

Standardising the referral and management of patients with infective endocarditis at a large tertiary cardiothoracic centre

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BACKGROUND

The Yorkshire Heart Centre (YHC) based at Leeds General Infirmary provides regional specialist cardiology care to a population of 5.4 million living in West Yorkshire.

The Infective Endocarditis service at YHC treats around 100 patients with infective endocarditis each year with 35.4% requiring surgical intervention.

The current model for the referral of suspected or confirmed cases of infective endocarditis involves contacting a cardiologist or microbiologist, each of whom has a sub-specialty interest in infective endocarditis, by e-mail or telephone.

This model has worked well for many years but there are a number of disadvantages. There is variability in the referral information provided, a lack of a robust audit trail and a small risk that the referral may not be seen, and therefore acted upon, in a timely fashion.

Additionally, there is currently no agreed standard operating procedure (SOP) for the management of patients with infective endocarditis which risks variations and potential delays in decision-making and definitive treatment.

The forthcoming GIRFT report on cardiology recommends that 'all networks should have a ... defined referral pathway... for the rapid assessment and referral of suspected endocarditis patients to a surgical centre 7 days a week to minimise delays'¹.

The GIRFT report also states that there should be provision for the 'referral of non-emergency patients to a network endocarditis MDT via a single point of entry'¹.

AIMS

To design and implement an electronic referral platform which can initially be accessed by clinicians from within Leeds Teaching Hospitals NHS Trust (LTH) in order to streamline and simplify the infective endocarditis referral process via a single point of entry.

To develop an SOP for infective endocarditis in order to provide accurate guidance on the management of the condition to ensure consistency of the care provided.

METHODS

The referral information that was felt to be essential was first agreed by all members of the infective endocarditis team. This included the patient history, a list of important pre-disposing factors, the blood culture and echocardiography results and the antimicrobial regimen that the patient had received.

Once the referral information had been agreed, meetings were held with a private provider, *Patient Pass*, which specialises in the development of secure online platforms for communication and referral between secondary and tertiary care.

An online referral system was devised and refined over a few weeks before going live within LTH in September 2020.

To develop an SOP for infective endocarditis, meetings were initially held with each of the relevant shareholders including fellow cardiologists, microbiologists, cardiac surgeons and cardiac intensivists.

With this multispecialty insight, a consensus document was designed to provide clear guidelines on the optimal investigation and treatment of patients with infective endocarditis including the indications and timing of surgical intervention and a defined referral pathway for patients who require urgent or emergency intervention from around the region.

This was discussed further during a Cardiac Services clinical governance meeting in December 2020 and the contents of the SOP was agreed by all stakeholders.

The screenshot displays a web-based interface for managing infective endocarditis referrals. It features a top navigation bar with options like 'Add Referral', 'View Referrals', 'Waiting List', 'Dashboard', and 'Specialities'. The main content area is divided into several sections: 'Summary' with patient details (name, NHS number, gender, DOB, work, COVID-19 status, and reason for referral), 'Clinical Information' with admission dates and history, 'Status' (Referral complete), and 'Messages' (a list of messages with dates and 'MESSAGE' buttons). The interface is clean and professional, designed for clinical use.

Figure 1. Example of online infective endocarditis referral platform

RESULTS

The infective endocarditis service at YHC has an online platform which allows clinicians from within LTH to refer patients with suspected or confirmed infective endocarditis to the team.

This has simplified and streamlined the referral pathway, the referrals have become standardised due to the mandatory information required and there is now a robust audit trail which has improved the accountability of the whole process.

The referral system has also been incorporated into a new SOP for infective endocarditis and this will help to ensure that patients with infective endocarditis at YHC receive optimal care on a consistent basis.

FUTURE DIRECTIONS

Moving forward, the aim is to liaise with other hospital trusts in the region in order to agree the SOP and referral pathway and then enable them to refer patients via the same online referral platform.

Additionally, there are plans to develop a more structured regional endocarditis service whereby cardiologists and microbiologists with an interest in infective endocarditis are identified at each district hospital and are linked to the tertiary centre in a Hub and Spoke model.

As part of this, there is an aim to set up a weekly virtual MDT, specifically to discuss patients with infective endocarditis from around the region and have the option for referring clinicians to 'dial-in' and participate in the management discussions.



Figure 2. Illustration of the Hub and Spoke model for the Regional Infective Endocarditis service in West Yorkshire

REFERENCES

1. Clarke S, Ray S. Cardiology: GIRFT programme national specialty report. London: GIRFT/NHS Improvement; 2021.