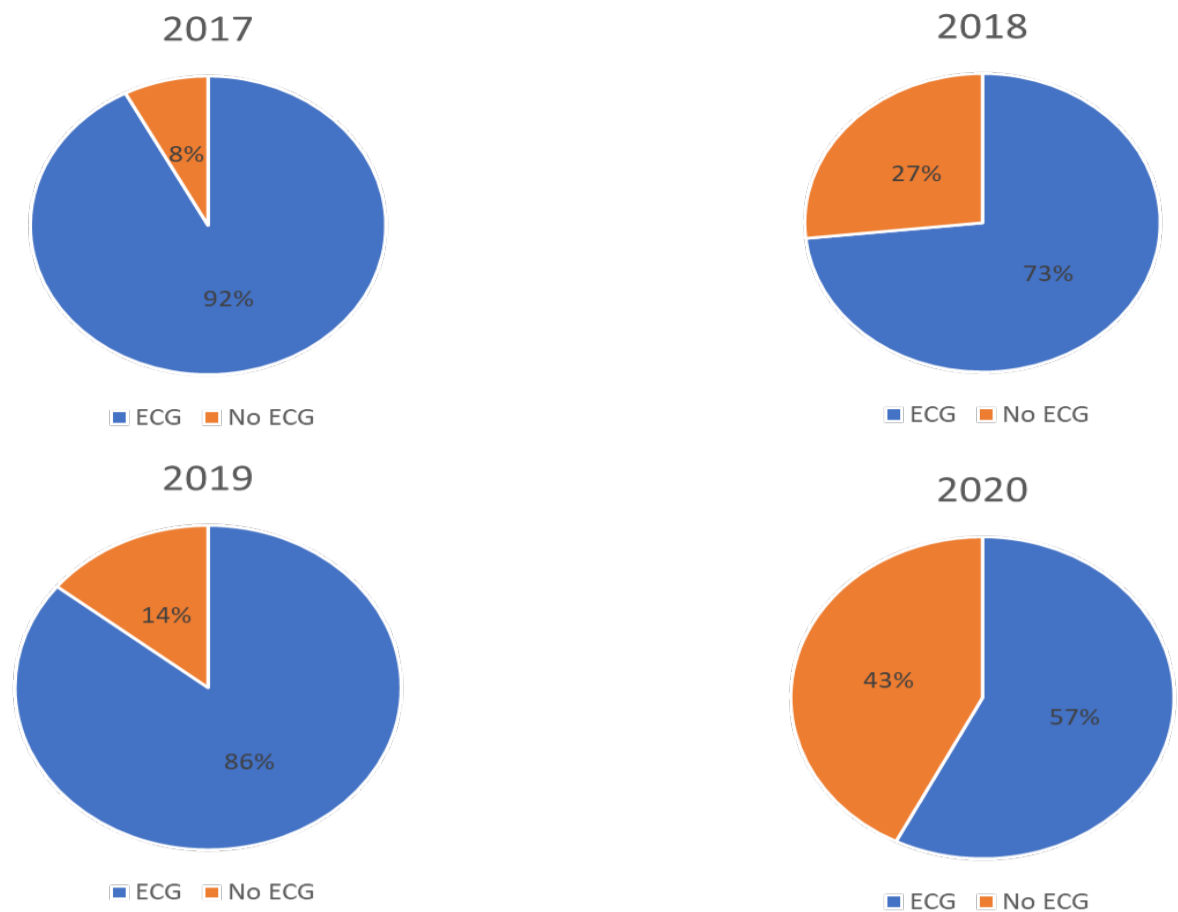


Year 2 follow-up ECG



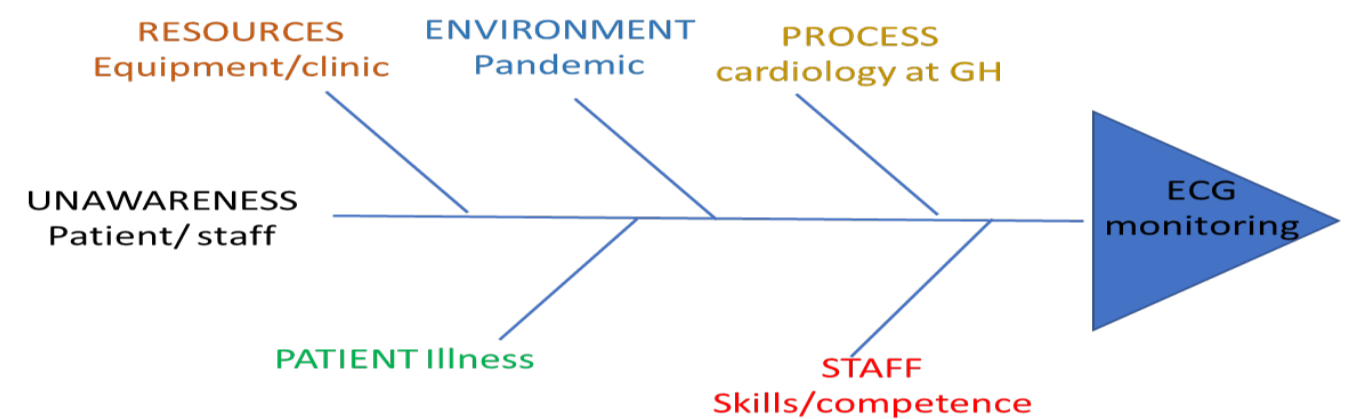
- Only 8% of our patients had a follow-up ECG at the end of 3 years which was completed by the EIS team.
- In 2017, 92% of the patients had a baseline ECG which dropped significantly to 57% in 2020.

Yearly review of baseline ECG monitoring

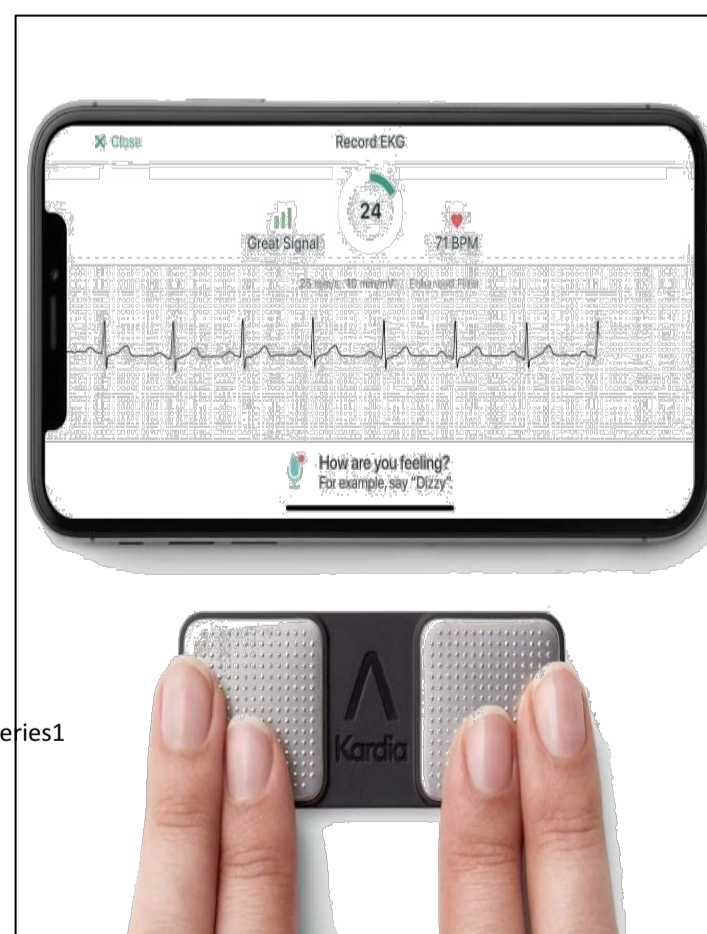


Discussion

Following the discussion of the results at the CIG (Clinical Improvement Group) meeting, a driver diagram was developed with the probable interventions to improve the ECG monitoring.



Fragmentation and disintegration of care among services were a major deterrent in the physical health monitoring, especially given the challenges with our patient population. This led to a service provision where the EIS could access the local cardiology services. However, with the pandemic, there was a system failure where this system provision was unavailable. This resulted in the process of piloting the use of mobile ECG in the EIS clinics to improve the cardiovascular monitoring of our service users.



- 6 lead ECG in 30 seconds.
- Does not require the skills needed for the 12-lead ECG.
- Less expensive (£150.00) compared to a traditional ECG.
- The ease of use and quick trace will be appealing to our service users
- High specificity for detecting QTC >450ms and has received FDA approval.

Conclusion

1. Completion of PDSA cycle needs to be performed to evaluate if the implemented use of mobile ECG may improve the cardio-metabolic monitoring and is being currently rolled as a pilot project.
2. Further single-site and multi-site validation needs to be performed prospectively to evaluate the effectiveness.