



Conference Programme

2nd ERAS UK Conference

“Meeting Challenges”

2nd November 2012 Cheltenham UK

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¹Thompson R, Kelly L. 1992. Managing Resources in the Operating Department. British Journal of Theatre Nursing, September 1992

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Mr Nader Francis
Yeovil District Hospital

Dr Mike Scott
Royal Surrey County Hospital

Mr Tom Wainwright
Bournemouth University

Mr David MacDonald
Golden Jubilee Hospital

Ms Wendy Lewis
NHS Improvement AQuA

Dr Rachael Barlow
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Mr John McGrath
Royal Devon and Exeter Hospital

Mr Nigel Acheson
Royal Devon and Exeter Hospital

Dr Fiona Carter
ERAS UK

Mrs Elaine Cox
ERAS UK

Mrs Allison Slipszenko
ERAS UK

Dear colleague,

Welcome to the second ERAS UK Conference which, this year, is being held in Cheltenham.

Following our event in Bath in 2011, we have carefully considered the delegate feedback. The organising committee has been expanded to reflect more areas of the UK and different specialties. We hope that this results in an engaging conference that will benefit all delegates and faculty.

The underlying theme of today's event is "meeting challenges" for Enhanced Recovery. We hope that you will get involved in the discussions that will form part of each session.

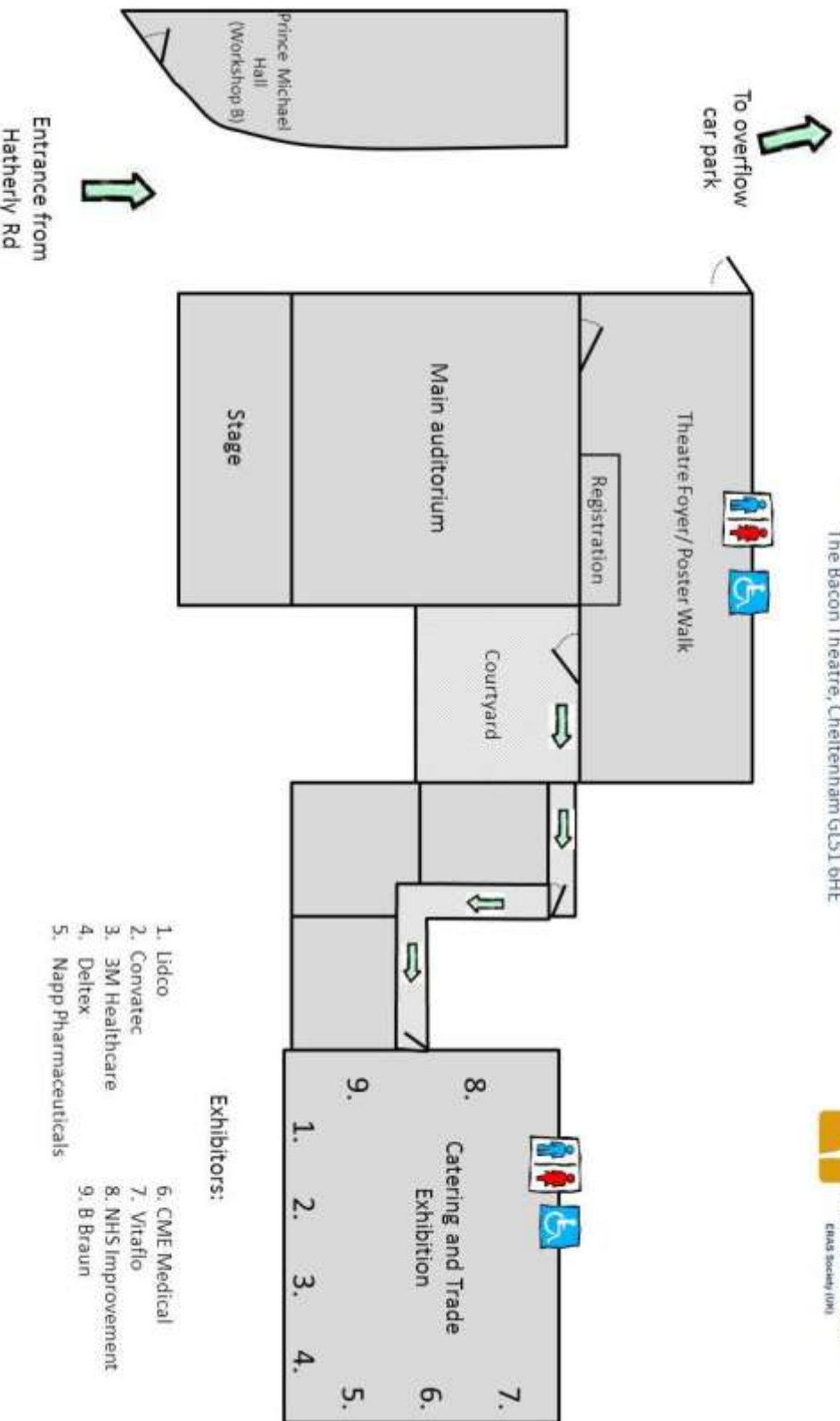
We would like to thank those of you who took part in the pre-conference survey on Patient Experience. We will be keeping the survey open for 1 month after the conference and would be grateful if all delegates could take part. It is available via the front page of our website and also here: <http://www.surveymonkey.com/s/CP8BB9J>

Sincerely,

*ERAS UK Conference
Organising Committee*

2nd ERAS UK Conference Floorplan

The Bacon Theatre, Cheltenham GL51 6HE



TIME	SESSION	FACULTY	VENUE	LEARNING POINTS
8.30	Registration and coffee		Reception	
9:15	Welcome Opening address and Update on National ER Programme	Nader Francis	Main auditorium	Brief background and current state of play for ER in the UK. What is the future for ER in the UK
9:45	Session 1: Measuring ER: Outcomes, processes and patient experience <ul style="list-style-type: none"> Measuring processes and outcomes Recent ERAS UK Delegate Survey Results Patient Experience & Discussion Panel 	Chair: Mike Davidge Panel: Nader Francis, Tom Wainwright, Emma Jones and Patient Representatives	Main auditorium	Provide an overview of the current methods of measuring outcomes and patient experience.
10:45	Coffee/ networking/ poster walk			
11:15	Session 2: Oral presentations		Chairs: Olle Ljungqvist and Mark Daugherty	Main auditorium
	<p>12006 Implementation of an enhanced recovery programme for radical cystectomy</p> <p>12013 Patient-controlled Lumbar Epidural versus Wound infiltration for total knee arthroplasty within an enhanced recovery programme - a randomised clinical trial.</p> <p>12015 Challenging the Old Traditions in Renal Transplantation; The First UK Enhanced Recovery After Renal Transplantation.</p> <p>12019 ERAS in UGI cancer surgery reduces cost of hospital stay</p> <p>12027 Patients Experience of the Enhanced Recovery Programme after Colorectal Surgery</p> <p>12040 Does Oesophageal Doppler add value to an enhanced recovery programme? A prospective cohort study</p> <p>12043 Challenges to the Enhanced Recovery Program in Primary Total Hip and Knee Arthroplasty Patients</p> <p>12060 An Audit of the impact of a written clinical pathway for Enhanced Recovery following Oesophago-gastric Cancer Surgery.</p>		<p>TJ Dutton</p> <p>David McDonald</p> <p>Ahmed Halawa</p> <p>Emma Collins C Tregidon</p> <p>Joel Lambert</p> <p>Hui-Ling Kerr</p> <p>S Das</p>	

2nd ERAS UK Conference Timetable



12:15	Workshop A ER for MSK/ Trauma Surgery: Progress and Challenges Venue: Main Auditorium Facilitators: Tom Wainwright and David McDonald Fractured Neck of Femur <ul style="list-style-type: none"> Borders – A Mehdi Torbay – M Swart 	Workshop B ER for Emergency Surgery: Progress and Challenges Venue: Prince Michael Hall Facilitators: Nader Francis, Matthew Dickinson, Clare Evans, John Conti <ul style="list-style-type: none"> Emergency pathway Laparotomy pathway 		
13:00 Buffet lunch / trade exhibition / poster presentations				
13:30 Optional sponsored talk from Deltex Medical: Individualised Fluid Management within an Enhanced Recovery Protocol – what does the evidence tell us” By Dr Murrell, Scientist Lecturer, in the main auditorium				
13:50	Session 3: Pain Management in Open and Laparoscopic Surgery <ul style="list-style-type: none"> Advances in Pain Management Study Outcomes 	Chair: Mike Scott Faculty: William Fawcett, Mark Daugherty	Main auditorium	Way forward for pain management. Stimulate collaborative research and data collection Survey the current practice in the UK during the session
14:30	Session 4: What’s Stopping our Patients Moving?	Chair: David McDonald Faculty: William Fawcett, Wendy Lewis	Main auditorium	Best method of analgesia for mobilisation Unresolved areas e.g. nausea, vomiting, IV
15:15 Afternoon Tea / Networking				
15:45	Session 5: Challenges in Enhanced Recovery <ul style="list-style-type: none"> Impact of economic downturn on implementation and sustaining ERAS Preoperative rehabilitation of high risk patients Compliance with post-operative elements in ERAS Integration and transition of care 	Chair: Nader Francis Panel: Tom Wainwright, Mike Swart, Wendy Lewis	Main auditorium	
16:30	Oral presentation and poster prizes Conference summary and close	Mike Scott Nader Francis	Main auditorium	
17:00 – 18:00	Networking and Open Bar		Reception / Foyer	



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Enhanced Recovery Partnership

The **Enhanced Recovery (ER) Partnership** brings together a wide range of expertise and stakeholders, as an advisory group to share intelligence, engage with wider stakeholders, remove barriers to progress and hold conversations relevant to the continuing adoption and wider application of the enhanced recovery model. The ER Partnership has continued to build on progress made within the original specialties of Colorectal, Orthopaedic, Urology and Gynaecology and is gaining consensus on application of ER components to surgical specialties, emergency surgery and application to acute medicine.

The Partnership has worked to position ER within the NHS Outcomes Framework and new Improvement Body to maintain progress beyond March 2013.

Working with the Royal Colleges and Associations, the partnership is working to ensure ER principles are integrated into undergraduate and post graduate training programmes and revalidation.

The national profile of ER has been maintained through the networking ability of the partnership and willingness to engage with and support other national, regional and local ER work programmes.

ERAS UK is very grateful for the generous sponsorship from the following companies/ organisations



Conference Faculty

Mike Davidge

Senior Improvement Advisor, 1000 Lives Plus, Wales



Mike Davidge joined the NHS in 1979. In the early 1980's as part of IACC, he was jointly responsible for creating the first national performance indicators and between 1986 and 1992 pioneered reduced waiting times in England and Wales. He became the Analysis Director for the Modernisation Agency in 2001 and left the MA in February 2005 to take up a role as Director of Analysis & Modelling within the Leeds health economy. He currently divides his time between the NHS Institute for Innovation and Improvement and 1000 Lives Plus in Wales.

Mark Daugherty MBBCh, FRCA

Consultant Anaesthetist, Royal Devon & Exeter NHS Foundation Trust



Mark Daugherty graduated from the University of Witwatersrand in South Africa in 1984. I trained in London, the South West and the University of Virginia – USA. I have been a consultant since 1997, and have worked at the Royal Devon & Exeter Hospital since 2001. I have anaesthetised for major urological cancer surgery with an initial interest in promoting the safe and efficacious use of intraoperative cell salvage in urology. In 2007 I started working with John McGrath and embraced the concept of Enhanced Recovery in our patients. We have worked closely together and developed a novel new analgesic technique (Rectus Sheath Catheters), which we have used in all patients having a Radical Cystectomy or Prostatectomy since 2008.

Dr Matt Dickinson BSc (Hons) MBBS FRCA FFICM

Consultant Anaesthetist, Royal Surrey County Hospital, Guildford.



Dr Dickinson trained in anaesthesia at St Bartholomew's & the Royal London Hospitals and the Wessex region. He undertook a fellowship at the Royal Prince Alfred Hospital, Sydney, in anaesthesia for upper GI surgery and liver transplantation. He sits on the NHS Enhanced Recovery Partnership's National Task and Finish group. He has been instrumental in developing the enhanced recovery programmes for oesophagogastrectomy and liver surgery at the Royal Surrey County Hospital. He is a co-investigator in a multi-centre quality improvement study investigating the implementation of an emergency laparotomy pathway at the Royal Surrey, Royal United, Torbay and Royal Devon & Exeter Hospitals.

Dr William Fawcett

Consultant Anaesthetist, Royal Surrey Hospital



Dr Fawcett studied Medicine at Guy's Hospital, trained in anaesthesia in London and then worked as lecturer in St George's Hospital Medical School. He took up his current post in 1994, where his major clinical commitments are head of acute pain service, anaesthesia for laparoscopic bowel resections, laparoscopic gynaecology and liver resection. He is actively involved in research with 100+ publications in basic sciences and clinical areas. He also co-authored the first 23-hour stay paper for patients undergoing colorectal resection. A major area of interest is the use of regional anaesthesia and its effects on patients undergoing cardiac surgery, liver and colorectal resections. Dr Fawcett also lectures / examines at University of Surrey on MSc Course in Clinical Biochemistry and Molecular Biology. He has been closely involved with the National Enhanced Recovery Programme and has been invited to lecture several times at National Meetings as well as write a chapter on this topic. He has run several courses at both Surrey University and The Association of Anaesthetists of Great Britain and Ireland on Enhanced Recovery.

Mr Nader Francis MBChB FRCS PhD

Chair of ERAS UK Steering Board, SWSTN Lead Surgeon, Yeovil District Hospital NHS Foundation Trust, Honorary Senior Lecturer, University of Bristol. Since taking up his post in Yeovil, Mr Francis has continued to develop his laparoscopic colorectal practice. In addition to his role as a preceptor within the south west surgical training network, Nader also Chairs the steering board of ERAS UK. His research background including a PhD on laparoscopic surgical training and assessment with Sir Alfred Cuschieri, has underpinned Nader's leadership of a national 'Training the Laparoscopic Colorectal Trainers' course. Other research interests include methods of pain control after laparoscopic colorectal resections, analysis of low rectal resection techniques and optimal methods of perineal reconstruction. Nader also Chairs the Site Specific Group for the Avon, Somerset and Wiltshire Cancer Network and has recently been appointed as the lead for the Western NIHR Comprehensive Clinical Research Network (Surgery)



Mr Alan Horgan

NTP Preceptor, Consultant Colorectal Surgeon & National Clinical Lead for the Enhanced Recovery Partnership Programme. Mr Horgan graduated from University College Cork in 1988. Following Basic Surgical Training, he completed his MD in Surgical Immunology at Harvard Medical School. Higher Surgical Training was undertaken in the West of Scotland Rotation following which he spent a year as Clinical Fellow in Colorectal Surgery at The Mayo Clinic. He was appointed as Consultant Colorectal Surgeon at Freeman Hospital in Newcastle in 1999. He has since Co-founded and is director of the Newcastle Surgical Training Centre and the Newcastle Translational Research Unit. He has concentrated his clinical and research efforts on Laparoscopic Colorectal Surgery and Enhancing Recovery after Colorectal Surgery and was appointed National Clinical Lead for the DofHe Enhanced Recovery Programme in April 2009



Wendy Lewis

National Improvement Lead, NHS Improvement, AQUA. Wendy is a nurse who since qualifying in 1993 has enjoyed a range of clinical, managerial and service improvement roles. She completed a post graduate certificate in clinical education in 2006. Wendy joined the Enhanced Recovery Partnership in 2008 initially contributing as a local ER Lead and manager within an Acute Trust and latterly as a National Improvement Lead. Within the partnership she represents nursing on the National Advisory Board and support SHAs North and South of England with the continued spread and adoption of Enhanced Recovery in new specialties and developing evidence of its application to emergency and medical pathways

Olle Ljungqvist

Professor of Surgery, Örebro University Hospital, Örebro. Affiliated Professor of Surgery, Metabolism & Nutrition, Karolinska Institutet, Stockholm, Sweden. He clinically active in the field colorectal surgery. Olle Ljungqvist is a co-author of several original publications, reviews and book chapters and editorials. A tutor of 12 PhD students and 2 ongoing students. Appointed Editorial Board of several leading international journals in surgery and nutrition. Invited to give key lectures at over 20 major conferences annually world wide the last 10 years. He gave the Arvid Wretling lecture at ESPEN Istanbul 2006 and was awarded the Jonathan Rhoades lecture at ASPEN in Vancouver 2011. Olle Ljungqvist initiated the idea of preoperative carbohydrate treatment instead of fasting, now recommended in international and national fasting guidelines. He has held several leading positions in the European Society for Clinical Nutrition and Metabolism (ESPEN) and is the current President of the International Association for Surgical Metabolism and Nutrition (IASMEN), part of the International Surgical Society. He chairs the Europeans Nutrition for Health Alliance, serves the Danish Research Council as Chairman of the Fund for Strategic Clinical Research. and is a reviewer for funding for many international bodies. Olle Ljungqvist cofounded the Enhanced Recovery After Surgery study group in 2001 and initiated the ERAS Society in 2010, where he is serving as the Chairman





David McDonald

Caledonian Co-ordinator, GJNH, Clydebank, Scotland. David graduated as a physiotherapist in 2001 and became the lead orthopaedic physiotherapist in 2005 at the Golden Jubilee National Hospital (GJNH). In 2007 David formed a key role in development of their own ERP known locally as the CALEDonian Technique (Clinical Attitudes Leading to Early Discharge). From 2010 he has been supporting the Scottish Government part time to help develop and implement ERP in orthopaedics across Scotland and improve the standards of care by decreasing variation of practise around the country. The programme continues to evaluate and improve the evidence base for ERP in orthopaedics.

Dr Mike Scott

Consultant in Anaesthesia and Intensive Care Medicine.

Mike has been a consultant in Anaesthesia and Intensive Care Medicine at The Royal Surrey County Hospital and St Luke's Cancer Centre in Guildford for 14 years. His main work is performing anaesthesia and perioperative care for major cancer surgery. He has an interest in fluid therapy, cardiac output, and oxygen utilisation and analgesia. Mike is on the working party and educational sub group for the WHO Global Pulse Oximetry Project. He is a member of the Editorial Board of the Resuscitation Council (UK) and contributor for the Advanced Life Support, Immediate Life Support Manuals and teaching materials.

Mike has published widely on Enhanced Recovery for colorectal surgery and is author on the new ERAS consensus guidelines.



Mike Swart

Consultant in Anaesthesia and Critical Care Medicine at Torbay Hospital, Devon. Over the last ten years Michael Swart and John Carlisle have been using cardiopulmonary exercise testing to learn how to assess high-risk surgical patients. They are close to reaching the point where they can begin to evaluate the use of cardiopulmonary exercise testing.



Mr Tom Wainwright

Clinical Researcher in Orthopaedics, The Royal Bournemouth Hospital Tom was previously a pathway manager at The Royal Bournemouth Hospital where he led the design and implementation of an award winning, and internationally recognised enhanced recovery pathway. He is passionate about the benefits of enhanced recovery pathways, and now combines research and quality improvement work to help spread its wider adoption. Tom originally worked as a physiotherapist and more recently has held managerial and research roles within the National Health Service (NHS). For the last 3 years he has worked as an independent quality improvement consultant and has worked with hospitals in both the UK and abroad. In combination with this work, Tom is also highly active academically. He is a Visiting Associate at Bournemouth University and is currently studying for a PhD. His thesis will examine how to understand, appreciate, and account for variability when managing healthcare systems and ERAS pathways.



Notes

Oral Presentations (Abstracts)

12006 Implementation of an enhanced recovery programme for radical cystectomy TJ

Dutton, MO Daugherty and JS McGrath. Royal Devon and Exeter NHS Foundation Trust, Exeter, UK. tdutton@doctors.org.uk

Introduction: Radical cystectomy is associated with a long in-patient stay. Patients may greatly benefit from enhanced recovery (ER) principles. However, there is a relative lack of data for ER in major urological surgery. We present our experience of implementation and evolution of an ER programme for patients undergoing open radical cystectomy (ORC).

Methods: One hundred and forty-one consecutive patients were entered between 1st January 2008 and the 31st May 2012. Key components of the programme included day-of-surgery admission, no bowel preparation, carbohydrate loading, avoidance of nasogastric tubes, early removal of drains, and early mobilisation and feeding. An alternative to epidural analgesia, rectus sheath catheters (RSCs) was also introduced as part of the ER programme. Outcome measures included length of stay (LOS), and 28-day mortality and re-admission rates.

Results: All 141 patients (mean age 66.8 years, range 37-82) undergoing ORC (ileal conduit 111, neobladder 30) were included. All patients are now admitted on the day of surgery. RSCs were used for 83% of patients. The mean LOS reduced from 16.9 days (pre-ER) to 10.25 days (median 8) following full implementation. Current mean LOS is 11.07 days (median 10). A mean re-admission rate of 12.8% was recorded. Two deaths within 28 days of surgery have been recorded.

Conclusions: ER for open radical cystectomy is effective at reducing length of stay without adversely affecting mortality and readmission rates when compared to national data. We anticipate evolution of this programme to ensure continued improvements, and in particular the adoption of minimally invasive surgical techniques.

12013 Patient-controlled Lumbar Epidural versus Wound infiltration for total knee arthroplasty within an enhanced recovery programme - a randomised clinical trial. David

McDonald, Angela Deakin, Tracey Howe, Brian Ellis, Yvonne Robb, Nick Scott, Andrew Kinninmonth. Golden Jubilee National Hospital. david.mcdonald@nhs.net

Introduction: Lumbar epidurals (LEA) have become less popular because of well-documented side-effects, whilst local infiltration anaesthetic (LIA) has demonstrated equitable analgesia and faster rehabilitation following total knee arthroplasty (TKA). This randomised controlled trial compared the effect of patient controlled LEA versus LIA (with no adjuncts) on TKA rehabilitation

Methods: Following ethical approval (NRES: 09/S10014/56) a parallel group trial was carried out within an elective orthopaedic unit from April 2010- August 2011. 242 patients undergoing primary TKA for osteoarthritis were recruited and received standardised pre-operative education, multimodal analgesia, accelerated rehabilitation and were randomised using a simple unrestricted randomisation method to receive either patient-controlled lumbar epidural (PC-LEA) or LIA. Primary outcome measure was the proportion of patients discharged by day four from rehabilitation.

Results: Following randomisation 222 patients were included in analysis (PC-LEA (n=109) & LIA (n=113)) with a mean age of 67 and mean BMI = 32. 20 patients were excluded due to failed spinal anaesthesia. No statistical differences ($p < 0.01$) was observed between the proportion of patients ready for discharge (PC-LEA =77% vs. LIA =82% $p=0.33$). Median hospital stay was four days for both groups ($p=0.54$). No difference was observed for catheterisation rates ($p=0.16$), pain scores ($p=0.28$), use of additional analgesia ($p=0.55$) or rates of mobilisation on theatre day ($p=0.013$). No incidences of morbidity or mortality were observed in either group up to 30 days post surgery.

Conclusion: Both PC-LEA and LIA enable early mobilisation, satisfactory pain management, rapid recovery and equitable clinical outcomes within an established ERP for TKA.

12015 Challenging the Old Traditions in Renal Transplantation; The First UK Enhanced Recovery After Renal Transplantation. [Ahmed Halawa](#), Gavin Gray, Stephen Rowe, Mandy Plant, Julia Hanvere, Ghulam Abbas, Chidambaram Nathan, Simon Boyes and Fleur Roberts. Sheffield Teaching Hospitals. ahmed.halawa@sth.nhs.uk

Introduction: Applying principles of enhanced recovery (ER) in elective living renal transplantation has been previously presented. We expanded ER to include a non elective activity - deceased donor kidneys transplantation. This type of transplantation is associated with higher rate of delayed graft function requiring more dialysis. **Methods:** Patient education and discharge planning are commenced on admission. Intraoperative management including goal-directed fluid management using ***Transoesophageal Doppler was also implemented*** to achieve adequate fluid balance and avoid central lines. Intrathecal diamorphine and transverses abdominis plane block (TAP block) were used to minimise the use of systemic morphine (PCA) to achieve improved postoperative analgesia. Patients were commenced oral intake few hours after the operation. Urinary catheters were removed 4 days after the operation. This enabled early mobilisation and patient education resulting early discharge without increase in the readmission rate. **Results:** Postoperative PCA requirement was significantly reduced in ER patients compared to standard recovery patients ($P < 0.001$) demonstrating better postoperative analgesia. The length of stay was significantly reduced ($P < 0.001$) for living transplant recipients (Mean 5.1 vs. 9.4 days, Median 5 vs. 9 days) and for deceased donor transplant recipients (Mean 5.2 vs. 11.3 days, Median 5 vs. 8.5 days) compared to patients who had traditional recovery. There is significant correlation between LOS and morphine requirement ($r = 0.55$, $P < 0.001$). Implementing ER saves 2160 pounds per patients (533 pounds per day). **Conclusion:** Our study demonstrates that ER benefits both forms of renal transplantation with better quality of care and no difference in LOS.

12019 ERAS in UGI cancer surgery reduces cost of hospital stay. Emma Collins, P Daliya, H Scrimshire, N Welch, S Parsons, J Catton. Nottingham University Hospitals NHS Trust. emmacollins100@hotmail.com

Background: ERAS following oesophago-gastrectomy surgery has been shown to reduce length of hospital stay without compromising patient outcomes. ERAS also has potential economic benefits, an attractive advantage in an era of NHS cutbacks.

Major upper GI resectional surgery is resource intense, requiring access to and dependant on the availability of critical care provision. Enhanced recovery programmes focus on overall patient stay and not on the intensity of patient care.

Aims: To assess the effect of an Enhanced recovery program after Upper GI surgery on the use of critical care.

Setting: Upper GI Surgical Unit of Nottingham University Hospitals NHS Trust, UK

Participants: 88 patients undergoing gastrectomies or oesophagectomies for upper GI malignancy between March 2011 and March 2012.

Methods: The above cohort of patients underwent Upper GI cancer surgery using ERAS principles. Their length of stay in critical care was compared to previous patients undergoing gastro-oesophageal resections for cancer at this institution prior to the introduction of an ERAS protocol.

Results: Those patients undergoing ERAS post Upper GI surgery had a reduced length of stay in critical care by 0.825 days per patient episode. Critical care provision has a significant impact to a trusts' budget. The freed resources were equivalent to a financial saving of £3575.49 per day with overall saving of nearly £260,000 in this cohort.

Conclusions: ERAS following Upper GI cancer surgery reduced the utilisation of critical care resources. This allows either potential health care cost savings or redistribution of resources within an acute health care provider.

12027 Patients Experience of the Enhanced Recovery Programme after Colorectal Surgery.

Tregidon C, Davies MM, Davies R, Howell G, Jones C, Jones A, Nelson C, Cadogan J, Tresize C
Cardiff and Vale UHB claretregidon@wales.nhs.uk

Background: The Enhanced Recovery After Surgery (ERAS) Programme was introduced into the Colorectal Surgery Unit in Cardiff in October 2010. The effectiveness of ERAS is often emphasised through outcome indicators such as reduced length of stay and complications, however patient experience is also of paramount importance in contributing to the overall quality of the programme.

Objective: A collective patient story methodology was undertaken to help the clinical team to learn and understand patient preferences about the ERAS programme. This would inform clinical practice and help shape future care.

Method: Twenty four randomly selected patients were invited by letter to an informal workshop where they were asked to share their experiences of the ERAS Programme. Sixteen attended. Facilitation of the workshop was provided by the health board service improvement team as it was acknowledged that patients might not give their honest views to members of the clinical team who had provided their care.

Results: A number of themes were identified which were grouped into categories. The experiences of patients were largely positive with many patients recalling their excellent treatment carried out by a professional and caring multi-disciplinary team. Areas for improvement were also identified.

Conclusion: Patient feedback is an integral part of quality improvement. Using a collective patient story model has helped us to understand both the strengths and weaknesses of our ERAS programme through the eyes of the patient.

12040 Does Oesophageal Doppler add value to an enhanced recovery programme? A prospective cohort study. Joel Lambert; Helen Burt; Dawn Gane; Lisa Hayward; Rhys Davies; Anne Pullyblank.

North Bristol NHS Trust. bereal95@hotmail.com

Intra-operative oesophageal Doppler (IOD) probes monitor cardiac output in order to optimize peri-operative fluid therapy. Recent meta-analysis has shown IOD monitoring to be associated with shorter hospital stay, reduced mortality, reduced intensive care unit (ICU) admission, quicker return of gut motility in patients undergoing major abdominal surgery.

Aim: To assess the value of IOD within the enhanced recovery programme in patients undergoing major colorectal surgery.

Methods: Between January 2010 and October 2011, 133 patients who had IOD monitoring were analysed against a matched control cohort (non-oesophageal Doppler group) NIOD. Post-operative outcomes included gut motility, hospital stay (LOS) (days), ICU admission and mortality.

Results: Analysis of the IOD vs. NIOD group showed a reduction in time to resume gut motility in days (C.I -0.97 to -0.05) p 0.03. LOS showed no statistical difference (C.I -0.30 to 1.60) p 0.18. Chi-squared analysis showed no statistical difference in ICU admissions and mortality between the groups. Subgroup analysis of stoma vs. no stoma and laparoscopic vs. open showed that the presence of stoma and the open approach were associated with increased LOS in both groups. There was no difference in LOS whether the resection was left or right sided between the two groups.

Conclusion: IOD monitoring was associated with reduced time to gut motility. LOS, ICU admission rates and mortality did not achieve statistical significance. Other factors such as the presence of a stoma and the open approach appear to be much stronger determinants of LOS than fluid optimization alone.

12043 Challenges to the Enhanced Recovery Program in Primary Total Hip and Knee Arthroplasty Patients. Hui-Ling Kerr, Laura Beard, Dominic Teichmann, William Passmore, Abdul Nasir, Mahesh Parmar, Jon Mutimer. Cheltenham General Hospital hui.kerr@gmail.com

Background: The Enhanced Recovery Programme is a proposed, evidence based model of care with orthopaedic targets of a 5 day hospital stay for elective total hip and knee arthroplasty patients. Few papers assess which main factors cause primary total hip and knee arthroplasty patients from the UK to have delayed discharge.

Aims: Identification of factors contributing to the increased length of stay in primary total hip and knee arthroplasty patients.

Materials and Methods: Primary total hip and knee arthroplasty patients were selected over a 4 week period at 2 district general hospitals in Gloucestershire. Patients were identified as either fit or unfit for discharge by the 5th postoperative day. Pre and post operative factors were compared between the 2 groups.

Results: Of 109 patients (43 M, 66 F), 56% were fit for discharge and 44% unfit for discharge at postoperative day 5. The 3 most common reasons for delayed discharge included wound ooze (25 patients), medical post operative problems (20 patients) and not reaching physiotherapy goals (14 patients). There was no significant difference ($P < 0.05$) between either group for all pre and post operative factors. Both hospitals had similar mean lengths of stay (6 and 7 days, $p = 0.064$).

Conclusions: 3 main disparate causes were found to prevent discharge. The reasons for these are complex and further research is necessary to investigate this. This study also highlights that effective implementation of the Enhanced Recovery Program would take investment of resources and multidisciplinary effort at all stages to achieve its goal.

12060 An Audit of the impact of a written clinical pathway for Enhanced Recovery following Oesophago-gastric Cancer Surgery. S Das, A Noorani, PH Patel, A Riaz, P Jambulingam, JI Livingstone, A Al-Bahrani. Upper GI Cancer Unit, Watford General Hospital, West Hertfordshire Hospitals NHS Trust. ayeshanoorani@yahoo.co.uk

Introduction: This audit assessed the impact of a protocol driven clinical pathway for enhanced recovery after curative resection for oesophageal, junctional and gastric cancer.

Methods: A prospective database of all patients undergoing oesophago-gastric resection in the Enhanced Recovery Programme (ERP) was analysed. National morbidity and mortality results from National Oesophago-Gastric Cancer Audit 2010 were employed as standards.

Results: 41 patients were enrolled in the ERP from April 2011 to June 2012. This included 24 Ivor Lewis Oesophagectomies (6 laparoscopic, 18 open), 17 gastrectomies (3 distal, 3 extended total and 11 total gastrectomies). The median age was 70 years (range 63-86). 8 were female, 33 were male. Median LOS was 11 days (IQR 10-14). Median ITU stay was 6 days (IQR 3.5-7). 30 day mortality was 2.4% (1 patient). Post-operative morbidity: 4 patients (9.8%) had pulmonary complications (2 pneumonia, 2 empyema) and 3 patients (7.3%) had cardiac complications (atrial fibrillation). 1 patient had post-operative bleeding from the insertion of a pharyngo-jejunosomy tube, 1 had a wound infection, 1 had an anastomotic leak and 1 had a chyle leak. 4 (9.8%) patients returned to theatre within 30 days.

Conclusions: The use of a written protocol for the enhanced recovery programme for oesophago-gastric cancer is feasible and is associated with encouraging morbidity and mortality data. As a result, our unit uses the ERP as the first line of management for patients undergoing oesophago-gastrectomy.

Poster Presentations (Abstracts)

12001 Experiences in piloting the “Colorectal Enhanced Recovery Pathway” in a District General Hospital (DGH) – are we on the right page? [Dr Khoon-Sheng Kok](#), Saahil Mehta, Neil Smith. East Surrey Hospital, Redhill, UK khoonsheng@gmail.com

Background: We adopted the Colorectal Enhanced Recovery Pathway (CERP) in July 2011, through a pilot 64-page care-bundle booklet where multidisciplinary team members are able to document pre-admission, daily and discharge “target” checklists. Such a platform is fundamentally important to prompt interaction and discussion in an otherwise busy DGH, whilst promoting mutual understanding and reminder of the importance of the goal-orientated CERP.

Aims: To identify variance in documentation of the CERP booklet, and to elicit attitudes and assess knowledge of CERP.

Setting: Department of Colorectal Surgery, East Surrey Hospital, Redhill

Participants: Healthcare professionals, including junior doctors, surgical ward sisters and nurses, physiotherapists.

Methods: We retrospectively reviewed the care booklet for 20 elective CERP patients and established extent of completion of checklists. We handed out questionnaires to various healthcare professionals.

Results: Total percentage documentation was 72.1% and 55.7% for doctors and nurses respectively, with no notes recorded by physiotherapists. This coincided with the “Mobility” section being the least completed checklist daily. Discharge checklist was only used in 20% of the patients. Despite 80% of nurses acknowledging the user-friendliness of the booklet, aims and expectations were not clearly defined to them.

Conclusion: We have highlighted challenges towards incorporating CERP in a DGH. With the pathway still in its infancy, we were able to identify that though routine nursing care was well documented and presumably performed, the unique features of CERP were not readily understood. To aid successful practical implementation, better education, regular departmental meetings and appointing an Enhanced Recovery Nurse Lead are recommended.

12002 A literature review: The impact of Enhanced Recovery After Surgery on patient experience in orthopaedics. [Emma Jones](#), T.W Wainwright, N.K Francis, R.G Middleton. Yeovil District Hospital Emma.Jones@ydh.nhs.uk

Background: Patient experience is a driver of quality within healthcare that is of equal standing alongside effectiveness of care and patient safety. Collecting and measuring this data is becoming more important within Enhanced Recovery After Surgery (ERAS).

Objectives: This paper will outline what is meant by the outcome ‘patient experience’. The literature will be reviewed to identify to what extent patient experience has been reported on in orthopaedic ERAS.

Methods: A review of literature published in English between 2000 and 2012 was undertaken. Embase, MEDLINE, the Allied and Complementary Medicine Database, the Cumulative Index to Nursing and Allied Health Literature and the Cochrane library were used. MeSH terms related to experiences, acceptance, satisfaction or perception of ERAS, and Quality of Life (QoL) in orthopaedic ERAS.

Results: 10 papers were reviewed. 4 papers reported on patient satisfaction (3 comparative studies, and 1 case series). Satisfaction scores were high in ERAS patients. Patients were highly satisfied with a reduced Length of Stay (LOS). Satisfaction with LOS may be impacted by patient characteristics such as age and previous experience. 2 papers (both comparative) reported upon Quality of Life (QoL). QoL scores can increase up to 12 months post ERAS but may exist alongside lower functional scores. Qualitative methods highlighted problems after discharge in 2 papers. 2 papers reported that surgeons’ pre and post-operative expectations may not correlate with patients’ satisfaction.

Conclusion: Orthopaedic ERAS patients report high QoL and satisfaction scores. However, outcomes used within current literature cannot reflect the patients’ experiences of ERAS and how they contribute to the reported health status. Measuring patient experience should be promoted and standardised with further research.

12003 A Systematic Review on Patient Experience of Enhanced Recovery After Surgery. [E. L. Jones](#)¹, [J. D. Foster](#)¹, [T. W. Wainwright](#)², [N. K. Francis](#)³. ¹Research & Development, Yeovil District Hospital, Yeovil BA21 4AT ²Orthopaedic Department, Royal Bournemouth Hospital, Bournemouth ³Colo-rectal Surgery, Yeovil District Hospital, Yeovil, BA21 4AT United Kingdom. Emma.Jones@ydh.nhs.uk

Objectives: Enhanced Recovery After Surgery (ERAS) is proven to improve wellbeing after surgery. Length of Stay (LOS) and re-admission are its primary measures. There is an emerging drive to capture patient experience to improve ERAS delivery. This paper reviews the literature on existing measurement tools of patient experience across ERAS.

Methods: A systematic review of literature published in English between 2000 and 2012 was undertaken. Embase, MEDLINE, the Allied and Complementary Medicine Database, the Cumulative Index to Nursing and Allied Health Literature and the Cochrane library were used. MeSH terms related to experiences, acceptance, satisfaction or perception of ERAS, and Quality of Life (QoL) in all surgical specialities.

Results: 14 heterogeneous publications were found and analysed describing 2528 colorectal (CR) and musculo-skeletal (MS) patients with no data in other specialities. The results were analysed under: Patient satisfaction, Quality of Life and Interview data. 6 studies reported on patient satisfaction (1 randomised controlled trial (RCT) - CR, 4 comparative studies - CR and MS, and 1 case-series - MS). Satisfaction scores were uniformly high within ERAS, not affected by LOS, and not significantly different to traditional care. 6 articles addressed QoL (2 RCTs - CR, 3 comparative studies - CR and MS, and 1 case series - CR). QoL scores were not compromised by ERAS and increased up to 12 months post-operatively. 102 patients were interviewed in 4 studies, mostly in CR. Results highlighted that ERAS may not always produce positive experiences despite short LOS. Problems were related to communication and support after discharge.

Conclusion: ERAS does not compromise patient satisfaction or QoL in CR and MS. However, patient satisfaction and QoL scores may not provide an accurate reflection of the phenomenon experience. The paucity of outcome research which can capture patients' experience of ERAS highlights the need for further research.

12004 An Audit To Assess Compliance With The Enhanced Recovery After Surgery (ERAS)

Programme In Colorectal Surgery At Walsall Manor Hospital. [Ming-Li Hodder](#), [Abdisom Ali](#), [Sarah Hutton](#), [Nilushi Ratnayaka](#). University of Birmingham. m.hodder@nhs.net

Background: ERAS aims to achieve the best possible outcomes for surgical patients by reducing length of hospital stay and optimising post-operative rehabilitation. NICE estimate that up to 200,000 bed day savings per year could be made using ERAS. It has proven to be very successful in colorectal surgery.

Method: This is a retrospective audit looking at 28 colorectal surgical patients who followed the ERAS programme between November and December 2011 at Walsall Manor Hospital. We measured compliance with the pre, intra and post-operative components of ERAS. Standards of 100% were used. We are currently collecting further data in order to improve population size.

Results: In summary: all patients received venous thromboembolism prophylaxis, carbohydrate loading and appropriate bowel preparation. Intra-operatively, 39% of patients received a thoracic epidural and 0% had transoesophageal monitoring documented. Post-operatively, 94% of patients received high protein drinks, however none received the recommended amount. Normal saline was prescribed for 20% of patients despite recommendation against its use. Median length of stay was 6 days (4 – 14 days).

Conclusion: re-operatively the hospital is performing well, however intra & post-operative improvements can be made. Education regarding the benefits and importance of ERAS to nurses, doctors (surgical and anaesthetic) and patients will help improve compliance. We recommend improving documentation, particularly for anaesthetic and nursing charts. We have introduced stickers for intravenous infusion charts to deter the prescription of normal saline.

2010 An audit on optimal analgesia in reducing inpatient stay following laparoscopic nephrectomy.

Joyce Ngai, Thogulava Kannan. Luton & Dunstable University Hospital. joyngai@gmail.com

Recent trends towards minimally invasive techniques, regional anaesthesia and early mobilisation amongst others in the toolkit of enhanced recovery have significantly reduced inpatient stay following major surgery. Although inpatient stay following laparoscopic nephrectomy is often quoted as two days, in our experience it is rarely achieved. We wanted to identify the optimal analgesic techniques, and how analgesia interacts with other factors affecting discharge.

We identified all laparoscopic urological operations between September 2010 and August 2011 at a district general hospital. We extracted data from patients' notes using a proforma designed with reference to the enhanced recovery programme. Data were then combined into various analgesic techniques and directly compared to assess for effects.

Of the 19 operations, four sets of notes were unavailable. The majority of stays lasted six days (range 3-14). Over two thirds received regional anaesthesia; 80% had patient-controlled analgesia which, along with drains, appeared to affect discharge in the earlier days. 75% of patients who did not receive regional anaesthesia were discharged within four days, compared to 20% who did. Transversus abdominis plane block resulted in lower average cumulative morphine requirement and pain score in recovery. However, higher post-operative opioid analgesia requirement was associated with earlier discharge. Despite the small sample size, we conclude that greater attention should be placed on good quality patient-controlled analgesia to promote shorter inpatient stay. This also demonstrated that the role of regional anaesthesia in enhanced recovery is complex. Encouraging patient engagement with pain management from the outset would likely be beneficial.

2011 Tracking individualised Patient Experience by using 'Patient Experience Tracker' Whilst Supporting Enhanced Recovery Programme In Gynaecology Surgical Patients.

Sujesh Bansal, Kathleen Cooper, Dan Conway, Tanviha Quraishi. Central Manchester University Hospitals NHS foundation Trust. sujesh.bansal@cmft.nhs.uk

The enhanced recovery programme (ERP) for Gynaecology at Saint Mary's Hospital was launched in early 2011. Before launch of this initiative, we piloted a 'patient experience' centred project in to determine prevailing obstacles to enhanced recovery of gynae-oncology patients. This was done by tracking individual patient's daily experiences during whole of their inpatient hospital stay with innovative use of electronic 'patient experience tracker'.

Several obstacles to enhanced recovery were identified in this pre-ERP pilot on the basis of patient's inpatient experiences; main obstacles were due to lack of preoperative patient information & preparation; and we also identified potential of improved postoperative management. The average length of stay for abdominal hysterectomy in December 2010 was noted to be 8.3 days.

The preoperative preparation (assessment and information dissemination) of the patients was strengthened with the involvement of the specialist nurses (enhanced recovery and preoperative nurses). Analgesia guidelines have been written to improve transitional analgesia specifically once analgesia infusions are stopped after 24-48 hours on the basis of above results.

Audit repeated six months after our project showed significant improvement; demonstrating the implementation of above suggestions. Patient experience project was repeated 12 months after initial project to review the impact of established ERP on patient experience. 100% of the patients reported to have excellent/good experience of the pre-assessment clinic with understanding of the ERP pathway and found the ERP leaflets useful. The average length of stay had reduced from 8.3 days to 4.6 days in Jan 2012 for abdominal hysterectomy. 'EuroQol self-reported VAS' daily scores were found to be similar to pre-ERP project thus showing no deterioration on patient's experiences who are on enhanced recovery pathway.

To conclude, in the initial pilot project we used patient experience centred approach to identify obstacles to enhanced recovery. Once we identified the obstacles we used multi-disciplinary approach to resolve the issues for best patient care and successful implementation of enhanced recovery programme. After 12 months, we reviewed the enhanced recovery with perspective of patient experience and have shown improved patient experience/satisfaction despite significantly reduced length of stay.

12012 ERAS in the elderly – experience from an RCT in open liver resection surgery. [Leigh Kelliher](#), C Jones, M Dickinson, M Scott, W Fawcett, N Quiney. Royal Surrey County Hospital. lkelliher@nhs.net

Introduction: There is little published data on Enhanced Recovery (ER) in the elderly undergoing major surgery. Increasing age is associated with more co-morbidity and a decline in physiological reserve, which may lead to concern that these patients may be less suitable to partake in ER programmes. We wish to evaluate the feasibility of ER in patients over 70 years old.

Methodology: All patients over 70 years were analysed from our randomised controlled trial for liver resections (ISCRTN03274575). They were randomised to either standard pathway (SP) or an ER pathway. The latter group differed principally in preoperative information, perioperative carbohydrate supplementation and goal directed fluid therapy. Our primary endpoint was time from surgery until medically fit for discharge (MFD).

Results: There were 31 patients over the age of 70. There were no significant differences in patient's age, weight, ASA status, duration or magnitude of surgery and blood loss between the two groups. The MFD time was 7.0 days (SP group) compared with 4.0 days (ER group, $P < 0.001$).

Discussion: In this study of major surgery age wasn't an obstacle to reducing MFD time. Given the projected demographic changes in the UK, this has significant implications for the future, and we would strongly encourage the enrolling of elderly patients into ER programmes. ER represents a standard of care applicable to all.

12014 Does a colorectal enhanced recovery programme require a permanent coordinator? [Paul Hawkin](#), Claire Goatman, Salim Kurrimboccus. Salford Royal Foundation Trust. paul.hawkin@srft.nhs.uk

Background: Implementing enhanced recovery after surgery (ERAS) programmes is challenging and requires effort to achieve success. ERAS coordinators can help implement programmes and ensure all interventions are fully implemented. This work aims to identify whether such coordinators are required to maintain results.

Methods: Records for patients undergoing major colorectal surgery between November 2010 and June 2011 prior to the introduction of ERAS were examined retrospectively. Records for patients enrolled in the colorectal ERAS programme with an ERAS coordinator (July 2011–October 2011) and after the coordinator post was lost (November 2011–February 2012) were also examined. The outcome measures were length of stay, time to first post-operative diet and mobilisation and 30-day re-admission rates.

Results: 72 patients were included prior to the introduction of ERAS, with 76 patients within the ERAS group. Of the ERAS group, 37 underwent their procedures whilst the ERAS coordinator was employed, whilst 39 patients followed ERAS without a coordinator. The groups were matched for age and co-morbidity (ASA). Overall, ERAS reduced mean inpatient length of stay from 12.7 to 7.6 days ($p = 0.005$). The absence of the ERAS coordinator had no significant effect on the length of stay, post-operative time to dietary intake or mobilisation. Two patients were re-admitted within 30 days prior to ERAS and a single patient after introduction of ERAS.

Conclusion: Coordinators may help initiate an ERAS; however after completing a learning curve, further impact may be lost. Further work is recommended to assess whether outcome changes are affected over the longer term.

12016 Enhanced Recovery and Emergency Laparotomy – a retrospective baseline audit. Caroline Stupples, Muhammad Mehdi Masood, Saleem El-rabaa. Kettering General Hospital. carolinestupples@kgh.nhs.uk

Introduction: The ASGBI advocate the implementation of enhanced recovery (ER) principles in the emergency situation. However no data has been published relating to ER and *emergency* colorectal surgery. This audit was undertaken to obtain current ER activity in emergency colorectal surgery.

Method: 50 patients were retrospectively audited against adapted clinical standards for ER.

Results: 22 male and 28 female patients were audited. 30% of surgery was for malignancy. 26% went to ITU post-operatively, 34% to Level 1 care and 40% to the ward.

The adoption of ER components have been categorised according to adoption:

Low goal directed fluid therapy (0%); high peri-operative oxygenation (0%); curtailed fasting (2%); early diet (6%); minimal incisions (22%)

Medium avoidance of nasogastric tubes (42%); restricted IV fluids (48%); early mobilisation (54%); avoidance of systemic opiates (57%); pre-operative information (58%);

High appropriate use of wound drains (84%); epidural analgesia/local anaesthetic blocks (88%); VTE prophylaxis (90%); IV antibiotic therapy (99%); avoidance of sedative pre-med (100%); avoidance of hypothermia (100%)

Conclusion: The majority of ER principles have been adopted in emergency colorectal surgery.

Further research is needed particularly in relation to tolerance of pre and post-operative enteral nutrition to promote ER in this patient group.

12017 A Clinical Audit of Enhanced Recovery After Surgery (ERAS) in Six Surgical Specialties at Nottingham University Hospitals – One Year Review. Sarah Humphries, Helen Scrimshire, Nick Simson, James Catton, John Hammond, Chrill Gornall, Charles Maxwell-Armstrong. University of Nottingham. mzydshl@nottingham.ac.uk

Background: ERAS is a concept to improve elective surgical recovery and reduce postoperative length of stay (LOS) by targeting individual components of the surgical journey. Our unit implemented fast-track surgical care protocols in 2010 for colorectal, gynaecology, gynaecology oncology, hepato-pancreato-biliary and upper gastrointestinal specialties. A previous audit showed ERAS success to be 45.7%, 63.6%, 29.2%, 38.9% and 20% respectively. Recommendations were then produced.

Aims: This audit aims to identify interventions, improvements and hindrances one year following recommendations, and will evaluate initial orthopaedic ERAS outcomes.

Methods: From September to December 2011, pre-, peri- and post-operative data was collected prospectively on 227 patients. Primary outcomes of success rate (discharge on or before the correct day) and LOS were compared to 2010 using SPSS.

Results: Success was again highest in gynaecologic surgery at 57.4%, and lowest for upper gastrointestinal surgery at 25%. Initial orthopaedic ERAS success was disappointing at 27.8%. The largest improvement was in gynaecologic oncology surgery to 51.5% with a 1.1 day decreased mean LOS. Mean LOS reduced for open liver resection and oesophagectomy by 3.2 and 3.7 days respectively, but increased by 2.6 days for laparoscopic colorectal surgery. Overall colorectal success decreased to 34.4%, with distance walked on day 2 ($P=0.018$), drain use (OR 0.7; $P<0.001$) and early IV fluid cessation (OR 1.6; $P=0.022$) as significant predictors of success in a multivariate analysis, also conducted for other specialties.

Conclusion: The improved success rate in three specialties suggests effective recommendations and increased experience, while worsening colorectal results raises sustainability issues.

12018 Video presentation of a laparoscopically guided rectus sheath block: a novel local anaesthetic technique Name of first author. [Paul Hawkin](#), Nasira Amtul, David Watson Salford Royal NHS Foundation Trust paul.hawkin@srft.nhs.uk

Introduction: Effective post-operative analgesia with minimal use of opiates is a priority for enhanced recovery programmes. This increases the emphasis on peri-operative regional and local anaesthesia. The transversus abdominis plane (TAP) block was developed to anaesthetise the sensory nerves supplying the abdominal wall and provide post-operative analgesia for abdominal procedures. A recent meta-analysis has shown the technique to be safe and reduce opiate analgesia requirements within the first 48 hours following surgery. Traditionally, these blocks have been performed under ultrasound control by anaesthetists. However, with a full view of the peritoneum, laparoscopic surgery has permitted the development of a technique for the safe and effective delivery of similar blocks intra-operatively without the need for ultrasound guidance.

Method : The block is performed on completion of the surgical procedure, but before removal of the laparoscopic ports and loss of pneumoperitoneum. A 21 gauge needle is introduced percutaneously under direct laparoscopic vision lateral to the incisions. The needle is introduced perpendicular to the skin until it can be seen pressing on the peritoneum. A volume of 0.25% levobupivocaine is then infiltrated, creating a pre-peritoneal "sausage" of local anaesthetic seen from within the peritoneum. The process is then repeated bilaterally, using up to 80ml of anaesthetic agent in an arc supero-lateral to the wound to complete the block. The video demonstrates this technique in a patient who has undergone a laparoscopic anterior resection with a low abdominal wound.

12020 The impact of a single novel analgesic intervention on an established enhanced recovery programme. [Nasira Amtul](#), M Howarth, R Meskell, R Makin, D Slade. Hope Hospital, Manchester nasiraamtul@hotmail.com

Introduction: High thoracic epidurals may be unnecessary for segmental laparoscopic colorectal resections. Single-dose epidural morphine (Depodur™) has been proposed as an alternative durable analgesic in this setting. We evaluated its effectiveness by measuring analgesic requirements, post operative nausea and vomiting (PONV), and length of stay (LOS) within our established ERAS programme.

Methods: Consecutive patients undergoing laparoscopic colorectal resections for benign and malignant disease were included. Historical laparoscopic controls were taken from our patient database. LOS, PCA duration and volume, and PONV were recorded. All patients were offered a morphine or fentanyl PCA, and dosage expressed as morphine equivalent in mls. 24 patients (12 male), mean age 59yrs (range 21-84); median ASA II (I-III) received 7.5mgs-10mgs of Depodur on induction. 48 controls (24 male), mean age 63 yrs (23-90), median ASA II (II-III) were matched for age, sex, pathology and procedure. All patients were managed using the same enhanced recovery pathway.

Results: Median (IQR) LOS for Depodur versus controls was 5(2-8) days and 6(4-10) days respectively ($p=0.21$, Mann-Whitney). 14 Depodur patients required a PCA compared to all 48 controls. PCA duration was 1(1-2) day compared to 2(2-3) days for controls ($p<0.005$) and median volume infused was 5mls (3-15), compared to 55.5mls(20.75-110; $P<0.01$). PONV was reduced by 50% in the Depodur group. No patient suffered a significant adverse incident. 3 patients in the Depodur group suffered self-limiting pruritus.

Conclusion: Depodur has been the single most effective intervention providing both durable pain control and reduced PONV in our laparoscopic patients.

12021 Problems Post-Angiography - a Prevention Proforma. [Sayyada Mawji](#), Mohammed-Abbas Khaki, Batul Kaj. University of Leicester. sayyadamawji@hotmail.com

It was observed that junior doctors at a busy District General Hospital were uncomfortable assessing post-angiography patients - a problem compounded by often being the first doctors asked to carry out this assessment. It had separately been observed that documentation of the post-angiography assessment was often incomplete, with important examination findings missing.

With the input of a senior vascular consultant, a proforma was created for junior doctors to use when assessing patients post-angiography. A survey of junior doctors was then carried out to investigate whether the proforma had assisted them in safely performing and adequately documenting their post-angiography assessment. Doctors were also asked to rate their confidence in performing a safe post-angiography check before and after using the proforma.

Twenty-nine junior doctors participated in the survey of which 100% felt more confident and safer in assessing patients post-angiography using the proforma, and felt it enabled them to document their findings quickly and clearly. Furthermore, utilising the proforma, confidence in performing a safe post-angiography check had improved, on average, from 4.5/10 to 8.2/10.

The audit highlights the importance of standardised proformas in ensuring safety when assessing patients. Junior doctors were particularly aided by this proforma, which increased their confidence to carry out safer, quicker and more thorough post-angiography checks, and to document their findings clearly and comprehensively. This systematic assessment and clear documentation will also improve communication between teams, whilst ensuring junior doctors alert senior doctors more quickly where appropriate. This could prevent serious adverse affects and improve patient safety overall.

12022 The stress response after open liver surgery with an enhanced recovery programme or standard perioperative care – a randomized trial. [Leigh Kelliher](#), Chris Jones, Matt Dickinson, Nariman Karanjia, Nial Quiney, Mike Scott. Royal Surrey County Hospital. lkelliher@nhs.net

Introduction: Enhanced recovery programmes (ERP) have been shown to reduce length of stay and improve outcomes following elective surgery [1]. One of the guiding principles of ER is to employ measures that reduce the surgical stress response, however few studies have actually measured the stress response following ER compared with non-ER [2]. Interleukin-6 (IL-6) is one marker of the stress response. This study compares the stress response in patients undergoing liver surgery with standard care (SC) or an ERP.

Methods: Patients were randomized to an ERP or SC. Blood samples were taken preoperatively (baseline) and 6, 24, 48 and 72 hours postoperatively. Serum IL-6 was analysed at each time point.

Results: There was no significant difference in IL-6 levels between groups at any time point.

Discussion: Despite no difference in IL-6 between ER and non-ER groups, the ER group had better clinical outcomes. IL-6 did not predict clinical outcome in this study.

12023 Paravertebral analgesia for oesophagectomy – a key part of a successful enhanced recovery (ERAS) programme. [Alison Rybicki](#), Catton JC, Carney AJ. Nottingham City Hospital.

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Background: Post-operative analgesia for oesophagectomies is traditionally provided with thoracic epidural analgesia (TEA), but increased use of minimally-invasive surgery has led to the adoption of alternative analgesic techniques, including paravertebral blockade. Paravertebral catheters have can provide comparable analgesia to TEA, and may be associated with fewer side effects. We compared surgically-placed paravertebral catheters with TEA, during a prospective, single-centre audit. Successful completion of this ERAS programme has been shown to decrease length of stay on intensive care and therefore make significant cost savings.

Aims: We wished to confirm the effectiveness of paravertebral analgesia as an alternative to TEA. Secondary outcomes included post-operative vasopressor and fluid requirements, and completion of the ERAS programme.

Methods: All patients at Nottingham City Hospital having an open or laparoscopic-assisted oesophagectomy between 1st July 2011 and 3rd January 2012 were included.

Results: Of 42 oesophagectomies audited, 16 patients received paravertebral/PCA analgesia, and 26 received TEA. Pain scores were equivalent between groups over 96 hours, but the epidural group received more documented interventions to maintain analgesia. There was no difference in post-operative fluids received ($p=0.22$). Similar numbers of patients required post-op vasopressors (paravertebral 46.7% vs TEA 42%) but TEA tended towards a longer duration on noradrenaline (24 vs 38hrs). 50% of the paravertebral group completed the ERAS programme, compared to 27% of TEA group.

Conclusions: Paravertebral analgesia is a safe and suitable alternative to TEA for oesophagectomy, and facilitates successful completion of the ERAS programme.

12025 Enhanced Recovery for Latissimus Dorsi breast reconstruction: How can this be achieved?

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Aim: To understand our current practice in relation to Latissimus Dorsi breast reconstruction (LDBR) and use the principles of enhanced recovery to reduce the patient's length of stay (LOS).

Background: Breast reconstruction is a popular treatment choice for patients in our institution and we have one of the highest regional immediate reconstruction rates.

The National Mastectomy and Breast Reconstruction Audit demonstrated a marked variation in LOS for these patients¹. The Cancer Reform Strategy demonstrated how reducing LOS can be beneficial to patients (lowering hospital-acquired infection rates and increasing patient satisfaction)².

Methodology: We looked retrospectively at our current practice. The notes of 21 patients were reviewed, examining the pre-operative preparation received; the intraoperative anaesthesia, analgesia, antibiotic prophylaxis, catheters and antiemetics prescribed and the post-operative physiotherapy and discharge planning. The average LOS was calculated.

Results: Our average LOS was 3.6 days. We showed variation in antibiotic and catheter use and no use of pre-operative carbohydrate loading. Subsequently we put together an LDBR enhanced recovery proforma with the aim of reducing our LOS.

Conclusion: We have introduced a standardised LDBR patient pathway with pre-operative carbohydrate drinks, standardised pain management, antiemetic prescription and use of prophylactic antibiotics, early removal of urinary catheters, rationalisation of drains and the use of formal discharge planning. We hope that this will reduce our LOS to the "best" seen nationally.

12026 100 Days Under Circle Partnership: A Quality Improvement Project to Improve Patient Experience In Arthroplasty Patients: A Joint Venture Between The Private (Circle Healthcare) And Public Sector. Sue Richards, Emma James, Andrea Linnell, Helen Murray, Lindy Sewell. Hinchingsbrooke NHS Trust. sue.richards10@nhs.net

BACKGROUND: INCONSISTANT ANAESTHETIC AND POST OPERATIVE ANALGESIC GUIDELINES WERE CONTRIBUTING TO LOWER THAN DESIRED PATIENT SATISFACTION LEVELS. BLOOD TRANSFUSION RATES WERE 34% AND SUBOPTIMAL POST-OPERATIVE MEDICAL OPTIMISATION CONTRIBUTED TO LENGTH OF STAY AT 5.6 DAYS.

AIMS: TO IMPROVE THE EXPERIENCES FOR PATIENTS UNDERGOING ELECTIVE PRIMARY HIP AND KNEE ARTHROPLASTY SURGERY, THROUGH REDUCING POST-OPERATIVE PAIN, LENGTH OF STAY AND OPTIMISING POST-OPERATIVE MEDICAL RECOVERY.

SETTING: 21 BEDDED ELECTIVE ARTHROPLASTY UNIT AT HINCHINGBROOKE HOSPITAL, HUNTINGDON UK.

PARTICIPANTS: THE ORTHOPAEDIC TEAM: NURSES, INCLUDING PAIN SPECIALIST NURSE, PHYSIOTHERAPISTS, ANAESTHETISTS AND PHARMACISTS.

METHODS: SCOPING WORKSHOPS FACILITATED THE DEVELOPMENT OF TWO PROJECTS BASED ON THE WARD. PATIENT PARTICIPATION THROUGH FOCUS GROUPS WAS A DRIVER TO FACILITATE CHANGES TO IMPROVE THEIR EXPERIENCE. EXTERNAL PROJECT SUPPORT WITH PERFORMANCE METRIC DEVELOPMENT HELPED MOTIVATE STAFF TO CHANGE AND ENSURE PROCESSES WERE PUT IN PLACE. PATIENTS WERE ENCOURAGED TO ACTIVELY PARTICIPATE IN THEIR POST-OPERATIVE RECOVERY THROUGH THE USE OF PATIENT CENTRED REHABILITATION GOALS. A STANDARDISED ANALGESIC PATHWAY WAS INTRODUCED AFTER A REVIEW OF BEST PRACTICE. MDT TRAINING IMPROVED UNDERSTANDING AND COMPLIANCE.

RESULTS: FOLLOWING PROJECT IMPLEMENTATION A 45% REDUCTION IN LENGTH OF STAY TO 3.1 DAYS WAS ACHIEVED. A 73% REDUCTION IN TRANSFUSION RATES TO 9% WAS RECORDED. PAIN SATISFACTION INCREASED FROM 77% TO 92% IN THE TKR GROUP AND 82.5% TO 89% IN THE THR GROUP.

CONCLUSIONS: THE INTRODUCTION OF A STANDARDISED ANALGESIC PATHWAY, PATIENT CENTRED GOALS AND A COMMITTED PROJECT SUPPORT TEAM LED TO A MARKED IMPROVEMENT IN THE OVERALL PATIENT EXPERIENCE THROUGH A REDUCTION IN LENGTH OF STAY, INCREASED PAIN SATISFACTION AND POST-OPERATIVE MEDICAL OPTIMISATION.

12029 Optimisation of Anaemia in Elective Orthopaedic Surgery. Rebecca Mills, Hardev Sehmi, Tanya Hawkins, Liz Brannigan. Royal Berkshire Hospital NHS Foundation Trust. rebeccajaynemills@gmail.com

Pre-operative assessment (POA) has a key role to play in improving surgical outcomes by identifying and optimising factors such as anaemia. The Royal Berkshire Hospital implemented a novel triage system to identify anaemia earlier, at the time patients are listed for elective orthopaedic surgery. Anaemic patients are flagged to their GP and further investigation and oral iron therapy encouraged to optimise their haemoglobin prior to surgery.

We re-audited outcomes including transfusion rate and length of stay six months after the implementation of this new system to determine its effectiveness and highlight areas for ongoing development.

65 patients underwent elective hip and knee arthroplasty in March 2012. Clinical details were collected from theatre lists, electronic pathology systems and discharge letters. Anaemia was defined as <12 g/dl.

21% of patients were anaemic pre-operatively, with one operation cancelled as a result and five patients requiring transfusion post-operatively. Only 26% of patients were triaged through the new system, and those that were anaemic were not successfully optimised. Of the remaining patients, 42% were seen at POA less than 21 days before surgery, allowing minimal time for optimisation. Our results demonstrate that we need to widen access to the triage system and improve our communication with primary care when anaemia is identified. We have secured funding for point of care haemoglobin testing in the outpatient department and hope that sending patients home with a result and letter to their GP will enable faster optimisation and result in them enjoying better outcomes from their surgery.

12030 Introduction of Enhanced Recovery After Surgery (ERAS) Pathways in Reconstructive Breast Surgery. [Lisa Whisker](#), Rachel Farmery, Eleanor Gutteridge, Jo Gough, Helen Scrimshire, Krystle Brierley.

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Background: Breast surgery as a sub-specialty has high quality randomised controlled trial evidence to support current treatment practice and trial evidence to support many of the components of ERAS.

In other surgical specialties there is good trial based evidence for ERAS and additional specialties are adopting ERAS. Despite this there is very little evidence for enhanced recovery pathways in breast surgery (oncological, reconstruction or aesthetic).

A recent review article¹ identified components of ERAS applicable to oncological breast surgery and concluded that the principles of ERAS can be adopted in breast surgery.

Methods: A review of current practice was completed including length of stay (LOS).

The components of ERAS applicable to breast surgery have been reviewed.

Collaboration between surgical, anaesthetic and nursing colleagues; with the aid of the development team to produce ERAS pathways for breast reconstructions.

Results: Current LOS in the trust is twice the national expected LOS².

Breast reconstruction ERAS pathways have been produced and the LD pathway introduced in July 2012.

Prospective audit is in progress to monitor adherence to ERAS pathways and LOS.

Conclusions: Current practice can be streamlined with the aim to reduce LOS.

ERAS has a role in breast surgery to enhance patient experience and recovery.

We will present our pathways.

12033 THE IMPACT OF PRE-OPERATIVE ASSESSMENT ON OUTCOME IN PATIENTS FOLLOWING THE ENHANCED RECOVERY PATHWAY FOR ELECTIVE ARTHROPLASTY: A STUDY OF 13 PATIENTS.

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East Lancashire Hospitals NHS Trust employs the Enhanced Recovery principles for elective hip and knee primary arthroplasty cases. It was noted that a number of patients were being transferred post-operatively for higher level clinical care and were often unable to continue on the enhanced recovery pathway.

The aim of this project was to investigate the reasons for transfer and identify areas where improvements in pre-operative assessment may influence outcome.

Data was collected retrospectively for 12 months commencing April 2011. Patients were identified electronically. Case notes were analysed and the relevant data collected.

13 patients (mean age 75.4 years) were transferred from the elective orthopaedic theatre site for further management of a medical complication, 61.5% following total hip arthroplasty. The mean length of stay for the group was 20.7 days (median 9.5). Although a spectrum of complications prompted transfer to the acute hospital, cardiac events were the most common, occurring in five patients (38.5%); four with known cardiac co-morbidities.

Although cardiopulmonary exercise (CPEX) testing is available it is not used routinely in our preparation of orthopaedic patients. If the 'Traffic Light Tool' [1], a suggested method of categorising risk and estimating mortality and morbidity were applied to these five patients, it would suggest that three were at high risk and should have undergone pre-operative CPEX testing.

Although this is a small subset of the total volume of surgery (700 cases per year) their excessively long stay may skew the overall outcome and may be preventable with better pre-optimisation or patient selection.

12034 Improved Recovery with Spinal Morphine for Patients Undergoing Radical Prostatectomy.

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Background and Aims: Prostate cancer is the most common cancer of men in the UK¹. Radical retropubic prostatectomy (RRP) is offered to men with high grade disease and low risk for surgery. Severe pain is common following RRP. Effective analgesia reduces morbidity and length of hospital stay. A variety of analgesic techniques have been used in our institution for this operation. Our aim was to identify which offered the best recovery profile.

Methods: During a recent service evaluation, acute pain charts and length of stay data were collected for patients who had undergone RRP from 2009. 44 patients who had received PCA morphine and 44 patients who had received spinal morphine 200mcg were included. We evaluated the impact of the two analgesic techniques on maximum pain score and length of hospital stay.

Results: 93% of patients who had received spinal morphine had well controlled pain postoperatively ('no pain' or 'mild pain' only). This compared to only 76% of patients who received PCA morphine ($p = 0.065$). Mean length of stay was 65 hours in the spinal morphine group compared to 81 hours in the morphine PCA group ($p < 0.001$).

Conclusions: Spinal morphine may offer improved analgesia and was associated with a statistically significant reduction in length of hospital stay following RRP. We would recommend the use of this technique as part of an enhanced recovery programme.

12035 Assessing the Effectiveness of an Enhanced Recovery Protocol.

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Background: Enhanced Recovery After colorectal Surgery (ERAS) is protocol driven to improve patient care and facilitate early discharge. In our trust, protocols are incorporated into specific pre-operative, nursing and medical care pathways, with goals for each day of the program.

Aim: To assess compliance with the protocol.

Method: 231 goals within the ERAS program were identified. A random sample of 10 patient notes were audited against these standards.

Results : 72% of ERAS goals were met. Anaesthetic and analgesia protocols were poorly adhered to. This reflected a gradual change in anaesthetic practice since the program started two years ago. Surprisingly, 30% of patients exceeded various goals set by the program suggesting we could be more ambitious in our aims.

The program required nursing documentation three times per day. This was achieved in 46% of cases, but was completed on two occasions in 79%. The reason for this may be that shift patterns changed since the onset of the program to twelve hour shifts. In addition, the documentation for the day of/before admission was no longer completed. This was due to a move to same day admissions where this was no longer required.

Conclusion: Adherence to the ERAS protocol was good. Areas of poor performance reflected a change in practice which had not been reflected by modifying the paperwork. Following multidisciplinary discussion, areas of the care pathway have been modified and more ambitious patient goals agreed. This demonstrates the dynamic nature of ERAS programs requiring constant revision of protocols, checklists and pathways.

12036 At what point should a laparoscopic bowel resection be converted to an open procedure?

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Published data suggests short-term benefits including less post-operative pain, reduced length of stay (LOS) and reduced surgical morbidity using the laparoscopic approach for colorectal resections. However, there is concern that these benefits may be offset by an increased duration of operation.

Aim: To assess whether there was a time point at which the laparoscopic benefits are negated by increased operating time.

Method: Analysis of prospectively collected data on 513 patients operated on within an enhanced recovery programme over 3-years, using median day of discharge as the measured outcome.

Results: For right hemicolectomy (RH), high anterior resection (HAR) and subtotal colectomy (SC) the LOS for laparoscopic surgery is lower than open surgery, regardless of operating time up to 6 hours. LOS for laparoscopic RH increases significantly after 6 hours suggesting open conversion may be appropriate at this stage, however *n* values are small in these groups. For LAR the benefit of the laparoscopic approach is less obvious after 4 hours, suggesting that conversion may be appropriate at this stage. For Hartmann's and abdomino-perineal resections, laparoscopic surgery is not associated with a reduced LOS. This may be due to additional factors such as advanced tumours, elderly patients, a perineal wound and need for stoma care.

Conclusion: The concern that a longer operating time may offset the benefits of the laparoscopic approach is probably unwarranted for most operations but conversion should probably be considered after 4 hours and definitely after 6.

12037 Enhanced recovery protocol for patients undergoing radical cystectomy: Results in 469 consecutive patients

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Introduction & Objectives: Enhanced recovery protocols (ERP) describe a coordinated approach to the delivery of best evidence based peri-operative practice for patients undergoing surgery. This study describes the outcomes of patients undergoing radical cystectomy managed on an ERP which was started at our institution on 1 October 2005.

Material & Methods: Four hundred and sixty nine patients underwent radical cystectomy and urinary diversion or bladder reconstruction with curative intent between October 2005 and August 2011. During this period evidence based modifications to the ERP were instituted with the principles of strict peri-operative fluid balance, maintaining gut function and early mobility. Data were analysed from cancer network and hospital records. Primary outcome measures were length of inpatient stay, morbidity and mortality.

Results: Median age of patients was 69 years (Range 26-87). Median length of stay was reduced from 15 to 10 days between 2005 and 2011. Improvements in surgical technique, energy devices and attention to post operative detail have been of benefit with regard to a progression in rapid recovery of bowel function and shorter post-operative length of stay. The introduction of robotic assisted radical cystectomy in 2011 has markedly contributed to the significantly decreased length of stay in 2011. Despite increases in case complexity the complication rate has decreased year on year over the 6 year study period.

Conclusions: Implementation of a continually evolving ERP is associated with continued significant reductions in length of hospital stay with no deleterious effect on complication or readmission rates.

12038 Pain control in patients undergoing open liver resection surgery in an ERAS programme.

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Introduction: Epidural analgesia has been the gold standard for laparotomy. Early mobilisation is an essential part of an ERAS programme requiring good pain relief. We compare the timing of removal of epidural analgesia .

Methods: An RCT was open to all consecutive liver resection patients. 91 patients were randomised to receive either standard perioperative care (SG) or an ERAS programme. Both groups received a standardised anaesthetic and surgical technique with thoracic epidurals for post-op analgesia. The ERAS elements utilised were extra preoperative education, carbohydrate loading and oral nutritional supplements, post-resection goal-directed fluid therapy (LiDCOrapid™), early mobilization and physiotherapy. Epidurals were removed on postoperative day (POD) 2 in the ERAS group, and 3-4 days in the SG.

Results: 1 epidural failure (SG). 96% of patients in ERAS group followed protocol and had their epidural stopped on POD 2 compared with a median of POD 4 in SG.

There were no significant differences in mean pain scores between the groups, except POD 2 which was significantly better in the ERAS group (p=0.044).

Discussion: Despite having had their epidural removed on post-op day 2, patients in the ERAS group had same pain scores and mobilised sooner than the standard group who still had epidurals in-situ. This could be due to a number of factors including better active management of epidural in ERAS group, better patient engagement, early feeding and oral carbohydrate loading.

Conclusion: Early epidural removal does not significantly alter pain scores when part of an ERAS programme, and facilitates early mobilisation.

12039 Should Colorectal Surgeons be Brave Enough to Abandon Full Bowel Preparation? A non-randomised prospective cohort study. Joel Lambert; Ian Gregory; Dawn Gane; Lisa Hayward; Rhys Davies; Anne Pullyblank. North Bristol NHS Trust bereal95@hotmail.com

Meta-analysis suggests that full bowel preparation is unnecessary for elective colorectal resection. This is reflected in enhanced recovery protocols (ERP). Although phosphate enema (PE) is the default in our ERP, some surgeons still use full bowel preparation (FP) in left sided resections where defunctioning stomas are required.

Aim: to examine the use of PE instead of FP on length of stay (LOS) and complication rates for anterior resection patients.

Method: Prospective data was collected over a 3-year period on 219 patients.

Results: There were 145 high anterior resections (HAR) (50% laparoscopic) and 74 low anterior resections (LAR) (35% laparoscopic). 164 patients had PE and 52 had FP. There was no difference in bowel opening or first flatus. There were fewer wound healing problems (FP vs. PE 19% vs. 19% for HAR and 19% vs. 12% for LAR) and fewer infections requiring antibiotics at 30 days (FP vs. PE 19% vs. 15% for HAR and 13% vs. 10% for LAR) in PE patients.

There were more returns to theatre with PE (FP vs. PE 0% vs. 4% for HAR and 5% vs. 7% for LAR), and 3 deaths with PE (FP vs. PE 0% vs. 1.5% for HAR and 0% vs. 2% for LAR), but this was not statistically significant. There was no difference in LOS in the HAR group (median 4) but it was shorter for PE patients in the LAR group (6 vs. 7 days).

Conclusion: Abandoning FP in line with published evidence is safe, even in LAR

12041 Are there any reliable predictors for length of stay in patients within the Enhanced Recovery Programme? Yasmin Tabbakh, Ahmed Saleh, Ugo Ihedioha, Peter Kang. Northampton General Hospital. y_tabbakh@hotmail.co.uk

Introduction: Our aim was to identify pre-operative patient specific criteria and correlate this with length of stay. Can we predict which patients benefit the most in terms of length of stay of laparoscopic colorectal surgery within an enhanced recovery programme?

Method: Using a local Laparoscopic Colorectal Database, patients were identified prospectively from February 2010 to June 2012. Potential predictors considered were BMI over 30, presence of cardiorespiratory co-morbidities, diabetes, ASA grade < 3, previous abdominal surgery and day of operation. The outcome measured was average length of stay (LOS).

Results: A total of 59 patients underwent laparoscopic resections with 22 being right sided and 37 being left sided. There was no statistically significant difference in LOS in patient when considering any of the potential predictors listed above except for presence of cardiorespiratory disease pre-operatively (p=0.03922)

Conclusion: There are no reliable pre-operative predictors of increased post-operative length of stay, except for the presence of cardiorespiratory co-morbidities, in colorectal cancer patients undergoing laparoscopic colorectal surgery within an enhanced recovery programme (ERP). The benefits of laparoscopic colorectal surgery, within an ERP in terms of early recovery after surgery are well known, and therefore this service should be offered to all suitable patients with colorectal cancer.

12042 Two year experience following Introduction of Enhanced Recovery Programme (ERP) and Laparoscopic Colorectal Surgery (LCS) for Colorectal Cancer at Northampton General Hospital.

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Introduction: ERP is a multimodal evidence based approach, to prepare patients for, reduce the physical impact of and to hasten patients' recovery from surgery. ERP and LCS were introduced for colorectal cancer patients at Northampton General Hospital in February 2010. We present our two year outcomes and consider whether patient selection would improve outcomes.

Method: Prospective data collection using the Laparoscopic colorectal database, including length of stay (LOS), readmission rate within 30 days, re-operation rate within 30 days, 30 day mortality, and post operative complications .

Results: There were 115 laparoscopic colorectal resections performed by two experienced laparoscopic colorectal surgeons, from February 2010 to June 2012. There were 49 right sided, and 66 left sided cancer resections. Mean LOS was 7.5 days and 8.9 days for right and left sided resections respectively, with median LOS 5 days for both. Overall conversion rate 20%, 30-day reoperation rate 9.6%, 30 day readmission rate 4%, 30-day mortality 1.7% and anastomotic leak rate 6.1%. There were higher overall complication rates in the over 75's, but there was no significant difference in LOS.

Conclusion: Patient selection for laparoscopic colorectal surgery and ERP could reduce complication rates. This, however, would deny some patients from receiving the benefits of laparoscopic surgery and enhanced recovery protocols, in terms of early recovery after surgery and positive patient perception and experience.

12044 Why do daycases stay overnight? Interventions to improve Foot & Ankle daycase throughput by early communication within the multidisciplinary team. Burnand H, Clint S.

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Context: Daycase surgery has numerous advantages for patients, clinicians and the hospital. The Best Practice Tariff has an uplift of £200 per case for Minor Foot Procedures performed as daycases.

Problem: Daycase patients were not all being discharged on the day of surgery. This project analysed factors associated with length of stay of daycase patients on a Foot and Ankle list.

Analysis of causes: Foot & Ankle daycase procedures in Cheltenham General Hospital require physiotherapy assessment & frequently an orthotic aid before discharge which can cause delays.

Intervention: To enable pre-operative physiotherapy assessment and provision of required orthotic aids.

Strategy for change: A weekly multidisciplinary bulletin from the Orthopaedic Consultant to highlight post-operative weight-bearing instructions and orthotic requirements for forthcoming daycase patients to physiotherapists, nursing staff and junior doctors.

Measures for improvement: Length of stay was calculated using Patient Admissions System (PAS) data.

Effects of change: Two comparable patient series were analysed. Pre-intervention 61% (23 patients) were discharged the same day. Post-intervention 85% (35 patients) were discharged the same day. This demonstrates a statistically significant impact on the number of patients discharged the same day ($p < 0.0207$). The financial implications are increased revenue by achieving Best Practice Tariff with an uplift of £1800 and an associated reduction in the estimated cost of unnecessary overnight stays of £4640 over a 3 month period.

Lessons learnt: Improved multidisciplinary communication via a weekly team bulletin can significantly improve team efficiency, the patient experience, the impact on bed occupancy and cost of care.

12050 Attending Joint School has a direct effect on reducing length of stay and increasing patient satisfaction in patients undergoing primary arthroplasty. Sarah Spear, Derriford Hospital

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Introduction: Whilst introducing an ERAS pathway, we chose to set up a Joint School. In order to evidence the value of joint school we analysed the impact of attendance versus non-attendance on patient experience and length of stay (LOS).

Aim: The aim was to assess the effect of attending Joint School on length of stay and analyse the satisfaction of those attending, thereby justifying its role in our pathway.

Methodology: Between 5th Sept and 30th Nov, 205 primary arthroplasty were performed, 68% of which attended Joint School. All patients received the same pathway of treatment, regardless of their attendance. Satisfaction data was collected after Joint School attendance and on the day of hospital discharge, alongside length of stay.

Results: Analysis shows that attendance at Joint School reduces mean LOS by 1.3 days for TKR patients and 1.6 days following THR. Overall, attendance at Joint School reduces LOS by 17%, with a 95% confidence interval. As expected, LOS increases in correlation with age, making the impact on LOS more significant in older patients.

Satisfaction rates at Joint School have shown that 98% of patients found it useful, whilst 88.5% of patients reported Joint School as 'enhancing their overall experience' when questioned on the day of discharge.

Conclusion: Our data has demonstrated a direct correlation between attendance at Joint School and a reduction in LOS, whilst creating high satisfaction rates. Due to the success of implementing Joint School we are now looking at rolling out pre-operative education to all elective orthopaedic patients.

12051 Enhanced Recovery Program within a Bariatric Service. [Dr Tom Zamoyski](#), Mr Goldie Khera, Mr Adam Simpson, Mr Michael Wilson, Mr Sean Woodcock, Mr Keith Seymour Department of General Surgery, North Tyneside General Hospital tomzamoyski@yahoo.co.uk

Background: Enhanced Recovery Programs (ERP) are accepted within many elective surgical situations. We have found no published data reporting experience with formal ERP protocols within bariatric surgery. The bariatric service at this centre was established in 2006, and has a highly multidisciplinary (MDT) approach. The MDT has developed and implemented a specialised bariatric ERP.

Methods: The prospective database of an NHS Bariatric Service was interrogated for all patients undergoing single primary bariatric procedures in 2009-2011 (n=361). The length of stay (LOS), complications, 30 day readmission rate and mortality occurrence at any time were measured.

Results: All cohorts benefitted from short LOS, minimal complications, low 30 day readmission rates and no mortality. 198 patients had Roux en Y gastric bypass, the majority of which had just a 1 or 2 night stay. 66 patients had gastric bands; 65% were treated as a day case. 47 patients had gastric balloons; 94% treated as a day case. 50 patients had sleeve gastrectomy, over half only requiring a 2 night stay.

Conclusions: The Enhanced Recovery Protocol has been successfully adapted into bariatric surgical pathways. The ERP has resulted in the majority of patients benefiting from short LOS, and low complication and readmission rates. The study has shown that an ERP for an NHS Bariatric programme can be achieved with success, allowing high service efficiency.

12061 The establishment of an enhanced recovery program (ERP) after upper gastrointestinal cancer surgery in a regional cancer service. Patel P, Noorani A, Das S, Riaz A, Jambulingham P, Livingstone JI, A Al-Bahrani. Upper GI Cancer Unit, West Herts NHS Trust, Watford General Hospital. ayeshanoorani@yahoo.co.uk

Introduction: The enhanced recovery (ERP) programme is widely established in colorectal and orthopaedic practice, yet its uptake in upper gastrointestinal cancer surgery remains contentious and limited. We describe the process for successful implementation and modification of a regional Upper GI ERP.

Methods: Hertfordshire and Bedfordshire oesophago-gastric cancer treatment has been centralised since 2009. Surgery is performed at a central site with pre-operative assessment in peripheral hospitals.

A multi-disciplinary team of surgeons, anaesthetists, dieticians, pain and cancer nurses have created and subsequently modified a pathway bundle focused on morbidity control. This incorporates national ERP goals and is enabled by Trust acceptance and robust funding. Patients have dedicated pathways for optimal nutrition, pain control and early mobilisation that have undergone changes in order to improve patient outcome. Patients are admitted on the day of surgery and pre-operative counselling has been paramount in achieving high patient participation. Regular multi-disciplinary meetings have highlighted pitfalls to maximise efficiency. Clinical audit is used to determine ERP bundle compliance.

Results: The ERP was implemented successfully in April 2011. A total of 41 patients have been enrolled. The pathway bundle has been a robust framework for all clinicians to provide a goal directed service.

Conclusions: Our ERP is well established and has undergone substantial modifications since its conception. This has resulted in a robust, multidisciplinary framework for patients aimed at reducing morbidity. The ERP has become the first line of management in patients with oesophago-gastric cancer undergoing curative surgery in our trust.

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¹ Intraoperative Fluid Management Technologies Adoption Pack. Published May 2012. NHS Technology Adoption Centre (www.nhs.uk)
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