Centre for Perioperative Care

RCOA Royal College of Anaesthetists | Royal College of Surgeons | Royal College of Physicians | Royal College of Nursing | RCGP Royal College of General Practitioners | Association of Anaesthetists | RCPCH Royal College of Paediatrics and Child Health

Perioperative care, here and now

About perioperative care and the Centre for Perioperative Care (CPOC)[1]

Perioperative care is the integrated multidisciplinary care of patients from the moment surgery is contemplated through to full recovery. CPOC is a partnership between patients, the public and professional stakeholders including Medical Royal Colleges, to facilitate perioperative care for patient benefit. The CPOC partnership has a clear understanding of the value and benefit which perioperative care plays along the entire patient pathway.

Introduction – six perioperative care vanguards (or pilot pathway sites)

This brief paper outlines an initial proposal for NHS England/Improvement (NHSE/I) to facilitate and fund six perioperative care vanguards to develop an even stronger evidence base for the vital role of a multidisciplinary cross-sector approach to the coordinated, efficient and patient-centred care of surgical patients. A variety of pathways would be targeted:

1. two large teaching Trust cancer pathways including access target alterations
2. a Shared Decision Making in practice pathway
3. a prehabilitation/rehabilitation pathway
4. a non-cancer prevention agenda pathway
5. a front end/outpatient clinic re-design pathway.

Each vanguard will be selected based on their proven track record in large scale change management of integrated care, the appropriate use of quality improvement methodology including robust measurement and evaluation, patient involvement, and their commitment to the ambitions of perioperative care pathway redesign. Each will aim to facilitate the personalised and multidisciplinary optimisation of patients prior to surgery, and improved prevention of future disease, to demonstrate:

1. improved patient outcomes, satisfaction and quality care
2. improved shared decision making and patient centred, individualised care
3. enhanced postoperative recovery, outcomes and care
4. reductions in the overall length of stay (including that for critical care)
5. better integration between primary, secondary and social care services
6. reductions in the number of unnecessary surgical procedures
7. improved overall value, cost effectiveness and capacity for demand management.

NHS England/Improvement, perioperative care and the Long Term Plan

CPOC values NHSE/I's support. Professor Powis, NHSE's National Medical Director has encouraged "all system leaders within an Integrated Care System…to consider how a perioperative care approach could improve patient care in their area". High quality perioperative care is dependent on seamless communication and collaboration across primary and secondary care including the social care sector, It can optimise health and lifestyle and meets the triple aim of improving:

- patient experience of care including quality of care and satisfaction with care
- health of populations, including returning to home/work and quality of life, and
- reducing the per capita cost of health care through improving value.

In doing so, perioperative care aligns with national priorities around preventing illness and improving long-term outcomes, tackling health inequalities, digital transformation and facilitating the move to a population health management approach. Perioperative care is not about re-inventing the wheel. It is about using the skills and resources that already exist within the health and social care system and working differently to provide an optimised pathway for surgical patients. In this way, perioperative care is at the heart of the delivery of the NHS Long-Term Plan for England.

Tackling in/outpatient surgical complications

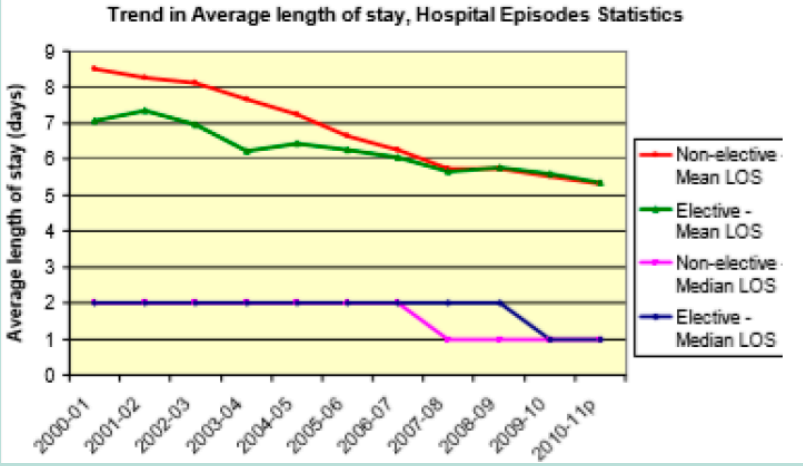
Of the 1.5 million major surgical inpatient procedures performed annually by the NHS in England, around 15% result in a significant complication and are associated with substantially extended length of hospital stays. Following discharge, these also result in increased demand for primary and outpatient care, hospital readmissions, prolonged ill health, delayed return to work, reduced quality of life and shortened life expectancy. Many of these adverse outcomes are avoidable with better perioperative care: optimisation of risk factors, supporting patients to improve their health, fitness and lifestyle and multidisciplinary care planning. Getting it Right First Time (GIRFT) reviews and National Clinical Audits demonstrate wide variation in the establishment and the delivery of services that can reduce complications (e.g. anaemia clinics and preoperative planning services). Importantly CPOC will be an essential vehicle to the delivery of GIRFT's predicted cost savings and quality improvement aspirations.

A further 5 million procedures are undertaken in outpatient settings, including day case procedures. Again, better perioperative care can support more efficient, cost effective and clinically effective services. This includes optimisation of comorbidities to reduce last minute cancellations, avoidance of unnecessary or non-beneficial surgery through better support for primary care and shared decision making, and, again, reduction in outpatient and primary care burden through reducing post-procedural complications.

Proof of concept

The emerging evidence demonstrates the cost-effectiveness of perioperative care pathways and prehabilitation, and improvements in patient experience and quality of care:

- Enhanced recovery is contributing to underlying trends of shorter lengths of stay and increased surgery on day of admission. Patients involved in the ERAS+ pathway had postoperative complications reduced by over 50%, with mean length of stay cut by three days.[7]



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- The PREPARE for surgery programme demonstrates the cost-effectiveness of delivering comprehensive prehabilitation services before surgery, based on individual need. Analysis of the PREPARE programme, run by the Imperial College Healthcare NHS Trust, calculates the cost of the core team delivering the programme at £20,900 p/y against an estimated cost savings of £265,000 p/y based on reduced rate/severity of complications and length of (hospital) stay.[9]
- The guidance report, *Prehabilitation for people with cancer,* a partnership between the RCoA, the NIHR and Macmillan Cancer Support, contains evidence that when services are redesigned so that prehabilitation is integrated into the cancer pathway the quality of life and long-term health of patients is considerably improved.[10]
- The Wessex Fit-4-Cancer Surgery study (WesFit) is a clinical service that looks to establish the benefits to patients of exercise and psychological interventions in advance of cancer surgery. It combines the rigour of a randomized control trial with the nimbleness of a clinical service evaluation. Patients who completed this training have returned to pre-treatment levels of fitness, or even improved and gained a healthier lifestyle.[11]
- Malnourished patients have increased postoperative morbidity and mortality. A single centre prospective observational cohort study at University Hospital Southampton NHS Foundation Trust has shown that preoperative nutritional optimisation improves perioperative outcomes and is a powerful predictor of length of stay. It has demonstrated two-day shorter median total hospital length of stay.[12]
- The award-winning acute pain team at the Royal Bournemouth Hospital demonstrated how, by offering patients up to three sessions with a psychologist, concerns and anxieties relating to their orthopaedic procedure could be better managed. Since the service began, over 150 patients receiving hip and knee surgery have taken advantage of the therapy sessions and, on average, are being discharged two days earlier than patients who didn't receive the service.[13]
- A recent analysis of secondary outcomes from a previously published randomised and blinded clinical trial of exercise-based prehabilitation in patients undergoing major elective gastrointestinal or liver surgery reported improved physical fitness, fewer postoperative complications, a reduction in the overall complication rate as well as fewer hospital readmissions at 30 days post-surgery.[14]

The vanguards will achieve four goals mapped to the NHS Long-Term Plan:

1. personalised approaches to health management in perioperative patients:
    - implementation of criteria led discharge and shared decision making, aiming to reduce median and mean length of stay, and reduce unnecessary surgery
    - taking opportunities to impact on health inequalities through improving health literacy and patient activation
2. evaluation and optimisation of comorbidities:
    - including approaches aimed at improving system 'flow' in keeping with Integrated Care Systems principles - for example, earlier communication with primary care
3. intervention to optimise patients' health behaviours: physical activity/exercise, diet, smoking/alcohol consumption, whilst addressing psychological barriers to change
4. facilitation and embedding of close cross-specialty working and integrated care between primary and secondary care teams (including allied health professionals).

The participating vanguards will work to:

- understand the drivers for improved perioperative care related to their specific area, and beyond, including what 'quality' means to patients, actively building patients into service design
- transform short- and long-term patient quality of care and outcomes to be of a uniformly higher standard in terms of safety, clinical effectiveness, patient focus and efficiency
- build capability and capacity, so the solutions and lessons developed can be sustained and spread across and beyond the vanguards after the end of the project
- improve staff engagement, sense of purpose, confidence, wellbeing and retention – helping to focus the attention of staff on the patients' experience
- raise awareness of and demonstrate that perioperative care can feasibly, affordably and sustainably become a core characteristic of routine clinical care at scale
- develop modernised and lean approaches to outpatient services.

The vanguards will aim to ensure that patients:

- both perceive themselves to, and objectively have, better participated in shared decisions about their care at a level they feel confident with
- both perceive themselves to, and objectively have been, involved in the co-design of services in partnership with clinical and non-clinical staff, to ensure services are designed around patient need
- feel confident that the care they receive is efficient, timely and well organised to a high standard
- feel their care is designed in a way that acknowledges their personal and lifestyle needs and expectations
- achieve Emergency Department admission avoidance of patients on long term waiting/ preparation lists.

Methodology

The evaluation will use mixed methods and adopt similar principles to those in the elective care transformation programme,[15] in which supported Trust teams implement change and evaluate the first 100 days of delivery. We will build on the quantitative methodology of the Perioperative Quality Improvement Programme (PQIP),[16] and other qualitative methodologies. In turn we will seek support from GIRFT for the evaluation and back up of early findings to assess sustainability.

PQIP establishes a dataset (based on the best evidence for patient risk factors, processes and outcomes) and uses it to measure and improve patient outcomes, while answering key research questions. It systematically measures complications, patient-reported outcomes and failure to rescue in participating hospitals. Hospitals may recruit a few patients per week or all patients in a surgical specialty/specialties. Once a patient starts their PQIP journey they will be followed up for one year after their procedure to assess general health and wellbeing.

The PQIP methodology supports clinicians and managers with how to use data for improvement. Participating hospitals are provided with a live dashboard of results and quarterly and annual reports, customized to the interests of different professional groups. Hospitals are supported in the interpretation, distribution and use of their data. Quality improvement tools are also provided and information assessed to see how it is helping drive local improvement. Local investigators are encouraged and supported to use their results to lead their own local quality improvement projects and research.

Our key personnel

- Dr David Selwyn, Director, Centre for Perioperative Care
- Dr Liam Brennan, Chair, Centre for Perioperative Care Board
- Professor Mike Grocott, Deputy-Chair, Centre for Perioperative Care Board

References

1 Centre for Perioperative Care, https://cpoc.org.uk

2 The Royal College of Anaesthetists, 'A teachable moment: delivering perioperative medicine in integrated care systems', March 2019, https://bit.ly/33byTqm

3 *BJA: British Journal of Anaesthesia*, Volume 119, Issue 2, August 2017, P249–257, https://doi.org/10.1093/bja/aex137

4 Getting it Right First Time – reports

5 Healthcare Quality Improvement Porgramme – The National Clinical Audit Programme

6 *BJA: British Journal of Anaesthesia*, Volume 119, Issue 2, August 2017, P249–257, https://doi.org/10.1093/bja/aex137

7 NHS Accelerator, ERAS +, https://nhsaccelerator.com/innovation/eras/

8 NHS, Enhanced Recovery Programme, Report – March 2011, https://bit.ly/34dcTwq

9 Royal College of Anaesthetists. *Bulletin*: September 2017. PREPARE for surgery: a paradigm shift. P.30-3

10 Macmillan Cancer Support and the Royal College of Anaesthetists, Principles and guidance for prehabilitation within the management and support of people with cancer, 2019

11 Wessex Fit-4 Surgery Cancer Trial

12 Pre-operative nutritional screening - potential cost savings from Southampton (MIKE S to provide reference)

13 The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust. Hospital initiative wins prestigious British Medical Journal Award. 15 May 2018

14 Barberan-Garcia A, Ubre M, Pascual-Argente N, et al. Post discharge impact and cost-consequence analysis of prehabilitation in high risk patients undergoing major abdominal surgery: secondary results from a randomized control trial. Br J Anaesth 2019; 123: 450-6

15 NHS England. Elective Care Transformation Programme. Handbooks and case studies.

16 Perioperative Quality Improvement Programme

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March 2020