

A Novel application of Focused Echocardiography: The Project Management Process

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Introduction: As part of the London region echocardiography recovery programme, NHS England and NHS Improvement (NHSEI) have been working with systems and clinicians to identify and enact interventions to facilitate backlog recovery and improve services. One area identified is the use of abbreviated protocols in specified cohorts. This approach has been used in some trusts successfully over many years and has demonstrated itself to be a safe and effective approach to managing demand in some cohorts (1,2,3).

OBJECTIVES

• The primary aim is to develop a focused echocardiography service, using handheld transducers, where patients from the Direct Access Cardiology Clinic (DACC) undergo an abbreviated echo protocol, triaging patients to separate those requiring full transthoracic echocardiograms (TTE) from those that can safely be discharged. This service would reduce the number of patients who require a full TTE, saving time and resources by freeing up more slots for full TTE, in turn reducing TTE waiting lists, waiting times and improving patient outcomes.

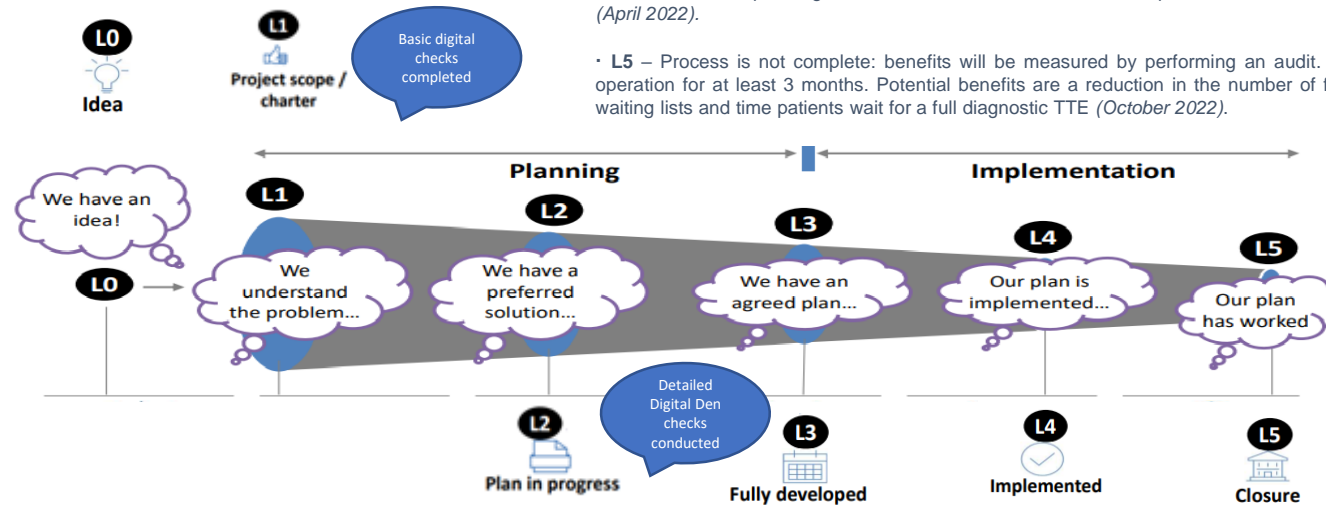
• The secondary aim is to develop and subsequently demonstrate relevant skills such as leadership at various stages of managing a service improvement project as part of the BCS Emerging Leaders Programme.

METHODS

- The service improvement project was planned and managed using stage gates (Figure 1)(4).
- A digital project tracker tool (TRAKIT) was used to plan and document these stages.
- At each stage, details of the expectations were developed and documented. Once all the expectations were met, the project moved through the next gate onto the next stage.

RESULTS

- **L0** – An idea to acquire handheld echo transducers to perform abbreviated protocols in low risk pt's from the DACC was born, stakeholders identified and approached, with the need for capital identified (*June 2021*).
- **L1** – Main goal was to reduce the number of full TTE required from DACC, increasing capacity and reducing waiting times for full TTE. Audit on the patients undergoing TTE from DACC performed for impact assessment. Capital funding identified as the source; innovation fund not suitable. Digital requirements identified and a request for approval submitted. Project registered with Transformation Services and a pathway created on TRAKIT (*October 2021*).
- **L2** - Business case submitted to Capital Review Group to secure £10,000.00. Risk assessment completed. Completed Data Protection Impact Assessment, Minimum Digital Standard and received digital checks from Clinical Safety, EBME, Information Governance and Integration (*November 2021*).
- **L3**- Funding approved and purchase order raised, Cyber Security check completed, Mobile Device Management agreement finalised. Quality impact assessment completed and approved (*December 2021*).
- **L4** – Standard Operating Procedures for the new service developed and ratified. Handheld transducers arrived in the department ready to be used (*April 2022*).
- **L5** – Process is not complete: benefits will be measured by performing an audit. Impact review to be completed once the service has been in operation for at least 3 months. Potential benefits are a reduction in the number of full TTE required from the DACC with subsequent reduction in waiting lists and time patients wait for a full diagnostic TTE (*October 2022*).



REFERENCES

1. Feasibility of an outpatients point of care echocardiography service. Chambers et al (2019).
2. Feasibility and reliability of point-of-care pocket-sized echocardiography. Anderson et al (2011).
3. Detection of heart disease by open access echocardiography: a retrospective analysis of general practice referrals. Chambers et al (2014).
4. Stage-gate systems: A new tool for managing new products. Cooper et al (1990).

CONCLUSION

Using handheld echo transducers to perform abbreviated echo protocols have the potential to help triage patients referred for TTE, ensuring only those that need a full TTE take up the time and resources required for full TTE studies. This could potentially reduce the number of patients waiting for a full TTE and ensure that those required, are performed within 6 weeks, improving patient care and hopefully outcomes.

Establishing a new service with a strong digital element can take an unexpected amount of time to complete from inception to closure. A structured project management process with stage gates are essential to ensure one gets the right information in the right order and at the right time. Very early engagement with the digital team is key to identifying all the digital checks that are required, in order to satisfy data privacy and information governance requirements, this is likely to be the main challenge which will consume the most time.