Cholecystectomy Quality Improvement Collaborative (Chole-QuIC)

Mr John Abercrombie
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Project rationale

• A large volume of patients are affected by acute gallstone disease; gallstone related diseases account for approximately one third of emergency general surgery (EGS) admissions and referrals
• 20 - 33% of patients with acute cholecystitis/pancreatitis will represent before receiving surgery
• 20% of patients with acute cholecystitis fail to get home without surgery
• There is wide variation in the management of these patients. For example, cholecystectomy rates within 10 days of first admission (ie urgent cholecystectomy) for acute cholecystitis range from 0 to 35% across England.¹ In comparison:

The mean time to cholecystectomy for patients admitted as an emergency in France is 2.3 days²

1. SWORD database: http://www.augis.org/sword/
Variance in ELC rates within UK

- 17% for acute pancreatitis
- 24% for acute cholecystitis
“…worryingly high number of repeat admissions [with the same diagnosis in previous admissions]…the failure to clear them completely results in unacceptable rates of readmission with recurrent pancreatitis and other gallstone-related complications.”

(co-author and NCEPOD Clinical Coordinator Derek O’Reilly)

Evaluation questions

*Did hospital involvement in the Chole-QuIC QI collaborative improve care processes and reduce time to surgery* (in line with NICE guidance) for patients requiring emergency cholecystectomy?

What was the *exposure* of local Chole-QuIC QI teams and their clinical colleagues to the QI project activities and interventions?

What were the *enablers and barriers* to the local Chole-QuIC QI teams’ ability to routinize care processes in line with the relevant NICE guidance?

Based upon participants’ (NHS staff involved in the project) experience, how might the development, refinement and understanding of the surgical QI collaborative be optimised?
Programme Objectives

Reduce variation & improve quality of care, for patients with acute gallstone disease across England and Wales

1) **Support clinicians to lead service improvement:**
   - 13 hospitals across England and Wales
   - Teams of motivated clinicians and managers test improvements in care
   - RCS provide structured support using expert facilitation and quality improvement methodology (i.e. Quality Improvement Collaborative)

2) **Local improvements in care.**

3) **Evidence of how to improve care in different contexts**
   (i.e. appropriate evaluation and development of translatable model for improving surgical care)

Refine and Scale-up
Why a quality improvement approach

Collaborative structure gives space to make improvements to care

“We have the necessary ingredients at the hospital to make this work, but we haven’t got the oven”

(Chole-QuIC site lead)

Benefits:

• Work on problems you want to fix
• Solutions tailored to local context and designed by those working in the system
• Focus on what works and get evidence of what works quickly (avoid long Business Case process on pet theories)
Clinical lead: Mr Ian Beckingham, Consultant laparoscopic and HPB surgeon, Nottingham University Hospitals NHS trust

- Project launched in October 2016
- Due to complete in January 2018

Quality Improvement Collaborative Approach:
- Small tests of local change; sharing solutions; and embedding change

Goal = At least 80% of eligible admitted patients to receive their cholecystectomy within 8 days of presentation at hospital, in line with NICE guidance

QI Strategy: Timeline

• **Phase 1: Initial testing - October 2016 - Jan 2017**
  • Launch Event (October 2016);
  • *Activity*: Data collection, engaging colleagues and finding ‘easy wins’
  • *Support*: 1 site visit; email support, monthly telecons;

• **Phase 2: Coached experimentation – Jan - July 2017**
  • *Activity*: Continue data collection - data analysis and feedback
  • *Activity*: Rapid tests of change, analysis and refining of changes
  • 2\textsuperscript{nd} and 3\textsuperscript{rd} collaboration meeting (Jan and July);
  • *Support*: 1 site visit; monthly telecons; email support; and webinars

• **Phase 3: Follow-up and support phase - Aug 2017 - Jan 2018**
  • *Activity*: Embedding and sustaining improvements, continue testing
  • *Support*: 1 site visit; telecons; email support; webinars;
  • Closing event: Jan 2018 and project presentations
Site solutions

Medway Maritime Hospital

Solution: a centralised email referral system, from which patients are either accepted or rejected

- Rejected patients are sent information as to why they are unsuitable
- Accepted patients are sent further instructions and booked onto a hot list
- Once a list has been filled and finalised it is emailed out to theatre staff, anaesthetist, operating surgeon & hot clinic nurse, containing all patient information.
Royal Preston and Chorley and South Ribble Hospitals

**Solution:** referring across to ‘cold’ Chorley site and utilising ring-fenced slots

- Following admission, patient is assessed for suitability for surgery
- If suitable duty surgeon responsible for informing waiting list, completing booking form, informing operating surgeon and ensuring pre-op workup complete
Formative results at half way point (cont).

Percentage achieving surgery within eight days of presentation
(all 13 sites combined)

- % 'Fit and Pt allow' patients with surgery in 8 days
- Baseline Median (11 July - 5 Oct)

Launch 6 Oct 2016 – End Jan 2018

Significant improvement on baseline median
Following project completion in January 2018 the evaluation will explore:

- If involvement in Chole-QuIC reduced time to surgery
- The exposure of each site to the QI activities
- Enablers and barriers to improvement within each site
- How future QI collaboratives can be improved

Mixed methods:
- HES and locally collected prospective data
- Focus groups, field notes and ethnographic observation
2) Emerging themes at half way point

**DESIGN:**
- Choosing the right problem to solve is important
- Backing from RCS is v. helpful

**START UP:**
- Team leadership is essential - motivated and persuasive ‘making the right thing easy’
- Data collection is a burden but a ‘necessary evil’ – important to development a consensus upfront about what is being measured and improved

**RELEVANCE FOR RCS AND OTHER PROJECTS:**
- Interest in learning QI skills is linked to practical application
- This is more than a project – normalisation important

‘This [project] is a springboard, it’s launching us into a new way of working, a mindset.’

(Chole-QuIC site lead & consultant surgeon)
Thank You

Email: cholequic@rcseng.ac.uk
Website: rcseng.ac.uk/cholequic

Project team
Clinical lead: Mr Ian Beckingham
Clinical QI advisor: Nial Quiney
QI specialist: Jonathan Bamber
QI specialist: Tim Stephens
Project manager: Ellie Duncan