

# General Surgery

## GIRFT Programme National Specialty Report



by **John Abercrombie** MB BS FRCS  
GIRFT Clinical Lead for General Surgery



# Contents

---

<b>Foreword from Professor Tim Briggs</b> .....	<b>3</b>
<b>Foreword from John Abercrombie</b> .....	<b>4</b>
<b>About this report</b> .....	<b>5</b>
<b>The Getting It Right First Time programme</b> .....	<b>6</b>
<b>What is general surgery?</b> .....	<b>9</b>
<b>Executive summary</b> .....	<b>10</b>
 <b>RECOMMENDATIONS</b>	
<b>Theme 1: Data and performance measurement</b> .....	<b>18</b>
Inaccuracies and inconsistencies in existing data .....	18
Gaps in data.....	21
Are we measuring the right things?.....	22
Measuring surgical performance.....	23
<b>Theme 2: Procurement</b> .....	<b>24</b>
What the data shows .....	24
<b>Theme 3: Choice, commissioning and care pathways</b> .....	<b>28</b>
Use of radiotherapy before surgery for rectal cancer .....	28
Treatment of oesophageal squamous cell carcinoma.....	29
Surgical approach for colorectal cancer.....	29
Use of day surgery for anti-reflux procedures.....	31
Availability of bariatric surgery .....	32
Persistent abdominal stomata .....	34
Variations in choice, commissioning and care pathways: some concluding observations .....	36
<b>Theme 4: Surgical performance</b> .....	<b>37</b>
What alternative measures of surgical performance demonstrate.....	39
Readmissions.....	39
Post-surgical complications.....	40
Learning from results .....	42
Litigation.....	42
Rethinking professional development for surgeons .....	44
A culture shift?.....	45
<b>Theme 5: Efficiency and emergency provision</b> .....	<b>46</b>
Capacity planning for general surgery .....	46
Examining throughput .....	47
The case for a surgical assessment unit.....	49
<b>Potential impact</b> .....	<b>51</b>
<b>Glossary</b> .....	<b>55</b>
<b>Acknowledgements</b> .....	<b>57</b>

## Foreword from Professor Tim Briggs, GIRFT Programme Chair

---

When I began my review of orthopaedic surgery more than five years ago, I was driven by a desire to improve the specialty I have devoted my career to, fix many of the issues I and my colleagues regularly face, and ensure better care and outcomes for the patients who put their trust in our hands.

I and my small team visited over 200 sites and met with more than 2,000 surgeons, clinicians, support staff and trust managers to review their own data and try to understand what kind of impact unwarranted variation was having on their services. We discussed the challenges they faced, debated the possible solutions, and where there was good practice, we held this up as an exemplar of how orthopaedic surgery in England could be improved.

All this information and insight was captured in my first report, which coined the term “Getting It Right First Time”, giving this programme both its name and its mission statement. The report included a range of evidence-based recommendations that I and my team felt would truly make a difference to care and efficiency in orthopaedic surgery; recommendations that were widely embraced by my fellow clinicians and the British Orthopaedic Association; recommendations that, where implemented, have helped improve care and patient outcomes, as well as saving the NHS millions of pounds.

What I found most heartening throughout that entire process was how supportive the majority of people were, both in the face-to-face meetings we held with clinicians and managers, and in welcoming the resulting report with its recommendations. Almost everybody I met understood and supported the importance of engaging with our work and acknowledged that the NHS must now review all unwarranted variation in the quality and efficiency of the services we deliver.

And it is in that same spirit of supportive and collaborative working that I am delighted to present and recommend this review of general surgery by John Abercrombie, the first national report to follow the Getting It Right First Time (GIRFT) methodology that we developed for orthopaedic surgery.

What John has discovered is that, not only are there significant differences in the way general surgery services are delivered and in the outcomes they produce, but also many clinicians are unaware how they perform compared with colleagues within their own trust, let alone compared with other trusts in England. There are gaps in their knowledge of infection rates, wide differences in care pathways, and issues around the way data is both recorded and used for future decision-making. Add to that factors such as a huge variation in procurement costs, and the report paints a picture of a general surgery service that has some major, albeit fixable, problems.

For the first time in this report we have a data-led view of clinical outcomes and costs, as well as real insight into what works and what isn't working. This will enable clinicians and managers to redesign their services for the benefit of their patients.

GIRFT and the other Carter programmes are already demonstrating that, by transforming provider services and investing to save, there are huge gains to be made in stabilising trusts financially and improving care for patients. My hope is that GIRFT, through initiatives such as this report, will provide the impetus for clinicians, managers and programmes such as ours to work together, shoulder to shoulder, to create solutions and improvements that for too long have seemed impossible to deliver.



*Professor Tim Briggs is Consultant Orthopaedic Surgeon at the Royal National Orthopaedic Hospital NHS Trust, where he is also Director of Strategy and External Affairs. He led the first review of orthopaedic surgery which became the pilot for the GIRFT programme, of which he is now Chair. Prof. Briggs is also National Director for Clinical Quality and Efficiency, at NHS Improvement.*

### **Professor Tim Briggs**

**GIRFT Programme Chair and National Director for Clinical Quality and Efficiency at NHS Improvement**

## Foreword from John Abercrombie, GIRFT Clinical Lead for General Surgery

---

I was delighted to have the opportunity to lead the Getting It Right First Time (GIRFT) programme for general surgery. I have visited 50 hospitals meeting many brilliant and inspirational surgical and administrative colleagues. No one should doubt that we all want the same thing: to improve outcomes for patients with surgical illnesses. There is a tremendous appetite to understand how well we are performing and thereby help us to deliver that improvement. All of the professional associations and societies (RCS Eng, ASGBI, AUGIS, ACPGBI, BOMSS, The Pelvic Floor Society) with whom I have met have wholeheartedly supported the GIRFT concept. The response from those hospitals that we have visited has been almost universally positive, responding to the challenge in a constructive and imaginative fashion that makes me both very proud of the profession and optimistic for its future.

The findings and effect of the pilot GIRFT project in orthopaedic surgery has been most impressive, highlighting variations in practice and outcome as well as identifying easily achievable cost savings. There are similar challenges in general surgery. Issues of regional variations in service and access to care through commissioning have been well documented. Variation in clinical practice and the quality of care is also known by the profession but remains an unsolved problem. A person with a given condition should be able to walk into any department and get roughly the same advice, treatment and outcome. It is clear that this is not being achieved and that the results of care, in some areas, appear to lag behind other European countries and the USA.

This project offers us the chance to take a step back: to look at the way we work and the outcomes we deliver as a profession; and to examine those same things with fellow surgeons and senior hospital managers, understanding the different ways we can deliver similar - or sometimes better - results.

The GIRFT data gives us a more detailed picture of general surgery in individual hospitals than ever before, highlighting the considerable variation in patient pathways and provisioning. That information has been used to shape valuable changes in practice in many hospitals. Yet at the same time, it feels as though we have barely scratched the surface.

The data shows the variation, but we still do not truly understand the fundamental underlying problems that explain it. While we - the GIRFT programme team and the individual hospitals - have pinpointed many of the key challenges faced in general surgery, we don't yet have the insights to resolve them.

The NHS is very good at process measurement. Unfortunately this does not necessarily reflect the quality of care and thereby promote best practice. How can we set about improving team and personal performance when we do not measure it? To

borrow an analogy from Matthew Syed's influential *Black Box Thinking*, we are "playing golf in the dark".

This is exacerbated by the fact that much of what we do measure risks being counter-productive. We measure how many deaths occur at the hand of a surgeon, but we do not celebrate how many lives they save and improve. We measure how quickly patients receive an operation for colorectal cancer, but not the success of those operations or alternative treatments. These politically derived measures are not clinically driven or motivated; they do not help improve our service or our skills, nor do they lead to better outcomes for patients. They may even have adverse consequences by inducing surgeons to adopt risk-averse behaviour.

There is, however, much we could measure that would make a difference: surgical performance; the number of urgent - if not emergency - patients who receive care within a given time; readmissions and infection rates. Linking such data to the different procedural approaches used, we can truly understand what the safest and most effective procedures are in NHS practice rather than clinical trials. The American College of Surgeons National Surgical Quality Improvement Program is a shining example that challenges us all.

Many of our recommendations focus on building that next level of insight. While there are some that enable almost immediate improvements and efficiency savings - notably around reducing the staggering variation in procurement - many are focused on longer-term transformation.

This report builds on the work carried out by Professor Tim Briggs supported by Lord Carter and his Model Hospital project. It has the benefit of serious political investment which shows a real intent to help us care for our patients more effectively.

It is an exciting opportunity. I am convinced that the GIRFT project will help build a better surgical service that is even more rewarding to work within than the one we have today.



*John Abercrombie is Consultant Colorectal Surgeon at Queen's Medical Centre, Nottingham. His areas of specialist practice are in inflammatory bowel disease, abdominal wall reconstruction, the surgery of intestinal failure and bowel cancer screening colonoscopy.*

**John Abercrombie**  
MBBS FRCS



## Royal College of Surgeons

The Royal College of Surgeons is a strong supporter of the Getting It Right First Time Initiative which has shone a light on variation in surgical practice and processes across the NHS. Surgical change is most effective when driven by surgeons themselves and we are pleased to see this report is no exception to that principle. As a professional body that exists to advance surgical care, we believe the recommendations have the potential to improve the quality and experience of care that patients receive, as well as deliver important cost savings to the health service.

**Professor Derek Alderson**  
President, Royal College of Surgeons

## About this report

This report examines key aspects of the way general surgery - defined here as the management of patients presenting with elective or emergency abdominal disease - is delivered in NHS England.

Drawing on a broad range of data from across the NHS, together with the learning from visiting many NHS provider trusts, it pinpoints areas of variation in general surgical practice, procurement and patient outcomes. It then analyses this variation to underpin a series of recommendations that offer opportunities to enhance patients' experience of care, improve patient outcomes and reduce post-surgical complications, while delivering tangible savings to individual trusts and the NHS as a whole. These recommendations include suggestions that could reduce length of stay, cut readmissions and rapidly save millions of pounds on procuring clinical supplies.

The recommendations are the output of work conducted under the NHS Improvement programme Getting It Right First Time (GIRFT). The aim is that they should serve as the catalyst for further discussion and action, at national, trust and individual surgeon level, to enhance patient care, improve outcomes from general surgery and drive efficiency.

Begun in 2012, the GIRFT programme uses existing NHS data in a new and innovative way. Data from multiple different NHS sources is consolidated and analysed to provide a detailed national picture of a particular area of practice. This process highlights variations in care decisions, patient outcomes, costs and other factors across the NHS. The data is then put to immediate use by experienced clinicians who visit individual hospital trusts to discuss the data, focusing on areas where that trust's approach appears to differ from the national norm.

This is an opportunity for both parties to learn: the individual trust can understand where its performance appears to be below average, and draw on clinical expertise to identify ways to address that, while the visiting clinicians can gain an insight into emerging best practices, to feed into the national picture.

This report, the first of more than 30 which will be published under the GIRFT programme, focuses on the latter element, summarising key opportunities identified by the clinical lead to improve the delivery and outcomes of general surgery. Its 20 recommendations are spread across five themes - data and performance measurement; procurement; choice, commissioning and care pathways; surgical performance; and efficiency and emergency provision. There is a section of the report on each theme. Before that, the report provides more detail on what the programme involves and how it fits into the wider landscape of NHS Improvement. It also provides an overview of general surgery.

# The Getting It Right First Time programme

---

Getting It Right First Time (GIRFT) is a national programme designed to improve medical care within the NHS. Funded by the Department of Health and overseen by NHS Improvement, it combines wide-ranging data analysis with the input and professional knowledge of senior clinicians to examine how things are currently being done and how they could be improved.

Working to the principle that a patient should expect to receive equally timely and effective investigations, treatment and outcomes wherever care is delivered, irrespective of who delivers that care, GIRFT aims to identify approaches from across the NHS that improve outcomes and patient experience, without the need for radical change or additional investment. While the gains for each patient or procedure may appear marginal they can, when multiplied across an entire trust - and even more so across the NHS as a whole - deliver substantial cumulative benefits.

The programme was first conceived and developed by Professor Tim Briggs to review elective orthopaedic surgery to address a range of observed and undesirable variations in orthopaedics. In the 12 months after the pilot programme, it delivered an estimated £30m to £50m savings in orthopaedic care - predominantly through changes that reduced average length of stay and improved procurement.

The same model is now being applied in more than 30 different areas of medical practice. It consists of four key strands:

- A broad data gathering and analysis exercise, performed by health data analysts, which generates a detailed picture of current national practice, outcomes and other related factors.
- A series of discussions between clinical specialists and individual hospital trusts, which are based on the data - providing an unprecedented opportunity to examine individual trust behaviour and performance in the relevant area of practice, in the context of the national picture. This then enables the trust to understand where it is performing well and what it could do better - drawing on the input of senior clinicians.
- A final report that draws on both the data analysis and the discussions with the hospital trusts to identify opportunities for NHS-wide improvement.
- An implementation phase where the GIRFT team supports providers to deliver the improvements recommended after the clinical specialist visits.

The programme relies on engagement by NHS trusts and foundation trusts. At the outset of the programme, letters are sent from the GIRFT clinical lead for each area of practice to the chief executive, the medical director and the heads of service for the relevant specialty of all NHS trusts and foundation trusts in England. This letter calls on the provider to engage with the programme, and to date providers have responded well to this call.

## GIRFT and other improvement initiatives

The GIRFT programme is founded on using data to understand unexplained variation to provide an opportunity for standardisation and improvement.

It also reflects experience in the NHS and internationally accepted best practice that the most effective initiatives to improve quality, productivity and efficiency are clinically led. As well as support from the Department of Health and NHS Improvement, it has the backing of the medical Royal Colleges and professional associations.

GIRFT is part of an aligned set of work streams within the Operational Productivity Directorate of NHS Improvement. It is the delivery vehicle for one of several recommendations made by Lord Carter in his February 2016 review of operational efficiency in acute trusts across England.

GIRFT has a significant and growing presence on the Model Hospital portal, with its data-rich approach providing the evidence for hospitals to benchmark against expected standards of service and efficiency. The programme will also work with a number of wider NHS programmes and initiatives which are seeking to improve standards while delivering savings and efficiencies, such as RightCare, New Care Models, and Sustainability and Transformation Plans (STPs).

---

## Data analysis

The data analysis exercise brings together a wealth of existing NHS data in an innovative way to paint a comprehensive picture of this aspect of medical practice. It includes Hospital Episode Statistics (HES), relevant registry or professional body data, mortality data, demographic information and patient survey data. Alongside this, a specific questionnaire is sent out to all trusts that have agreed to participate.

The output is a detailed report consisting of standard and novel metrics, covering input, activity, process and outcomes. For example, it will typically address issues such as:

- Quality of care - using indicators such as mortality and readmission rates.
- Factors linked to outcomes - including adoption of best practice, low volumes of procedures, and time to surgery,
- Access - e.g. standardised activity per 100,000 population.
- Efficiency - length of stay and costs.
- Patient experience.

The data sources are selected and the metrics for each area of practice are developed in partnership with GIRFT programme clinical leads for that area - thus ensuring they are relevant to the decisions a senior clinician in that field may have to make. For general surgery, data has been taken from large national audits (the National Bowel Cancer Audit Programme, Upper Gastro Intestinal Cancer Audit and National Emergency Laparotomy Audit), Hospital Episode Statistics (HES) and trust reference costs. Patient Reported Outcome Measures (PROMs) are not yet widely validated in general surgery. Less direct indicators such as Friends and Family Scores have been used where good metrics are not yet available. As the programme develops, it is intended to develop more informative and actionable metrics.

The resulting report provides a detailed, data-led view of the way this area of practice is currently delivered across the country. It shows where there is variation in both provision and outcomes, and helps identify patterns which could indicate opportunities to improve care or deliver efficiencies.

## The discussions

With the national picture clear, the data analysis team then generate individual reports for each hospital trust that is participating in the programme. These reports compare the trust's performance with the national data, enabling the trust to see how its activity levels, commissioning decisions, costs and patient outcomes for different procedures measure up to those of its peers.

These individual reports are not designed for wider publication but rather to give the trust an insight into this area of practice. They are issued to the trust in advance of a scheduled meeting between clinical leads appointed by the GIRFT programme and senior staff at the trust.

At the meeting, the clinical leads discuss the individual report with the trust, with a particular focus on the areas where the data shows variation between national norms and the trust's performance. Where the data indicates the trust may be underperforming in some way, this is explored in more detail to see whether there is an alternative explanation for the data; where appropriate, the trust can then draw on the expertise of senior clinicians in the field as they discuss specific challenges they face and consider potential changes to practice.

Conversely, where the data indicates the trust is outperforming its peers, clinical leads seek to understand what the trust is doing differently and how its approach could be adopted by others to improve performance across the NHS.

Feedback from trusts has been uniformly positive and in every case, actionable steps have been identified to improve aspects of local provision.

---

The GIRFT General Surgery team has visited 50 hospital trusts since January 2016. Experience to date indicates these visits are most effective when attended by the trust's senior clinicians and senior managers - including the chief executive where available.

## The report

The orthopaedic GIRFT project identified that, following about 30 trust reviews, the problems and potential solutions identified were the same across all subsequent trust visits. After the visits have been completed the clinical lead oversees the creation of a national GIRFT report into their specialty. The report provides an overview of the way this area of practice is delivered across the country, examples of best practice and recommendations for potential improvements at the national level. This is one such report.

## Implementation

NHS Improvement reviews the report and recommendations from each practice area examined by the GIRFT programme. It then tasks the GIRFT team to co-ordinate an implementation programme designed to help trusts address the issues raised and improve quality. Some recommendations require national action; NHS Improvement identifies the most appropriate body or programme to lead on these recommendations. This will range from working with the Royal Colleges and national professional associations and societies on best practice guidance, to working with NHS England and the Care Quality Commission to ensure that GIRFT recommendations are reflected in any future evolution to regulation or national guidelines.

Where responsibility for implementation rests with individual trusts, NHS Improvement and in particular the GIRFT programme team will ensure there is a range of ongoing support available to help individual providers implement these recommendations locally.

By late 2017 a series of regional GIRFT hubs will be set up as centres from which clinical and project delivery leads can visit trusts and commissioners in each region on a regular basis. They will be able to advise on how to reflect the national recommendations in local practice and support efforts to deliver any trust-specific recommendations emerging from the GIRFT visits. These teams will also help to disseminate best practice across the country, matching up trusts that might benefit from collaborating in selected areas of clinical practice.

Importantly, GIRFT will be working closely with other NHS programmes at regional and trust level, such as RightCare, Sustainability and Transformation Plan (STP) footprints and the Model Hospital project, to ensure a complementary approach and to streamline requests to providers.

Through all our efforts, local or national, GIRFT will strive to embody the "shoulder to shoulder" ethos which has become GIRFT's hallmark, supporting clinicians nationwide to deliver continuous quality improvement for the benefit of their patients.



## What is general surgery?

---

General surgery is an umbrella term for the management of patients presenting with elective or emergency abdominal disease. It includes surgery of the gastro-intestinal tract (oesophagus, stomach, small and large bowel) and the repair of hernias. General surgery also encompasses liver, biliary tree and pancreas, breast, transplant procedures such as for the liver, pancreas and kidney, and endocrine glands, which will be covered in a separate report next year. Emergency general surgery concerns the treatment of patients presenting with acute abdominal pain, infections, bleeding and trauma.

It is a large specialty, provided in the overwhelming majority of NHS hospitals, and accounts for around 1.8 million episodes of inpatient care each year at a cost of £2.7 billion. The majority of these episodes involve surgical procedures - 1.35 million general surgery procedures were performed in 2015/16 but general surgeons also deal with complex illnesses for which surgery may not be required. For example, approximately 40% of patients presenting with bowel cancer do not undergo an operation. Decisions where surgical treatment is withheld are among the most challenging scenarios that patients and their carers face in day to day practice.

The area of practice is growing fast. From 2003/04 to 2013/14 there was a 27% increase in admissions for surgical procedures - a fact attributable to a range of factors including increased life expectancy and rising obesity levels, along with developments in surgical practice and changes in commissioning. This increase has in turn led to a growth in the workforce; in September 2013 (the date of the last workforce stocktake), there were 2,077 consultant general surgeons and 2,029 registrars and non-training grades specialising in general surgery working in the NHS in England. This makes general surgery one of the largest surgical specialties, accounting for 27% of the surgical workforce, and 5% of the medical consultant workforce.

Most general surgeons in the UK develop an interest in a sub-speciality (colorectal, upper GI, hepato-biliary, breast, endocrine, transplant) for their elective work; however, in all but the largest providers, emergency general surgery requires a more generic skill set, with rapid access to diagnostics and senior decision-making.

## Executive summary

---

Every year the NHS delivers more than a million general surgery procedures. This umbrella term in fact covers some of the most complex and important surgery conducted by the NHS: life-saving, life-lengthening and life-enhancing operations to deal with all aspects of abdominal disease. It includes surgery for bowel cancer, the removal of gallstones, anti-reflux procedures and gastric bands and bypasses.

There are thousands of highly committed general surgeons in the NHS delivering these procedures each day, to an exceptionally high standard of patient care. General surgery is undertaken in almost every hospital trust and demand for procedures is growing fast: from 2003/04 to 2013/14, there was a 27% increase in admissions.

Given such a high and diverse volume of work - general surgeons also deal with complex illnesses for which surgery may not be required - general surgery was recognised early as a field that stands to benefit from the Getting It Right First Time (GIRFT) programme. This new programme, funded by the Department of Health and jointly overseen by NHS Improvement and the Royal National Orthopaedic Hospital NHS Trust, seeks to identify variation within NHS care and then learn from it.

GIRFT is one of several ongoing work streams designed to improve operational efficiency in NHS hospitals. In particular, it is part of the response to Lord Carter's review of productivity, and is providing vital input to the Model Hospital project. It is also closely aligned with programmes such as RightCare, New Care Models, and Sustainability and Transformation Plans (STPs) - all of which seek to improve standards while delivering efficiencies.

### The GIRFT programme

Under the GIRFT programme, data from many NHS sources is consolidated and analysed to provide a detailed national picture of a particular area of practice. This process highlights variations in care decisions, patient outcomes, costs and other factors across the NHS. The data is reviewed by experienced clinicians, recognised as experts in their field, who visit individual hospital trusts to discuss the data with senior management and the clinical teams involved in the specialty under review. Discussion focuses on areas where the trust's approach appears to differ from the national norm.

Where the data indicates the trust may be underperforming in some way, this is explored in more detail to see whether there is an alternative explanation for the data; where appropriate, the trust can then draw on the expertise of the GIRFT clinical leads as they discuss specific challenges they face and consider potential changes to practice.

Conversely, where the data indicates the trust is outperforming its peers, the clinical leads seek to understand what the trust is doing differently and how its approach could be adopted by others to improve performance across the NHS. The analysis and visits lead not only to targeted action within individual trusts, but also a national report, including recommendations, backed by an implementation programme to drive change.

The approach was first used in orthopaedic surgery and, within 12 months of completing the analysis and visits, led to an estimated £30m to £50m savings in orthopaedic care - predominantly through changes that reduced average length of stay and improved procurement.

### Opportunities in general surgery

Examination of both national data and local practice in general surgery has identified similar opportunities to improve patient experience and outcomes and make more effective use of NHS resources. In particular, there are opportunities to learn from the trusts where readmission rates following complex surgery are lowest, where the use of day case surgery for less complex procedures is most common and where the proportion of patients with stoma 18 months after surgical resection for colorectal cancer is smallest.

If all trusts reached the national average in these three areas, it would potentially save the NHS half a million pounds a year; more significantly, it would make an enormous difference to patients' lives.

- 
- Nationally, one in five patients who undergoes colorectal cancer surgery requires readmission to hospital within 90 days - but in some trusts the figure is just 10%. The GIRFT programme has sought to understand what these best performers are doing differently.
  - According to the British Association of Day Surgery, at least 20% of anti-reflux surgery should be possible as a day case. The GIRFT review found that a handful of trusts undertake around 50% of procedures as day cases - and in one case, around 80%. Yet most trusts do not at present offer anti-reflux surgery on a day case basis. Data indicates that there is no detrimental impact on patient outcomes from day surgery, but it offers an improved patient experience and a cost efficiency for the trust - so there appears to be an opportunity to learn from those routinely using day surgery.
  - Surgical resection for rectal cancer is a complex procedure and patients typically need a stoma (such as a colostomy or ileostomy) after the operation. Modern surgical practice means that the majority of stomata should be reversible, but the data shows substantial variation in the proportion of patients who still have a stoma 18 months after surgery. In some areas, three-quarters of patients still have a stoma; in others, it is less than a quarter and in four trusts the figure was zero. Given the vast impact on quality of life, and the fact that the cost to the NHS of providing care in the community to an individual with a stoma is around £6,000 per year, it is only logical that the approach taken by these latter trusts should be examined in more depth - with recommendations relating to this.

Other opportunities identified relate to rethinking the balance between elective and emergency provision, so that patients who would benefit from surgery within days (i.e. as soon as practical, rather than needing life-saving surgery immediately) can be diagnosed and scheduled in swiftly. This shift in balance not only benefits the patient but can also mean that the surgery required is less complex and costly than it would be further down the line. Several trusts have adopted a model where general surgeons are available to examine patients on first admission and surgical rosters are designed to allow this flexibility, and the indications are this benefits patients and the trust as a whole. Further study of this model is recommended.

## Learning from the data, learning from peers

Every hospital visited by the GIRFT team has found the process extremely valuable and a number have already begun to take action in response to some of the opportunities identified. However, it is also clear that clinical leads and senior managers at many trusts were surprised by some of the variation, and by some of the approaches taken by peers, even where this variation had been previously recognised at a national level.

For example, during GIRFT visits, one common area of discussion was around the wide national variation in the use of radiotherapy for rectal cancer and chemoradiotherapy for oesophageal cancer. In some trusts, 80% of rectal cancer patients receive radiotherapy before a surgical procedure; in others, radiotherapy is seldom employed. This is a vast difference but its impact on outcomes is unclear.

When this data was presented to clinical teams during GIRFT visits, many were genuinely surprised at the variation. National audits demonstrate the variation has been consistent - but clinical practice has not changed. The surprise of the trusts indicates that many were unaware of how their peers elsewhere have been managing the same conditions.

A clear benefit of the GIRFT programme is that it draws together valuable insight from data-driven reports, audits and peer to peer discussion, and spurs trusts to rethink their approaches based on this information. Nationally, it would appear there is a significant further opportunity to study patient outcomes and gain a greater insight into the effectiveness, or otherwise, of pre-operative radiotherapy.

However, there is a further factor to consider here: that of professional development for surgeons. At present, this is largely left to surgeons themselves to co-ordinate; there is no formal programme or assessment. This is not just true of general surgery but of all surgical disciplines. While the majority of surgeons are both conscientious and professionally curious, studying new approaches through journals and conferences, it can mean surgeons not keeping abreast of developments in their specialist field.

One key recommendation from this strand of the GIRFT programme is to add a new dimension to professional development of surgeons. By learning directly from peers, fellow surgeons, in other hospitals, who are using different approaches, there are opportunities to study surgical technique, infection control, anaesthesia - all aspects of the surgical process.

---

This is particularly important for general surgeons who may carry out a wide range of different procedures on a relatively infrequent basis. The data shows that while some hospitals in England undertake over 22,000 general surgery procedures a year, others undertake fewer than 4,000, and may carry out some of the more complex procedures only a handful of times per year. Learning from those who repeatedly conduct successful procedures seems desirable for all and the report makes several recommendations related to this.

## **Improving data quality and accuracy**

This leads into another key issue that the GIRFT programme in general surgery has raised: that of how success is measured. While the programme team has been able to gather and analyse a range of data to provide a more detailed national picture than ever before, it is nonetheless true that the data currently available about general surgery on the NHS is extremely limited.

Clearly, there has been a significant amount of activity in recent years to improve data - requiring hospitals to measure performance in more ways and gather information about a range of factors. Yet there is still much we can do to improve the quality of this data. Patient Reported Outcome Measures (PROMs) are not yet widely validated in general surgery, though a number of projects have been developing and validating effective PROMs in some benign conditions, including incisional hernia, oesophageal reflux, gallbladder disease and laparoscopic cholecystectomy.

Most strikingly of all, 71% of emergency general surgery activity nationally is recorded in Hospital Episode Statistics under the generic diagnostic code of "abdominal and pelvic pain". As a result, we cannot gain a true understanding of the demand for emergency general surgery - what conditions are being dealt with and what procedures are being used - nor its effectiveness.

The NHS needs more accurate data and to reduce the variation in the way it is recorded across trusts using diagnosis and procedure codes. Only by improving data quality will the NHS know how well it is treating patients and how it can improve patient treatment and care.

The GIRFT programme also identified concerns with some of the data that is currently measured. For example, the key measure of surgical performance at present is mortality rate: the number of patients who died within a set period after surgery by a particular surgeon. This is a crude measure, taking no account of the type of procedure or of co-morbidities. The easiest way to improve performance would simply be to avoid potentially higher risk procedures.

Yet there are other key indicators of surgical performance and patient experience that are not routinely measured, such as readmission rates and wound infection. Just four of the 50 hospitals that had participated in the GIRFT review programme (prior to publication of this report) were able to report wound infection rates reliably, even though infection can be a direct cause of readmission or further treatment - at best distressing and painful for the patient and incurring further potentially avoidable costs for the trust.

The two examples of readmissions and wound infection rates are not chosen by accident. Not only are they both already monitored in other countries, but there is also established guidance in the UK that encourages trusts to gather, analyse and learn from this information. This is included in the Royal College of Surgeons' guidance for the conduct of morbidity and mortality meetings. Trusts run meetings which focus on deaths and major complications but do not reliably take account of readmission and surgical site infection rates.

The data analysed by the GIRFT programme already demonstrates just how valuable this information can be to individual trusts and to the NHS as a whole. By improving the quality of data we collect and focusing on data that can give us a richer insight into care quality, we can do much more. Many of the recommendations from this report are therefore related to data.

## **Opportunities in procurement**

One area where data is easily obtained and compared is around procurement - and the GIRFT programme has identified this as a key opportunity to identify marginal gains that together can have a major impact.

For general surgery, trusts were asked to provide information on recent prices paid for some common surgical instruments and consumables. The responses showed wide variation: if all trusts had purchased this basket of goods at the lowest unit price, the total cost would be £1,466.98. If all were procured at the highest cost, the price would be £2,335.52 - some 59% higher. While there were some differences in the items purchased, these did not appear to have a clinical impact.

---

No one trust purchased all the items at the highest price, nor the lowest; some might negotiate a great price for one item but pay an above average rate for another. Buying in bulk had no discernible cost benefit.

Clearly, there are opportunities here for cost savings and for greater consistency across trusts; recommendations relate to how greater consistency could be achieved.

## Examples of best practice

Throughout our review of general surgery at trusts in England we found examples of best practice; initiatives and good ideas that could bring benefits if adopted by other trusts. Below are some examples of what we found.

### Independent assessment of quality

Ipswich Hospital has signed up to the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP). Two nursing colleagues are employed to make assessments of surgical wounds and to monitor other complications. This data is entered onto the ACS NSQIP database, allowing the trust to compare its performance against the whole database as well as similar sized hospitals in the USA.

### Strong and sustained early recovery after surgery

The Countess of Chester Hospital is home to one of the best performing colorectal teams. They have a very low readmission rate with short lengths of stay for their group of rather elderly and frail patients. This is achieved by a tightly knit group of surgeons with a consistent approach to patients supported by a skilled team to help patients recover rapidly from surgery.

### Personalised fluid charts

Bournemouth Hospital introduced a personalised fluid balance chart that allows the foundation doctors to produce bespoke fluid prescriptions for patients based upon a defined protocol.

### Consultant-led surgical triage

A number of trusts have introduced consultant-led surgical triage and ambulatory emergency surgical systems. These have consistently shown that 30% of acute surgical admissions can be avoided. Inspired by these vanguard units (Bath, Derby and Blackburn), Nottingham University Hospital introduced an emergency general surgical service (NEGSS) and surgical triage unit (STU) in 2015. This new model was brought in to improve service efficiency, patient care and experience; recognising that there were high numbers of inappropriate referrals/admissions, unnecessary admissions and delayed senior decisions.

A senior member of their general surgery team covers the “front door” of the admissions unit between the hours of 8am and 5pm, seven days a week, taking telephone calls from all sources of referral including A&E, the ambulance service, and medical and nursing colleagues in primary care. Patients can be seen on the surgical triage unit or in the A&E department and the surgeon then makes the decision as to whether the patient goes home or is admitted. The unit has the facility to undertake ultrasounds, quick blood tests and x-rays if needed. This has shown a 15% reduction in inappropriate referrals and a 57% increase in same day discharge. By the end of 2015, the trust's length of stay reduction was 2,635 bed days. These two reductions have helped towards Nottingham NHS health care saving £2.1 million.

### Mathematical model for emergency theatre sizing

This model was designed to work out where to place additional theatre time in order to reduce the waiting time for emergency surgical patients. It did this by taking the historical emergency waiting list information based on urgency code (CEPOD) and whether the patient was an adult or a child. It remodelled theatre capacity in order to shape it to predicted volumes of activity. It allowed experimentation with different solutions in order to produce the best answer and has led to an increased theatre resource being made available for emergency work.

---

## Recommendations

This report makes 20 recommendations, spread across five themes - data and performance measurement; procurement; choice, commissioning and care pathways; surgical performance; and efficiency and emergency provision. Each is supported by a series of actions which form a key part of the implementation programme.

### Theme 1: Data and performance measurement

1. Improve coding of emergency general surgical activity.
2. Introduce national policy levers to drive case ascertainment (completeness) in national audit programmes to a level approaching 100%.
3. Improve routine data collection quality.
4. Enhance national audit programmes by recording the number of patients with a relevant diagnosis, not just those who underwent a surgical procedure.
5. Design and progress implementation of an optimum care pathway for colorectal patients, and review national cancer targets in light of the resulting evidence.

### Theme 2: Procurement

6. Instigate pricing transparency in procurement for general surgery, and use the resulting insight to deliver more cost-effective procurement.
7. Review options for consolidation of procurement at a national level.
8. Identify centres of good procurement performance, and understand what factors lead to the most favourable procurement prices.

### Theme 3: Choice, commissioning and care pathways

9. Require reversible risk factors to be addressed prior to non-urgent procedures, using a patient-centred approach utilising shared decision-making.
10. Where not already described, define optimal care pathways in national guidance so they can be implemented locally with minimal, if any, variation. Optimal care pathways already defined in guidance should be implemented locally with minimal, if any, variation.

### Theme 4: Surgical performance

11. Adopt a “zero-tolerance” approach to known avoidable surgical complications, on which there should be reliable data and national guidance.
12. Strengthen the clinical morbidity and mortality meetings by expanding the current focus on deaths and major complications.
13. Improve understanding of the causes of litigation and take action to reduce common errors that lead to claims.
14. Make available and require at appraisal surgeon-level intelligence on activity and outcomes.
15. Develop a means of identifying the best performing teams and enable others to visit them as part of continuing professional development (CPD).
16. Conduct a national review, assessing the NHS model of clinical autonomy against international comparators, with a view to reducing unwarranted variation in clinical practice.

### Theme 5: Efficiency and emergency provision

17. Require data to be collected routinely about operation duration to establish a measurable benchmark for different types of procedures.
18. Undertake a capacity planning study to enable theatre capacity to be principally organised around emergency care.
19. Provide consultant-delivered emergency general surgery in each trust.
20. Require every trust to identify a consultant lead for emergency general surgery, with allocated time in their job plan.

Further recommendations will follow as the programme moves into implementation and as the available data increases.

---

## Next steps: implementation

This report has underlined a need to transform services and practice at pace, to reduce variation and, in so doing, deliver a higher quality, more sustainable service. As such, NHS Improvement's objective is for GIRFT implementation in general surgery to be complete, and a new business as usual phase reached, by April 2019. The principal mechanism for doing this will be delivery of tailored implementation plans in each trust, which will translate this report to meet local needs.

Trusts should begin developing their implementation plan, based on:

- the indicators for which they are a negative outlier, of which GIRFT has provided a summary in their trust general surgery data pack
- the specific recommendations reported to the trust following the GIRFT visit<sup>1</sup>
- the recommendations in this national report.

In developing and delivering their implementation plans trusts should prioritise:

- the recommendations most emphasised in the GIRFT visit report, which would be based on both the data and the discussions during the visit
- the recommendations in this national report highlighted for immediate action.

To achieve the results we all want, it is vital that clinicians, management and all staff within trusts work shoulder to shoulder to progress these plans. Where this report recognises that national guidance, or any other national support, is needed prior to provider implementation, this is reflected in the timescales associated with our recommendations. Beyond immediate actions by trusts, we would specifically ask Clinical Commissioning Groups and NHS Rightcare to note action 10D (recommendation 10, theme 3), on access to bariatric surgery, for delivery by December 2017.

NHS Improvement and the GIRFT programme team recognise that developing implementation plans and delivering against them may be challenging. As such, GIRFT hubs based in regional locations across England will, from autumn 2017, support trusts by providing advice and management support, including advice on developing and troubleshooting implementation plans. The hubs will also lead a buddying process to help spread best practice between trusts, and manage dependencies with other transformation efforts including STPs, acute care collaborations (ACCs) and NHS RightCare. The core GIRFT data will be updated on an annual basis, to enable trusts to monitor progress, and where necessary reprioritise their implementation efforts.

The GIRFT programme team will work with national bodies, professional bodies and others to develop policy levers that can help accelerate delivery. In the interim, we encourage national bodies, professional bodies, CCGs, STP leads, ACCs and RightCare to keep GIRFT informed of interdependent transformation efforts. We are also working to build our policy and national support offer. Specifically, we expect:

- **By October 2017:** that NHS England and NHS Improvement will have agreed national policy proposals to support implementation. Consultation will then be undertaken as needed, for a final implementation date to be determined. By October, STPs, NHS RightCare delivery partners and Accountable Care Collaborations will also have begun joint working with the GIRFT Hubs, following contact from the hubs.
- **By early November 2017:** progress will have been made on developing clinical guidance, such as that referred to in recommendations 5, 9, 10 and 19, along with the pricing list referenced in recommendation 6.
- **By February 2018:** progress will have been made on all other national deliverables required to support improved procurement, reduced litigation and CPD.
- **By August 2018 to April 2019:** any further clinical and professional guidance will be delivered, along with the improvements to national audit programmes called for in recommendation 4. Research findings and subsequent national deliverables will be delivered. This will enable the new business as usual phase for general surgery.

**Once the new business as usual has been reached:** reviews of the NHS model of clinical autonomy and national cancer targets should be conducted.

Trusts are able to register for access to the Model Hospital at [www.model.nhs.uk](http://www.model.nhs.uk)

The full report and executive summary are also available to download as PDFs from [www.gettingitrightfirsttime.co.uk](http://www.gettingitrightfirsttime.co.uk)

<sup>1</sup> Trusts which have already been visited by the GIRFT clinical lead will either have already received this, or will receive it imminently. Trusts which have not been visited yet will receive their recommendations within one month of the visit. Trusts should be starting to build their implementation plans already as they have received their data packs.

# Causes of variation in general surgery

---

Data shows there are currently marked differences in patient access to general surgical care, the nature of that care and the outcomes from it. The programme has identified multiple instances of unexpectedly large variation that cannot be adequately explained by differences in obvious drivers of demand, such as age, population-standardised incidence of disease, or co-morbidities.

The observed variation across general surgery broadly fits into the following five categories, which are likely to apply across all areas of practice:

- Variation in demand.
- Variation in activity.
- Variation in decision-making.
- Variation in outcomes.
- Variation in productivity and cost.

Some of this reflects intentional differences in practice and approach; in other areas, as the discussions with trusts proved, variation is unwanted and unwarranted and trusts may be unaware of the variation between themselves and other trusts.

Reducing variation where it is unwarranted - in who receives care, how services are provided, the tools and techniques used, and the quality of outcomes - is recognised as fundamental to improving quality and reducing costs. Wide variation in patient outcomes implies both a cost to post-surgical quality of life, and a financial burden of post-surgical management including revision or rescue surgery. Variations in underlying costs suggest that there are inefficiencies in the provision arrangements of certain procedures in general surgery, and in procurement.

## Variation in demand

Demand for general surgery has risen considerably over recent years. The incidence of problems requiring, or amenable to, surgical intervention has increased, while the thresholds for intervention have lowered through new surgical techniques and technologies which serve to cut the costs and risks of surgery while improving impact.

Demand for some surgical procedures is hard to predict. However, there are areas where there is clear evidence of unmet need. The most obvious of these is bariatric surgery, where despite a 300% increase in surgical activity over the last six years, due to the prevalence of obesity, only 0.6% of potential surgical activity is currently delivered. Evidence has shown that access to surgery varies widely between regions, and that provision is not necessarily higher in areas that have the greatest prevalence of obesity. This has led to sizeable variations in demand at present that will increase if current patterns do not change.

Given the high levels of childhood obesity in the UK, NHS England is now collating evidence to support a proposal<sup>2</sup> for the routine commissioning of bariatric surgery for those aged 18 and under. If this was introduced, it would clearly have a substantial impact on demand.

## Variation in activity

The data gathered indicates that there is a wide variation in general surgery activity levels across NHS hospitals. Some hospitals undertake over 22,000 procedures a year; others undertake fewer than 4,000.

When specific types of procedures are considered, the variation is even greater. There are many hospitals where more complex procedures are carried out just a handful of times a year: while clearly this is, in part, linked to demand, it means some clinical teams may have comparatively little experience in these often higher risk operations.

There is a general view that very low volumes of activity either by an individual or a unit are not conducive to high quality outcomes, although there is limited English data to support this belief. In 2009 the Association of Upper Gastrointestinal Surgeons (AUGIS) stated that an ideal oesophagogastric unit would consist of between four and six surgeons each carrying out a minimum of 15 to 20 resections per year; hepatobiliary surgeons should carry out a minimum of 12 to 16 pancreatic resections per year and 15 to 25 liver resections (between 10 and 15 major) each.<sup>3</sup> More recently, AUGIS recommended that surgeons should undertake a minimum of 10 laparoscopic cholecystectomies per year while the Association of Coloproctology of Great Britain and Ireland (ACPGBI) expects bowel cancer surgeons to be undertaking at least 20 curative resections per annum.

<sup>2</sup> NHS England - Clinical Commissioning Policy Proposition: obesity surgery for children with severe complex obesity (2016). [https://www.engage.england.nhs.uk/consultation/copy-of-clinical-commissioning-wave7/user\\_uploads/a05x03-obesity-surgery-policy-proposition2.pdf](https://www.engage.england.nhs.uk/consultation/copy-of-clinical-commissioning-wave7/user_uploads/a05x03-obesity-surgery-policy-proposition2.pdf)

<sup>3</sup> [http://www.augis.org/wp-content/uploads/2014/05/AUGIS\\_recommendations\\_on\\_Minimum\\_Volumes.pdf](http://www.augis.org/wp-content/uploads/2014/05/AUGIS_recommendations_on_Minimum_Volumes.pdf)



---

The data available demonstrates that many general surgeons will not complete the recommended number of procedures each year in all areas. The Hernia Outcomes Campaign has published a document showing that more than 50% of surgeons carrying out inguinal hernia repairs undertake fewer than 12 operations per annum. The campaign argues that results would be improved by fewer surgeons carrying out larger numbers of operations.

## Variation in decision-making

While general surgical activity is linked to demand, GIRFT metrics and other sources (e.g. *The NHS Atlas of Variation in Healthcare*) indicate that there are large variations in the levels of surgical activity, as well as provision, which cannot be attributed to differences in population or disease profiles.

For example, the proportion of patients with rectal cancer undergoing pre-operative radiotherapy varies from less than 10% in some trusts to over 80% in others. There are also marked differences in the rate of use of chemoradiotherapy as the primary treatment modality for oesophageal squamous cell carcinoma: while the national average is 46%, in five trusts over 60% of patients are treated this way and in four trusts fewer than 30% are.

This is not new data; it has been clear from the results of national audits for some years, yet has not resulted in a more consistent approach. This suggests that despite the existence of multidisciplinary teams (MDTs) to oversee cancer treatment, there is no agreement on the optimal patient pathway - a point made even more clearly when looking at the use of laparoscopic (keyhole) surgery for major colorectal procedures. Nationally, around 60% of patients are treated using laparoscopic methods, but in some trusts the figure is almost 100%. In others, it is less than 20%.

While patient choice may have some influence on this, these huge variations indicate that the key factors in decision-making are likely to be the views of individual clinicians and commissioners.

## Variation in outcomes

The data gathered shows wide national variations in outcomes of general surgery across a range of measures, from mortality rate after surgery to readmissions and post-surgical infection.

At one level, this data must be treated with caution: outcomes are related to surgical and commissioning decisions. In the simplest terms, if a surgeon is only allowed to operate on advanced, late stage disease then outcomes are likely to be worse. The available data does not enable full analysis of the outcomes by disease stage.

Nonetheless, there are aspects of this variation which are concerning. For instance, the 90-day mortality rate for patients undergoing major resection for colorectal cancer varies from zero in five trusts - including one which conducted over 140 such procedures in the measured period - to almost 14% in another trust. Rates of readmission following the same procedure varied from under 10% to over 30% - meaning in a handful of trusts, nearly one in three patients was readmitted to hospital within three months of surgery.

## Variation in productivity and cost

Data around general surgery productivity is currently minimal. However, previous reports have indicated that productivity in general surgery has decreased slightly in recent years, going against the grain of productivity increases across the NHS.<sup>4</sup>

To investigate this further, the GIRFT programme has created a very basic indicator of throughput: procedures conducted per operating theatre. This is based on the number of operating theatres available in each trust and the total number of general surgery procedures the trust reported completed in a year. This illustrated considerable variation in throughput, but the data needs to be viewed with caution: the data gives no indication of the complexity or duration of procedures, nor their outcomes. It also does not consider the activity undertaken outside of general surgery which itself will vary widely.

Productivity - in such simple terms - may also be reduced by safety factors (such as longer anaesthetic turnaround and operating times) and through patient choice. These factors could positively impact clinical and patient outcomes but at the cost of greater resource use.

In the absence of richer data about the types of procedures undertaken and how they are undertaken - how many clinical staff are present, for example - it is also not possible to build up a full picture of comparative costs for general surgery. However, as part of the GIRFT programme, hospitals were asked to provide information on procurement costs for some commonly used surgical devices and consumables. The results showed huge variation; this is discussed in more depth under Theme 2.

<sup>4</sup>Centre for Workforce Intelligence - Securing the future workforce supply: general surgery stocktake (January 2016) . [www.cfwi.org.uk](http://www.cfwi.org.uk)

# Recommendations

## THEME 1: DATA AND PERFORMANCE MEASUREMENT

The GIRFT programme has provided further proof of the enormous value of data and performance measurement to help improve services. By building a picture of the way services are delivered nationally and the outcomes achieved, the team has been able to identify significant national variation - and thus opportunities to achieve efficiencies or improve patient care. By providing a local dimension and enabling individual trusts to see how they compare to their peers, the programme has opened fruitful discussions and resulted in changes to practice.

However, in the view of the GIRFT team, these results have been only a fraction of what could be achieved, because the data currently available about general surgery in the NHS is extremely limited.

General surgery is difficult to measure because of the diversity of general and sub-specialty practice, and GIRFT indicators in some areas are in the early stages of development. For example, PROMs (Patient Reported Outcome Measures) are not yet widely validated in general surgery, though a number of projects have been developing and validating effective PROMs in some benign conditions, including incisional hernia, oesophageal reflux, gallbladder disease and laparoscopic cholecystectomy.<sup>5</sup>

Essentially, the available data shows what procedures are undertaken in which trust. It should show why the procedures were undertaken - i.e. diagnostic data - and who the lead consultant was. However, there are issues with both these data items.

### Inaccuracies and inconsistencies in existing data

Despite expert clinical coding input, the way activity is recorded, using diagnosis and procedure codes, varies greatly between trusts. The most striking example of this is the fact that 71% of emergency general surgery activity nationally is recorded in Hospital Episode Statistics (HES) under the generic diagnostic code of “non-specific abdominal and pelvic pain”. In some trusts, more cholecystectomies are undertaken on patients admitted as emergencies than there are diagnoses of acute gallstone disease.

The result is that it is currently impossible to derive a true picture of the demand for emergency general surgery or its relative effectiveness - and it seems likely that similar issues would be found in other areas of practice. Such recording inhibits further understanding of treatment decisions and reduces the ability to track patient outcomes effectively. It makes it extremely difficult for units, let alone individuals, to have any idea how well they are performing and thereby to improve that performance.

A major piece of work, involving surgeons, administrators and clinical coders, needs to be undertaken to address these inaccuracies. Data quality requirements must be explicit and set out in national guidance, constituting an element in the NHS standard acute contract.

### Recommendation 1: Improve coding of emergency general surgical activity

Recommendation	Actions	Timeline
Improve coding of emergency general surgical activity.	<b>1A:</b> Surgeons to meet trust regularly with information team and coders to review activity attributed to them.	<b>1A:</b> For immediate action.
	<b>1B:</b> Trust management to ensure emergency general surgery data is incorporated into the appraisal intelligence as per recommendation 14.	<b>1B:</b> For immediate action.
	<b>1C:</b> GIRFT to create speciality-specific methodology focused on accuracy of coding, beyond the current validity methods, working with national bodies, such as NHS Digital, as appropriate.	<b>1C:</b> For completion by April 2019.
	<b>1D:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>1D:</b> Agreement on national policy proposals to be achieved by October 2017.

Another area where the data is insufficient is around consultant attribution. It is an administrative requirement that every episode of care has a named consultant associated with it. However, when the team attempted to use this attribution data to answer specific questions such as how many surgeons at a trust undertake emergency laparotomies, the information proved to be full of records that indicate attribution is incorrect. It is therefore not possible to determine how frequently a specific consultant conducts a particular procedure, or (which would be of equal importance) how often the same consultant chooses a different course of action for a similar set of symptoms.

The issue of data accuracy is not a new one for the NHS and various national audits have been introduced to gather richer clinical information, with some success. For instance, the GIRFT general surgery programme has drawn heavily on the National Emergency Laparotomy Audit (NELA),<sup>6</sup> the first report of which collated data on over 20,000 patients - more than 80% of all patients who underwent emergency bowel surgery. The report therefore provides a valuable insight into the treatment provided and patient outcomes.

However, as the report itself highlighted, “there was considerable variation in case ascertainment rates across hospitals, ranging from 100%, to less than 20%”. It was subsequently concluded that nationally case ascertainment was just 65% - a figure that rose to 70% in the second NELA report.<sup>7</sup> This therefore represents a major gap in our understanding of what is happening to one of the most vulnerable groups of patients under the care of general surgical teams.

Addressing this does not require trusts to provide more data; it simply needs trusts to improve the quality of data they submit. If necessary, this should be monitored and enforced.

**Recommendation 2: Introduce national policy levers to drive case ascertainment (completeness) in national audit programmes to a level approaching 100%**

Recommendation	Actions	Timeline
Introduce national policy levers to drive case ascertainment (completeness) in national audit programmes to a level approaching 100%.	National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	Agreement on national policy proposals to be achieved by October 2017.

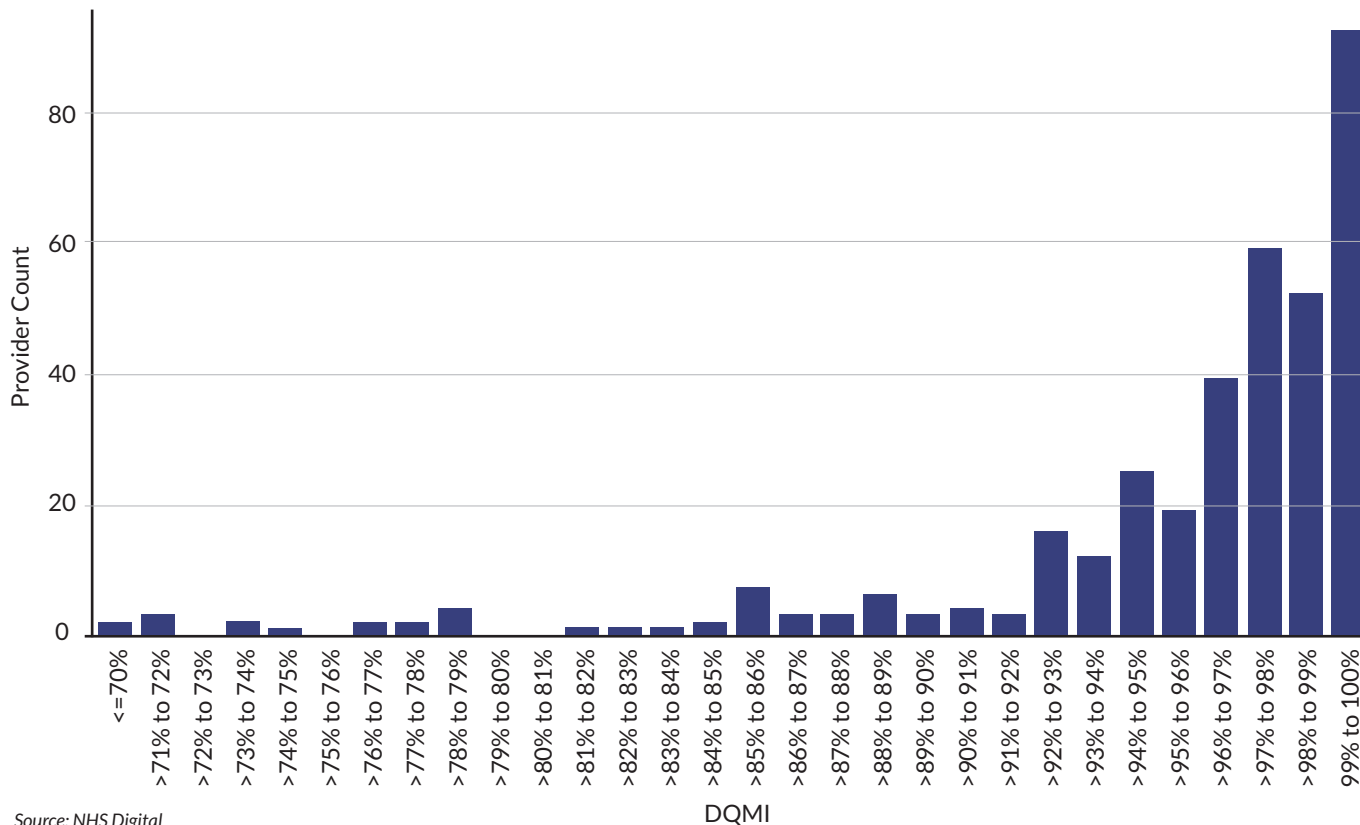
To enable a more accurate response to both HES and these national audits, there needs to be an improvement in routine data collection. Again, this is something that has been identified as an issue across the NHS and the Data Quality Maturity Index (DQMI)<sup>8</sup> has recently been launched to help raise the profile of the issue. Its first report, on HES data, showed that in 56 organisations, data did not achieve 90% basic field validity - meaning the core data set underlying the majority of national reporting is not as robust as it should be.

<sup>6</sup> NELA - The First Patient Report of the National Emergency Laparotomy Audit (NELA 2015). [www.nela.org.uk/reports](http://www.nela.org.uk/reports)

<sup>7</sup> NELA - The Second Patient Report of the National Emergency Laparotomy Audit (NELA 2016). [www.nela.org.uk/reports](http://www.nela.org.uk/reports)

<sup>8</sup> HSCIC - Data Quality Maturity Index (2016). [http://digital.nhs.uk/media/21184/DQMI-Methodology-10/pdf/DQMI\\_Methodology\\_1.0.pdf](http://digital.nhs.uk/media/21184/DQMI-Methodology-10/pdf/DQMI_Methodology_1.0.pdf)

**Figure 1: Data Quality Maturity Index (DQMI) distribution for provider trusts: January to April 2016**



Source: NHS Digital

Improving this is within the gift of NHS providers; indeed, the majority of providers are at 97% or above, underlining that higher quality data is entirely feasible. This next recommendation focuses on ways to do so, considering contractual obligations and incentives. While it is included here in the general surgery report, it could be applied to all areas of practice.

**Recommendation 3: Improve routine data collection quality**

Recommendation	Actions	Timeline
Improve routine data collection quality.	<b>3A:</b> Mandated national audits to report data completeness and field validity, reporting at a provider level the proportion and count of submissions that are both complete and valid.	<b>3A:</b> For completion by April 2019.
	<b>3B:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>3B:</b> Agreement on national policy proposals to be achieved by October 2017.

There are two main groups of staff who generate this data: clerical staff such as admissions officers, ward clerks, clinic clerks and others who create the core of the record; and then clinical coders who add the diagnostic and procedure activity codes. Effective monitoring and management of these vital staff groups has been shown to improve the quality of the data greatly and NHS Digital recommends the use of a performance evidence delivery framework.<sup>9</sup>

## Gaps in data

As well as inaccuracies in the data, there are also substantial gaps. For example, there is no national collection of data pertaining to operating theatre processes - the personnel involved other than the named surgeon, the time spent in theatre, under anaesthetic or in recovery. Such information would be invaluable to explore and improve theatre suite efficiency. There are some small trusts that share this data with a selection of peers to benchmark and learn, but a national data set would be of great value.

Perhaps the most significant gap is in the data related to patients who - though seen by general surgery consultants - do not receive an operation. Many of these may be theoretically in scope of an existing mandated audit but the existence of these patients is not always captured within these audits. This has various consequences:

- It means there are potential inaccuracies in our understanding of unmet demand.
- It also means that there is no data on the use and effectiveness of non-surgical intervention within these rich data sets.
- It risks skewing results elsewhere. In principle, the “success rate” of surgery could be increased by choosing not to operate on Very high risk patients. It is not possible, based on the available data, to quantify the number of cases in which this might be happening. However, there is a clear perverse incentive here, which needs to be eliminated to help assure the quality of patient care.

To understand patient outcomes under the care of a consultant general surgeon, it is vital that all patients - not only those that are operated upon - are represented in the data. We need to be confident that the audits are driving an improvement in care and that surgical teams are not becoming risk averse simply because they are being measured.

### **Recommendation 4: Enhance national audit programmes by recording the number of patients with a relevant diagnosis, not just those who underwent a surgical procedure**

Recommendation	Actions	Timeline
Enhance national audit programmes by recording the number of patients with a relevant diagnosis, not just those who underwent a surgical procedure.	<b>4A:</b> GIRFT programme to develop a methodology to collect data on patients who have surgical illness but do not undergo an operation, including the reason why no operation occurred.	<b>4A:</b> For completion by April 2019.
	<b>4B:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>4B:</b> Agreement on national policy proposals to be achieved by October 2017.

<sup>9</sup> [http://www.digital.nhs.uk/media/21886/Performance-evidence-delivery-framework/pdf/Performance\\_evidence\\_delivery\\_framework\\_august\\_2016.pdf](http://www.digital.nhs.uk/media/21886/Performance-evidence-delivery-framework/pdf/Performance_evidence_delivery_framework_august_2016.pdf)

---

This is a significant challenge to the large audit projects such as NELA which was designed to look specifically at the outcomes of patients undergoing emergency bowel surgery. Trying to capture data which was relating to all patients for whom an operation might have been a possibility is likely to be very difficult indeed; many hospitals struggle to enter all the data fields required for the audit of operative cases alone. Therefore, alternative approaches such as the use of snap audits and routine benchmarking need to be explored to ensure that the outcomes of the whole cohort of patients presenting with acute abdominal disorder are considered.

**While better data would undoubtedly have enabled further insights, it is the firm opinion of the GIRFT team that the data available nonetheless enabled an extremely valuable analysis, in particular during discussions with individual trusts.**

**All available data was provided to trusts in the pre-visit reports; it was accepted at face value and while the gaps in the data sets were acknowledged, there was almost universal agreement that simply presenting an individual trust's data in the context of the performance of other trusts has been a very helpful way to consider strengths and weaknesses.**

**The process also served to demonstrate the value of generating the data used in national audits, which too often has been seen as an unnecessary administrative burden and even a threat to providers, rather than a tool to enable local improvement. By making trusts aware of the limitations of the available data, the GIRFT team has encouraged them to improve their data collection and reporting.**

### **Are we measuring the right things?**

While considering data and performance measurement, it is also valid to look at the impact of some existing measures and targets. Insight gained from our reviews has identified two key areas where existing targets may inadvertently result in reducing the quality of care patients receive.

The first of these are the national targets around cancer treatment, including the target for all suspected cancer referrals to be seen within two weeks, a maximum 31-day wait for subsequent treatment where the treatment is surgery and a maximum 62-day wait from referral from an NHS cancer screening service to the first definitive treatment.

These targets are designed to ensure consistent patient care, but such swift referral and treatment for colorectal cancer can lead to poorer patient outcomes. The tight timescales mean that little time can be allowed to address reversible risk factors, such as smoking or poorly controlled diabetes, that are known to have a significant negative impact on surgical outcomes.

The slow progression of colorectal cancer means that in most cases delaying surgery in order to address reversible risk factors and thereby improve operative outcomes would have no negative impact on cancer survival.

Emergency bowel surgery can be needed for benign and malignant colorectal disease. It is well known that the risks of emergency surgery are between five and ten times greater than for planned operations. Clinically, it would be more effective to prioritise patients at risk of becoming emergency colorectal patients, both those with and without cancer. This could enable improved patient care across all colorectal disease groups. Urgent colorectal treatment should be prioritised appropriately according to clinical need, not just for those patients with cancer.

To address this, an optimum pathway should be established and implemented for colorectal cancer treatment. In principle, this would enable reversible risk factors to be addressed before surgery wherever appropriate, as well as freeing up vital general surgery resources to allow appropriately timely treatment for patients with other conditions.

The evidence emerging from this process, and any other source, should then inform a review of national cancer targets. This could lead to the conclusion that the pathway and national targets are compatible; that they are incompatible and the targets should be amended: or that additional resource, or reform, is required both to deliver the pathway and meet the targets.

**Recommendation 5: Design and progress implementation of an optimum care pathway for colorectal patients, and review national cancer targets in light of the resulting evidence**

Recommendation	Actions	Timeline
Design and progress implementation of an optimum care pathway for colorectal patients, and review national cancer targets in light of the resulting evidence.	<b>5A:</b> GIRFT clinical lead to work with the Association of Coloproctology of Great Britain and Ireland (ACPGBI) to design the optimum care pathway for patients presenting with suspected colorectal cancer, and other urgent colorectal cases.	<b>5A:</b> Progress to have been made by early November 2017.
	<b>5B:</b> GIRFT to progress implementation of this pathway with providers.	<b>5B:</b> For implementation, to a new business as usual stage, by April 2019.
	<b>5C:</b> A review to be conducted on national cancer targets, in light of evidence emerging from 5B.	<b>5C:</b> To be conducted after new business as usual stage is reached.

**Measuring surgical performance**

Another area of concern is the use of surgeon-specific mortality data as the key measure of surgical performance. This data is typically presented without context: it simply shows the number of patients who died within a set period after surgery by each surgeon. As such, it risks providing a false measure: even though attempts are made to risk adjust appropriately, if a surgeon wished to improve their performance against this crude measure, the easiest way would be to avoid high risk procedures.

Worryingly, there are some indications that this is happening. A particular example is around patients with metastatic colorectal cancer: increasingly, and in the face of National Institute for Health and Care Excellence (NICE) guidance<sup>10</sup> that multidisciplinary teams (MDTs) should consider surgical intervention if tumours are considered resectable, patients are being referred for oncological or palliative care rather than being offered surgery. This was something that emerged at first anecdotally; however, the National Bowel Cancer Audit indicates that there has been a steady reduction in the proportion of such patients who are being offered surgical treatment and that there may be a survival disadvantage in this group as a consequence.

**Table 1: Numbers undergoing a major resection for colorectal cancer**

Stage at diagnosis	2012	2013	2014	2015
Disease only local - no metastases	14,952	15,638	13,841	13,667
Metastatic disease	2,147	2,170	1,564	1,338
Total	17,099	17,808	15,405	15,005

Source: NBOCAP - direct communication

By focusing only on deaths and major complications, these targets do not adequately measure surgical performance and bring with them further risks. Yet other key indicators of surgical performance and patient experience are not routinely measured: there is very little analysis of important morbidity data such as readmission rates and wound infection after discharge. Fewer than five hospitals were able to report reliably on the latter, even though it can be a direct cause of readmission or further treatment - at best distressing and painful for the patient and incurring further potentially avoidable costs for the trust.

The immediate focus must be on rethinking targets which are having a negative impact on patients, but more broadly consideration should be given to ensuring we are measuring the factors and driving behaviours that make the most clinical difference.

<sup>10</sup> Colorectal cancer: diagnosis and management (December 2014). <https://www.nice.org.uk/Guidance/CG131>

## THEME 2: PROCUREMENT

Variation in procurement is easily measured and readily understood, and the data gathered by the GIRFT programme shows huge differences in the amounts different trusts are paying for similar surgical products. This in many ways is no surprise: variation in procurement is recognised as an NHS-wide issue and there are ongoing initiatives, such as the purchasing price index benchmark (PPIB) programme, seeking to address this. Nonetheless, the data gathered by the GIRFT programme illustrates the current situation and clearly represents a major opportunity to increase efficiency across general surgery.

### What the data shows

On condition of anonymity, participating trusts were asked by the programme to submit the prices they paid for a 'basket' of commonly used surgical devices and consumables. In total fifteen trusts responded and the variation was significant: for one item - laparoscopic harmonic shears - one trust reported paying just £27.75 while another claimed to have spent £2,473.71. For some disposable items, the variation was proportionately greater still: the reported costs of a small laparoscopic wound protector ranged from 36p to £126.

**Table 2: Initial procurement survey**

*Initial procurement prices for selected surgical instruments and consumables returned by 15 provider trusts who have participated in site visits by the GIRFT team*

Item	Highest reported procurement cost (£)	Lowest reported procurement cost (£)	Scale of variation
Disposable suction/irrigation	180	9.84	18.3
Laparoscopic harmonic shears	2,473.71	27.75	89.1
Abdominal perineal pack	43.75	10.9	4.0
Linear cutter e.g. TLC 75	301.02	49	6.1
Linear cutter reloads e.g. TLC 75 Reloads	1,071.47	48.83	21.9
Smoke evacuation system	44	2	22.0
Small laparoscopic wound protector	126	0.36	350.0
Endoscopic stapler e.g. Echelon 60	529	180.35	2.9
Anti-fog	21	1.05	20.0
Size 12 port with trocar	180	15	12.0
Size 12 port	86	13	6.6
Size 5 port with trocar	220	9	24.4
Size 5 port	108	7	15.4
Scope warmer seals	50	4	12.5
Intraluminal circular stapler e.g. CDH29	831.55	165	5.0
30 x 30cm lightweight polypropylene mesh	189.26	43.26	4.4
12 x 15cm lightweight polypropylene mesh	212.88	23.55	9.0

Source: trust data



The variation was so startling that the team requested further data to confirm whether trusts were describing the same items. It was also suggested that pack size may be a factor, with trusts potentially benefiting from buying in bulk.

Table 3 below focuses on the procurement data provided by just three trusts, including pack size, which enabled the GIRFT team to calculate price per unit.

**Table 3: Additional detail re procurement data**

Procurement prices (inclusive of VAT) including pack size returned by three trusts who have participated in site visits by the GIRFT team

Item	TRUST 1		TRUST 2		TRUST 3	
	Pack size	Single unit price (£)	Pack size	Single unit price (£)	Pack size	Single unit price (£)
Disposable suction/irrigation	1	13.20	12	14.13	10	16.90
Laparoscopic harmonic shears	1	493.24	6	485.50	6	555.05
Abdominal perineal pack	1	30.30	1	19.38	10	4.27
Linear cutter e.g. TLC 75	1	165.49	3	196.67	3	260.23
Linear cutter reloads e.g. TLC 75 reloads	12	7.69	-	-	12	140.54
Smoke evacuation system	1	12.46	Multi	33.21	20	13.20
Small laparoscopic wound protector	1	4.80	1	78.34	100	0.43
Endoscopic stapler e.g. Echelon 60	1	360.68	3	335.94	3	292.37
Anti-fog	1	1.98	10	3.59	20	3.12
Size 12 port with trocar	1	36.00	6	151.20	6	26.40
Size 12 port	1	21.60	-	-	6	16.800
Size 5 port with trocar	1	26.40	6	89.43	6	14.40
Size 5 port	1	21.60	-	-	6	9.60
Intraluminal circular stapler e.g. CDH29	1	309.68	3	325.99	3	268.13
30 x 30cm lightweight polypropylene mesh	1	120.00	1	189.26	1	145.15
12 x 15cm lightweight polypropylene mesh	1	33.60	6	28.26	1	57.60
<b>Basket total</b>		<b>£1,658.72</b>		<b>£1,950.90</b>		<b>£1,824.19</b>

Source: Local trust data. The highest per unit price is shaded red; the lowest is shaded green

On this basket of 16 items, many of which are 'single-use', Trust 2 currently pays 16.6% more than Trust 1. While they used different suppliers, and purchased different quantities of the items throughout the same period, there is no obvious reason for the variation. Furthermore, there appears to be no cost benefit in purchasing multiple items; Trust 1 typically purchases items singly and had the lowest overall cost.

Responses from the trusts confirmed that while there were some differences in the precise capabilities of the products, they were essentially for the same purpose. Though no comprehensive study has been conducted, the impact on clinical outcomes of using more expensive/less expensive items appears to be negligible. Yet if all trusts had purchased this basket of goods at the lowest unit price, the total cost would be £1,466.98. If all were procured at the highest cost, the price would be £2,335.52 - some 59% higher.

This data clearly does not tell the whole story, focusing only on a small number of trusts and a small number of items. Nonetheless, it strongly indicates that there is an unnecessary level of variation in procurement for basic equipment - and that the opportunities for savings are significant. No one trust appears to have all the answers: all three of those examined above were buying some items at a higher cost than their peers.

Furthermore, data from the 2016 GIRFT orthopaedics report indicated similar levels of variation in the cost of implants.<sup>11</sup> The authors recommended that a set of clinical criteria be identified for specific items, then prices sought centrally: buyers would then have information about a rational price point for an item. The same approach should be adopted in general surgery.

**Recommendation 6: Instigate pricing transparency in procurement for general surgery and use the resulting insight to deliver more cost-effective procurement**

Recommendation	Actions	Timeline
Instigate pricing transparency in procurement for general surgery and use the resulting insight to deliver more cost-effective procurement.	<b>6A:</b> GIRFT to work with the PPIB team to develop a specified list of surgical items and consumables that meet the correct standard at the most rational price point.	<b>6A:</b> Progress to have been made by early November 2017.
	<b>6B:</b> GIRFT and PPIB to identify centres of good procurement performance, and providers to implement the best practice identified.	<b>6B:</b> Progress to have been achieved by February 2018.
	<b>6C:</b> NHS Improvement to enable pricing transparency for items on the specified list.	<b>6C:</b> Agreement on national policy proposals to be achieved by October 2017.
	<b>6D:</b> Trust management to ensure this list is used to reduce costs.	<b>6D:</b> Agreement on national policy proposals to be achieved by October 2017.

The responses from the trusts indicate that as well as variation in costs, there is substantial variation in procurement practice across the NHS: in some trusts, individual departments are responsible while others have a central procurement function. In the view of the authors, different items call for different procurement strategies: items used by all specialties and wards (like a one-litre bag of normal saline) should always be bought trust-wide to maximise any opportunity of volume discounts.

However, a different approach may be required for specialist items, where high levels of price variation appear to be a result of factors such as a surgeon's preference for a specific branded choice of surgical instrumentation, or a choice that is made based on an opinion that it will provide a better patient outcome.

Given the extreme levels of price variation identified here, consolidating procurement for the specialty at a national level, to some degree, may be appropriate. Any such consolidation is likely to draw on clinical and procurement expertise from multiple trusts to establish a list of approved items, available at a pre-negotiated price. This would help reduce the variation in expenditure, and may be delivered through existing national procurement programmes. This work would be complemented by identifying centres of good procurement performance.

To do this, more information must be gathered about what instruments are used, by whom and where; what prices are paid; and what, if anything, is wasted. This could then form the basis for informed negotiations with suppliers. Volume discounts are likely to be achievable, but the risk of expensive surgical equipment remaining unused after the expiry date could remove any procurement savings. Thus careful thought should be given to quantities purchased per order, and the frequency of ordering.

<sup>11</sup> GIRFT Update and Emerging Themes (May 2016).

---

**Recommendation 7: Review options for consolidation of procurement at a national level**

Recommendation	Actions	Timeline
Review options for consolidation of procurement at a national level.	<b>7A:</b> GIRFT to engage with relevant national programmes to develop solutions, within the scope of the programme's procurement work stream.	<b>7A:</b> Progress to have been achieved by February 2018.

**Recommendation 8: Identify centres of good procurement performance and understand what factors lead to the most favourable procurement prices**

Recommendation	Actions	Timeline
Identify centres of good procurement performance, and understand what factors lead to the most favourable procurement prices.	<b>8A:</b> GIRFT and PPIB to identify centres of good procurement performance and work with them to generate an understanding of related factors, to inform national procurement consolidation as per recommendation 7.	<b>8A:</b> Progress to have been achieved by February 2018.

### THEME 3: PATIENT CHOICE, COMMISSIONING AND CARE PATHWAYS

One of the most striking areas of variation identified through the GIRFT programme is in the treatment pathways provided to patients with ostensibly similar conditions. While some difference would be expected due to patient choice, co-morbidities, complicating factors and genuine uncertainty over what the most effective or appropriate pathway might be, the variation is far greater than was expected. Furthermore, where data or conversations with trusts have enabled further investigation into these areas of variation, there has in general been no clear clinical or financial explanation for the different approaches.

In this report five specific examples of variation in pathways are examined in depth:

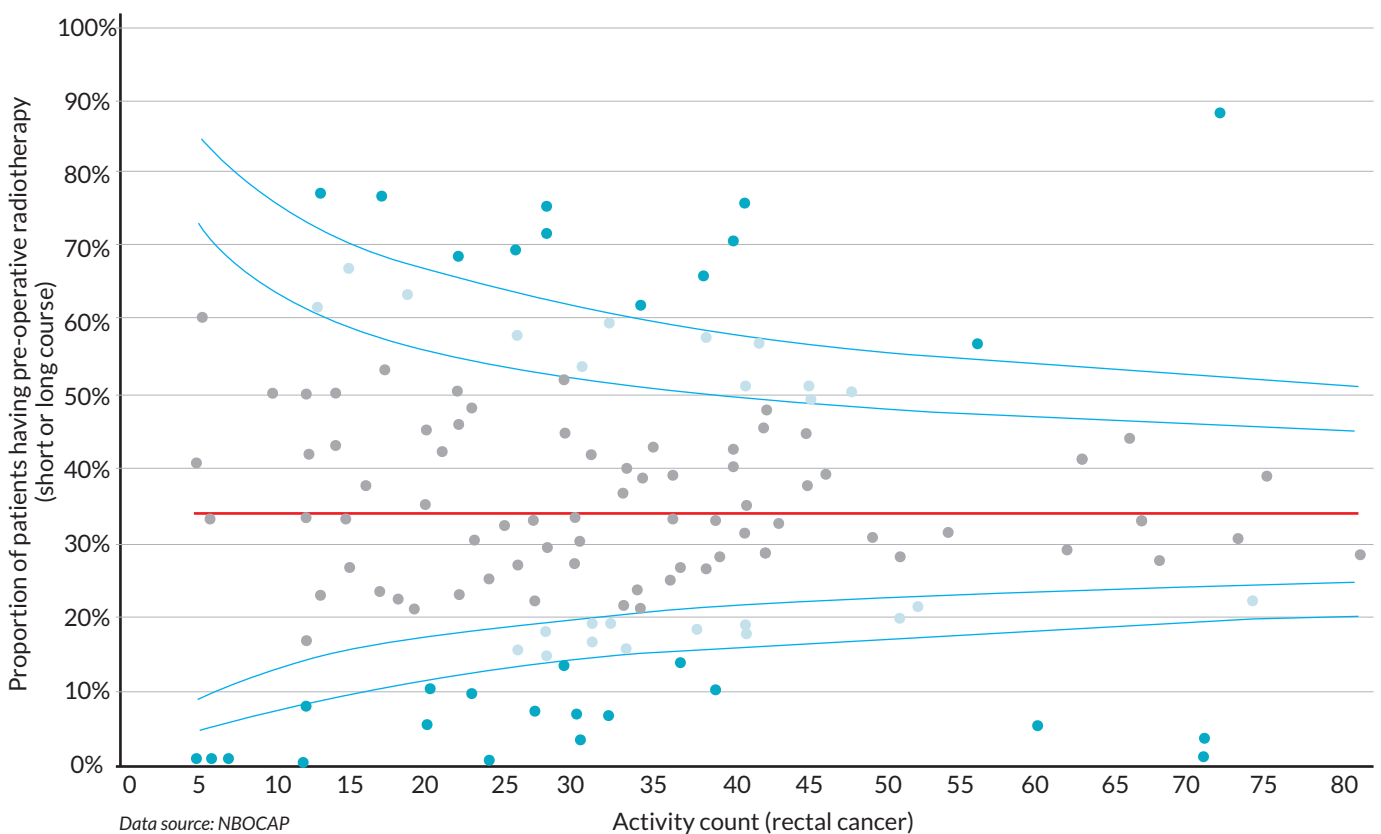
- Use of radiotherapy for rectal cancer.
- Use of radiotherapy as primary modality for oesophageal squamous cell carcinoma.
- Surgical approach for colorectal cancer.
- Use of day surgery for anti-reflux procedures.
- Availability of bariatric surgery.

#### Use of radiotherapy before surgery for rectal cancer

As Figure 2 below shows, there are vast differences between trusts in the use of pre-operative radiotherapy for patients with rectal cancer. In some trusts, no patients received radiotherapy; in others, over 80% did. The trust in which radiotherapy was most commonly offered was also one of the trusts performing the most surgery; conversely, two trusts which provided similarly high volumes of surgery offered fewer than 5% of patients pre-operative radiotherapy.

In short, there is no clear pattern - suggesting complete disagreement on the optimal pathway both within the general surgery community and the wider multidisciplinary team.

**Figure 2: Proportion of patients undergoing pre-operative short or long course radiotherapy (%) - 1 April 2012 to 31 March 2013**

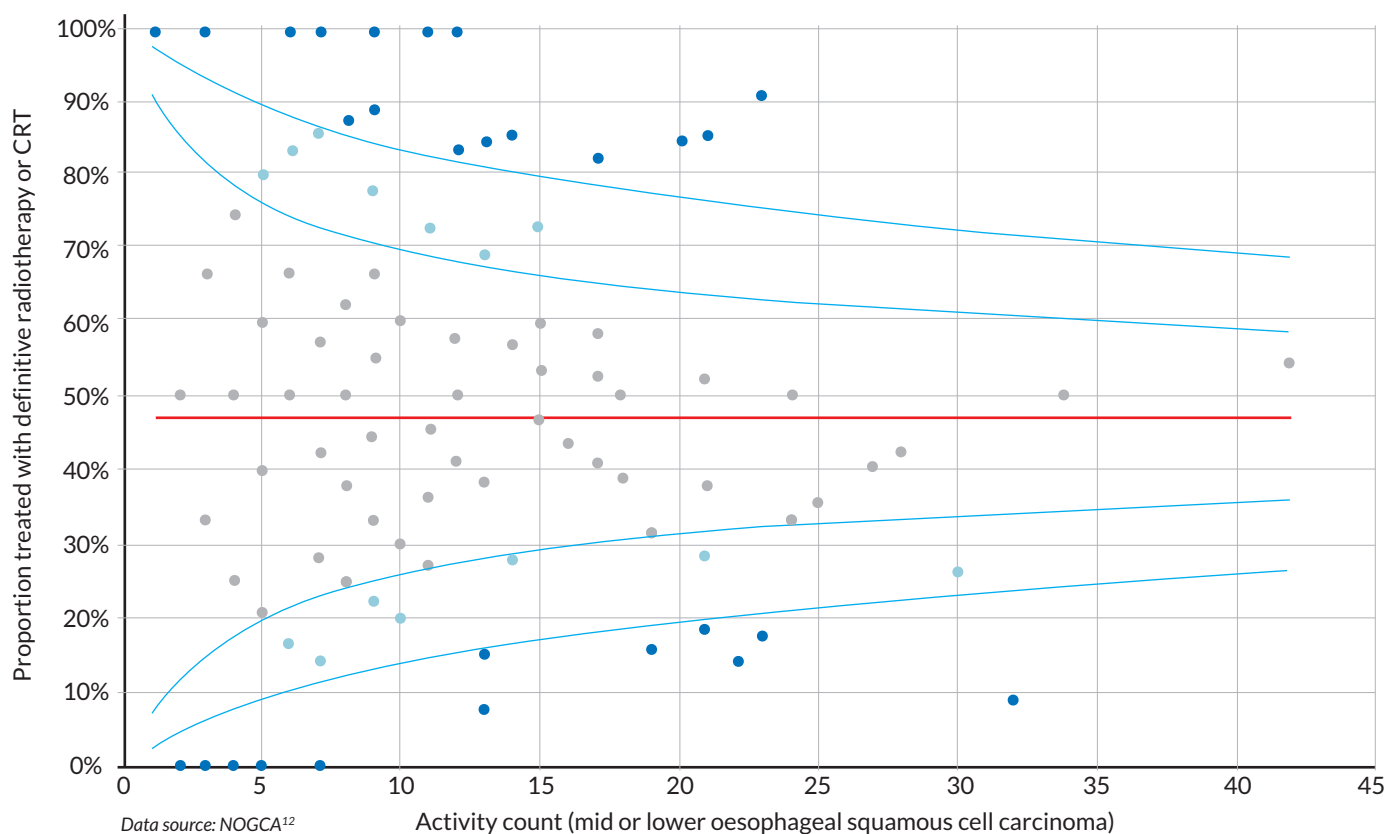


It has already been suggested that an optimum pathway should be established for colorectal cancer treatment. Clearly, the use (or non-use) of radiotherapy for patients would be an important consideration in this. It is important to recognise however that the decision to use radiotherapy may relate to other factors, such as how advanced the cancer is and co-morbidities.

### Treatment of oesophageal squamous cell carcinoma

There are also striking differences in the rate of use of chemoradiotherapy (CRT) as the primary treatment modality for oesophageal squamous cell carcinoma. While a majority of trusts have a use rate close to the national average of 46%, in five regions the rate is above 60%, and in a further four below 30%.

**Figure 3: Proportion of patients with mid/lower oesophageal squamous cell carcinoma who were managed with curative intent, treated with definitive radiotherapy or CRT (%) - 2012 to 2015**

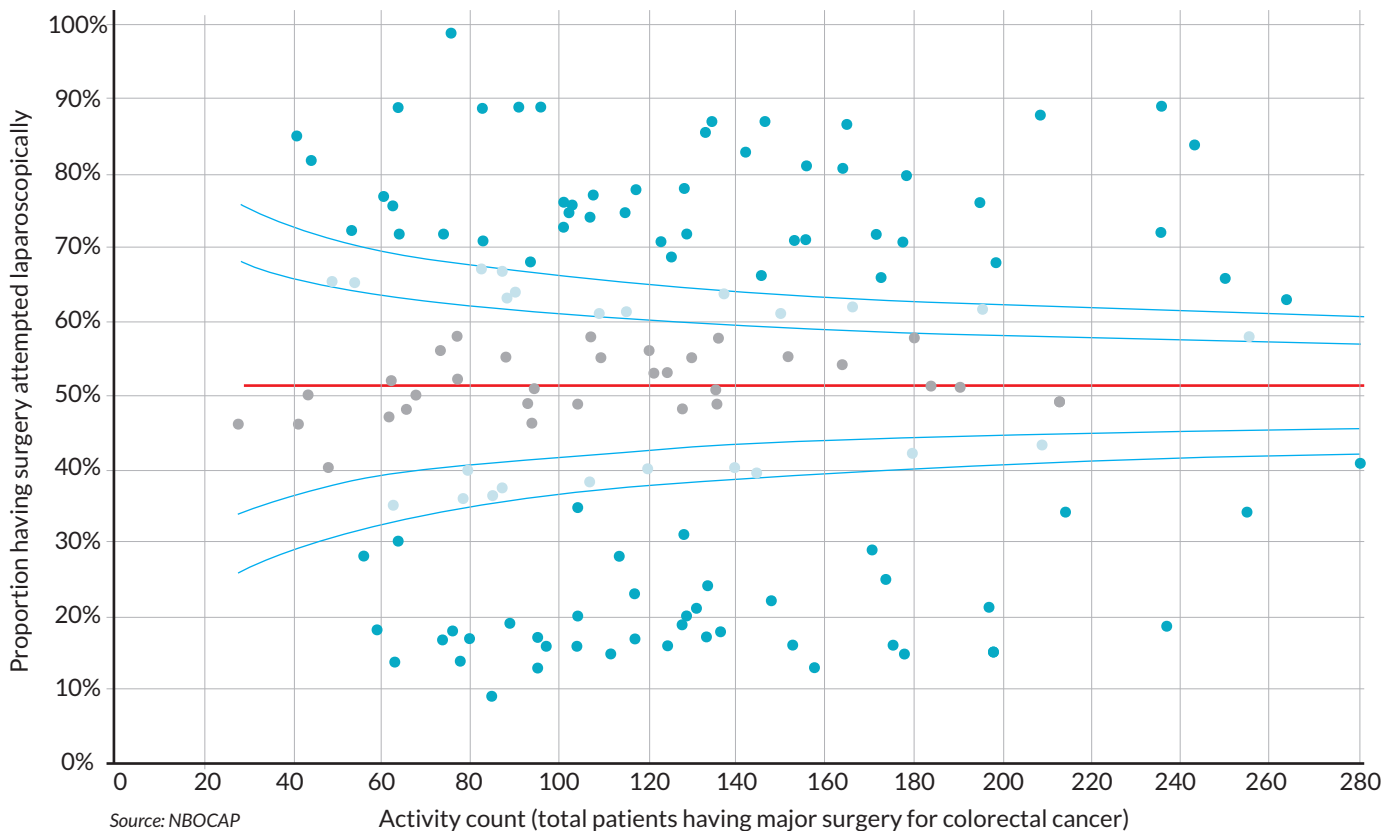


### Surgical approach for colorectal cancer

There is broad national variation observed in the decision to attempt major colorectal surgery via a laparoscopic method. The national average is just over 50% of all patients undergoing this type of surgery. However, in some areas, fewer than 10% of patients in a trust have surgery attempted laparoscopically, while in others, almost 100% do. Providers at both extremes have very similar counts of activity.

<sup>12</sup> National Oesophago-Gastric Cancer Audit 2016. <http://content.digital.nhs.uk/catalogue/PUB21561/clin-audi-supp-prog-oeso-gast-2016-rep.pdf>

**Figure 4: Proportion of patients undergoing major colorectal surgery where the procedure is attempted laparoscopically (%) - 1 April 2013 to 31 March 2014**



This data has been published and available for some years through national audits, but the scale of difference in clinical practice is not changing. It appears therefore that to date these audits, though a rich evidence base, have had a negligible impact on clinical practice. When this data was presented to clinical teams during GIRFT visits, many were genuinely surprised at what they perceived as new information.

Many surgical teams were not aware that the decisions they are making are different from those in other trusts. This is therefore an immediate benefit of the GIRFT programme as it encourages trusts to at least consider alternative approaches.

As stated earlier, national cancer targets may be a factor in colorectal cancer care decisions: providing radiotherapy within the target period would be deemed a successful commencement of treatment within the target. However, in the view of the GIRFT team, a more important early intervention would be to ensure there is time within the pathway to address reversible risk factors before colorectal cancer surgery is undertaken.

For instance, there is already strong clinical evidence that if patients stop smoking for six weeks before surgery, there is a reduced risk of septic complications. Given the long development time of the disease, a period of time taken to address such risk factors would, in most cases, be of benefit. It would also reduce the chance of the patient requiring (higher risk) emergency surgery.

Such a change would require 'whole system' design, ensuring the relevant support is available and that NHS professionals and the public alike are aware of this. However, many elements of such a system are already in place, such as the bowel cancer screening programme, public awareness campaigns and direct access routes to specialist investigation. Such a change would also need to be consistent with a patient-centred approach to care, and involve shared decision-making with patients.

**Recommendation 9: Require reversible risk factors to be addressed prior to non-urgent procedures, using a patient-centred approach utilising shared decision-making**

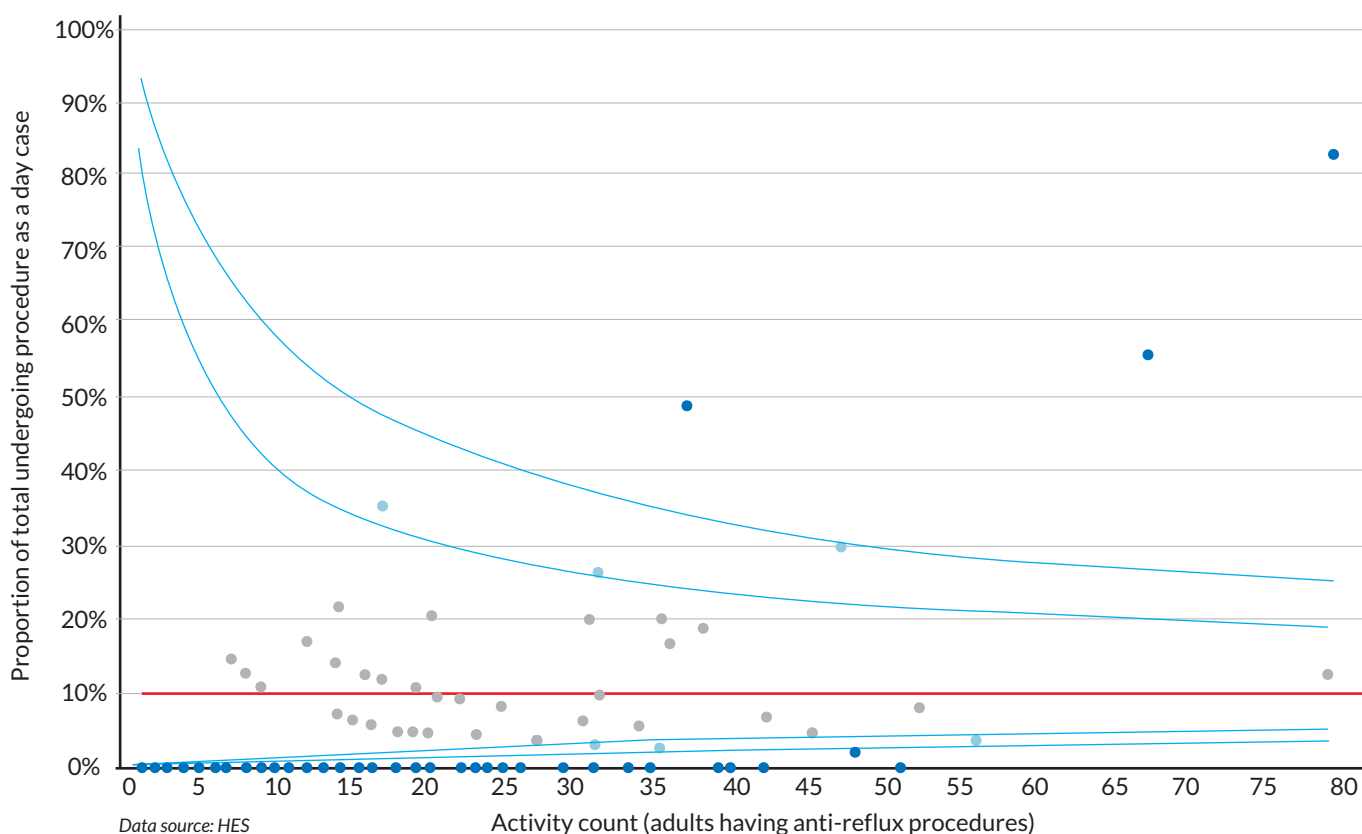
Recommendation	Actions	Timeline
Require reversible risk factors to be addressed prior to non-urgent procedures, using a patient-centred approach utilising shared decision-making.	<b>9A:</b> Guidance to be developed by GIRFT on the management of reversible risk factors prior to surgery, with the involvement of the Royal College of Surgeons of England (RCSE) and the Association of Surgeons of Great Britain and Ireland (ASGBI), working with the Royal College of Anaesthetists, and the GIRFT perioperative care project.	<b>9A:</b> Progress to have been made by early November 2017.
	<b>9B:</b> Providers to adhere to new guidance.	<b>9B:</b> For action upon completion of 9A.
	<b>9C:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>9C:</b> Agreement on national policy proposals to be achieved by Oct 2017.

**Use of day surgery for anti-reflux procedures**

The use of day surgery, rather than requiring patients to stay overnight, has a range of benefits beyond simply freeing up beds. It offers a better patient experience, reduces the risk of catching a hospital-associated infection and typically means the surgery itself is less “invasive”, leading to faster recovery times.

Within general surgery, there is a specific opportunity to deliver anti-reflux procedures laparoscopically in a day case setting. This is a controversial area, with strong views regarding the suitability of patients both for anti-reflux surgery itself and for the employment of a day case pathway. However, British Association of Day Surgery (BADS) guidelines state that 20% of anti-reflux surgery should be possible as a day case and a further 70% done with one night in hospital. Yet as figure 5 below shows, most trusts do not at present offer this at all.

**Figure 5: Laparoscopic anti-reflux procedures delivered in a day case setting (%) - 1 April 2013 to 31 March 2014**



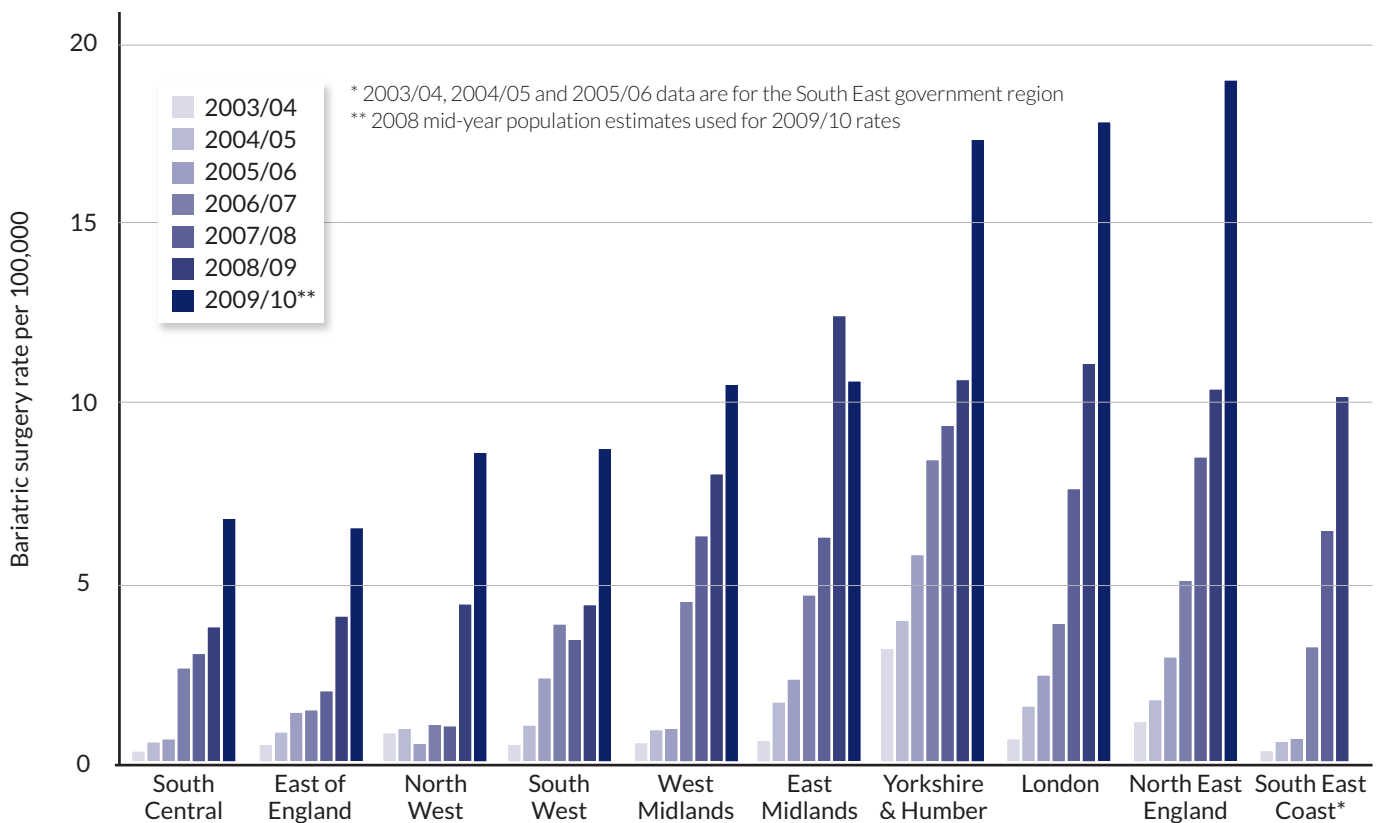
Set against this are a handful of trusts which undertake around 50% of procedures as day cases, and one trust which conducts around 80% in a day. Though this has not been formally evaluated, the evidence from reviews at trusts indicates that using day surgery has not resulted in worse patient outcomes.

### Availability of bariatric surgery

Similar factors appear to dictate the availability of bariatric surgery in different regions and trusts. Over the last decade, the number of bariatric procedures performed in the NHS has risen by over 300%. This reflects a range of factors including the increasing prevalence of obesity in both adults and children and the links between obesity and various co-morbidities which are associated with a lower life expectancy and which place significant demands on health services. Most significantly, bariatric surgery is increasingly considered or recommended for patients who have not responded to other methods of treatment (including non-invasive pharmacological options).

Figure 6 below shows the increase in the amount of bariatric surgery conducted across England between 2003/04 and 2009/10.

**Figure 6: Hospital episodes for bariatric surgery per 100,000 population by Strategic Health Authority**

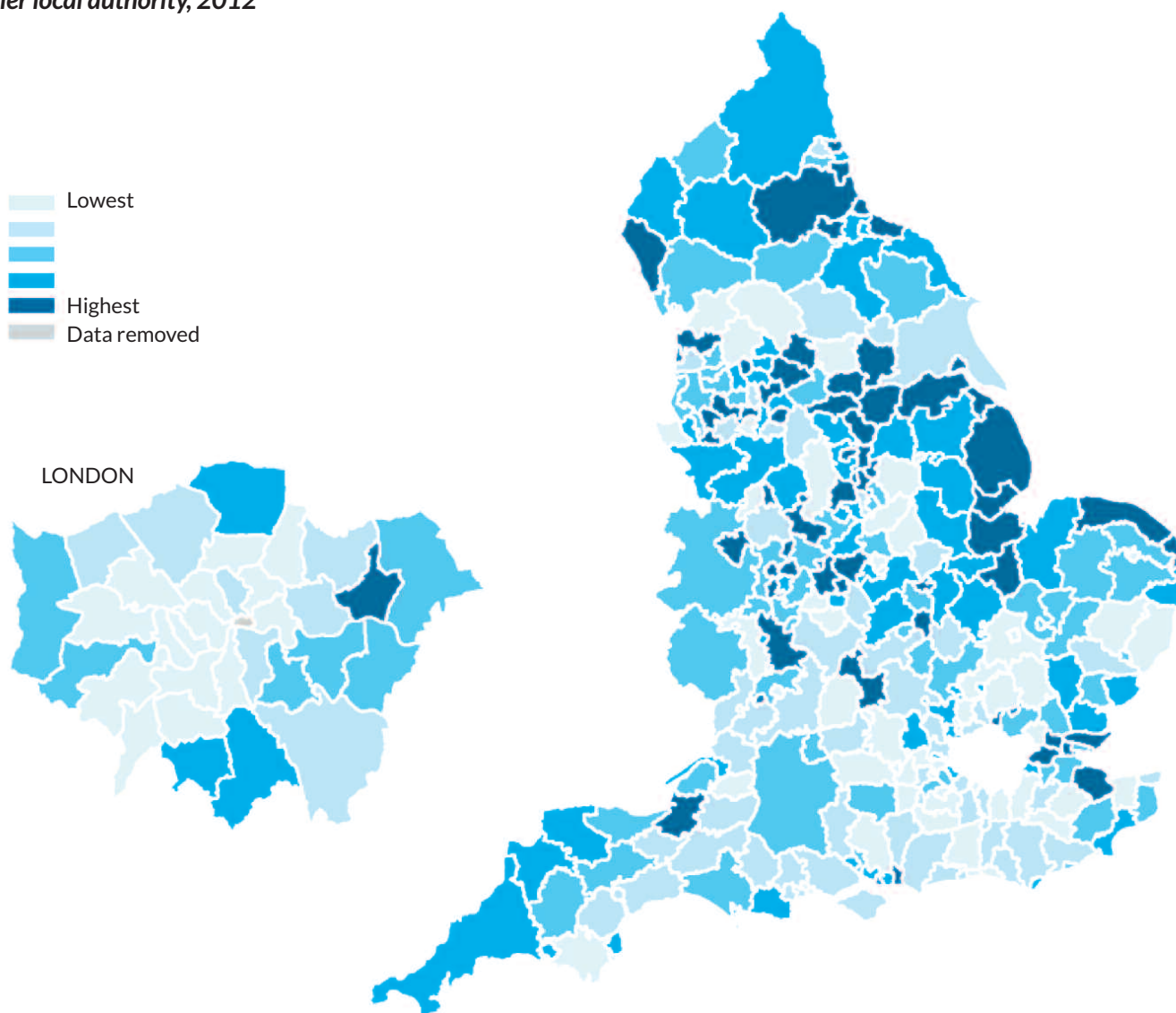


Source: National Obesity Observatory: Bariatric Surgery for Obesity, 2010



However, the key point about Figure 6 is that rather than showing absolute numbers, it shows the number of episodes per 100,000 of the population. This is significant because there are major differences in the levels of obesity by region. As data from the NHS Atlas of Variation<sup>13</sup> shows, obesity prevalence is highest in the North East (31%) and South West, and lowest in London (21%) and the South East.

**Figure 7: Percentage of people aged 16 years and over who had a BMI greater than or equal to 30kg/m<sup>2</sup> by lower tier local authority, 2012**



Source: The RightCare Atlas of Variation in Healthcare, September 2015

<sup>13</sup><http://fingertips.phe.org.uk/profile/atlas-of-variation>

There appears to be a clear mismatch between the availability of bariatric surgery and the prevalence of obesity. The two areas with the lowest levels of obesity are among the three regions providing the most surgery. It is also notable that while in most regions surgery episodes increased significantly in 2009/10, the provision rate in the East Midlands - previously the highest - dropped.

To try to understand these differences, the GIRFT team examined a table of regional commissioning policies for bariatric surgery. These were based on three categories identified by NICE.

**Table 4: Compliance of regional commissioning policies for bariatric surgery with NICE guidance**

Region	NICE eligibility criteria		
	BMI 35-40 in presence of serious co-morbidity	BMI 40-50 when non-surgical methods have failed	BMI >50 as first line treatment
East Midlands	No	No*	No
London	No regional guidance		
North East	Yes	Yes	No
Yorkshire & Humber	Yes/ No**	Yes/ No**	Yes
South East Coast	Yes	Yes	No
West Midlands	No regional guidance		
South West	Yes	Yes	No
East of England	No	No***	No
South Central	No	No	Unclear
North West	Yes	Yes	No

\*Must have co-morbidity and BMI greater than or equal to 45.  
 \*\* Half of Clinical Commissioning Groups in the Yorkshire & Humber area were operating to NICE criteria and half stipulated that patients must have BMI greater than or equal to 45 and serious co-morbidity to be eligible.  
 \*\*\*Must have type 2 diabetes and sleep apnoea.

Source: *BMJ: Variation in the provision of bariatric surgery, 2013*

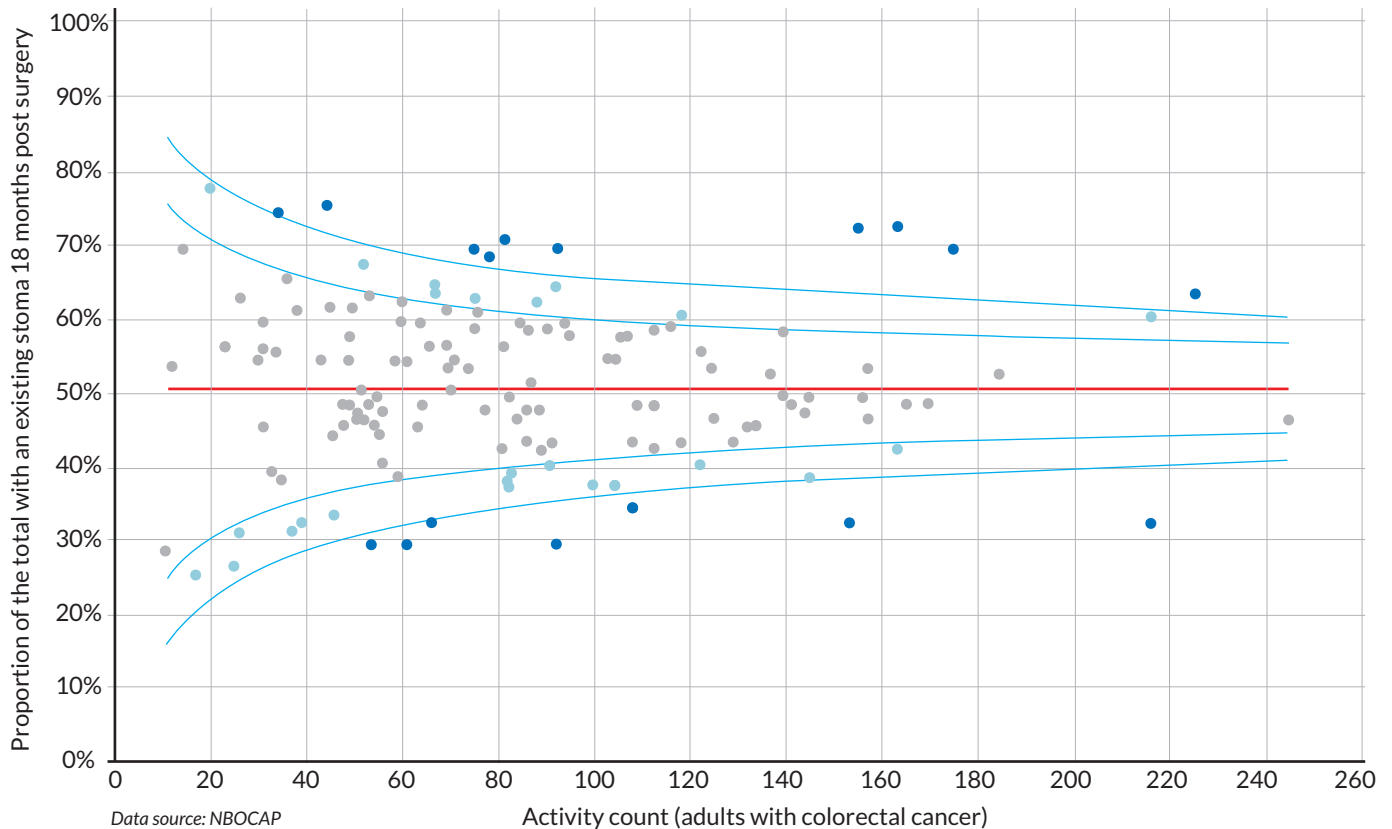
These policies are clearly reflected in the number of episodes per 100,000 patients, but indicate that in several regions, NICE guidance is not being followed.

There is a further key point here: based on the data examined, fewer than 0.6% of patients eligible for bariatric surgery under NICE criteria will receive surgery each year. This is an area of serious underprovision, which could be exacerbated if NHS England chooses to support routine commissioning of bariatric surgery for those aged 18 and under (it is currently collating evidence around this). Attention must be given to the national guidelines for commissioning such services.

### Persistent abdominal stomata

It is too simplistic to say without detailed case-by-case investigation that any individual deviation away from the average is unwarranted. All that can be said is that wide variation is unexplained and probably undesirable. A good example has been encountered in the GIRFT clinical visits when discussing the variation in the rate of patients who still have a stoma 18 months after rectal cancer surgery, as shown in Figure 8.

**Figure 8: Proportion of patients who have a stoma present 18 months after surgical resection for rectal cancer (%) - 1 April 2010 to 31 March 2013**



For the majority of patients undergoing surgical resection for rectal cancer is a complex procedure and patients will need a stoma (such as a colostomy) after the operation. However, modern surgical practice means that the majority of stomata should be reversible.

Available data indicates that the speed at which stomata are reversed varies considerably between different areas. In some areas, three-quarters of patients still have a stoma 18 months after surgery; in others, fewer than a quarter do; and in four trusts the figure was zero.

Having a stoma has a major impact on the patient's quality of life. It is also expensive: the cost to the NHS of providing care in the community to an individual with a stoma is around £6,000 per year.

During the GIRFT visits, the differences were explored. One trust explained that their high rate of persistent stomata was because their oncology colleagues insisted patients must complete any adjuvant therapy before reversal is considered. Another trust attributed their outstandingly rapid stoma closure pathway to the fact that their oncology colleagues preferred not to undertake adjuvant therapy unless any stoma was reversed.

Having identified these significant differences in clinical decision-making pathways that lead to variation in the rate of patients still having stomata after surgery, the next step is to examine these further. In particular, further study should seek to establish what impact the different approaches have on outcomes to enable optimal care pathways to be defined.

**Recommendation 10: Where not already described, define optimal care pathways in national guidance so they can be implemented locally with minimal, if any, variation. Optimal care pathways already defined in guidance should be implemented locally with minimal, if any, variation**

Recommendation	Actions	Timeline
Where not already described, define optimal care pathways in national guidance so they can be implemented locally with minimal, if any, variation. Optimal care pathways already defined in guidance should be implemented locally with minimal, if any, variation.	<b>10A:</b> Optimal care pathways to be defined by GIRFT, in new national guidance, to address the following issues: the use of radiotherapy for rectal cancer; the surgical approach for colorectal cancer; persistent abdominal stomata.	<b>10A:</b> Progress to have been made by early November 2017.
	<b>10B:</b> Surgeons to implement the pathways referred to in 10A, and trust management to facilitate and monitor this.	<b>10B:</b> For implementation upon completion of 10A.
	<b>10C:</b> Surgeons to implement the British Association of Day Surgery guidelines on anti-reflux procedures. Trust management to facilitate and monitor delivery.	<b>10C:</b> For immediate action.
	<b>10D:</b> Commissioners to ensure that access to bariatric surgery complies with the recommendations in the NICE guideline "Obesity: identification, assessment and management". This should be delivered by amending any contrary referral or prior approval policies and auditing results.	<b>10D:</b> Local policy to be amended by December 2017.
	<b>10E:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>10E:</b> Agreement on national policy proposals to be achieved by October 2017.

### Variations in choice, commissioning and care pathways: some concluding observations

As the examples above indicate, there is a huge variation in the way general surgery patients are treated. While the general causes of variation in healthcare are known,<sup>14</sup> the available data is not rich enough to provide full explanations for the specific variations identified in this report. However, it is clear that:

- There remains a marked geographic variation in the care patients are offered.
- There are clear opportunities to treat more patients via day surgery, which is often a more cost-effective option and better for the patient.
- Sometimes surgery is being offered in situations where successful outcomes are compromised.
- Care is not driven by patient choice.

This is a highly complex area and the data merits continual investigation beyond the scope of the GIRFT programme - in particular where the evidence of clinical benefit is unclear.

<sup>14</sup> Appleby et al - Variations in health care: the good, the bad and the inexplicable (2011). [https://www.kingsfund.org.uk/sites/files/kf/field/field\\_publication\\_file/Variations-in-health-care-good-bad-inexplicable-report-The-Kings-Fund-April-2011.pdf](https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/Variations-in-health-care-good-bad-inexplicable-report-The-Kings-Fund-April-2011.pdf)

## THEME 4: SURGICAL PERFORMANCE

Surgery is a highly skilled field and surgeons, rightly, must complete rigorous training and undergo repeated assessments of their knowledge, technical and practical skills before they qualify.

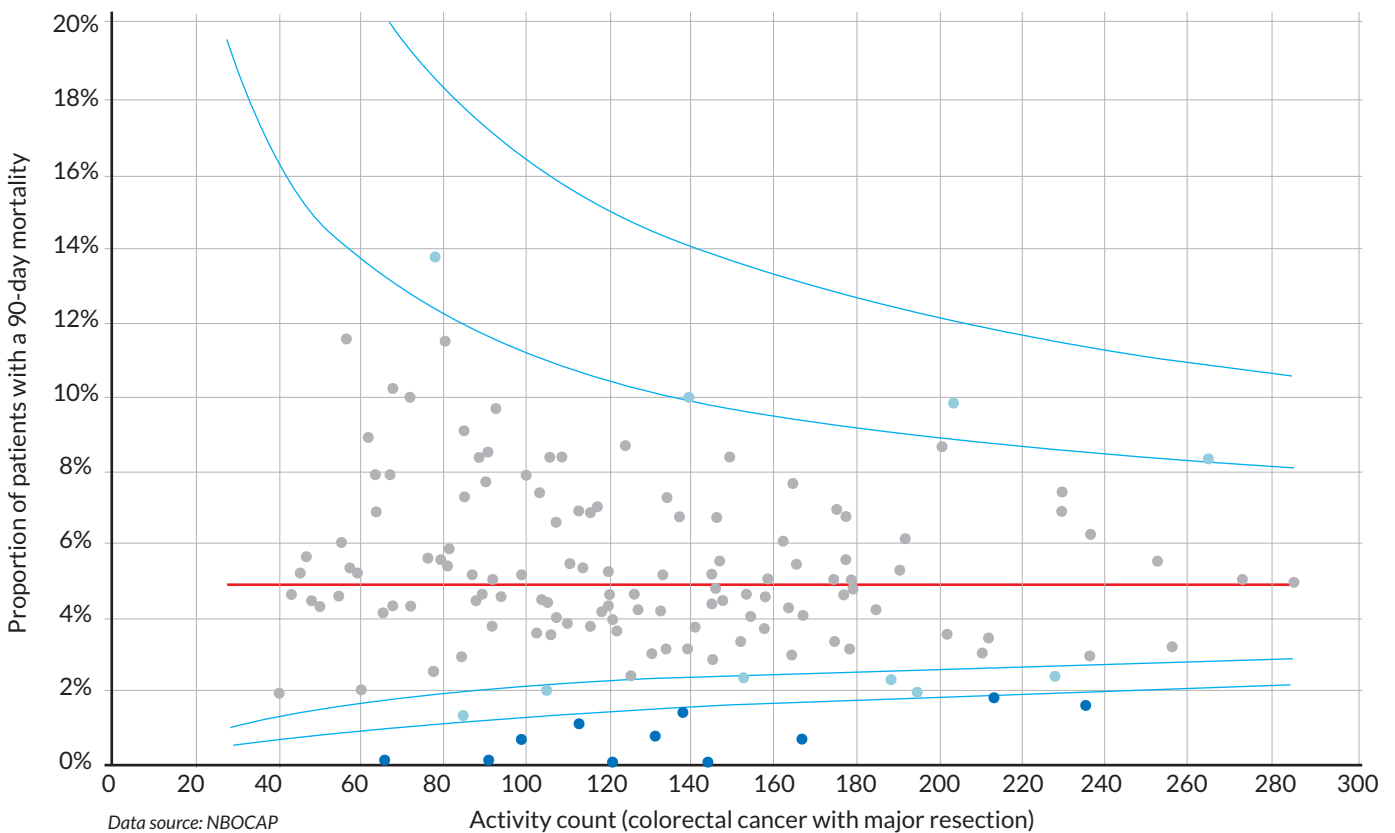
However, once a surgeon has graduated to independent practice, there are few robust mechanisms in the NHS to assess levels of performance and little or no oversight of their professional development. Surgeons are granted considerable autonomy, both in the decisions they make about patient care and about their own learning. This means that, conceivably, a busy surgeon could remain unaware of new surgical techniques, developments in infection control and alternative care pathways.

It is possible that this in turn contributes to the variation already identified in the way the same conditions are treated in different hospitals.

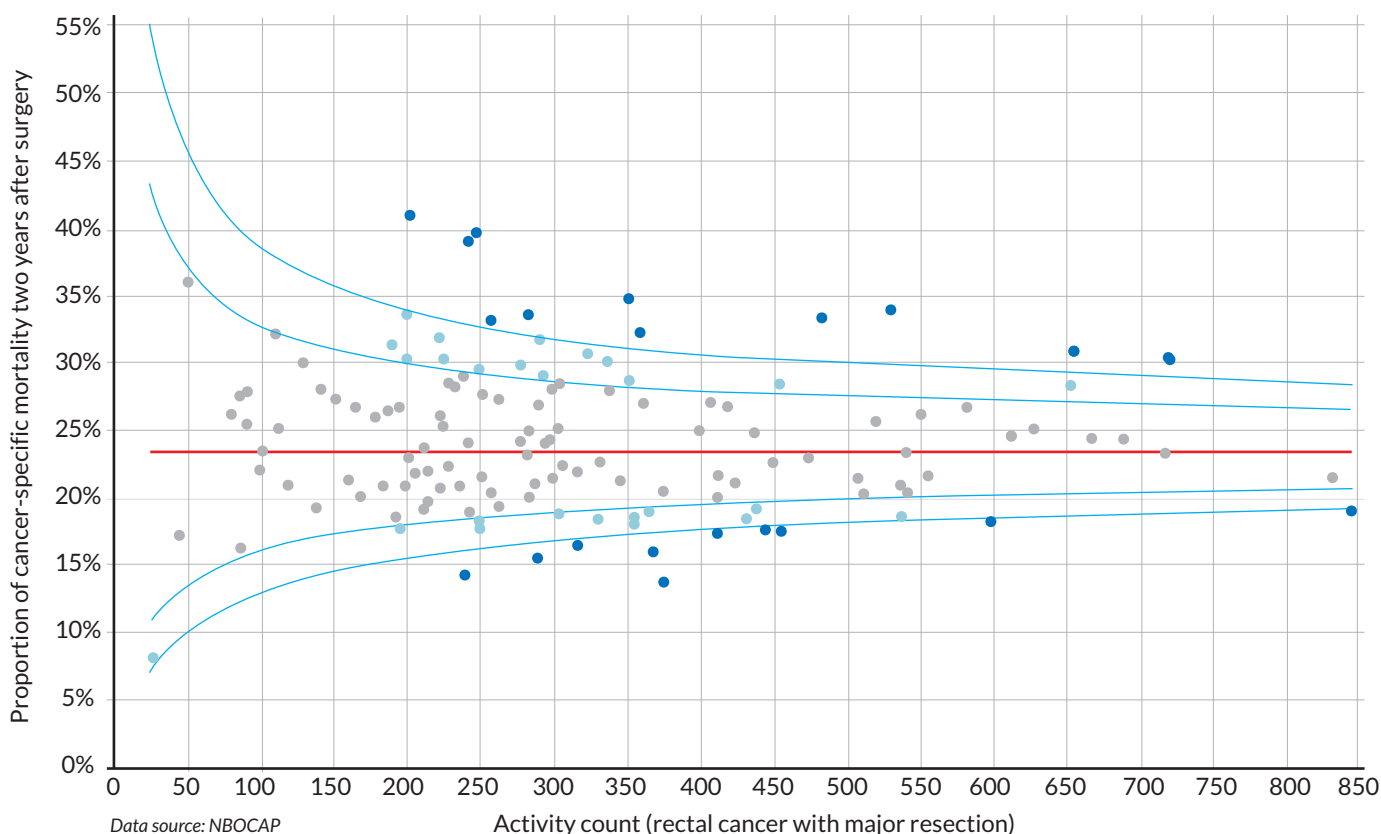
One of the simplest patient outcome measures is mortality rate. What is perhaps surprising is the scale of variation both in the short and medium term. Figure 9 shows that 90-day mortality following major resection for colorectal cancer varies from zero to over 10%, with wide variation between centres undertaking similar volumes of care. Though this is unadjusted data, the scale of variation is significant.

The variation in medium-term (two-year) mortality ranges from less than 10% to more than 40%.

**Figure 9: 90-day mortality for patients undergoing major resection for colorectal cancer (%) - 1 April 2014 to 31 March 2015**



**Figure 10: Two-year cancer-specific mortality for patients undergoing major resection for colorectal cancer (%) - 1 April 2008 to 31 March 2015**



As already indicated, one of the main current measures of surgical performance is crude mortality rates for surgical cases. However, death is such a rare event after elective surgery that it will take a surgeon's whole career to discover whether his or her performance is substandard. Furthermore, as identified earlier, it is not clear that this is a useful measure, as the easiest way to "improve" performance against the target would be to avoid higher risk surgery on the most ill patients.

Yet there are already other ways that a broader assessment could be made of surgical performance - such as wound infection rates and readmissions. These are routinely collected in the US and surgeons are accountable to their hospitals and the insurers for both. By contrast, UK surgical data relies on individual diaries of activity and individual recording of morbidity, meaning it is subject to all the inherent flaws of personally collected data. Birkmeyer et al\* published an important paper in which they showed that a surgeon's technical skill during laparoscopic obesity surgery directly correlated with morbidity and mortality from the procedure.

It is worth highlighting the contrast with the national bowel cancer screening programme. There, a host of accurate, independently collected indicators track the performance of the screening colonoscopists; yet when the same individuals conduct colorectal surgery, no performance data is collected. The contrast is stark.

\*Birkmeyer et al. *Surgical Skill and Complication Rates after Bariatric Surgery*. *New England Journal of Medicine* (2013), 369:1431-42.

## What alternative measures of surgical performance demonstrate

The GIRFT programme examined available data relating to some alternative measures of surgical performance:

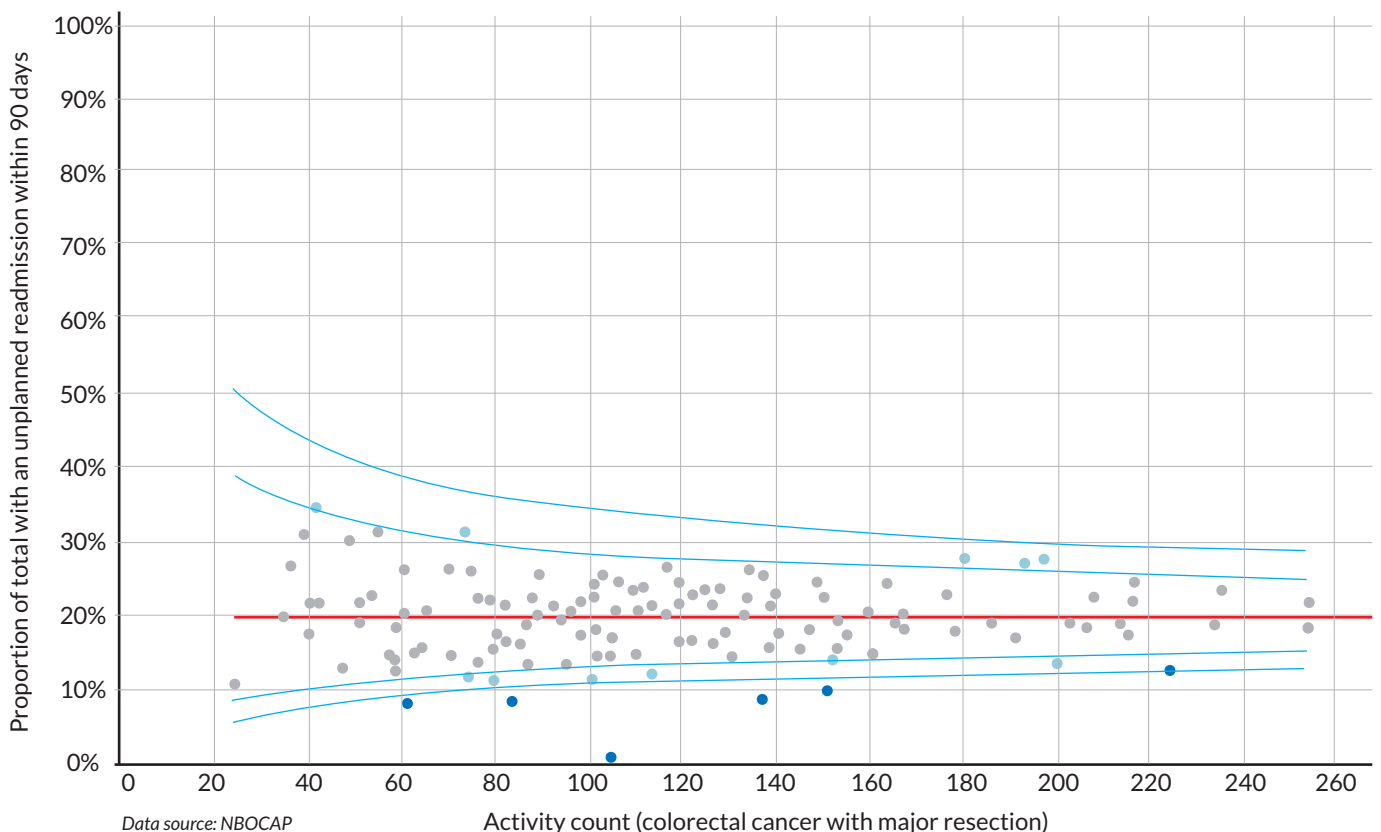
- data about readmissions
- data about post-surgical complications including wound infection rates and incisional hernia
- litigation data.

The data as it stands does not allow analysis of individual surgeons' performance. However, the high levels of variation seen between trusts' performance reinforce the case for more robust measurement of individual performance, which in turn can inform targeted professional development.

### Readmissions

Data from the National Bowel Cancer Audit shows the levels of readmissions within 90 days for patients undergoing different procedures. The first is major resection for colorectal cancer.

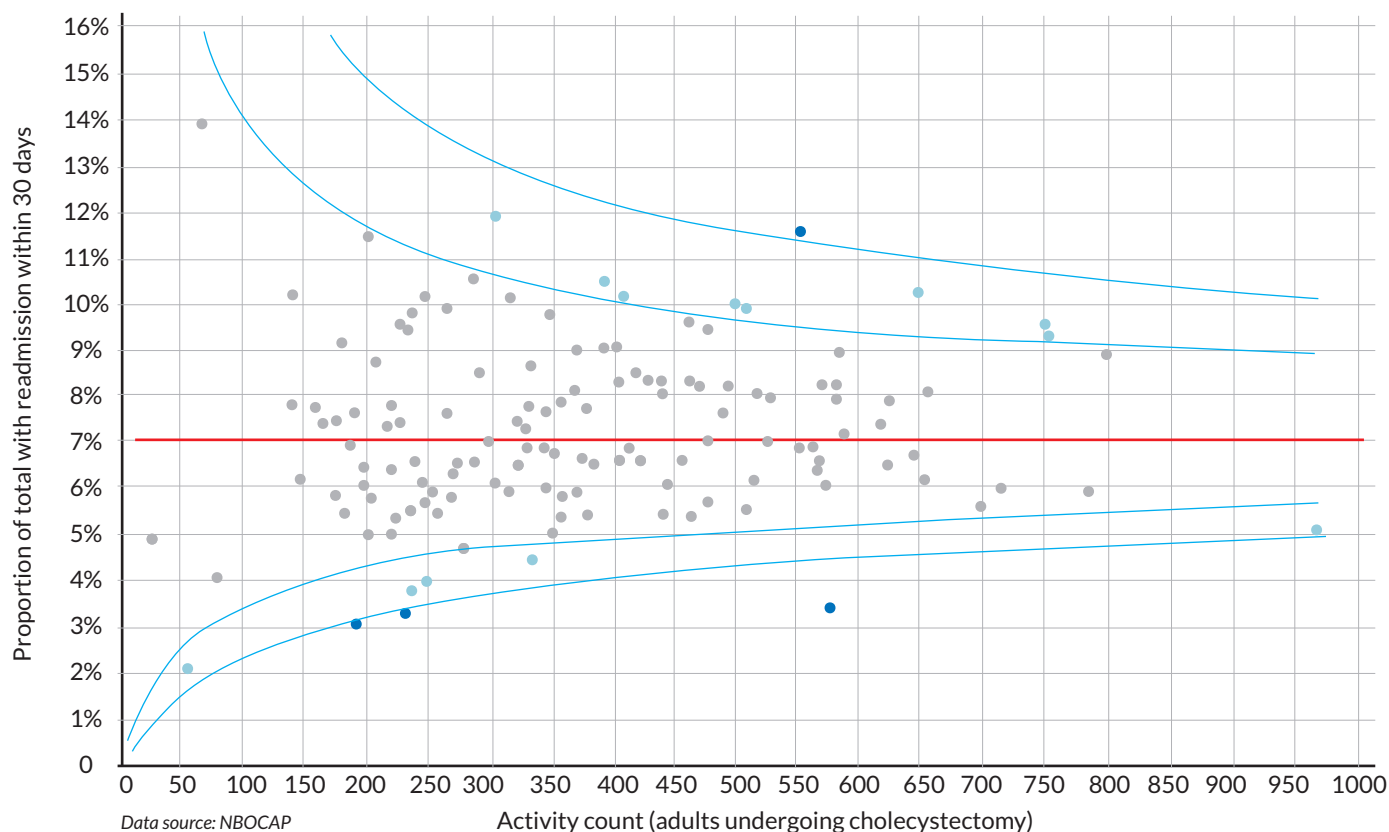
**Figure 11: Readmissions within 90 days for patients undergoing major resection for colorectal cancer - 1 April 2014 to 31 March 2015**



Nationally, around one in five patients is readmitted within 90 days after this major surgery. However, in some areas, the figure is under 10% and in others over 30%.

A similar degree of variation is seen in the level of readmissions within 30 days for patients undergoing cholecystectomy. This is a fairly common elective procedure for benign disease, yet in the best performing trusts, fewer than 5% of patients are readmitted, compared with over 10% in others.

**Figure 12: Readmissions within 30 days for patients undergoing cholecystectomy 1 April 2013 to 31 March 2014**



Readmissions are costly; they damage patient confidence and mean patients are in pain or ill-health for a long period. The variation identified appears to indicate a key opportunity for trusts to improve care and efficiency. While clearly a range of factors could influence readmission rates, such as local pathways, co-morbidities and post-surgical care, the variation merits further investigation in terms of individual surgeon performance and practice.

The responses of individual trusts during GIRFT visits indicated that very few have examined this area as yet.

### Post-surgical complications

Post-surgical complications such as wound infection are not only distressing for patients but can lead to permanent impairment or in the worst cases shorten lives. They also create costs for hospitals as a key cause of readmissions. Just four of the 50 hospitals that participated in the GIRFT review programme were able to report wound infection rates reliably. Very few units have a clear picture of the complications that occur following surgical treatment; the overall picture is of a significant lack of understanding of these vital quality measures.

One potential complication is incisional hernia, which can occur when a surgical incision in the abdominal wall fails to heal properly, or the scar from a previous abdominal operation breaks down. They can be painful and can lead to poor cosmetic outcomes; treating them further causes discomfort and inconvenience, while left untreated they can result in more serious complications such as obstruction. Furthermore a 2012 study in the US estimated that each incisional hernia repair costs approximately \$16,000.

Globally, huge variation has been observed in the incidence of abdominal incisional hernia, possibly as much as 3%-60%.<sup>15</sup> The mean figure appears to be that hernias occur in around one in four abdominal incisions. However, there have been a number of studies that suggest that the incidence of incisional hernia can be reduced by meticulous technique during pre-operative preparation, infection prophylaxis, incision and suture.

<sup>15</sup> Kevin Sexton - Best Practice Management of Incisional Hernia (2013). [www.mc.vanderbilt.edu/documents/GSR/files/2013\\_SextonFeb27\\_IHR.pdf](http://www.mc.vanderbilt.edu/documents/GSR/files/2013_SextonFeb27_IHR.pdf)



At present there is a lack of meaningful data related to the incidence and prevalence of incisional hernia in the UK. However, anecdotally it is clear that very few surgeons in the NHS follow the guidance published by the European Hernia Society in 2014,<sup>16</sup> which recommended the use of a ‘small bite’ technique to minimise the likelihood of hernia; the majority continue to employ a manifestly inferior big bite heavy suture method.

As well as an inconsistent approach to minimising the risk of incisional hernia, there is demonstrable inconsistency in the approach to hernia repair. It is well known that a failed repair can often mean the patient’s abdominal wall will never be fully restored - one reason why several trusts will simply not sanction incisional hernia repair without individual funding approval. Yet there is no national guidance around repair and no usable data to demonstrate the outcomes of different approaches. Mesh repair, which should be routine, appears only to be carried out in approximately 80% of cases and laparoscopic repair of small hernias is variably employed.

It is recognised that there are ongoing debates about what constitutes best practice<sup>17</sup> in the field. However, given that recent literature indicates the continued presence of high levels and large variation in incidence of incisional hernia, there is an urgent need for the NHS as a whole to agree a reliable performance indicator to ensure that patients have access to appropriate advice and technical expertise.

More generally, the example of incisional hernia reflects a wider issue: that post-surgical complications appear to be accepted as an inevitable risk. Wound infections in colorectal surgery are tolerated because surgical sites are almost inevitably contaminated. This should not be allowed to continue; all teams should have an infection prevention bundle in place. We must recapture a “zero tolerance” for these complications.

**Recommendation 11: Adopt a “zero-tolerance” approach to known avoidable surgical complications, on which there should be reliable data and national guidance**

Recommendation	Actions	Timeline
Adopt a “zero-tolerance” approach to known avoidable surgical complications, on which there should be reliable data and national guidance.	<b>11A:</b> GIRFT to establish an audit of incisional hernia in England.	<b>11A:</b> Progress to have been made by early November 2017.
	<b>11B:</b> Trust management and surgeons to ensure all cases of surgical complications are discussed in morbidity and mortality meetings, with a view to reducing incidence towards 0%.	<b>11B:</b> For immediate action.
	<b>11C:</b> Surgeons and trust management should consider adoption of the ‘small bite’ technique to minimise hernia risk.	<b>11C:</b> For immediate action.
	<b>11D:</b> Surgeons and trust management to ensure mesh repair is used as routine for incisional hernia repair.	<b>11D:</b> For immediate action.
	<b>11E:</b> Surgeons and trust management to ensure an infection prevention bundle is in place.	<b>11E:</b> For immediate action.
	<b>11F:</b> GIRFT to ensure national guidance is developed on the surgical risks noted, and others as considered appropriate.	<b>11F:</b> For completion by April 2019.
	<b>11G:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>11G:</b> Agreement on national policy proposals to be achieved by October 2017.

<sup>16</sup> Muysoms et al. *European Hernia Society guidelines on the closure of abdominal wall incisions 2014*. *Hernia* (2015), 19:1-24. doi: 10.1007/s10029-014-1342-5

<sup>17</sup> *Correspondence discussion, Lancet* (2016). [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(16\)00222-1.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)00222-1.pdf)

## Learning from results

The two examples of readmissions and wound infection rates are not chosen by accident. Both are already monitored in other countries and there is established guidance in the UK that encourages trusts to gather, analyse and learn from this information. This is included in the Royal College of Surgeons' guidance for the conduct of morbidity and mortality meetings.<sup>18</sup>

During GIRFT visits the team asked trusts whether they were aware of these guidelines: only a handful were and only one had adopted the recommended system. While the majority hold morbidity and mortality meetings, the impression given is that they focus on the analysis of deaths and major complications - clearly important, but not necessarily something that will lead to the identification of smaller improvements that could deliver recurring savings and repeated benefits to patients. By contrast, there is very little analysis of important morbidity data such as readmission rates and wound infection after discharge from hospital.

The reasons underlying this are complex, but are underpinned by a lack of appropriate measurement and time for reflection upon that data. It would not be tolerated in industry; the NHS should adopt the same view of quality assurance and ensure that best practice is not merely recognised, but systematically embedded. To achieve this, morbidity and mortality meetings would need to become more comprehensive.

### **Recommendation 12: Strengthen the clinical morbidity and mortality meetings by expanding the current focus on deaths and major complications**

Recommendation	Actions	Timeline
Strengthen the clinical morbidity and mortality meetings by expanding the current focus on deaths and major complications.	<b>12A:</b> GIRFT to collaborate with national bodies to agree plan for improved morbidity and mortality meetings.	<b>12A:</b> Progress to have been made by early November 2017.
	<b>12B:</b> Surgeons to implement this plan. Trust management to facilitate this practice, and audit of it.	<b>12B:</b> For immediate action following completion of 12A.
	<b>12C:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>12C:</b> Agreement on national policy proposals to be achieved by October 2017.

## Litigation

The most common causes for claims are avoidable. More importantly, numbers of claims could be reduced by educating surgeons on the type of behaviour that can lead to claims. This should occur both during training and as part of professional development once trained. Surgeons should be aware of local and national guidance, while remaining informed of the scientific evidence in their area of practice. They should be supported through the implementation of clear local processes where problems with clinical practice are identified to allow the quality of care to be improved.

It is also worth noting that in many cases claims cannot be defended due to a lack of accurate documentation. It is entirely conceivable that in these instances safe clinical practice was followed. Therefore as part of the next phase of the GIRFT programme in general surgery, a more detailed analysis of the causes of claims will be conducted, with the aims of improving both clinical practice and documentation.

### **Recommendation 13: Improve understanding of the causes of litigation and take action to reduce errors that lead to claims**

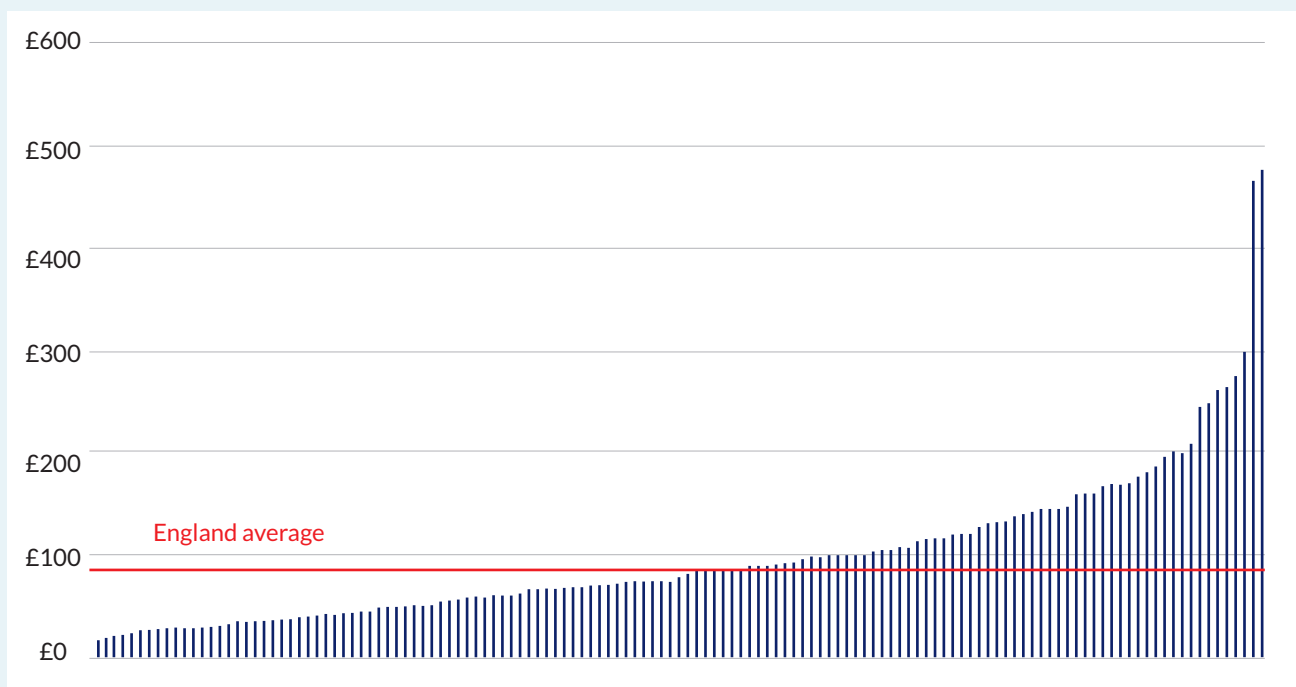
Recommendation	Actions	Timeline
Improve understanding of the causes of litigation and take action to reduce errors that lead to claims.	<b>13A:</b> GIRFT to produce guidance outlining the causes of litigation in general surgery and strategies to ensure claims are reduced.	<b>13A:</b> Progress to have been achieved by February 2018.
	<b>13B:</b> Providers and training programmes to use this guidance for practice and education purposes.	<b>13B:</b> For action following completion of 13A.
	<b>13C:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>13C:</b> Agreement on national policy proposals to be achieved by October 2017.

## SUMMARY OF LITIGATION IN GENERAL SURGERY

Between 2011/12 and 2015/16, the NHS received 5,367 claims related to general surgery, resulting in estimated settlement costs of £585 million. In 2015/16, general surgery accounted for 9% of all clinical negligence claims and 3% of costs. Only orthopaedic surgery, casualty/A&E and obstetrics and gynaecology contributed more claims.

The average cost of litigation per general surgical spell nationally was £88.23; regionally, this varied from £17.32 to £476.67.

**Figure 13: Variation in general surgery litigation costs per admission in England. Claims involving patients 16 years old and younger were excluded**



The most common causes for claims are 'judgement/timing' (2,809 claims, 52.34%), 'unsatisfactory outcome to surgery' (1,078 claims, 20.09%) and 'interpretation of results/clinical' (984 claims, 18.34%). In total, 5% related to issues of consent yet this is probably the area around which most litigation related discussion has focused in recent years. Over the five-year period there were 78 claims related to 'never events':<sup>19</sup> 57 were related to 'retained instruments' and 21 to 'incorrect site of surgery.' Never events like these represent a systematic failure to ensure patient safety, and the cost of litigation itself, though relevant to NHS finances, is a peripheral concern in these cases. They can and must be eradicated by more diligent organisation and closer adherence to tools including the World Health Organisation checklist.

<sup>19</sup> Never events are defined here: <https://improvement.nhs.uk/resources/never-events-policy-and-framework/>

## Rethinking professional development for surgeons

The examples considered previously underline the need for a change of approach to the performance monitoring and professional development of surgeons.

It is vital that surgeons - and the trusts they work for - understand the level at which they are performing and then use this insight to guide targeted professional development, to the benefit of patients and to help make better use of NHS resources. A comparatively small investment in ongoing development has the potential to reduce readmissions, infection rates and litigation; it could also feed into more cost-effective care decisions, such as greater use of day surgery.

The GIRFT programme believes the current approach to CPD for surgeons is not of the rigour that would be expected in other professions. It is individually driven - surgeons can choose which conferences they attend and which sessions they participate in - and is not monitored for its effect upon their performance.

We urge the surgical Royal Colleges to consider undertaking a review of the current model of CPD, drawing on a new approach to gathering data about individual surgeons' decisions and activity, and of the patient outcomes.

### **Recommendation 14: Make available and require at appraisal surgeon-level intelligence on activity and outcomes**

Recommendation	Actions	Timeline
Make available and require at appraisal surgeon-level intelligence on activity and outcomes.	<p><b>14A:</b> Trust management to ensure all appraisals are informed with required intelligence input, including the alternative measures of surgical performance listed earlier.</p> <p><b>14B:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.</p>	<p><b>14A:</b> For immediate action.</p> <p><b>14B:</b> Agreement on national policy proposals to be achieved by October 2017.</p>

Instead of ad hoc learning, it would be more beneficial for surgeons to visit other units and to be visited by other surgeons. In particular, surgeons should be encouraged to visit the units which are delivering the best outcomes across a range of different indicators. This would spread good practice and develop learning in the workplace in a much more holistic fashion. A range of bodies, including NHS Improvement, NHS England and professional bodies, could facilitate this.

### **Recommendation 15: Develop a means of identifying the best performing teams and enable others to visit them as part of CPD**

Recommendation	Actions	Timeline
Develop a means of identifying the best performing teams and enable others to visit them as part of CPD.	<b>15A:</b> GIRFT to develop methodology to identify high performing teams.	<b>15A:</b> Progress to have been achieved by February 2018.
	<b>15B:</b> Royal Colleges, Health Education England (HEE) and other CPD providers or certifying bodies to develop and roll out mechanism for formal CPD accreditation for peer visits.	<b>15B:</b> Progress to have been achieved by February 2018.
	<b>15C:</b> GIRFT to facilitate a programme of peer visits and buddying.	<b>15C:</b> For action upon completion of 15A and 15B, to reach new business as usual by April 2019.

---

## A culture shift?

As pointed out at the start of this section, NHS surgeons have considerable autonomy compared with their counterparts in other countries. This relates not only to their own professional development but also to clinical issues and decisions. At its most extreme, it means individual surgeons in the same department might adopt different approaches to patients presenting with the same condition and similar circumstances.

On one level, this reflects the fact that there is often limited clinical evidence for the superiority of one approach over another. Yet it also means that wider teams have to be able to work in different ways to support consultants - so have less experience of any one approach. It can also mean that departments must be able to provide different pre-operative services and post-operative care, potentially increasing costs.

In the US, the chief surgeon of a hospital or specialty has the responsibility for setting standards and governing ways of working. In Germany, the departmental chairman fulfils a similar role. Both are able to rely on greater evidence about the efficacy, or otherwise, of specific care pathways.

Given the wide variation in patient outcomes evidenced in this report, and the expectation that similar findings will be made in other specialties, it is time for the NHS to consider a similar approach.

### ***Recommendation 16: Conduct a national review, assessing the NHS model of clinical autonomy against international comparators, with a view to reducing unwarranted variation in clinical practice***

Recommendation	Actions	Timeline
Conduct a national review assessing the NHS model of clinical autonomy against international comparators, with a view to reducing unwarranted variation in clinical practice.	<b>16A:</b> GIRFT team to engage with all relevant national stakeholders to determine scope and organisation of the review.	<b>16A:</b> For completion by April 2019.
	<b>16B:</b> An appropriate national body to conduct the review and report recommendations.	<b>16B:</b> For immediate action, following completion of 16A.
	<b>16C:</b> GIRFT team to develop implementation strategy, as appropriate.	<b>16C:</b> For immediate action, following completion of 16B.

## THEME 5: EFFICIENCY AND EMERGENCY PROVISION

Measuring and comparing the efficiency of general surgery teams is extremely complex. While there is data to show what types of procedure are carried out, records are typically not kept of how long procedures take. It is also not clear how long procedures should take: while it is in no one's interest that surgery is unnecessarily prolonged, speed is not necessarily an indicator of quality.

To gain a greater understanding of efficiency, we would need to analyse operation times - ideally by phase - in the context of patient outcomes and potentially co-morbidities. This data could then help identify an optimum duration for types of procedure.

Such information would be valuable not only to help assess efficiency, but also to support surgical planning and better use of specialist resources, such as theatres. This could, in turn, underpin a much-needed change in the way emergency care is managed.

### **Recommendation 17: Require data to be collected routinely about operation duration to establish a measurable benchmark for different types of procedures**

Recommendation	Actions	Timeline
Require data to be collected routinely about operation duration to establish a measurable benchmark for different types of procedures.	<b>17A:</b> Data indicating "operation duration" to be collected and included in the Model Hospital.	<b>17A:</b> Progress to have been made by February 2018.
	<b>17B:</b> GIRFT to commission research assessing "optimum" operation durations.	<b>17B:</b> Progress to have been achieved by November 2017.
	<b>17C:</b> Benchmarks resulting from 17B to be included in the Model Hospital.	<b>17C:</b> For action upon completion of 17B.
	<b>17D:</b> Surgeons and trust management to utilise this information to drive efficiency improvements.	<b>17D:</b> For action upon completion of 17C.

### Capacity planning for general surgery

The information gathered by the GIRFT programme team makes it clear that, in most trusts, planning for theatre capacity is centred on the elective service. To provide emergency care, many hospitals simply set aside a single operating theatre that is available 24 hours a day. While this theoretically ensures there is always an emergency facility, the situation becomes more complex when there are multiple emergency cases. Many specialties are in competition for this limited theatre resource and priority is, of course, given to the most urgent cases.

Alongside this, elective procedures are managed in other theatres, their schedule occasionally disrupted when there is no other way to accommodate patients requiring immediate surgical care.

In the middle, there is a group of patients needing care on a "semi-urgent" basis, neither top of the list for emergency facilities nor part of the well-managed schedule.

This service design does not reflect need: the emergency service, where patients are most ill and most in need of specialist resource, does not seem to be the core around which the rest of the surgical service is organised.

Reshaping this via effective capacity planning - and through richer data on demand and optimal duration for different procedures - could increase emergency capacity while minimising disruption to elective lists, enabling greater throughput on both the elective and emergency side of the service. To date, very few trusts have undertaken comprehensive capacity planning to ensure adequate provision of emergency theatres: doing so would not only ensure emergency provision is well delivered but also help manage elective care waiting times successfully.

**Recommendation 18: Undertake a capacity planning study to enable theatre capacity to be principally organised around emergency care**

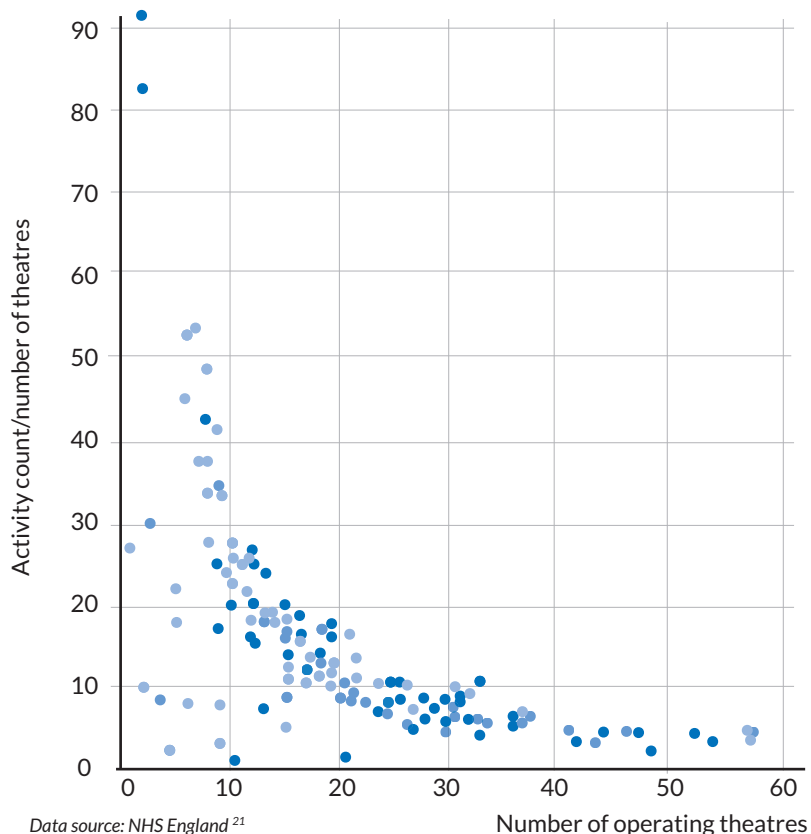
Recommendation	Actions	Timeline
Undertake a capacity planning study to enable theatre capacity to be principally organised around emergency care.	<b>18A:</b> GIRFT to undertake study and produce guidance based on resulting insight.	<b>18A:</b> For immediate action.
	<b>18B:</b> Surgeons and trust management to implement this guidance.	<b>18B:</b> For immediate action following completion of 18A.
	<b>18C:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>18C:</b> For implementation upon completion of 18A.

**Examining throughput**

One thing the available data does allow us to determine is the number of procedures undertaken per operating theatre across the NHS. (This is based simply on dividing the total number of theatres available to a hospital<sup>20</sup> with the total number of procedures the hospital carries out: it is not based on detailed records of how many procedures and of what kind are carried out in each theatre.)

This shows that the variation in throughput between hospitals is considerable. In a period in which the majority of providers managed around ten procedures per theatre, two managed over 80 per theatre. What is more, the data shows a clear trend that the more theatres a provider has, the lower its per theatre throughput is.

**Figure 14: Number of procedures undertaken per operating theatre for all NHS provider organisations in England - April to June 2016**



<sup>20</sup> <https://www.england.nhs.uk/statistics/statistical-work-areas/cancelled-elective-operations/supporting-facilities-data/>

<sup>21</sup> NHS England Supporting Facilities Data 2016. <https://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2013/04/Operating-Theatres-Q1-2016-17-04532.xlsx>

The available data does not offer any clear reasons for this; it is also not clear how “specialised” different theatres are or whether they are only available to certain teams. Given that every operating theatre carries significant overheads, it is an area that may merit further study. In the interim, insight from the report *Helping NHS Providers Improve Productivity in Elective Care* is expected to be useful during implementation of this programme.<sup>22</sup>

Above all, it indicates that theatre space should not be a constraint on capacity planning: it would appear that in the majority of trusts there would be space available to increase the number of procedures undertaken. Of course - as will be considered below - the other key constraint on throughput is the availability of surgeons.

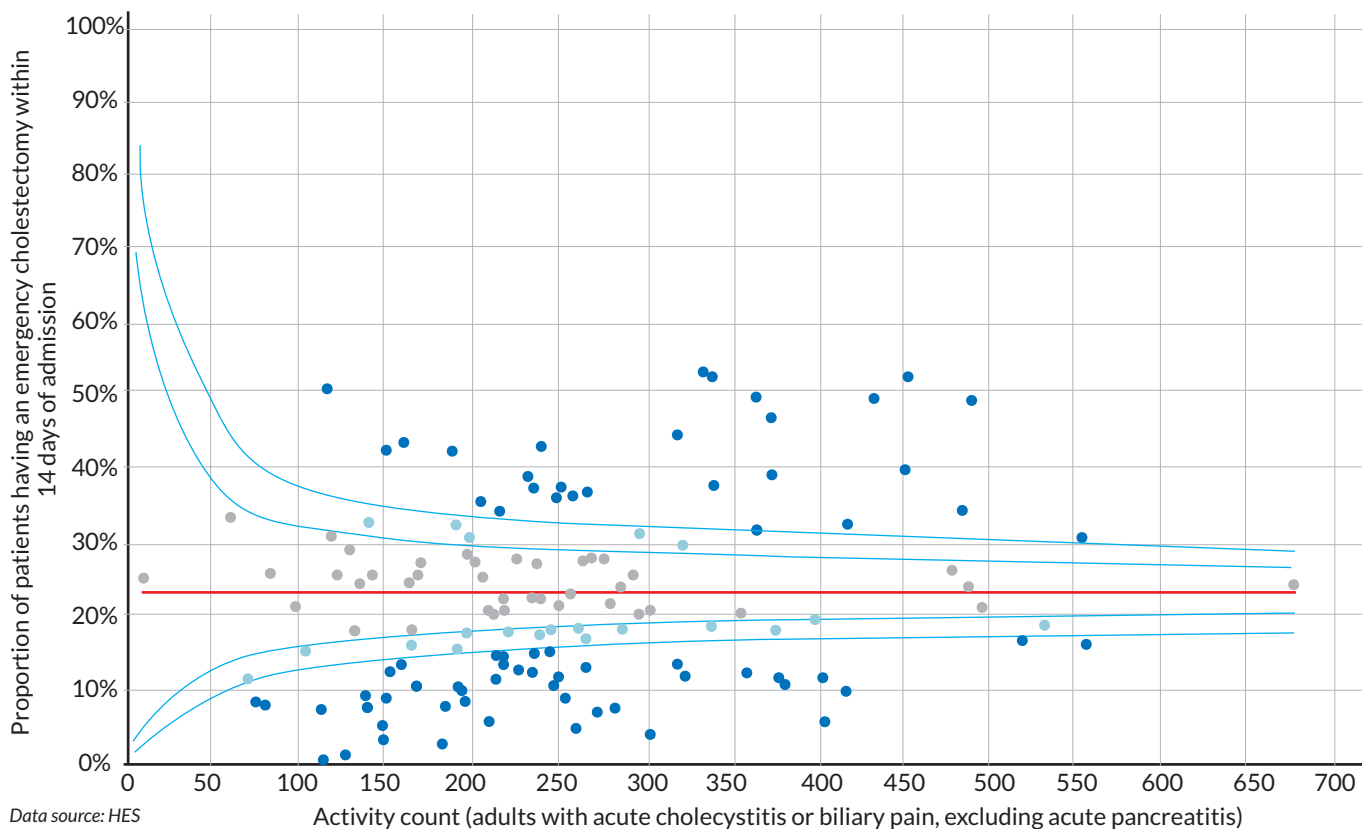
Even without data about length of procedure, it should still be possible for trusts to improve their capacity planning (and thus efficiency) for emergency general surgery - which would in turn significantly improve patient experience. It also has the potential to be a driver of overall efficiency: if serious concerns are addressed within a few days, rather than as part of the planned elective surgery programme, it could reduce the likelihood of complications or of a more difficult operation being required.

An example here is the treatment of acute cholecystitis (gallstones). Patients presenting with this condition are typically in considerable pain and the most effective treatment is a cholecystectomy.<sup>23</sup>

However, data gathered during the GIRFT programme shows that nationally fewer than 20% of patients will undergo a cholecystectomy on their index admission. In some areas, the figure is less than 10%. These delays routinely lead to readmissions, excessive waiting lists and increased morbidity and mortality when the operation is finally carried out.

In contrast, the majority of such patients in France and Australia will undergo surgery within two days of admission.<sup>24</sup>

**Figure 15: Proportion of cholecystectomies within 14 days of admission for acute cholecystitis or biliary pain (excluding acute pancreatitis) (%) - 1 April 2013 to 31 March 2014**



<sup>22</sup> Monitor, British Orthopaedic Association and - Royal College of Ophthalmologists - *Helping NHS Providers Improve Productivity in Elective Care* (2015). [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/466895/Elective\\_care\\_main\\_document\\_final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/466895/Elective_care_main_document_final.pdf)

<sup>23</sup> See for example the pathway published by AUGIS for the management of acute gall stone disease. <http://www.augis.org/wp-content/uploads/2014/05/Acute-Gallstones-Pathway-Final-Sept-2015.pdf>

<sup>24</sup> CholeS Study Group, West Midlands Research Collaborative, *Population-based cohort study of outcomes following cholecystectomy for benign gallbladder diseases*. *British Journal of Surgery* (2016). doi: 10.1002/bjs.10287



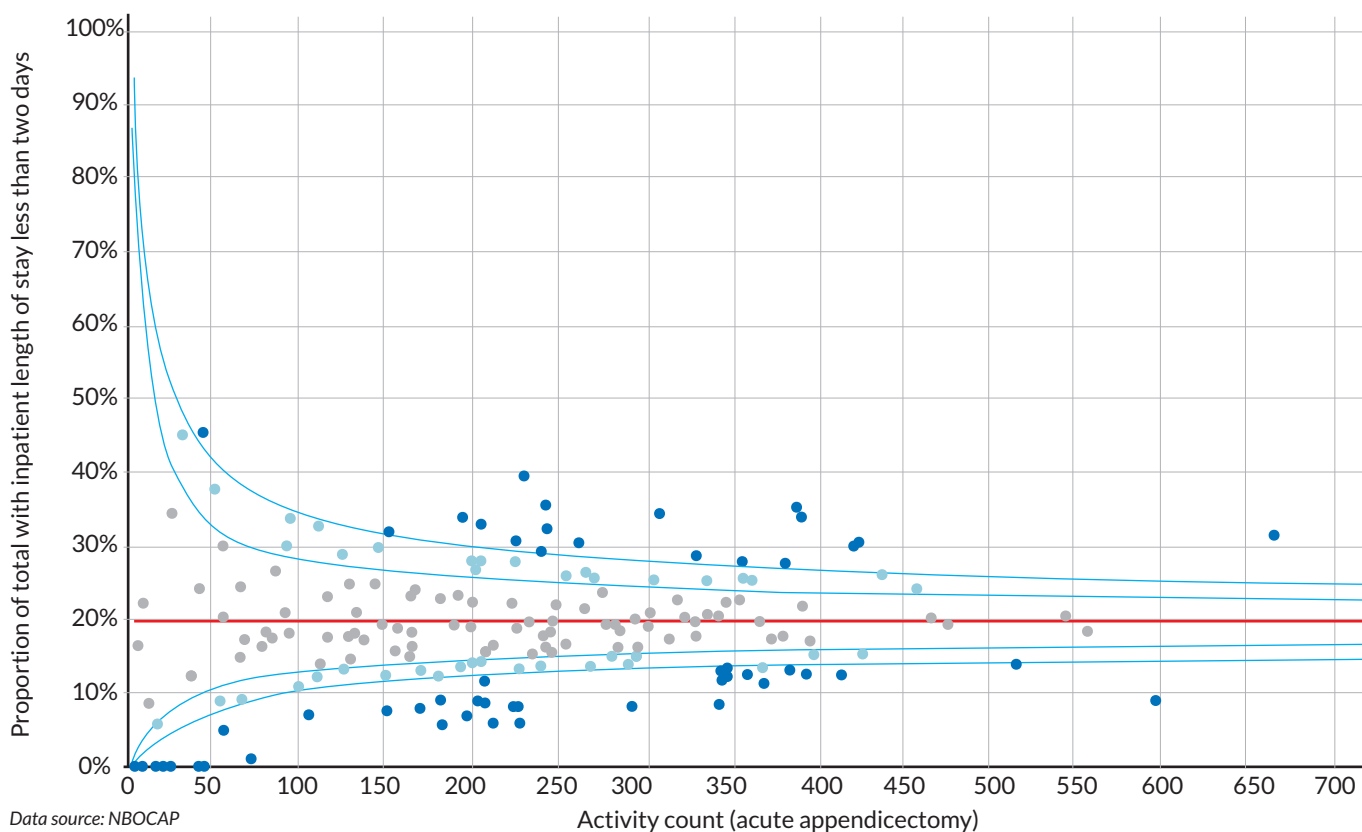
Importantly, the data shows that there are several trusts where over 40% of NHS patients admitted for this condition **do** receive surgical treatment within 14 days. The GIRFT team contacted these to see what was different about their approach.

### The case for a surgical assessment unit

The trusts that appear able to achieve higher proportions of cholecystectomy on the index admission have all moved in some way towards a surgical assessment unit model. Staffed by senior decision-makers, this unit provides a form of triage, determining which patients should be prioritised for surgery. Most of these sites - including Nottingham, Bath, Blackburn and Derby - actually put a consultant on the “front door”, meaning there is expert diagnostic input at an early stage.

This approach not only benefits patients with acute cholecystitis but also those diagnosed as needing an acute appendicectomy. Many of these trusts are among those where patients typically stay in hospital for less than two days when they need this procedure.

**Figure 16: Proportion of patients with a length of stay of less than two days following acute appendicectomy (%) - 1 April 2013 to 31 March 2014**



Data source: NBOCAP

Tellingly, in each of these sites with a surgical assessment unit, there has been a reduction of about one third in the number of patients admitted to the acute surgical service. Having surgeons determining who needs emergency surgery - and who can wait - does not necessarily lead to more emergency surgery. In Nottingham, the approach has also been assessed as delivering a £2.1m saving for the local health community.

Some of these units have gone further and employed dedicated emergency general surgeons, which has further positive impacts on the service provided to patients in the most need.

Various other models are in use across the NHS which appear to improve the availability and flexibility of emergency care. The Association of Surgeons and the Royal College of Surgeons of England have issued standards and commissioning guidance recommending a number of requirements which would be beneficial but have only been variably adopted.

These include:

- A nominated lead surgeon with administrative time to run the emergency general surgery service, a dedicated emergency surgical assessment and short stay unit linked to the rapid availability of senior surgical opinion: this pairing can be highly beneficial,<sup>25</sup> particularly for flows, without impacting readmission rates.<sup>26</sup>
- Ensuring the 'on-call' surgical team, including the consultant, are not listed for elective activity such as clinics and routine theatre lists at the same time. This not only speeds decision-making and provides rapid, effective management of emergency referrals; it also means that elective procedures are less likely to be cancelled. Studies indicate this has the same benefits as early triage.<sup>27</sup>

Across general surgery, the intermingling of resources is unavoidable, in that the same beds, staff, theatres and equipment are generally required for both elective and emergency pathways. The problem is design and primacy. While they remain in the minority, there are now a growing number of hospitals which are seeking to address this primacy issue: the consistent success factor appears to be the early involvement of a senior clinician.

### **Recommendation 19: Provide consultant-delivered emergency general surgery in each trust**

Recommendation	Actions	Timeline
Provide consultant-delivered emergency general surgery in each trust.	<b>19A:</b> GIRFT to provide national guidance on best practice in emergency general surgery, reflecting the need for consultant-delivered care, and drawing on existing evidence concerning increasing throughput.	<b>19A:</b> Progress to have been made by early November 2017.
	<b>19B:</b> Providers to reshape the emergency general surgical service to ensure consultant-delivered care.	<b>19B:</b> For immediate action following completion of 19A.
	<b>19C:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>19C:</b> Agreement on national policy proposals to be achieved by October 2017.

### **Recommendation 20: Require every trust to identify a consultant lead for emergency general surgery, with allocated time in their job plan**

Recommendation	Actions	Timeline
Require every trust to identify a consultant lead for emergency general surgery, with allocated time in their job plan.	<b>20A:</b> Providers to identify relevant emergency general surgery lead, with allocated time in their job plan.	<b>20A:</b> For immediate action.
	<b>20B:</b> National policy levers to be developed by GIRFT in collaboration with national bodies, such as NHS England and NHS Improvement, as appropriate.	<b>20B:</b> Agreement on national policy proposals to be achieved by October 2017.

<sup>25</sup> Walsall Healthcare NHS Trust - Surgical Assessment Unit. Report of pilot and proposal. <https://www.walsallhealthcare.nhs.uk/Data/Sites/1/media/documents/board-papers/2016/june/enc-21-surgical-assessment-unit-trust-board-june.pdf>

<sup>26</sup> Johnstone et al A clinical decisions unit improves emergency general surgery care delivery 2015. *Clinical Governance: An International Journal* (2015), 20(4): 191-98.

<sup>27</sup> King's Fund: Reconfiguring acute surgical services (2014). [http://www.kingsfund.org.uk/sites/files/kf/field/field\\_publication\\_summary/Reconfiguration-of-clinical-services-kings-fund-nov-2014.pdf](http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_summary/Reconfiguration-of-clinical-services-kings-fund-nov-2014.pdf)

# Potential impact

---

Following the analysis and work carried out through this GIRFT general surgery report, the impacts that could result can be grouped as either quantifiable or unquantifiable. Quantifiable impacts are those that can be measured, while unquantifiable impacts are those that are either not quantifiable currently (but could be at a future time) or simply not quantifiable.

## Potential quantifiable impact

As GIRFT is predominantly a data-driven process, most impacts should be quantifiable, at least in principle. Quantifiable impacts could include:

- improved patient outcomes
- savings in bed days
- lives saved
- reduced number of admissions
- actual cashable savings

or any of a number of measurable positive outcomes.

## Potential savings

GIRFT's recommendations aim to improve patient experience in areas such as the reduction in length of stay and the reduction of complications that can lead to readmissions. Some recommendations would require an initial investment to deliver benefits in efficiency and budgets; freeing up beds for other patients, as well as reducing the cost of a specific service. Other recommendations, such as changes to procurement processes, would directly improve efficiency and cost-effectiveness.

### Potential savings include:

- Consultant-led surgical triage of emergency patients has resulted in approximately 30% reductions in general surgery emergency admissions in a number of trusts. In England in 2016 there were 697,314 emergency general surgery admissions of which no surgical procedure was delivered during 305,507 admissions, at a cost of £361m. If consultant-led triage was implemented in all acute trusts, patients would be treated appropriately more quickly without being admitted to hospital. A 30% reduction in non-surgical admissions would **cut the current annual cost by £108m**.
- It is rare that general surgical patients are admitted electively and then do not undergo an operation. It does happen due to cancellation of a procedure or the need to expedite investigations. Neither of these is appropriate, yet in 2016 there were 57,470 elective general surgical admissions without any surgical procedure. Reducing this by three quarters would stop patients being admitted unnecessarily and **could save close to £7m a year**.
- The national average length of stay for patients after an appendicectomy is just over three and a half days. About 42,000 of these procedures are done every year. However, some trusts manage to discharge nearly half of their patients within two days of admission. If all providers could match this performance, more patients could return home earlier and over 30,000 bed days could be freed up for other patients. The bed day savings could result in a **cost reduction of £8.5m**.
- A reduction from just over ten days, the current average length of stay for patients after a colorectal cancer resection, to five and a half days, the length of stay achieved by the best UK hospitals, would ensure patients spend less time in hospital and would save 84,000 bed days, **a saving of £23.6m**.
- Removal of the gall bladder is a very high volume procedure, with about 70,000 undertaken each year in the UK. Modern practice requires that these operations are undertaken as soon as possible after emergency presentation rather than wait for the initial inflammation to settle. The best hospitals achieve surgery within 14 days (current guidance) for over half of patients, but many achieve this for fewer than 10% of patients, with the national average of just 23% of patients. Many patients are sent home and readmitted for surgery on another day. If all suitable patients underwent gallbladder surgery within 14 days of diagnosis, more people would be treated in a timely fashion, **saving £5m**.
- The national average rate of emergency readmission at 30 days is just over 7% after planned gall bladder surgery. If hospitals with high levels of readmission could reduce their rate to the national average, fewer patients would have to return to hospital, **saving £1m in bed days**.

- 
- Similarly, if those providers with high 30 day emergency readmission rates following appendicectomy, could reduce their rate to the national average, this would prevent readmission for 2,000 patients, **freeing up £5.8m worth of bed days**.
  - The recommended time frame for reversal of surgical stomas following colorectal cancer resection is 6 months. If all trusts could, where appropriate, achieve this recommendation, this would provide a better experience for patients and **could save almost £2.4m annually**.
  - For a basket of non-medicine surgical supplies, procurement costs vary from £1,467 to £2,336. If all hospitals procured these items at the lowest price, **national costs would reduce by 59%**.

Table 5 summarises the main potential quantifiable impacts from this first analysis, calculated from metrics used throughout this analysis at various levels of improvement from the current state. As data collection and reporting becomes increasingly mature, there will be further potential quantifiable impacts that appear.

We have elected to display quantifiable impact at four levels:

- a **relative** improvement of 10% from current performance, aggregated from individual provider totals
- an **absolute** improvement of 2% from current performance, aggregated from individual provider totals
- improvement if all providers below the current average improved to that average
- improvement if all providers who fall outside can improve to the current 95% confidence level (performance approaching the best in the country).

The figures presented show the potential impacts across the country. They represent what the impact of GIRFT implementation would be nationally, assuming improvement across all providers. The impacts are measured against the outcomes our recommendations would improve, rather than the recommendations themselves. This is because:

- multiple recommendations may contribute to a single outcome
- a single outcome may be achieved by implementing multiple recommendations.

Financial impacts are calculated assuming all providers performing below the national average for an outcome improve sufficiently to achieve the national average.

**Table 5: Potential quantifiable impacts based on current performance**

Improvement / saving	10% improvement (relative)	2% improvement (absolute)	Improvement to current national mean	Improvement to current 95% confidence interval	Financial impact of improvement to national mean (short stay)*	Financial impact of improvement to national mean full tariff)*
<b>Lives saved</b> - colorectal cancer with major resection (90 day mortality reduction)	91	357	168	497	n/a	n/a
<b>Admissions saved</b> from reduced readmissions within 90 days from major colorectal cancer resection	334	338	305	1,070	£185,264	£872,385
<b>Admissions saved</b> from reduced cholecystectomy readmissions within 30 days	392	1,056	419	1,258	£254,855	£1,200,084
<b>Inpatient bed days saved</b> from reduced length of stay by undertaking emergency cholecystectomy within 14 days of admission for acute pancreatitis	556	665	1,602	4,947	£355,644	£1,098,234
<b>Inpatient bed days saved</b> from increasing the number of laparoscopic anti-reflux procedures delivered in a day case setting	56	279	332	502	£73,795	£111,400
<b>Inpatient bed days saved</b> from increasing the number of cholecystectomies within 14 days of admission for acute cholecystitis or biliary pain (excluding acute pancreatitis)	8,190	7,045	17,947	30,678	£3,984,234	£6,810,516
<b>Inpatient bed days saved</b> by increasing the number of acute appendectomies with a length of stay less than two days	3,020	3,043	2,043	9,475	£453,546	£2,103,450
<b>Patient stoma months saved</b> by reducing stoma rate at 18 months post colorectal cancer procedures	609	241	533	1,352	£266,700	£676,000
<b>Total financial impact</b>					<b>£5,574,038</b>	<b>£12,872,069</b>

\* Financial values are based on bed day impact using a cost per bed day of £222,<sup>28</sup> which we consider a low estimate, but better references are not obvious.

\*\* Uses a cost per month for stoma management of £500<sup>29</sup>

<sup>28</sup>NICE - Costing statement: Implementing the NICE guideline on Transition between inpatient hospital settings and community or care home settings for adults with social care needs (NG27).

<sup>29</sup>High Impact Actions for Stoma Care (2010). [http://www.apollonursingresource.com/wp-content/uploads/2013/10/High\\_Impact\\_Actions\\_Booklet.pdf](http://www.apollonursingresource.com/wp-content/uploads/2013/10/High_Impact_Actions_Booklet.pdf)

---

## Potential unquantifiable impact

Unquantifiable impacts are those benefits that do not currently have a measurable, tangible value attached, but still create a value gain. It is possible that some could become measurable; whether or not that happens, they remain a positive.

The following areas have been identified as unquantifiable impacts of the GIRFT programme in general surgery:

- **Increased understanding of the value of performance data** - the more professionals across the NHS appreciate the value of performance data, the better quality that data will become. Already, through the GIRFT visits, it was clear that senior managers and clinicians saw real benefit in being able to benchmark their performance against their peers in a range of areas beyond current national data sets.
- **Greater engagement with local service change** - when teams can see the impact of changes on the outcomes that matter most to them - in particular, patient outcomes - it serves as motivation to drive further change.
- **Richer insight into different surgical options** - with better data about the outcomes and risks of different procedures, surgeons can make better decisions and recommendations - and patients can make more informed choices.
- **Increased transparency** - it is likely that providers that perform well will wish to inform others of their successes, leading to a greater openness of information sharing around patient outcomes, which can only be a positive impact.
- **Faster time to impact** - with more consistent performance measurement, the effects of policy change nationally and locally will be noted sooner - and any negative effects can be addressed earlier.
- **Procurement savings** - Theme 2 has shown the potential savings on everyday procurement in general surgery. This is currently unquantifiable as there is not sufficient data on what is procured and how much is spent; however, it should be possible to create a baseline from which savings could be measured.

# Glossary

---

## List of associations and initiatives

**ACPGBI** - Association of Coloproctology of Great Britain and Ireland. ACPGBI supports high quality, innovative teaching and training. [www.acpgbi.org.uk](http://www.acpgbi.org.uk)

**ASGBI** - Association of Surgeons of Great Britain and Ireland. For the advancement of the science and art of surgery and the promotion of friendship among surgeons. [www.asgbi.org.uk](http://www.asgbi.org.uk)

**AUGIS** - Association of Upper Gastrointestinal Surgeons of Great Britain and Ireland. AUGIS promotes the establishment of high quality training programmes throughout the UK. [www.augis.org](http://www.augis.org)

**BADS** - British Association of Day Surgery. BADS provides information about day and short stay surgery for patients, relatives, carers, healthcare professionals and members. <http://daysurgeryuk.net/en/home/>

**BMA** - British Medical Association. The BMA is the trade union and professional body for doctors in the UK. [www.bma.org.uk](http://www.bma.org.uk)

**BOMSS** - British Obesity & Metabolic Surgery Society. [www.bomss.org.uk](http://www.bomss.org.uk)

**GMC** - General Medical Council. The GMC helps to protect patients and improve medical education and practice in the UK by setting standards for students and doctors. [www.gmc-uk.org](http://www.gmc-uk.org)

**RCSE** - Royal College of Surgeons of England. Committed to enabling surgeons to achieve and maintain the highest standards of surgical practice and patient care. [www.rcseng.ac.uk](http://www.rcseng.ac.uk)

**Royal Colleges** - the Academy of Medical Royal Colleges (the Academy) is the coordinating body for the UK and Ireland's 24 medical Royal Colleges and Faculties. It ensures patients are safely and properly cared for by setting standards for the way doctors are educated, trained and monitored throughout their careers. [www.aomrc.org.uk](http://www.aomrc.org.uk)

## Medical/surgical terminology

**Bariatric Surgery** - weight loss surgery, also called metabolic surgery. Sometimes used as a treatment for people who are very obese.

**Cholecystectomy** - removal of the gall bladder.

**Cholecystitis** - gallstone disease.

**Co-morbidities** - the simultaneous presence of two or more chronic diseases or conditions in a patient.

**EGS data** - Emergency General Surgery data.

**Index admission** - admission with a principal diagnosis of a specified condition.

**Laparoscopy** - type of surgical procedure that allows a surgeon to access the inside of the abdomen (tummy) and pelvis without having to make large incisions in the skin. This procedure is also known as keyhole surgery or minimally invasive surgery.

**Laparotomy** - a surgical procedure involving a large incision through the abdominal wall to gain access to the abdominal cavity

**Length of stay** - this is a term to describe the duration of a single episode of hospitalisation.

**MDT** - multidisciplinary team. A group of healthcare workers who are members of different disciplines (e.g. psychiatrists, social workers, etc.), each providing specific services to the patient. In this document, it typically refers to multidisciplinary teams for cancer care.

**Mortality and morbidity meetings** - meetings where clinical staff can discuss issues in recent care, share insights and learn lessons from clinical outcomes. The aim is to improve patient care.

**PPIB** - purchasing price index benchmark and Benchmark tool. A key recommendation in the Carter report on NHS productivity opportunities. A tool to help trusts be better informed about product purchase price and save money through greater transparency of purchasing information.

**Resection** - a surgical procedure to remove part of an organ or gland, as a sub-type of a resection which might involve removing the whole body part. It may also be used to remove a tumour and normal tissue around it.

**Stoma** - a small opening in the abdomen, intentionally created during surgery to divert the flow of faeces and/or urine.

**Surgical assessment unit** - a model of care where patients who have a confirmed or probable surgical condition are assessed and diagnosed by a consultant in the relevant surgical discipline.

---

## **NHS organisations and terminology**

**Clinical Commissioning Groups (CCGs)** - these were created following the Health and Social Care Act in 2012, and replaced Primary Care Trusts on 1 April 2013. CCGs are clinically led statutory NHS bodies responsible for the planning and commissioning of healthcare services for their local area. There are now 207 CCGs in England.

**Commissioners** - commissioning is the process through which the health needs of the local population are identified and the services purchased and reviewed to meet those needs.

**CQC** - Care Quality Commission. The CQC monitors, inspects and regulates services to make sure they meet fundamental standards of quality and safety and then publishes data, including performance ratings to help people choose care. [www.cqc.org.uk](http://www.cqc.org.uk)

**DQMI** - Data Quality Maturity Index is a quarterly publication about data quality in the NHS, which provides data submitters with timely and transparent information. <http://content.digital.nhs.uk/dq>

**Friends and Family Scores** - the Friends and Family Test is an important feedback tool that supports the fundamental principle that people who use NHS services should have the opportunity to provide feedback on their experience. <https://www.england.nhs.uk/ourwork/pe/fft/>

**HEE** - Health Education England exists to support the delivery of excellent healthcare and health improvement to the patients and public of England by ensuring that the medical workforce of today and tomorrow has the right numbers, skills, values and behaviours, at the right time and in the right place. <https://hee.nhs.uk/>

**HES** - Hospital Episode Statistics. Data collected during a patient's time at hospital and submitted to allow hospitals to be paid for the care they deliver. The aim is to collect a detailed record for each "episode" of admitted patient care delivered in England, either by NHS hospitals or delivered in the independent sector but commissioned by the NHS.

### **HQIP - Healthcare Quality Improvement Partnership**

An independent organisation led by the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. <http://www.hqip.org.uk/>

**NBOCAP** - the National Bowel Cancer Audit. [content.digital.nhs.uk/bowel](http://content.digital.nhs.uk/bowel)

**NELA** - National Emergency Laparotomy Audit. [www.nela.org.uk/](http://www.nela.org.uk/)

**NHS Atlas of Variation in Healthcare** - a compilation of routinely available data that relates to healthcare investment, activity and outcomes in each area. <https://www.england.nhs.uk/rightcare/intel/cfv/atlas/>

**NHS RightCare** - Reducing unwarranted variation to improve people's health. [www.england.nhs.uk/rightcare/](http://www.england.nhs.uk/rightcare/)

**NICE** - the National Institute for Health and Care Excellence. Improving health and social care through evidence-based guidance. [www.nice.org.uk](http://www.nice.org.uk)

**PROMs** - Patient Recorded Outcome Measures assess the quality of care delivered to NHS patients from the patient perspective. Currently covering four clinical procedures, PROMs calculate the health gains after surgical treatment using pre- and post-operative surveys. The four procedures are: hip replacements, knee replacements, groin hernia and varicose veins. PROMs have been collected by all providers of NHS-funded care since April 2009. <https://www.england.nhs.uk/statistics/statistical-work-areas/proms/>



# Acknowledgements

---

This project and report could not have happened without the leadership of Professor Tim Briggs and Lord Carter and it has been supported and delivered by an army of people all working far harder than me.

We are very grateful indeed to the HES database, ACPGBI, AUGIS, BOMSS ASGBI, and the Royal College of Anaesthetists (NELA), who have allowed us to use data they have collected. The project has been all the stronger for their support.

I am personally indebted to the GIRFT team: Caroline Ager, Rachel Yates, Nicola Joyce and Jamie Day for their infinite patience, organisation and support. My thanks also go to the team at Methods Analytics: Simon Swift, Richard Oakley, Andrzej Glowinski, Ben Marks, Jodi Carter and Neil Mason for their analytic brilliance and enthusiasm. I thank all the clinical and managerial colleagues from NHS trusts who have met with me and contributed to so many enjoyable and productive meetings.

Finally, I must thank my wife Lorraine. She is the best and most patient-centred surgeon I have ever met.

## **Mr John F Abercrombie MB BS FRCS**

Consultant Colorectal Surgeon at Queen's Medical Centre, Nottingham  
National Clinical Lead for General Surgery, Getting It Right First Time (GIRFT) Programme



For more information about GIRFT,  
visit our website: [www.GettingItRightFirstTime.co.uk](http://www.GettingItRightFirstTime.co.uk)  
or email us on [info@GettingItRightFirstTime.co.uk](mailto:info@GettingItRightFirstTime.co.uk)

You can also follow us on Twitter [@NHSGIRFT](https://twitter.com/NHSGIRFT) and  
LinkedIn: [www.linkedin.com/company/getting-it-right-first-time-girft](http://www.linkedin.com/company/getting-it-right-first-time-girft)

The full report and executive summary are also available to download as  
PDFs from: [www.GettingItRightFirstTime.co.uk](http://www.GettingItRightFirstTime.co.uk)