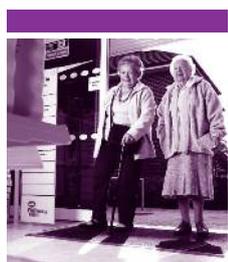
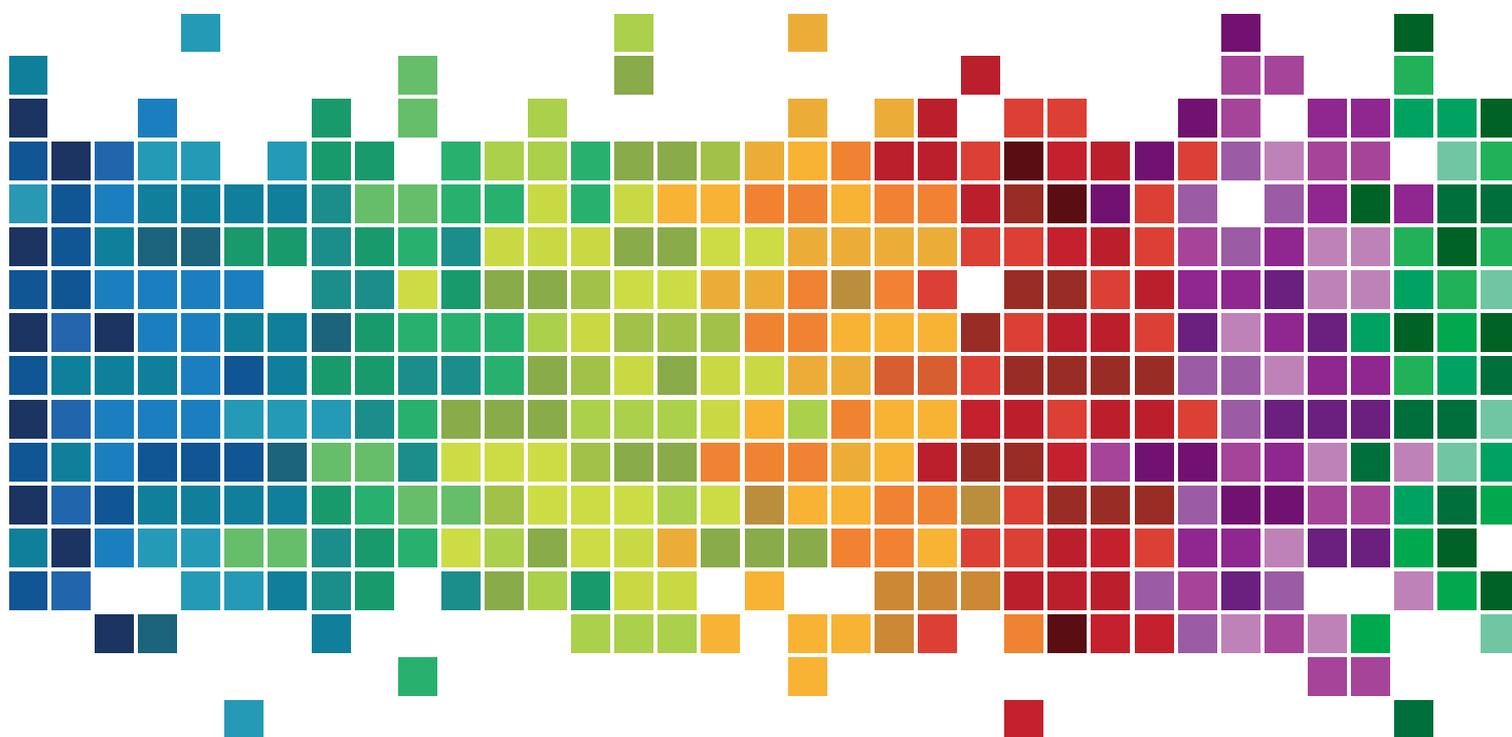


NHS Improving Quality in collaboration with NHS England

# Enhanced recovery care pathway

A better journey for patients seven days a week and better deal for the NHS

Progress review (2012/13) and level of ambition (2014/15)



# Enhanced Recovery: Consensus Statement

“The enhanced recovery approach to pre-operative, peri-operative and post-operative care has major benefits for many patients in relation to quicker recovery following major surgery. This facilitates shorter hospital stay with no increase in readmission rates. This has clear benefits for patients and their families and for the NHS.

Enhanced recovery is now being implemented across the NHS in patients undergoing elective procedures in four specialties: orthopaedics, colorectal, gynaecological and urological surgery. There is considerable scope to extend the relevant components of enhanced recovery to patients admitted as emergencies and to other specialties.

We believe that enhanced recovery should now be considered as standard practice for most patients undergoing major surgery across a range of procedures and specialties.”

Enhanced Recovery Summit - 30 April 2012, Consensus Statement updated February 2013

**Mr Bill Allum**  
President of the Association for Upper GI Surgery (AUGIS)

**Dr Stephen Field**  
GP & NHS Future Forum

**President Martyn Porter**  
British Orthopaedic Association

**President Dr J P van Besouw**  
Royal College of Anaesthetists

**President Mr Mike Hallisey**  
BASO – The Association for Cancer Surgery

**Professor Sir Mike Richards**  
National Cancer Director and Chair of the Enhanced Recovery Partnership

**President Professor Julian Bion**  
Faculty of Intensive Care Medicine

**Dr Helena Johnson**  
Chair, Chartered Society of Physiotherapy

**President Sir Richard Thompson**  
Royal College of Physicians

**Jane Cummings**  
Chief Nursing Officer for England

**President Dr Adrian Joyce**  
British Association of Urological Surgeons

**President Mr Graham Williams**  
Association of Coloproctology

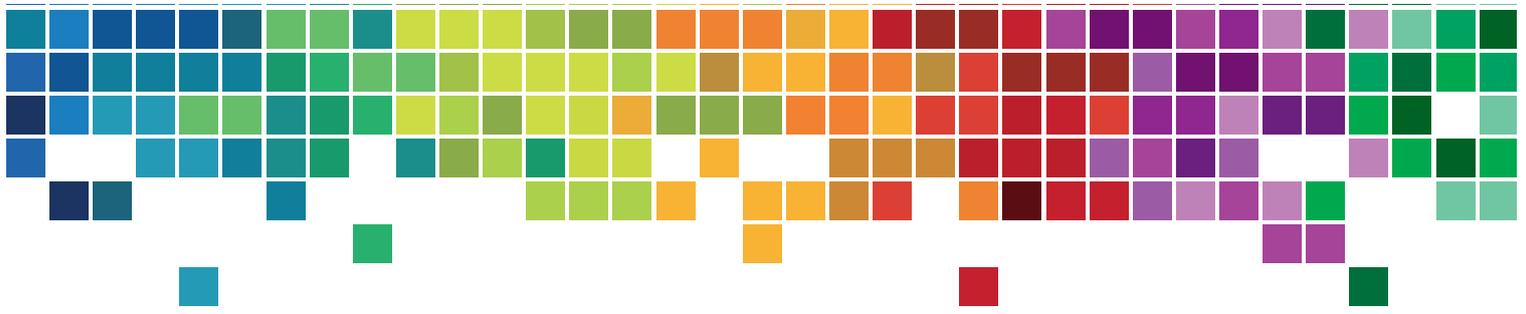
**Janet Davies**  
Director of Nursing and Service Delivery, Royal College of Nursing

**President Professor Sean Kehoe**  
British Gynaecological Cancer Society

**President Professor Norman Williams**  
Royal College of Surgeons

**President Dr Anthony Falconer**  
Royal College of Obstetricians and Gynaecologists

**Professor Sir Bruce Keogh**  
NHS Medical Director



## Foreword

I am delighted to introduce this document on enhanced recovery (ER) that is intended to place ER at the heart of modern high quality care pathways, and thus help to continuously improve the quality of care for our patients. Enhanced recovery is not a new concept. There is increasing evidence that it improves patient experience and shortens length of stay with no increase in readmissions, so it should be considered as the norm for high quality acute care pathways.

Quality is the driving principle of ER. ER improves the patient experience by getting patients better sooner, and changes clinical practice to make care safer and more efficient. Originally established in elective surgery, ER consists of identifying many steps in the whole care pathway where marginal gains can be made, leading to much better quality outcomes, rather like the approach of the British Cycling team!

There are many components to a good quality pathway, the starting point is the five P's:

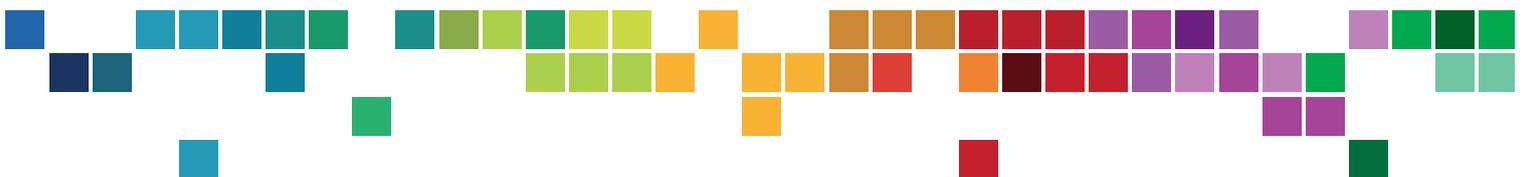
- Primary care 'fitness for referral' for common conditions e.g. anaemia – managing the risk
- Patient involvement: shared decision making
- Prehabilitation, assessment and care planning
- Pain relief, fluid management, anaesthetics
- Preparation for and effective discharge.

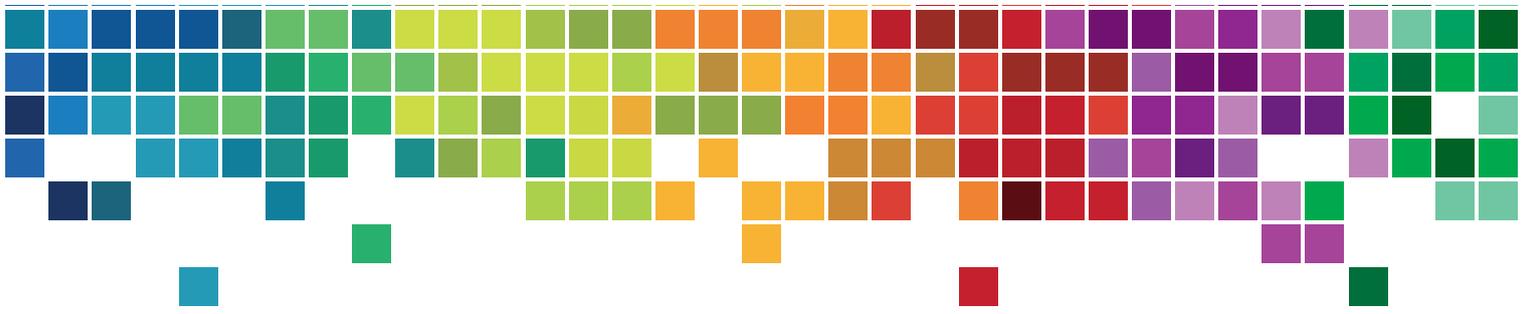
Given the current national focus on delivering quality clinical pathways seven days a week, integrated across the whole health care system and the Royal Colleges commitment to drive the delivery of ER as standard practice, this document sets out the levels of ambition to extend the principles of ER beyond elective care.

Spread and adoption of ER is continuing to happen to make it the norm. The principles of ER as a good quality pathway are being extended into emergency care, maternity care and acute medicine. A good example is the work on using ER in emergency laparotomy, where early results suggest a big improvement in patient outcomes and a reduction in inpatient stay. Much of the developing work in ambulatory acute medicine is also based on the principles of ER.

This document demonstrates the wide support for ER from patients and professional organisations. It describes some of the principles involved, with examples of specific steps that can lead to improvement. It also shows some of the improvement gains that have already been made nationally as a result of the initial implementation of ER. Our challenge now is to embed the principles of ER across the whole pathway.

**Celia Ingham Clark**  
National Clinical Director for Enhanced Recovery and Acute Surgery





## Enhanced recovery: a patient centred approach

Neil Betteridge, Enhanced Recovery, Patient and Public Adviser

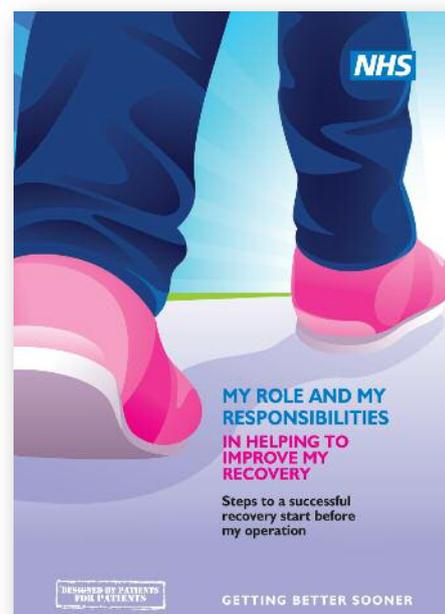
**From its inception, enhanced recovery has placed the individual patient at the heart of its pathway.** Indeed, the two components of this publication's title are inextricably linked: it is because the patient has a 'better journey' from enhanced recovery that the NHS achieves the 'better deal'. The enhanced quality of the patient experience is what realises the secondary gains, such as reduced length of stay without any increase in unscheduled readmissions.

In these last 12 months, the potency of a patient-centred approach has helped to drive spread and adoption of enhanced recovery more widely. In April 2012, when the then Health and Social Care Minister Paul Burstow launched the patient-developed leaflet 'My Role and My Responsibilities in helping to Improve My Recovery', at the Enhanced Recovery Summit, this approach became further embedded. Three months later, when providers across England had requested 100,000 copies of this leaflet, it was clear that policy commitments towards patient-centredness were rapidly translating into practice.

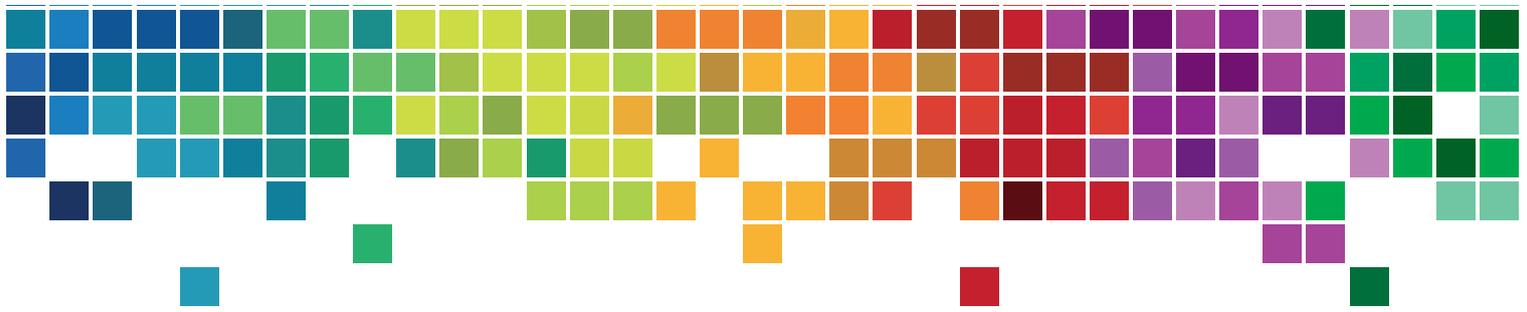
The unique aspect of the leaflet, as it says on its front cover, is that it has been 'designed by patients for patients.' The Enhancing Patient Experience working group had followed gold standard protocols based on a combination of the Department of Health (England) Information Standard and best practice imported from leading user-led health charities working in the third sector.

By ensuring that experienced patient representatives and individual patients who had experienced enhanced recovery led on identifying the need for this leaflet, designing it and advising on its content, a resource has been established which is now benefiting thousands of patients and simultaneously supporting the spread and adoption of enhanced recovery.

Importantly, this focus on the individual also helps maintain focus on the whole pathway and not just the admission phase. To achieve the active role in their recovery which the pathway calls for, the patient must be well prepared prior to admission and supported in advance of discharge to achieve optimal reablement post-discharge. Any discontinuity across the whole pathway would jeopardise the desired outcome of a smoother journey, better outcome and improved experience for the individual.



Online viewing at:  
[www.nhsiq.nhs.uk](http://www.nhsiq.nhs.uk)



To promote preparedness amongst patients, as well as support more widespread awareness and adoption, the Enhancing Patient Experience working group has been systematically engaging with national voluntary organisations relevant to specialties carrying out enhanced recovery protocols.

These have included Beating Bowel Cancer, Age UK, Cancer Research UK and Macmillan to date. Through the work of these organisations and others to whom people often turn when considering or planning surgery, we are ensuring that helpline services, publications, websites and events which are trusted by hundreds of thousands of patients are featuring enhanced recovery and making more people aware of what they can do to support themselves along their journey.

So by keeping the patient at the centre of the pathway, what might otherwise be distinct policy areas are able to converge cohesively. From shared decision making when discussing options with their GP or specialist nurse, through to alignment with NICE Quality Standards on Patient Experience, enhanced recovery continues to show how transformational it can be when people who use our services have the opportunity to inform them.

Truly a 'win-win'.

## Barry's story

**“I was out of bed and kept active, that's what helped my recovery.”**

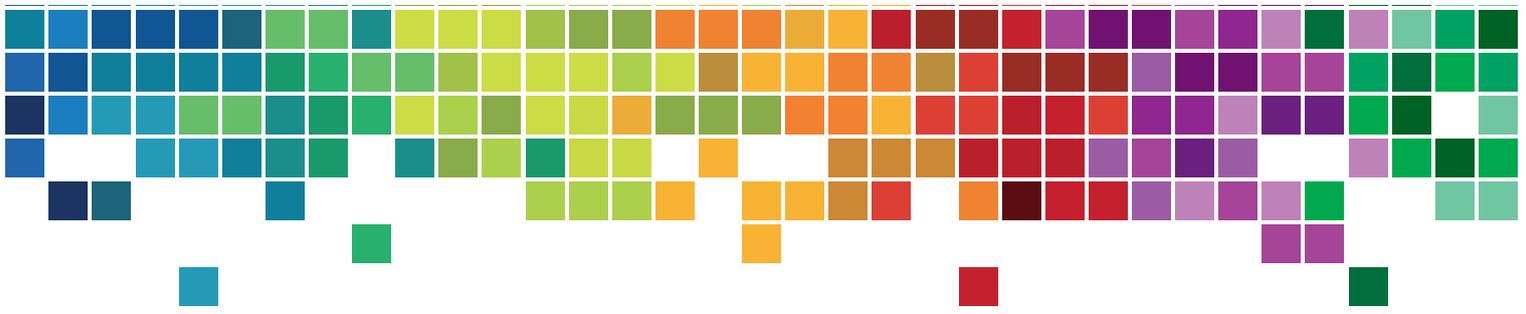
**Barry was admitted on the day of his colorectal surgery and was out of hospital within four days.**



From going to see the GP, surgeon and having the endoscopy, I knew exactly what was going on, and I got a copy of any letters sent - it was a level playing field and it all happened really quickly. The day of the endoscopy they came back and said I need to have an operation. I was told to get as much exercise as I could to prepare for my operation. I was given information that I could understand on how to enhance my recovery, it was tailored to me and my specific problem.

I went in the morning of my operation and they went through the information again. After the operation they wanted you up and about the next morning. My catheter was taken out, they said the sooner you're up the better, so I thought I will go with it. They helped me get through the operation and recover quickly but it took a little bit of effort on my part. I was out of bed and kept as active as I could and I'm sure that's what helped my recovery.





## Enhanced recovery: the story so far

**Enhanced recovery is the process of delivering continuous improvement across the whole acute care pathway, centred on shared decision-making between the patient and their healthcare team.** It builds on the principles first established in day surgery, and is about adding key steps systematically to as many care pathways as relevant, and about removing redundant steps to shorten and smooth the pathway.

- ➔ Healthcare professionals want to deliver the best possible care for their patients. Initial work by Kehlet<sup>1</sup> in 1993 showed that a focus on the whole care pathway for patients having elective colorectal surgery enabled patients to recover more quickly, with a shorter period of weakness after operation and a shorter hospital stay. Early involvement of patients throughout the pathway improved their understanding and experiences. In some cases patients could lead their own pathway and it became clear that shared decision making is key to success in improving the experience of care.
- ➔ In 2009, the Department of Health in England set up the Enhanced Recovery Programme (ERP)<sup>2</sup>, across eight elective surgical procedures, under the leadership of Professor Sir Mike Richards with Professor Monty Mythen an anaesthetist/intensivist and Mr Alan Horgan, a colorectal surgeon, as national clinical leads.
- ➔ Clinicians identified and spread best practice through meetings, publications<sup>2,3</sup> and a website. ER gained professional consensus support from 17 Royal Colleges and professional associations (see page 2). Patients led the production of an information leaflet that has been widely distributed across the NHS.
- ➔ Initially ER was introduced for major colorectal surgery and hip and knee replacement. It spread to other major cancer surgery, particularly in major urology and gynaecology and has been taken up and extended by a social movement of patients. It has been endorsed by a broad consensus of professional colleges and associations.
- ➔ Recent studies provide evidence that ER is a cost-effective approach to care<sup>4</sup> which significantly reduces the risk of medical complications and improves patients quality of life<sup>5</sup>. ER is now being extended to emergency surgery and acute medicine<sup>3</sup> and recovery from critical illness.

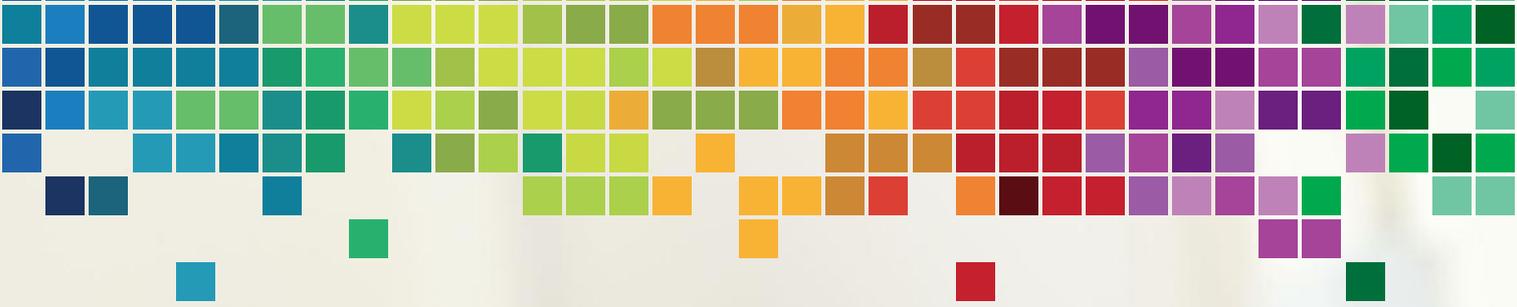
<sup>1</sup> Kehlet H. Multimodal approach to control postoperative pathophysiology and rehabilitation. *Br J Anaesth* 1997; 78:606–617.

<sup>2</sup> Guide to implementing Enhanced Recovery, Department of Health 2010

<sup>3</sup> Fulfilling the potential; A better journey for patients and a better deal for the NHS, Enhanced Recovery Partnership 2012

<sup>4</sup> Cost-effectiveness of the implementation of an enhanced recovery protocol for colorectal surgery *British Journal of Surgery* 2013; 100: 1108 – 1114

<sup>5</sup> Randomised clinical trial on enhanced recovery versus standard care following open liver resection *British Journal of Surgery* 2013; 100: 1015-1024



## Sandra's story

**“I had high energy drinks the day before my operation to build me up.”**

**Sandra went into hospital on the day of complex urological surgery and stopped smoking to enhance her recovery.**

At pre-operative assessment clinic they explain everything to you, what was going to happen and gave me two high energy drinks to drink, the day before to build me up for the operation.

I suppose it's common sense, you eat the right things. Now, I eat more fruit and vegetables than before. I was quite a heavy smoker and now I am puffing away on that electric thing.

## Keith's story

**“I made the decision regarding the type of surgery to have.”**

**Keith was back at home within a day of his robotic prostate surgery.**

In view of my age, the type of cancer, the risks associated, I felt that robotic surgery was the best option for me, the consultant supported my view. My recovery time was significantly shorter than more invasive surgery. I followed the guidance that was given to me as this was my responsibility. I was in hospital at 7.30am, and the next day was up and dressed, armed with urinary catheter and released from hospital.

At home, it was the encouragement to keep a diary which stimulated me to do things. I was going for short walks daily, you make sure you rest when you have to and exercise when you have to. At 10 days I went to the church service.

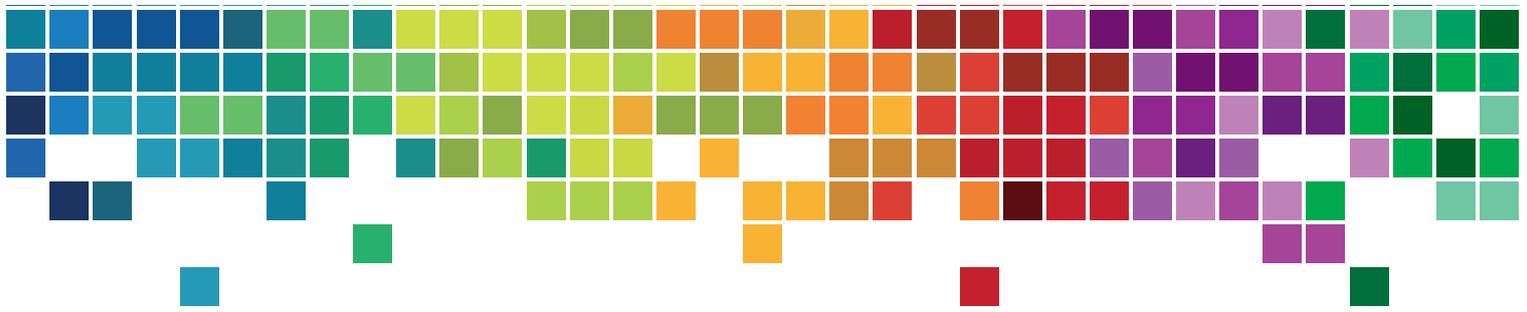
## Brian's story

**“Everything that should have happened did .... the pain management enabled me to walk straight away.”**

**Brian knew what to expect after surgery, his pain management enabled him to walk on the day after his operation.**

I wanted to know what was going to be done. The communication with me is what I wanted and what I expected. Being a retired pilot, I am used to being briefed. They tell you what they are doing.

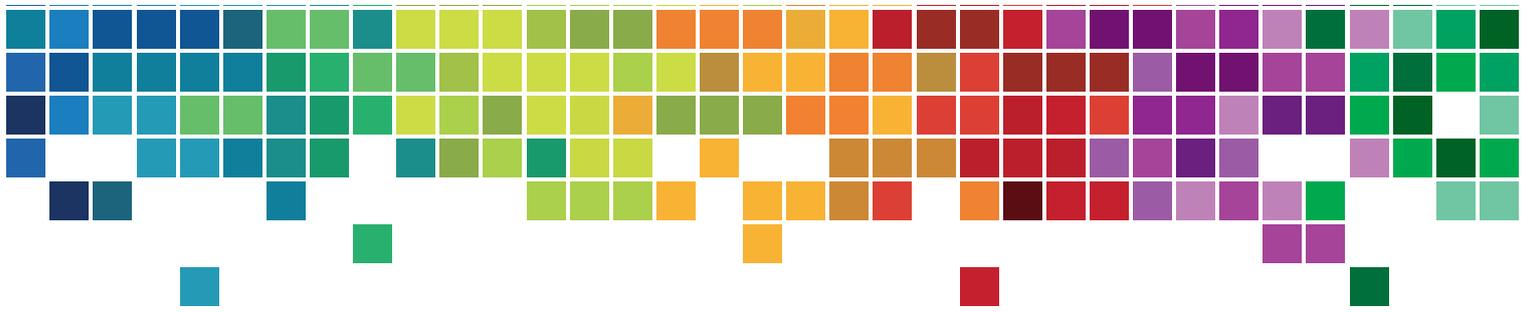
At pre-operative assessment I was allowed to ask pertinent questions, they discussed what would happen and how they would manage me and my pain. Anything that should have happened did. The pain suppression I had was spot on and I found I could walk straight away.



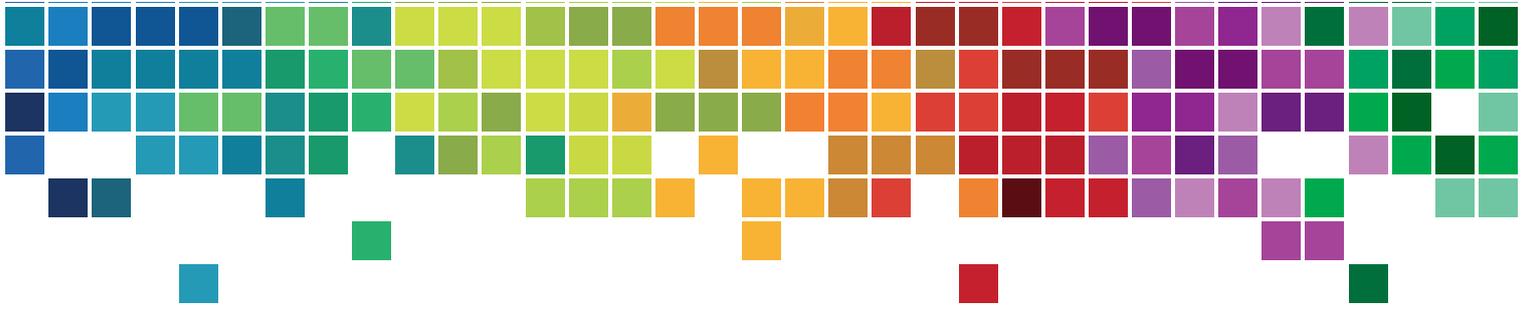
## What is involved in enhanced recovery?

ER involves the whole pathway of care. In elective surgery better information enables a person to make a fully informed choice to have a procedure and good preparation to optimise their fitness for surgery and understand the pathway ahead. It improves patient experience and the efficiency of delivery of the care pathway. Post-operative care planning in advance means patients and their carers know what to expect and what they can do to achieve better and faster recovery.

Actions	Examples
<b>IN PRIMARY CARE</b>	
<p>'Fitness for referral' Start shared decision making processes at consultation phase</p> <p>Optimise patient health before admission</p>	<p>Discuss options for treatment using patient decision aids</p> <p>Give patient information to make an informed choice about:</p> <p>(a) Having the operation or not (b) Contributing personally towards getting a high quality outcome</p> <ul style="list-style-type: none"> <li>• Correct anaemia</li> <li>• Manage hypertension</li> <li>• Improve diabetic control</li> <li>• Stop smoking</li> <li>• Encourage weight loss</li> </ul>
<b>BEFORE ADMISSION</b>	
<p>Pre-operative health and risk assessment</p> <p>Shared decision making. Give the patient information to make an informed choice about contributing personally towards getting a high quality outcome</p>	<ul style="list-style-type: none"> <li>• Complete consent process before admission</li> <li>• Joint school</li> <li>• Multi-professional input to discharge planning</li> <li>• Agree care pathway plan including length of stay, likely time to return to activities of daily living and return to work</li> <li>• Standardised pre-operative assessments</li> <li>• Cardiopulmonary exercise testing where appropriate</li> <li>• Pre-operative Patient Reported Outcome Measures</li> </ul>
<b>ADMISSION</b>	
<p>Day of surgery admission</p> <p>Involve patient in care pathway</p> <p>Further optimisation</p> <p>Prepare for discharge</p>	<ul style="list-style-type: none"> <li>• Share written plan again including estimated discharge date</li> <li>• Venous thromboembolism prophylaxis</li> <li>• No bowel preparation</li> <li>• Carbohydrate loading</li> <li>• Reduced starvation</li> <li>• Prepare for discharge plan and medication to take home</li> </ul>



Actions	Examples
<b>OPERATION</b>	
<p>Optimise fluid balance and cardiac function</p> <p>Manage pain control while minimising post-operative disability</p> <p>Minimise post-operative nausea and vomiting</p> <p>Minimise infection risk</p>	<ul style="list-style-type: none"> <li>• Goal directed fluid therapy using active monitoring techniques as indicated</li> <li>• Aim for 'zero balance' avoiding crystalloid excess</li> <li>• Regional or spinal anaesthesia with sedation where appropriate</li> <li>• Minimally invasive surgery</li> <li>• Prophylactic antiemetics where indicated</li> <li>• Intra-operative temperature control</li> <li>• Prophylactic antibiotics where relevant</li> </ul>
<b>POST-OPERATION</b>	
<p>Involve patient in care plan</p> <p>Minimise starvation/catabolism</p> <p>Minimise disability</p> <p>Manage pain pro-actively</p> <p>Prepare medication to take home before estimated discharge date</p>	<ul style="list-style-type: none"> <li>• Patient care plan +/- diary</li> <li>• Confirm estimated discharge date</li> <li>• Early oral fluid and food</li> <li>• No nasogastric tube</li> <li>• Stop intravenous fluids as early as possible</li> <li>• Planned early mobilisation with walking goals</li> <li>• Avoid drains and minimise catheter use</li> <li>• Avoid systemic opiates where possible</li> <li>• Regular oral paracetamol and non steroidal anti-inflammatory drugs if appropriate</li> </ul>
<b>TRANSFER TO HOME/COMMUNITY</b>	
<p>Effective communications with primary/community team</p> <p>Criteria based discharge</p>	<ul style="list-style-type: none"> <li>• Reconfirm any support needed post discharge e.g. physio, stoma care</li> <li>• Confirm expected discharge date</li> <li>• May be nurse led against a protocol</li> </ul>
<b>FOLLOW UP</b>	
<p>Telephone follow-up</p> <p>Care plan includes information on likely time to return to activity for daily living/work</p>	<ul style="list-style-type: none"> <li>• Use checklist with prompts to visits/reviews if needed</li> <li>• Patient Reported Outcome Measure review</li> <li>• Patient experience review</li> </ul>



## Enhanced recovery: implementation progress to date

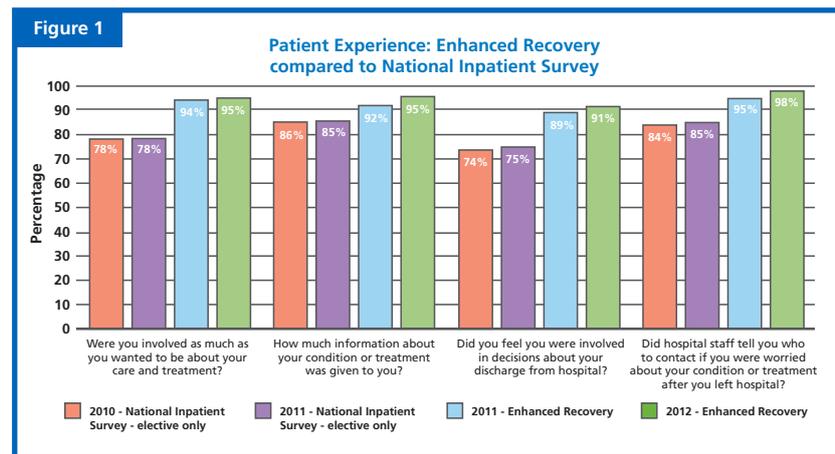
A range of outcome measures have been used to evaluate the progress made nationally and locally across the original eight procedures (colectomy, excision of rectum, cystectomy, prostatectomy, abdominal and vaginal hysterectomy and total hip and knee replacements).

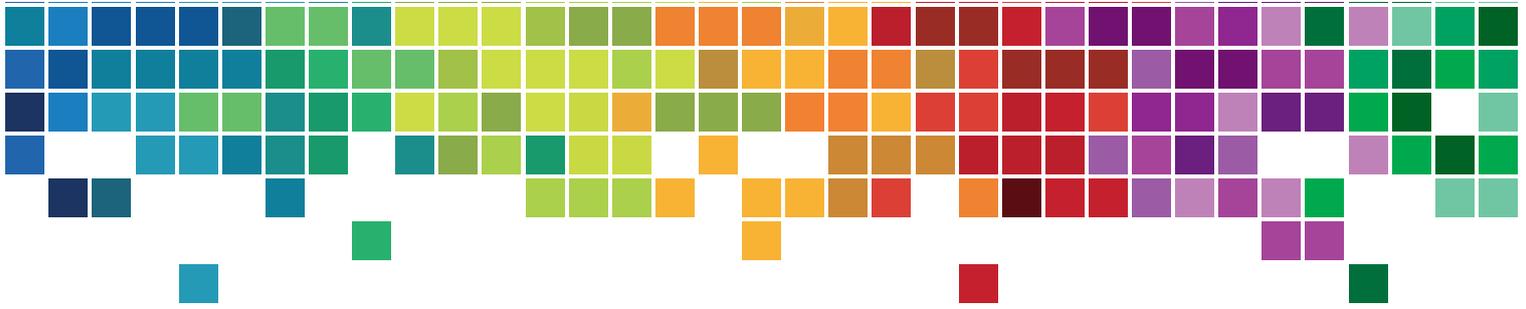
Key outcome measures include:

- Patient experience
- Length of hospital stay
- Readmission rates
- Day of surgery admission rates
- Data from the enhanced recovery reporting toolkit on process measures.

### Improved patient experience

The level of patients' experience reported in Trusts who are implementing ER is higher than that reported nationally as the national inpatient survey demonstrates (Figure 1). Four questions taken from the national inpatient survey were used to audit patient experience.





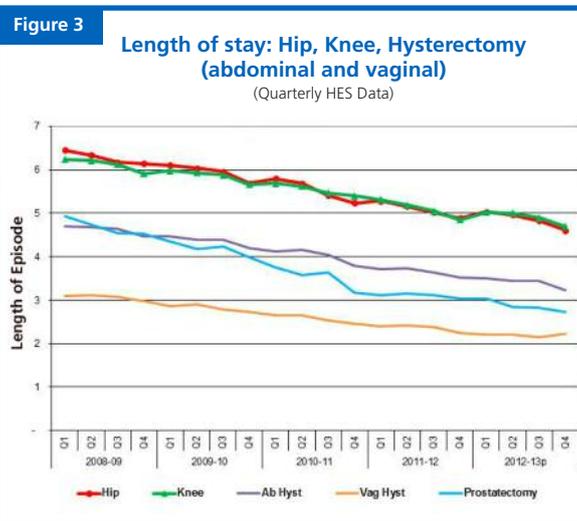
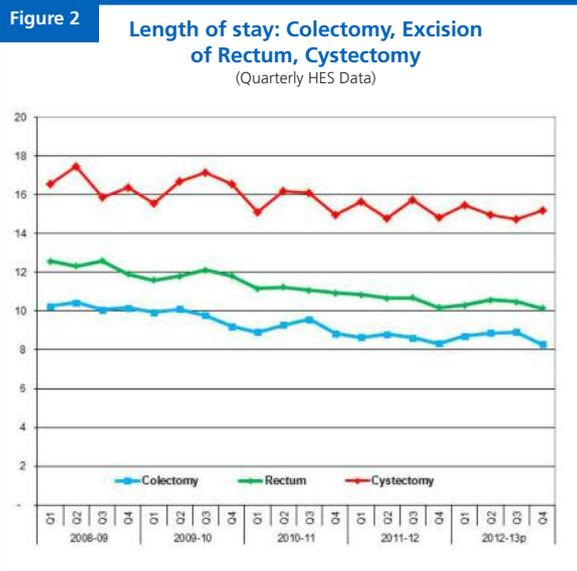
**170,000 fewer bed days since 2008/09**

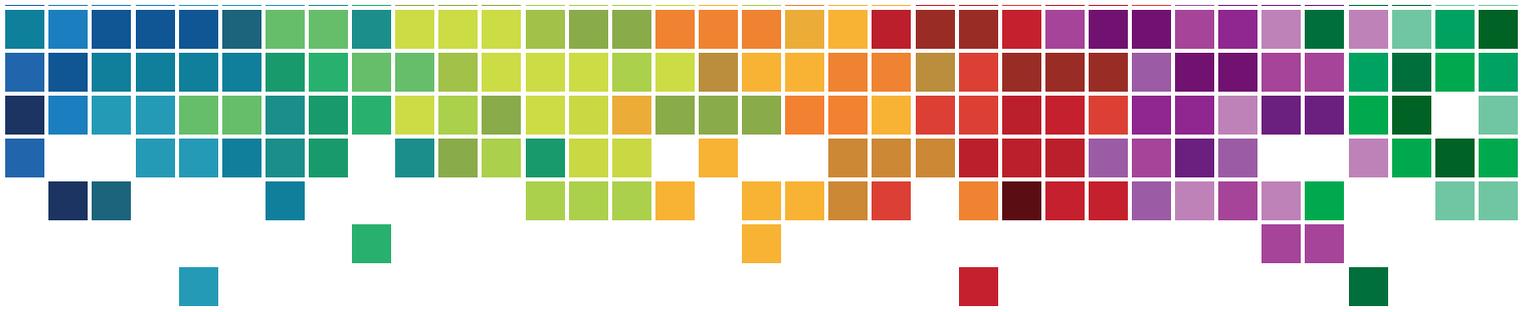
Proactive management to help patients get better quicker has resulted in a reduction in length of stay. Despite rises in activity for almost all of these procedures, there were nearly 170,000 fewer bed days for these procedures in 2012/13 than in 2008/09.

It has been estimated that further implementation of ER could save up to 20,000 additional bed days per year.

Regular benchmarking data on ER measures and a national enhanced recovery toolkit for local audit of ER implementation is available to the NHS.

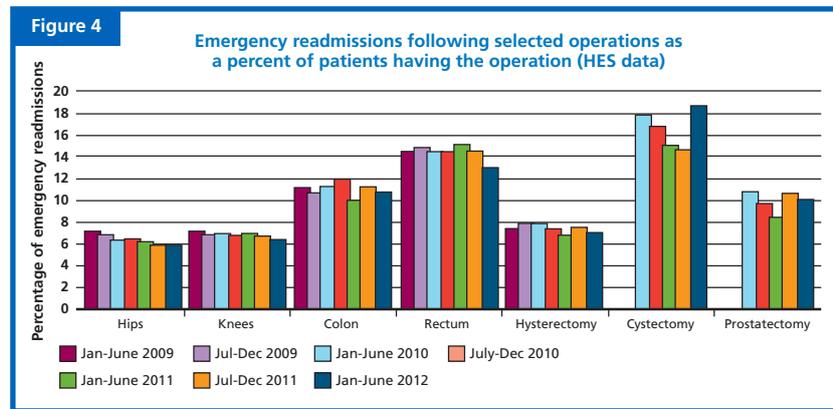
The ER toolkit enables organisations to benchmark metrics such as length of stay, day of surgery admission rates, compliance with 19 elements of enhanced recovery and readmission rates for procedures against the rest of the country. In some localities it is used to monitor CQUINs. Brief guidance for commissioners is available at: [www.nhsiq.nhs.uk](http://www.nhsiq.nhs.uk)





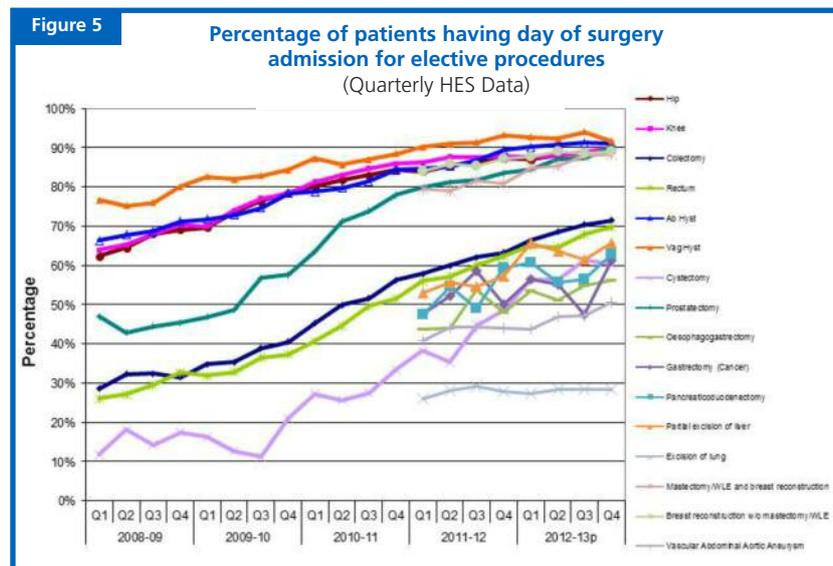
### No difference in readmission rates

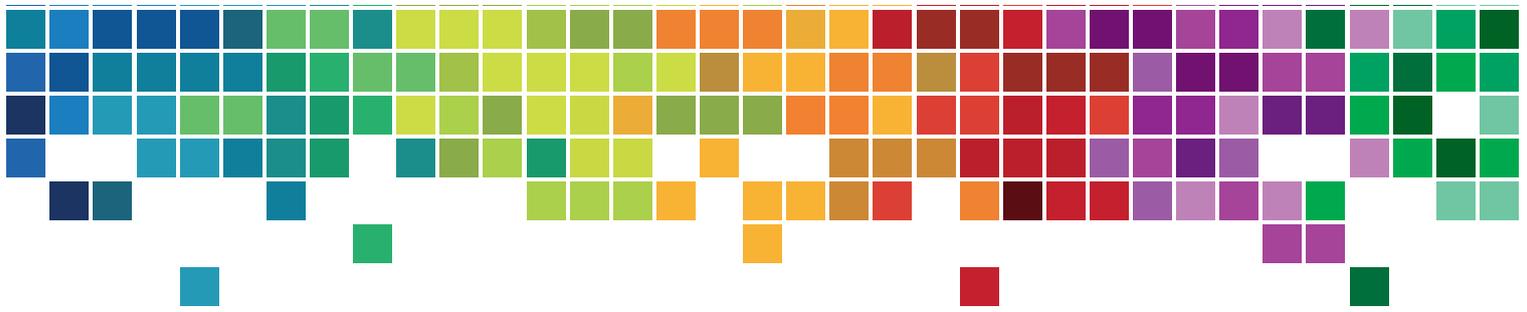
Readmission rates for organisations known to have implemented ER are not significantly different from the national average (Figure 4).



### Increasing day of surgery admission

Admission on the day of surgery continues to increase. The pace of change varies across specialties. Figure 5 also shows the baseline position of other specialties who are embarking on the adoption of ER.





## The Royal Colleges lead the way... Enhanced Recovery Consensus Statement in action



Since signing the consensus statement and progressing professional and public awareness of enhanced recovery (ER) the Royal College of Anaesthetists acknowledge that ER is now a standard for appropriate continuous patient care, but there is much to do to improve the care of patients undergoing major surgery.

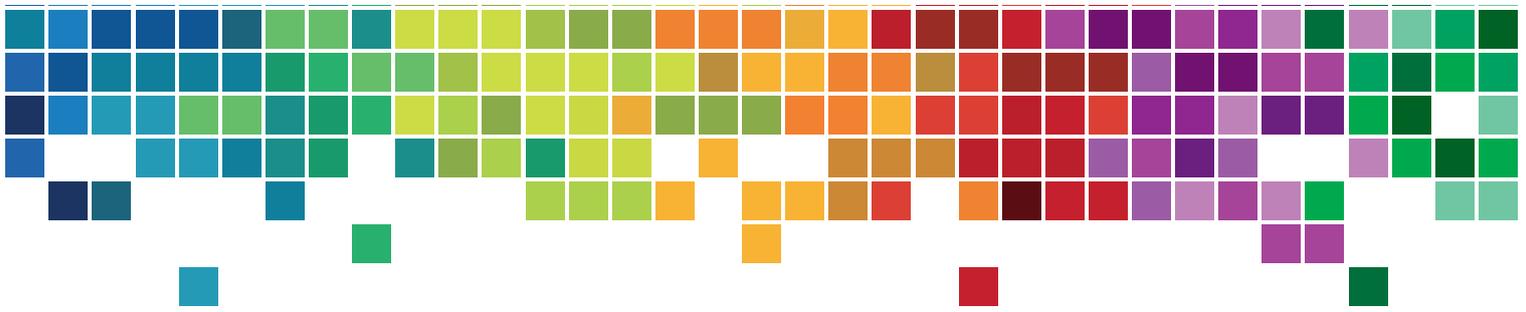
We need to spread ER into urgent and emergency surgery, we need to improve systems for 'fitness for referral' and develop better tools to identify surgical risk and improve shared decision making. We are committed to embedding the principles of ER in all undergraduate, post graduate and specialist programmes and recognise the importance of building clinical support for seven day services into job plans to enable the appropriate recovery of patients seven days a week.

Dr J P van Besouw, President,  
Royal College of Anaesthetists



I believe that the principles of enhanced recovery can be applied to emergency as well as elective surgery and have the potential to improve the quality of patient care and also reduce delays in care pathways.

Professor Norman S Williams,  
President, Royal College of Surgeons



## Summary and future levels of ambition

ER clearly demonstrates that system wide change is possible in “two years not 20 years.” The work so far on enhanced recovery has shown its ability to improve patient experience, patient safety and outcomes by ensuring that patients get the same standards of clinical care seven days a week. Its ability to reduce length of stay without increase in readmissions provide real efficiency benefits for the NHS. There are publications that show that ER improves clinical effectiveness and reduces complications after surgery. ER is now the standard care pathway for many patients having major surgery, but we now need to extend its use, particularly into emergency surgery and acute medicine.

For the future our challenge is as follows.

### **Increase patient engagement**

- The ER patient information leaflet has been very valuable to inform and empower patients, with over 100,000 copies printed and circulated. Going forward we need to extend the use of patient diaries and technology such as apps to help patients take control of their own acute pathways, supported by information from their healthcare team.

### **Ensure that all patients get the same standards of clinical care seven days a week**

- For patients requiring very resource intense care pathways after elective surgery, operating schedules may need to be adjusted so that these patients have surgery early in the week to avoid excessive demand at weekends

### **Develop systems to optimise patients fitness for referral and pre-hospital risk stratification to improve patient safety**

- Work with primary care to improve ‘Patient fitness for referral.’ We must work with GPs and practice nurses to improve systems particularly in relation to managing hypertension, diabetes and anaemia before referral for elective surgery
- Enhance systems for communication of risk with patients by developing pre-hospital triage of higher risk patients to ensure they can make informed decisions about their care, and to improve effective utilisation of critical care resources

### **Develop internationally comparable outcome measures to further build on the evidence base**

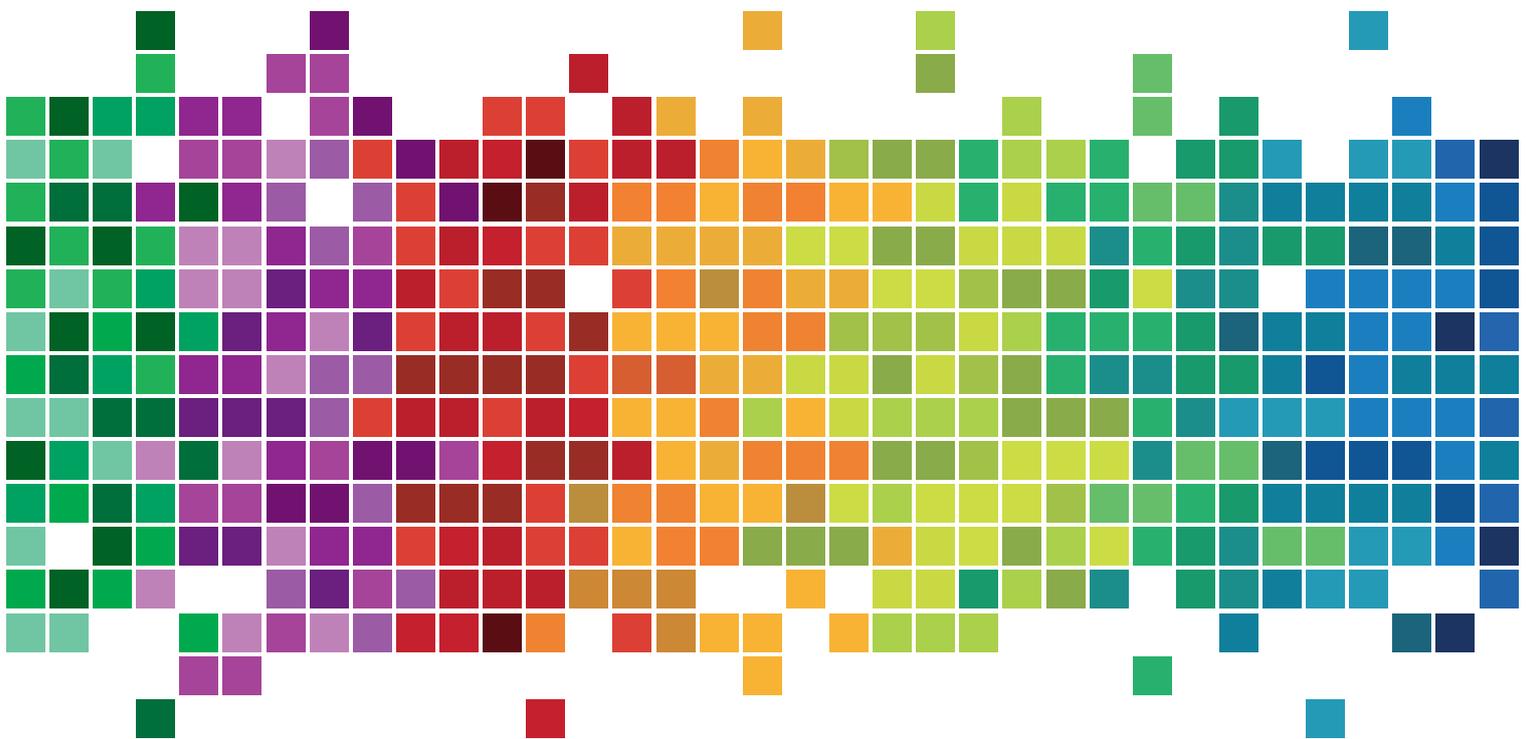
- Work with Health Education England and education providers to further embed enhanced recovery principles in all undergraduate and post-graduate training
- Improve the smooth transition from in-patient acute care to step-down care and ‘Hospital at Home’ where appropriate
- Implement the use of appropriate outcome measures such as disability-free one year survival to build on the evidence base internationally

### **Enhanced recovery is about delivering high quality 21st century care so we must make sure that all the patients who can benefit from this approach do so.**

# Acknowledgements

Acknowledgements and thanks go out to all of the many individuals, clinical teams, organisations, patient groups, Royal Colleges and Associations for their continued advice and support in taking forward enhanced recovery and building the momentum and making it the standard pathway of care across England and their this publication and for supporting the National Enhanced Recovery Summit (April 2012) and importantly for their continued support in taking forward enhanced recovery and building the momentum for enhanced recovery becoming the standard pathway of care:

- Professor Sir Mike Richards
- Professor Monty Mythen
- Mr Alan Hogan
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- NHS Improvement
- National Cancer Action Team
- Advancing Quality Alliance (Aqua)
- National Enhanced Recovery Clinical Leads and Advisors
- SHA Enhanced Recovery Leads
- NHS Improvement Associates
- The Enhanced Recovery Partnership Advisory Board
- Operational and Working Groups
- The Enhancing Patient Experience Working Group
- Royal College of Surgeons
- Royal College of Anaesthetists
- Royal College of Nursing
- Association of Surgeons of Great Britain and Ireland
- British Association of Urological Surgeons
- Royal College of Obstetricians and Gynaecologists
- British Orthopaedic Association
- Royal Society of Medicine
- British Gynaecological Cancer Society
- Association of Coloproctology of Great Britain and Ireland
- BASO ~ The Association for Cancer Surgery
- British Association of Day Surgery
- Royal College of Physicians
- Royal College of Radiologists
- Faculty of Clinical Oncology
- Future Forum
- Royal College of General Practitioners
- Faculty of Intensive Care Medicine
- The Allied Health Professional Federation
- The Enhanced Recovery Pathway Steering Group
- National Clinical Analysis and Specialised Applications Team



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Email: [enquiries@nhsiq.nhs.uk](mailto:enquiries@nhsiq.nhs.uk)  
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