



Enhanced recovery for elective surgery

Provided by: Department of Health

Summary

Enhanced recovery programmes use evidence-based interventions to improve pre-, intra-, and post-operative care. They have enabled early recovery, quicker discharge from hospital, and more rapid return to normal activities. Quality is improved by reducing complications and enabling a more rapid return to function. Productivity is improved by reducing hospital stay.

Evidence summary

- Yes** The intervention has been successfully implemented
- Yes** The intervention has been successfully replicated
- Yes** The intervention is linked to standards or guidance
- Yes** The intervention is supported by one or more national organisations
- Yes** An evaluation of the effects of the intervention has been carried out
- Yes** There are publications relating to this intervention

The proposal

Proposal description Enhanced recovery is a novel approach to elective surgery, which ensures that patients are in the optimal condition for treatment, have the best possible care during their operation, and experience optimal post-operative rehabilitation. It has been demonstrated to reduce length of stay from 16 to three days for colorectal surgery, and from eight to three days for musculoskeletal surgery.

The enhanced recovery programme is currently a partnership between the Department of Health's Elective Care & Diagnostics and Cancer branches, NHS Improvement, the NHS Institute for Innovation and Improvement, and the National Cancer Action Team. The proposal for 2010/11 is for an implementation programme to support spread and adoption of enhanced recovery across the NHS over two years, working with strategic health authorities (SHAs) to ensure transfer and sustainability of the expertise of this model of care.

The partners will maintain their commitment to the programme so

Quality and Productivity

there is national support, and will work in partnership with the SHAs to implement enhanced recovery in the chosen four specialties (colorectal, musculoskeletal, gynaecological and urological surgery). The programme would also use the year to focus on spread of the enhanced recovery principles to other specialties, as agreed by the existing national Steering Board.

The implementation options will be flexible and agreed with the 10 SHAs, but will combine the following features:

- a campaign to increase the spread of local expertise and experience, capacity and capability;
- links with local innovation hubs (and existing training centres for enhanced recovery) and the enhanced recovery innovation sites from 2009/10;
- links with local quality and productivity programmes;
- it will be based on a gap analysis to determine where the capacity and capability weaknesses are, eg musculoskeletal or gynaecology; and
- it will consider targeting by length of stay profiles to ensure maximum impact.

Delivery will comprise three components:

1. local SHA-based workshops and masterclasses to assist in spread;
2. three national workshops; and
3. programme management with some service improvement and facilitation support.

The estimated cost of implementing the programme in 2010/11 is circa £1.2 million to £1.8 million.

What is enhanced recovery?

The approach, sometimes known as fast-track, rapid or accelerated recovery, was pioneered and evaluated in Denmark, and has been successfully implemented in a few centres in England. The scope for more patients to benefit is large (see relevant benefits section).

Enhanced recovery has been applied to colorectal, orthopaedic, gynaecological and urological operations, but could possibly be extended to some other forms of surgery. Patients on enhanced recovery pathways recover more quickly following surgery, and can leave hospital and get back to normal activities sooner.

Enhanced recovery of surgical patients is an evidence-based approach involving a selected number of evidence-based interventions which, when implemented as a group, have a greater impact on outcomes.

For all of this to happen, three features are essential:

1. The patient must be in the best possible condition for surgery – for example, identify if anaemia, hypertension and/or diabetes is present, and correct it. This is ideally done by the GP prior to referral, or, at the latest, at pre-operative assessment. The patient must be involved and be a partner in their care through being provided with the appropriate information, enabling shared decision-making and understanding of expectations.
2. The patient has the best possible management during their operation to reduce pain, gut dysfunction and immobilisation – for example, the appropriate anaesthetic, fluids and pain relief should be used, and minimally invasive techniques should be used where/when appropriate.
3. The patient experiences the best post-operative rehabilitation, 7 days a week and 365 days a year, to enable early recovery, discharge from hospital and return to their normal activities – for example, planned early mobilisation, and commencing oral fluids and nutrition soon after surgery.

Enhanced recovery programmes should involve the whole health community, including primary and secondary care, surgeons, anaesthetists, nurses and allied health professionals, and NHS managers in primary care trusts and acute hospitals.

Together these principles mean patients recover from surgery sooner and they leave hospital in a better condition than when using traditional approaches.

Further background information on the programme is available.

Purpose of change

To improve clinical outcomes, patient experience, quality of elective care pathways and staff experience, all of which lead to significant reductions in length of stay and cost-efficiency savings through release of resource.

National implementation of the Enhanced Recovery Programme across procedures in four specialties could achieve bed day savings of at least 140,000 and potentially more than 200,000, equivalent to between £35 million and £52 million. Expected savings are closer to the higher end of this range.

This calculation is based on improvement in mean elective lengths of stay across the majority of providers to the good levels achieved in other trusts. The 'good' level is defined as the mean length of stay for each procedure group in a provider towards, but not at, the lower end of the length of stay range when providers are ranked by mean length of stay. In practice this is the length of

Quality and Productivity

stay of the provider at either the edge of the top 10% or the top 20% of all providers.

The 10% of providers with the longest lengths of stay may not be able to achieve such reductions in length of stay because of local conditions, such as high underlying levels of comorbidities, socio-economic factors, etc. These providers are therefore excluded from the savings calculation, as are any further improvements in the top 20% of providers, although in practice they may achieve some savings and supplement the estimates presented. This is one reason why the expected savings are towards the upper end of the range given.

Further information is available on potential bed day savings.

Pathway group	Planned care
Type of change	Service redesign / new way of working and new technologies
Related standards and guidance	18 Weeks maximum waiting times, the Cancer Reform Strategy (Transforming Inpatient Services), World Class Commissioning, National Confidential Enquiry into Patient Outcome and Death recommendations, Improving Surgical Outcomes Group recommendation, and the Care Quality Commission.
Other information	It would be remiss of the NHS not to support the implementation of a model of care that really sees patients' clinical outcomes and experience improved, as well as reducing other risks (such as hospital acquired infection) by a shorter length of stay.

Evidence of implementation

Organisations where the proposal has been implemented

Approximately 50 trusts in England are implementing enhanced recovery already to varying degrees across the main four specialties (musculoskeletal, colorectal, gynaecology and urology); 14 more are currently working on implementation with support from the partnership programme. A map of expert sites is available.

Case studies are also available for:

- Royal Surrey County Hospital NHS Trust;
- Salisbury Hospital NHS Foundation Trust;
- North Bristol NHS Trust;
- The Hillingdon Hospital Trust;
- South Devon Healthcare NHS Foundation Trust; and
- The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust.

Also available is a case study from Addenbrooke's Hospital, showing the beginnings of implementing enhanced recovery in gynaecology (the trust will roll out the full programme from 1

Quality and Productivity

January 2010). Links are also being made to the NHS Improvement: Transforming Inpatient Care programme.

Effect on quality of care

Enhanced recovery has significant positive impact on the three domains of quality.

It improves patient experience, first and foremost, by ensuring the patient is in the optimal condition for surgery, thus minimising complications and working towards a more effective rehabilitation and a shorter length of stay. Patients are empowered to take control of their own care pathway, and an involved pre-operative process ensures patients are fully informed and in charge of their care.

With the use of new and different techniques in surgery – such as avoiding the routine use of drains, using technology such as oesophageal Dopplers, surgical techniques such as laparoscopic surgery, and minimally invasive surgery – clinical effectiveness is improved, there can be early detection of complications, and the harmonisation of care across primary and secondary care enables better team working and improved staff experience.

Enhanced recovery has the additional benefits of reducing length of stay, saving bed days (including intensive care and high dependency units, where applicable), increasing capacity, and providing longer-term tariff benefits. It therefore gives the potential to treat more patients with the same resources.

Effect on productivity

Scenario modelling has been produced which demonstrates the potential impact of reduced bed days and capacity-releasing efficiencies in the region of 140,000 to 200,000-plus, and between £35 million and £52 million capacity release of resource.

Timescales for realisation of benefits

Varies from trust to trust: some 3–6 months, others 6–12 months; others may not see full realisation in mean/median length of stay for up to 18 months and this may also be the case nationally.

Additional costs

There are many myths that implementation of enhanced recovery requires additional nursing resource. However, the variation in implementation would suggest this is not the case. There is the requirement to invest in additional time to support change management and service improvement to achieve the change and ensure a sustainable pathway. This may be a nurse or project/general/service improvement manager; clinical leadership time is also necessary. In addition to this, any additional costs the trusts / local health communities may face will vary dependent upon their current pathway and services provided. Some costs are brought forward in the pathway which helps to reduce costs overall. Many of the indicated costs actually pay for themselves over time through reduction in length of stay and efficiency savings. Further work is being done in this area but anecdotally most sites report this to be cost-neutral. Pathway costing slides

are available.

Evidence for the effect on quality and productivity

Refer to case studies under evidence for implementation.

Evidence of replication

The proposal has been replicated

Yes In the NHS
Yes Other UK
Yes International

Details of replication

Enhanced recovery started in Denmark; several English hospitals went to visit Copenhagen's specialists with a view to adopting the model in their own hospitals. This led to the establishment of enhanced recovery (also called rapid recovery or fast-track surgery) in England. Over the last few years, it has spread to approximately 50 sites and four specialties across the UK; a further 16 Enhanced Recovery Innovation Sites (including two in Scotland) have been recruited to work with the programme with a view to spread and adoption in all four specialties and throughout their local area through 2010/11.

Results of replication

Yes A consistent cash-releasing saving or productivity gain was achieved
Yes A consistent gain in the quality of services was achieved

Supporting evidence

Refer to case studies.

Further evidence

Evaluations

The international Enhanced Recovery After Surgery group has evaluated this approach and published its findings; in addition many clinical teams have researched and published their findings on enhanced recovery. The enhanced recovery programme currently hosts a library webpage with all the relevant research articles (see www.18weeks.nhs.uk/Content.aspx?path=/achieve-and-sustain/Transforming-and-improving/enhanced-recovery/library/). In addition, the programme has undertaken some modelling on impact across the NHS. There will be an evaluation of the Enhanced Recovery Innovation Sites programme during March 2010.

Related publications

As above, an abundance of research articles in colorectal surgery, some in musculoskeletal, limited in gynaecology and urology although this is improving. An implementation guide is also being published by the partnership programme, due in December 2009.

Support from national organisations	The Royal College of Surgeons and Royal College of Anaesthetists fully support this approach and are proposing to either publicise case studies or run workshops.
Other evidence	Local modelling on a trust basis or SHA basis may help a more focused impact study. It would need local ownership by the SHAs to model their own forecast.

Implementation advice

Implementation guidance	Year 1 (2009/10) has focused on establishing the evidence base, and bringing together the evidence and the methodology to support spread and adoption into 2010/11. It is proposed to run an implementation programme during 2010/11 focusing on spread and adoption of enhanced recovery in the four specialties (musculoskeletal, colorectal, gynaecology, urology). The programme will also cover increasing the evidence base to support enhanced recovery in other specialties – one innovation site is already testing in liver and upper gastrointestinal surgery. Papers containing details on options and potential costings are available.
Further considerations	Implementation of enhanced recovery is a five-pronged approach – it cannot be implemented by an enthusiastic clinician alone. It is reliant upon clinical engagement from the surgical, nursing, allied health professional, and anaesthetic teams, and also requires executive leadership and primary care engagement. The latter must encompass not only GPs but commissioners as well, as the efficiencies realised do mean more activity can be done with the same resource. In some situations, local negotiations will need to take place as commissioners may be reluctant to see activity increase. Benefits realised may be impeded where there is reliance on other agencies that contribute to the patient pathway, for example social or community care packages. Socioeconomics are also a factor in delivery or reducing length of stay.
Contacts and resources	There is a national Enhanced Recovery Steering Board which combines clinical expertise from surgical, nursing, anaesthetic and allied health profession perspectives, plus expertise in change management and service improvement and expertise around measurement. The programme is producing an <i>Enhanced Recovery Implementation Guide</i> , due for publication in December 2009. In addition, in the NHS there are six training centres for enhanced recovery linked to laparoscopic training centres, and an increasing number of trusts that implement enhanced recovery are running their own local study/training days. The course content and costs charged are variable. Royal colleges, professional organisations, SHAs and cancer networks could help as well if engaged.
