Development of Cardiac Physiologist Services and remote follow up at the Northern Care Alliance

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Introduction

The Northern care alliance (NCA) NHS foundation trust is a recently formed trust that comprises of 4 hospital trusts within the northern region of Greater Manchester, that delivers care to over 1 million people [1]

Historically the trusts have managed the increasing number of cardiac device patients in their respective sites, utilizing paper notes and differing IT systems. With the formation of the (NCA), there is a need to modernize and streamline cardiac device follow up between multiple sites to improve patient care and physiologist workload.

Remote monitoring for cardiac devices has been recognised as a standard of care for a number of years[2,3]. Use of remote monitoring has been varied in cardiac centres due to a number of factors. With the advent of Covid-19, remote monitoring has accelerated significantly and the BHRS has advocated a shift towards a majority remote monitoring based process with alerts[4].

With increasing demand on cardiac device services, comes a drain on the physiologist workforce, the expertise available to deliver this service is not keeping up with demand and is recognised nationally[5]. It has been recognised that the time taken for a current face to face review can take more than 3 times that of a remote review[6].

Emerging Leaders Programme

British Cardiovascular Society

Objectives

Instigate a unified IT system and electronic devices database for cardiac device implants and follow up.

Strategise a primary remote monitoring service to improve and streamline service across multiple hospital sites.

Utilise industry lead remote monitoring services (Focus On ™) to help reduce workload of inhouse physiologists.

Method

Infrastructure for a unified IT system has been in progress for the past year and is being progressed throughout the department.

Assessment of current cohort of patients that can be moved to home monitoring.

Redesign of current devices template to focus mainly on remote monitoring with an alerts based system.

Involving industry providers of a remote monitoring service (FocusOn™) to provide remote monitoring for a cohort of cardiac devices patients.

Results

Unified IT System

Upgrading is still in progress. The addition of a unified electronic system will:

Create an electronic database of all devices patients.

Streamline physiologist work during device implanting, utilizing barcode scanners to upload equipment used and provide up to date stock updates.

Allow direct download of device data onto an electronic database to improve physiologist workload

Database will be easily exportable for NICOR / audit / Research purposes.

Searchable database for model specific issues, and accurate restrospective analysis.

Results

Remote monitoring device follow

Figure 1. Summarises the proposed model for cardiac device follow up.

The initial follow up will be face to face with the bradycardia and ICD patients being mainly followed up remotely.

CRT patients will have initial 6 month face to face (f2f). Then will have alternating 12 month remote and f2f follow up.

3 month remote follow up will occur for battery of <12 months.

Device alerts will be monitored throughout with reviews within 24 hours.

Through utilizing this model and reorganizing the template for device follow up, we have calculated that we will :

- Free up a band 6 physiologist for 1 day for other roles
- Create an afternoon of education and another afternoon for admin for all physiologist staff without loss of follow up numbers.

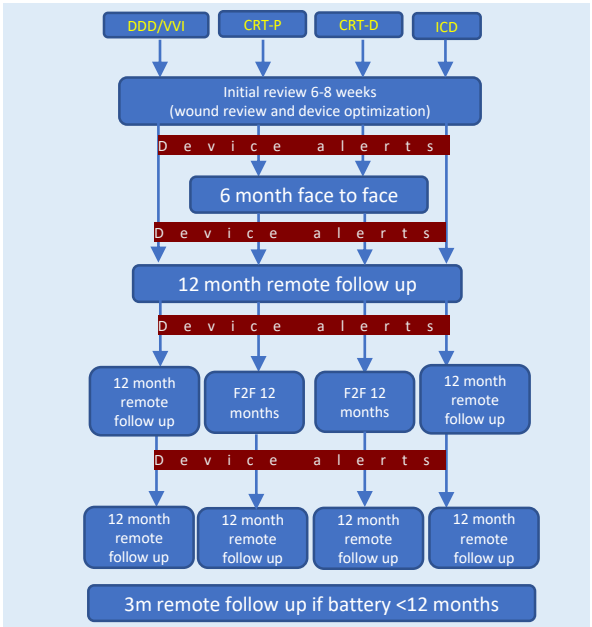

Figure 1. Proposed device follow up algorithm

Results

External remote follow up service

Current devices with home monitoring devices			
DDD/VVI	CRT-P	CRT-D	ICD
1430	304	283	293

The above table summarises the number of patients currently with a remote monitor. By using external device follow up services (FocusOn™). There is the potential to transfer all DDD/VVI patients to an external device monitoring service.

This would potentially free up a full time Band 7 physiologist.

This will however come at a cost, Current costings are being sought. It would only be financially viable if there was no available qualified staff recruitable.

CONCLUSIONS

The benefits on patient care, efficiency and quality of care are recognized with remote device follow up, especially in a large multi-site and geographical region. However not all patients will be suitable.

Given the scarcity of highly qualified cardiac device physiologists, maximizing their time and skillset through improved service structures is vitally important.

Remote monitoring still comes at an additional cost, especially FocusOn™. These costs need to be balanced against the true benefit that it will provide to cardiac device services.

We will continue to streamline our services towards a primarily remote monitoring service, and audit outcomes, including number of patients reviewed, safety outcomes, patient satisfaction and physiologist feedback.

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