Establishing digital application tools in Adult Congenital Heart Disease: A new model of care

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Background:

Up to 1% of the population is affected by congenital heart disease (CHD), and now up to 96% survive to adult life. The majority of whom require life-long follow up. As their CHD evolves, this can result in an increase in the frequency and utility of hospital services. This emerging cohort, are aligned with their health, often tech savvy and often seek novel ways to monitor their clinical progress as they face physical challenges.

Digital health application tools can enable remote monitoring and patient education, thus allowing for a more holistic impression of a person's wellbeing beyond the 'bedside'.

Digital health and remote monitoring have been shown to have a vast potential to enhance delivery of healthcare for patients, reducing their need for travel to clinic appointments therefore reducing costs to the patient and the healthcare service.

Objectives

To pilot a remote monitoring system via a digital application tool for a tailored group of ACHD patients

To support remote monitoring of patients with moderate to severe complexity ACHD as an adjunct to clinical care.

To integrate our pilot digital application tools with forward coming 'mychart' in the EPIC systems being implemented by the trust

Pilot Study 2021-2022

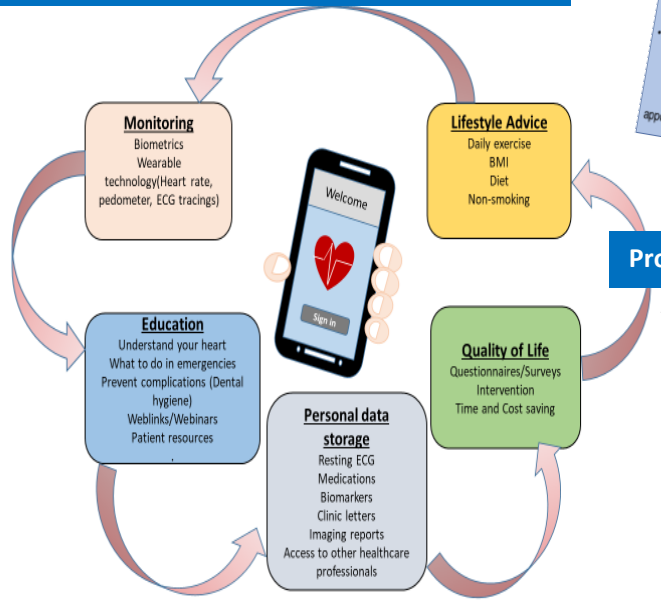
We carried out a pilot study in 2021-2022, of 100 patients with ACHD using a tailored digital application tool by Huma Therapeutics.

Eligibility was determined by willingness to use the application tool and suitable access to smartphones.

Funding of the application tool was provided by the Trust as part of a service improvement strategy.

Due to the success of the pilot, and positive patient feedback, the trust was committed to developing this new model of care.

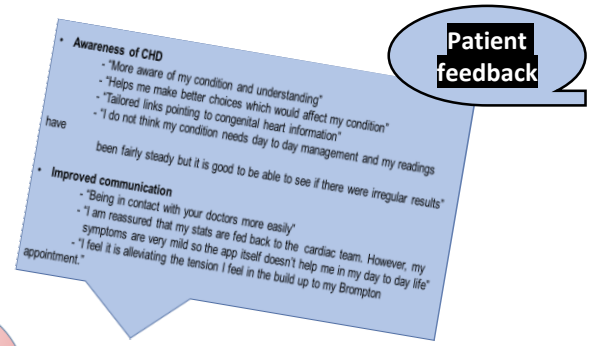
Digital application tool



Digital application tool was tailored to provide different modules; remote monitoring (measuring weight and blood pressure , exercise biometrics, patient education and quality of life.

Average time spent on app 5.2minutes. Average time to complete a model 57 seconds. Only 50% users accessed learning modules.

A clinical dashboard of all patients available to clinician for review. Flagged events (RAG system) based on inputted readings and QoL surveys prompted patient contact. 15 flagged events in total, 2 had early hospitalisations and intervention preventing significant deterioration



Progress

The trust is committed to make this an established model of care for ACHD and PH patients. Long term is to use the 'MyChart' platform in EPIC Systems when it will be implemented in October 2023. In the meantime, we have recruited patients to utilise a different digital application tool by Ortus i-health. Similar modules exist with tailored patient information and videos. We will transfer to 'MyChart' when it is established.

Conclusions

There is a growing utility for digital technology as part of patient care with chronic diseases, and warrants development and investment.

References

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