

Reducing Inpatient Echocardiograms at Burnaby Hospital

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Aim

By June 15th 2019, the number of patients receiving inpatient echocardiograms at Burnaby Hospital will decrease by 15%

Background

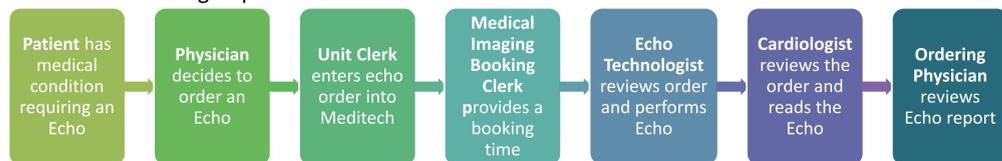
Burnaby Hospital is a 314-bed primary and secondary care community hospital located in British Columbia. It provides a full range of acute and specialized care services to more than 1.8 million people living in the city of Burnaby and its surrounding communities.

An echocardiogram (Echo) is a test used to provide information on a patient's cardiac condition. This test is available to both inpatients and outpatients at Burnaby Hospital. Many inpatients remain admitted in the hospital waiting for their Echo tests and unnecessarily extending their inpatient length of stay. Currently, 43% of the echocardiograms performed at Burnaby Hospital are ordered for inpatients. In 2017, approximately 51% of these inpatients remained admitted an average of 5 days longer than their expected length of stay (ELOS); where some inpatients could have alternatively received their test as outpatients. Having patients wait for tests as an inpatient slows down the flow of patients' discharge, reduces the hospital's bed capacity, stresses staffing, and unnecessarily challenges the hospital's resources and their optimal operational allocation.

Project Design & Strategy

STEP 1 – Develop a Flow Map of the Echocardiogram Booking Process

This high level map allowed us to really understand the current design process, identifying process members and participants that needed to be included in the planning and the brainstorming of potential solutions.



STEP 2 – Identify High Level Operational and Process Gaps

- 43% rebooking rate → each rebooked appointment is estimated to require 10-15 minutes to complete
- Variation in triaging patients based on their clinical needs
- Patients receive avoidable, unnecessary Echos
- Non-standardized information provided to booking clerks → Potential for Errors
- Many inpatient Echos could have been booked as an outpatient
- Adoption of workarounds to improve flow of patients → Variation in booking process

STEP 3 – Create an Echocardiogram Requisition Form

As a team, we decided to tackle the need for standardizing how we order Echos while addressing the high rebooking rate. The requisition form was created with the intent to enable physicians to provide the necessary information while prompting them to consider "alignment to goals of care" while booking their patients' Echos.

Right patient, right time, and right place!

STEP 4 – Plan, Do, Study, Act (PDSA) Cycles in Action!

A team of four physicians were gathered to trial the new requisition form in order to test its effectiveness. Furthermore, we sought feedback from the physicians and booking clerks to identify opportunities to improve on both the "Document", and the "Booking Process". The trial was then repeated with a larger group of physicians in specific departments, then spread throughout the entire hospital.

STEP 5 – Conduct Team Meetings to Monitor and Review Progress

Team meetings were aimed at:

- Testing, trialing and fine-tuning the Echo requisition form (PDSA)
- Connecting with Clinical Informatics to create an identical online requisition form version. This will improve the accuracy of the information transcribed by the booking clerks and avoid potential booking errors!

Changes Made

Site-specific echocardiogram booking requisition form created

Education to support improved patient identification for outpatient booking

Adopting an electronic booking process to:

- Standardize the booking process
- Standardize the information provided to appropriately book an Echo
- Reduce errors in the system by spreading it across Fraser Health
- To enable us to sustain and maintain our project gains

Next Steps

Audit of inpatient Echos ordered for appropriateness

Developing exclusion criteria for outpatient Echo bookings to facilitate and error-proof our new system

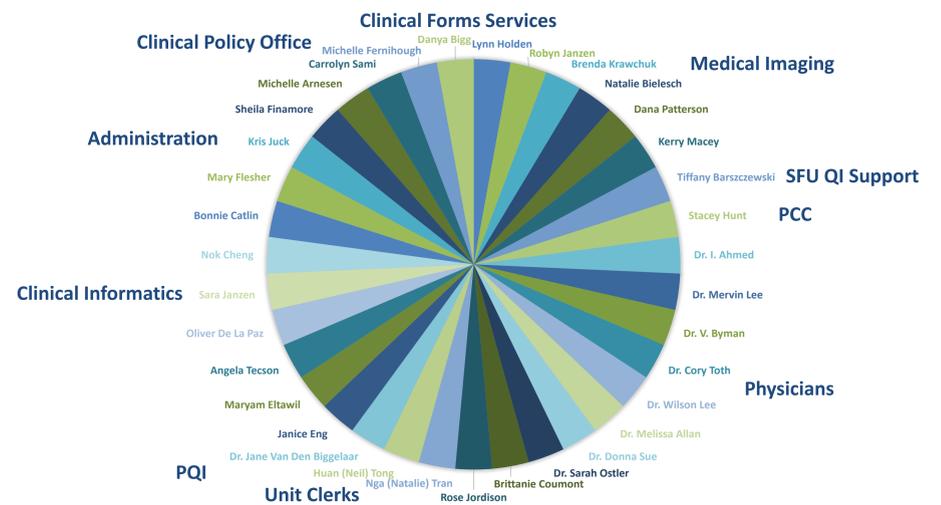
Monitor our progress by measuring inpatient Echo bookings

Work on developing the project's business case to highlight the savings achieved from reducing inpatients' ELOS due to waiting for an Echo

Continue to spread changes throughout the Fraser Health Authority

Team & Lessons Learned

Teamwork was critically important in carrying out a project of this scope and successfully implementing change. Having a multi-disciplinary team provided the right amount and level of expertise that was needed to us moving forward in decision-making and tackle challenges. Engaging and empowering our team ensured positive engagement while making QI an enjoyable experience. There were many steps in the quality improvement process, but the journey could not have sailed as smoothly as it did without the whole team:



Results

