

PREHAB to REHAB: Optimising Treatment Pathways for Cancer Patients



8th ERAS UK Conference

Heathrow 16th November 2018



In partnership with

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CANCER SUPPORT

Welcome to the 8th ERAS UK Conference

On behalf of ERAS UK, I am delighted to welcome you to our first conference to focus primarily on issues related to cancer treatment. It is wonderful to welcome such a broad range of healthcare professionals to this conference and I hope that you take the opportunity to network and debate throughout the day.

You can follow us on twitter @ERASsocietyUK, using #ERASUK8 and through our Facebook group www.facebook.com/groups/erasuk/

I would like to thank all of the faculty for their contributions to the day and I am particularly grateful to the patients who have taken the time to join us for this event. Thanks must also go to our conference partner, Macmillan Cancer Support and the healthcare companies who have generously sponsored the conference. Finally, I would like to express my gratitude to June Davis and Nader Francis for co-chairing this event.



Enjoy the day!

Dr Fiona Carter, ERAS UK Manager

MACMILLAN CANCER SUPPORT

Macmillan Cancer Support is here to help people find their best way through cancer, from diagnosis onwards, so they can live life as fully as they can. With the help of our millions of supporters, professionals, volunteers, campaigners and staff, Macmillan works across the UK to provide holistic support to all those affected by cancer.

Development of UK wide principles and guidance for prehabilitation in oncology (FACT project)

During 2017 Macmillan developed a strategic evidence and insight report on prehabilitation in oncology in collaboration with internal and external stakeholders.

Through discussion with clinical and academic leaders and the findings from the research it was agreed that it would be highly beneficial, primarily to service users, commissioners and service providers, to develop principles and guidance for prehabilitation in oncology for use UK wide.

The Royal College of Anaesthetists (RCoA) Perioperative Medicine leadership group have been focusing on prehabilitation before surgery in general, and cancer surgery in particular, as a priority for service development and research. Macmillan, RCoA and the National Institute for Health Research Nutrition and Cancer Collaborative have agreed to proceed in partnership to complete this work.

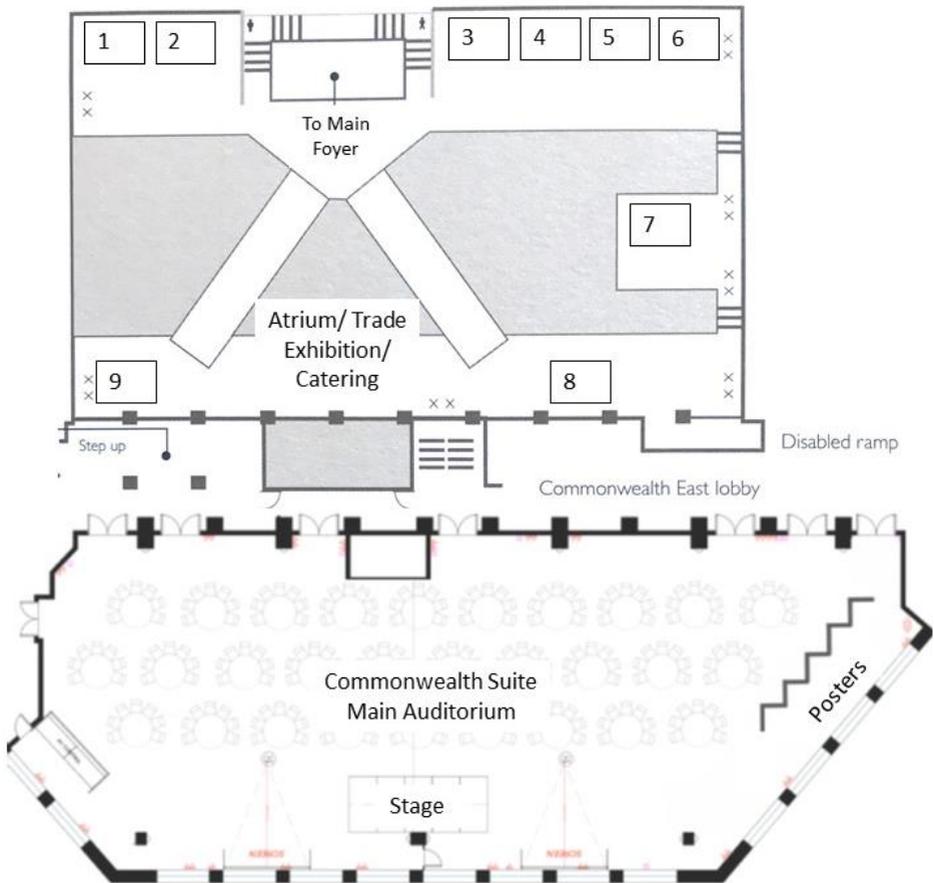
Scoping will commence in May 2018 with project commencement in July 2018 with the guidance launched at the World prehabilitation conference in London in early July 2019.

For more information please visit www.macmillan.org.uk

Timetable

TIME	TOPIC	FACULTY
08:30	Registration	ERAS UK Admin
09:15	Opening address	Prof Nader Francis
09:30	Keynote Lecture: Advances in anaesthetic and perioperative care for cancer patients	Prof Mike Grocott
10:00	Session 1: Pre-treatment Optimisation	Chairs: S Jack & M Grocott
	i, Primary care perspective	Dr Sinead Clarke
	ii, What does the future look like for prehabilitation in Wales and Scotland?	Dr Rachael Barlow & Dr David McDonald
	iii, Links between prehabilitation and the national cancer commissioning priorities	Fran Williams
11:15	Coffee & Trade Exhibition / Poster walk (Atrium)	
11:45	Session 2: Ken Fearon prize session	Chairs: A Balfour, I Fecher-Jones, T Wainwright
	18004 Implementation of the Enhanced Recovery Laryngectomy pathway: a first step for the Head and Neck service	Gabriella Massa
	18007 Implementation of a pre-operative physiotherapy service for patients undergoing oesophago-gastric surgery,	Alice Humphries
	18011 Effect of 4-week multimodal prehabilitation on fitness before pancreatic resection: an interventional pilot study	Jason George
	18020 Analgesia for video assisted thoracoscopic surgery: a multimodal approach to accelerated recovery	Lail-u-mah Zaheer
	18024 Could breath testing predict post-OP ileus and recovery following laparoscopic colorectal surgery?	Nana Lemm
12:30	Lunch, trade exhibition & Poster walk (Atrium)	
14:00	Session 3: Enhancing care during treatment and recovery	Chairs: R Barlow, N Francis, J Cave
	<i>Models for Prehabilitation for cancer patients</i>	
	a, Westfit project in Southampton	Prof. Sandy Jack
	b, Update on prehab projects in Manchester	Neil Bibby
	c, Prehab the Aintree way	Claire Knowles
	d, Prehabilitation for Upper GI Cancer patients	Mr Krishna Moorthy
15:00	Tea & Trade Exhibition (Atrium)	
15:30	Session 3 continues: Enhancing care during treatment and recovery	Chairs: R Barlow, N Francis, J Cave
	i, Living with cancer,	Patient panel
	ii, Painting the picture: the role of palliative chemotherapy in improving quality of life for those living with cancer	Georgina Wiley
16:30	Prizes awarded	ERAS UK Directors
16:45	Summing up and take home messages	June Davis
17:00	Close	

Floorplan



Exhibition stands:

1-2 Registration

3-6 Macmillan Cancer Support

7 Medtronic

8 Vitaflo

9 Halyard Health

ERAS UK are very grateful to the following organisations for their generous support of this conference:

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Angie Balfour

ERAS (Enhanced Recovery After Surgery) is an evidence-based care pathway that I have implemented in the colorectal unit at the Western General Hospital in Edinburgh. This role consists of several key principles that include but are not limited to: research, direct clinical care of surgical patients, education of the multi-disciplinary team, service and quality improvement and overall management of an evidence-based programme of care. Data collection, audit and process evaluation are essential elements of the role and ensuring that the data collected, analysed and reported is robust and meaningful to aid improvements in the patient pathway through their surgical journey.

For the last several years, I have been working with the ERAS Society as a clinical expert/ coach across the USA & Europe. This has led to various new opportunities including mentoring nurses from other countries and getting involved in national and international conferences to share knowledge and experiences. The ERAS UK chapter is one such conference that I enjoy contributing to.

Dr Rachael Barlow

Rachael is a registered Dietitian with more than 20 years' experience and obtained a PhD from Cardiff University School of Medicine in 2008. She currently works for the NHS in Wales as a Clinical Lead working closely with clinical teams delivering surgical care across hospitals in Wales to ensure services are delivering the optimal surgical care for patients. Rachael was instrumental in the launch of the Enhanced Recovery after Surgery (ERAS) Programme in Wales in 2010 and acts as an advisor to Welsh Government on surgical care. She holds several national positions representing the dietetic profession and in multi-professional organisations. Rachael also conducts her own research to help ensure that Dietitians and healthcare professionals deliver care based on clinical evidence and is cutting edge. She has published and presented research and guidelines on a national and international basis. Rachael regularly speaks at healthcare professional events and patient events and is passionate about the subject of nutrition. She works closely advising all members of the surgical teams including dietitians on what care is best for patients undergoing surgery. In addition, she teaches future health professionals nutrition including medical students within Cardiff University.

Mr Neil Bibby

Neil Bibby is a Senior specialist HPB dietitian working at the Manchester Royal Infirmary. He graduated from Leeds Beckett University in 2011, completing the postgraduate diploma course. He started his career at Nottingham University Hospitals, specialising in medical gastroenterology and colorectal surgery. He is

currently completing a Prehabilitation and enhanced recovery project working with surgical HPB cancer patients. He is a member of the Nutrition interest group of the pancreatic society of Great Britain and Ireland and Gastroenterology specialist group of the British Dietetic Association.

Dr Judith Cave

Judith Cave is a Medical Oncologist specialising in the systemic treatment of lung cancers and neuroendocrine tumours (NETS). She is the research lead for NETs and is proud to have been part of the successful bid for Wessex to become a European Centre of Excellence for NETs. She teaches undergraduate and postgraduate students (medicine and physiology) and is Associate Director of Medical Education. She is currently Principle Investigator for a study of exercise training in patients with metastatic lung cancer, and on the TMG for two other exercise intervention studies based at Southampton.

Dr Sinead Clarke

Sinead is a GP in Cheshire and a GP Advisor for Macmillan Cancer Support leading on Treatment and Recovery. She has had a career long interest in cancer and in how health care professionals can support people living with and beyond cancer to lead as full and active a life as possible. She is very excited about the work that is going on to improve outcomes for patients both with prehabilitation and rehabilitation approaches and believes primary care can play an active role in this work. She also works as a Clinical Director for South Cheshire and Vale Royal Clinical Commissioning Groups and can see the huge benefits of commissioning good end to end cancer care to maximise the benefits to patients. When not working she enjoys good science fiction novels and walking her new puppy.

June Davis

June Davis has 22 years' experience working in the NHS as a Dietitian, service and professional lead, general manager for a number of service areas within the acute setting and senior project lead for several large scale change projects across London. June has over 10 years' experience working as Head of Therapies for large acute Trusts. These roles involved both the strategic and operational management of one of the largest therapy services in the UK as well as being at the forefront of integrating research, service delivery and education across AHP services.

June has worked extensively with commissioners and service provider as an AHP lead for a cancer network to strengthen the role and contribution of AHPs. She has expertise in preparing and presenting business cases as well as generating and delivering service transformation working with and as a provider of services. June is a Director of Allied Health Solutions, Allied Health

Professions Advisor (part time) for Macmillan Cancer Support and a professional advisor to the Care Quality Commission.

Imogen Fecher Jones

Imogen Fecher-Jones trained as an Adult Nurse at Oxford Brookes University, graduating in 2001. Following three years working within GI oncology and surgery at the John Radcliffe and Churchill Hospital, she moved to University Hospital Southampton. In 2007, Imogen co-ordinated the introduction of a colorectal and HPB Enhanced Recovery after Surgery programme, which led to her becoming the Enhanced Recovery Co-ordinator for the Trust. Following completion of an MSc in 2012 in Advance Practice at Kings College, London, Imogen led a team of nurse practitioners providing 24 hour care for surgical patients. Working as an Advanced Practitioner in acute surgery she developed ambulatory and emergency surgery pathways for non elective patients.

In 2016 Imogen became the project manager for the new Perioperative Medicine Service at UHS. She is now the lead nurse for this service as well as a part time NIHR trainee investigating perioperative behaviour change.

Professor Nader Francis

Nader Francis is a colorectal surgeon at Yeovil and a visiting Professor at University of Bath. He is committed to minimal invasive surgery and enhanced recovery and continues to improve patient experience through an excellent relationship with the whole Multi-disciplinary team. In addition to fostering this locally he has working to promote the spread and adoption of enhanced recovery nationally through Enhanced Recovery After Surgery (ERAS-UK) society, which he chairs.

Nader is currently the Chair of the research committee of the European Association of Endoscopic Surgery and has key research interests in education; colorectal cancer; laparoscopic surgery and perioperative care. He has been a chief investigator of a number of studies and has presented and published widely in these areas.

Jo Green

I was diagnosed with incurable metastatic neuroendocrine cancer at the age of 34, the primary being in my bowel. It is estimated, by the onset of my symptoms which became increasingly severe and painful over the years, that I had probably had this cancer for at least 15 years. I had major abdominal surgery in 2011, 2 months after being diagnosed, to de-bulk my tumours where my surgeon (Consultant Hepatobiliary and Pancreatic Surgeon Neil Pearce) managed to remove all visible disease. I had further surgery to remove my gallbladder in 2017 which was followed a year later, January 2018, by further surgery to remove recurrent disease. I work full time as the Sales and Marketing Manager at a

private health club in where I also teach fitness classes. I also run PLANETS Cancer Charity, supporting patients with pancreatic, liver, colorectal and neuroendocrine cancer, with a fellow NET patient.

Professor Mike Grocott

Mike Grocott is the Professor of Anaesthesia and Critical Care at the University of Southampton and Consultant in Critical Care Medicine at University Hospital Southampton NHS Foundation Trust.

He leads the Critical Care Research Area within the Southampton NIHR Respiratory Biomedical Research Centre and is Head of the Integrative Physiology and Critical Illness Group at the University of Southampton. He also leads the Anaesthesia and Critical Care Research Unit within University Hospitals Southampton NHS Foundation Trust (UHS).

As lead for critical care within the NIHR BRC, he is leading efforts to address key unmet needs in critical illness across the life-course, including hypoxia (Xtreme Everest programme), lung injury, resuscitation, rehabilitation after critical illness, and perioperative care (including the Fit-4-Surgery programme).

Professor Sandy Jack

Professor Sandy Jack PhD is a Consultant Clinician Scientist and Professor of Prehabilitation Medicine in the Anaesthesia/Critical Care and Perioperative Medicine Research Unit, University Hospital Southampton NHS Foundation Trust (UHS), and the NIHR Southampton Biomedical Research Centre and the Integrated Physiology and Critical Illness Group, Clinical and Experimental Sciences, Faculty of Medicine, University of Southampton (UoS). She was Director of the Clinical Diagnostic and Preoperative Assessment Exercise service at Aintree University Hospitals NHS Foundation Trust and is now the lead Clinician Scientist at UHS.

Professor Jack manages the Centre for Human Integrative Physiology in the NIHR Research Facility; she is the co-director of the Fit-4-Surgery Consortium at UHS. She is a member of faculty on numerous courses including the European Practicum in Exercise Testing and Interpretation. More recently her research interests have been the use of exercise testing in preoperative assessment and perioperative management including prehabilitation in patients with cancer.

Philip Jones

My name is Phil Jones, I am 70 years of age and I live in Cardiff. I have worked in the steel industry for almost 45 years, working mainly with different types of furnaces and casting machines in the production of molten steel. In summer 2017, I began coughing up blood and went to see my GP, who suspected that I had a virus. My symptoms continued and, after further visits to my GP, I finally

received the results of a scan showing that I had a tumour on my left lung. On hearing this devastating news I was in total shock and feared the worst. I was referred to a Respiratory Consultant at Llandough Hospital, where I had lung function tests and several other investigations. I was also referred to the Prehabilitation and Optimisation Programme team (POP) a pilot scheme operating at Llandough hospital. At the time of meeting this team I was losing weight, either through the illness or through worry, I had lost my appetite for food, my clothes were no longer fitting me as they were now too big, and I found it hard to sleep at night as the illness was now constantly on my mind and keeping me awake, although I tried to put a brave face on matters for the sake of my wife, I was really depressed, not knowing what the outcome would be. During the time that a series of further tests were being carried out, I began following all the instructions and advice that the Prehab team had given me, I was doing everything I possibly could to regain the weight that I had previously lost, and at the same time I started on a strict exercise regime, as I had been informed that I was being considered for surgery. This was tremendous news and it encouraged me that much more, it gave me a more positive attitude regarding my illness and I put even more effort into everything I did. On 22nd December I underwent VATS to have a large section of my left lung removed, together with lymph nodes. I was discharged 7 days later and the treatment and aftercare I had in hospital was first class. I am incredibly grateful to the NHS for having such a highly skilled team of medical professionals behind me every step of the way throughout my illness. The Prehab team not only conditioned me ready for major surgery, they gave me a positive and an optimistic approach to my illness, without their professional help, guidance and support throughout this programme I doubt very much if I would have been in any fit state going into hospital for such major surgery.

Claire Knowles

Claire Knowles graduated with a BSc (Hons) in physiotherapy from the University of Liverpool in 2010. Following a short period of work at the Royal Victoria Infirmary in Newcastle she began working at University Hospital Aintree in 2011. Claire has had a varied range of physiotherapy experience before developing a special interest in surgical cancer patients following an extended period on the surgical wards and critical care. Following a period of multidisciplinary development the Aintree Prehab Programme was launched in August 2017. This service offers physiotherapy and dietetic input prior to cancer surgery and has proven to be successful over its pilot period. The team are now looking at how the principles of prehabilitation can be used across other specialities across the trust.

Dr David McDonald

David graduated as a physiotherapist in 2001 and became the lead orthopaedic physiotherapist in 2005 at the Golden Jubilee National Hospital (GJNH) in Clydebank, Scotland. In 2007, David formed a key role in development of their own ERP. From 2010 he supported the Scottish Government part time to develop and implement ERP in orthopaedics across Scotland and improve the standards of care by decreasing variation of practise around the country. He published a number of leading articles in this field and remains an active researcher in orthopaedics. David now works full time to support the Whole Patient Flow Improvement Programme within the Scottish Government Health Directorate. Good patient flow places the patient on the optimal patient pathway for their needs and contributes to safe, patient centred and effective care. Within this work there is a continued focus on spread and sustainability of ERP across other specialisms throughout the NHS in Scotland. Ensuring that all patients receive the right care, at the right time, in the right place, by the right team, every time.

Jackie Mifflin

My name is Jackie, I'm 63 years old, born in London. I have two children, my son is a lawyer and my daughter is a Lieutenant Commander in Royal Navy.

I was diagnosed with stage 3 bowel cancer April 2016. After being given a course of radiotherapy/chemotherapy I had surgery, anterior resection and ileostomy. Further chemotherapy and being given the 'all clear' followed by stoma reversal ensured that my recovery from bowel cancer was successful. I am now a volunteer for Bowel Cancer UK where I present talks, raising awareness and highlighting the symptoms and prevention of bowel cancer.

Mr Krishna Moorthy

Krishna is a Senior Lecturer and Hon Consultant Surgeon in Imperial College London. His clinical interests are general surgery, upper gastrointestinal surgery for cancer and bariatric surgery.

His research interests are in patient safety and quality of care in surgery. He was closely involved in the development of the WHO surgical checklist. His current interests include the implementation of prehabilitation and enhanced recovery protocols in oesophago-gastric cancer surgery.

Dr Tom Wainwright

Tom Wainwright is Associate Professor in Orthopaedics and Deputy Head of the Orthopaedic Research Institute at Bournemouth University. He is a physiotherapist, clinical academic, and quality improvement specialist internationally recognised for his work on Enhanced Recovery after Surgery (ERAS) protocols within orthopaedics. He has held managerial roles within the National Health Service (NHS) including a crucial leadership role in the design,

implementation, and delivery of an award-winning orthopaedic ERAS pathway. He is passionate about improving the quality of healthcare systems and The Institute of Consulting named him as the 2010 young consultant of the year. More recently, after being appointed as an Associate Professor in Orthopaedics, Tom has focussed on research within the field of ERAS and orthopaedics, he lectures worldwide and has produced numerous ERAS publications, including articles, textbooks, textbook chapters, and has won international prizes for his work.

Georgina Wiley

Georgina Wiley works as a Treatment and Recovery Advisor for Macmillan Cancer Support. She holds a Bachelor of Nursing Degree (Hons) and a post graduate certificate in cancer nursing. She started her career as an oncology nurse in Melbourne Australia and worked in both the private and public sector in CNS and management roles. In 2013 she was awarded a grant to undertake a research project looking at barriers to men with chronic illness accessing psychological and supportive care services. From this she undertook a number of other research and quality improvement projects before commencing a new job as a project manager for the Australian Cancer Survivorship Centre. During her time there she worked on a number of projects including some relating to health inequalities and equity of care and bridging the gap between primary and acute care services. She also authored a number of toolkits on implementing needs assessment tools and survivorship care plans for the Department of Health in Victoria. Georgina is passionate about addressing health inequalities and ensuring equal access to high quality cancer care for all.

Fran Williams

Fran has worked in the field of cancer for over 20 years and has experience of working in Primary and Secondary Care plus the statutory and charitable sectors. As a Macmillan Palliative Care CNS and Lead Cancer Nurse she completed a MSc in Psycho-Social Palliative Care. Working in Service Development for Macmillan Cancer Support she was involved in many new and exciting initiatives including Patient Triggered Follow-Up, a pan Hampshire Macmillan Citizen's Advice service and an exercise referral scheme. Now working for the Wessex Cancer Alliance, Fran has been leading on the Recovery Package and Stratified Pathways Transformational bids and is particularly excited to be involved with WesFit - a prehabilitation project combining the rigour of an RCT and a service evaluation. Totally committed to ensuring the patient is at the heart of any service development, she is very supportive of the QoL metric.

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References: 1. Forastiere E, Sofra M, Giannarelli D, Fabrizi L, Siorne G. E ectiveness of continuous wound infusion of 0.5% ropivacaine by On-Q pain relief system for post operative pain management after open nephrectomy. *Br J Anaesth*. 2008 (UK);101(6):841-847. 2. Zimberg SE. Reducing pain and cost with innovative post operative pain management. *Manag Care Q*. 2003;11(1):34-36. 3. Sherwinter DA, Ghaznavi AM, Spinner D, Saval RH, Macura JM, Adler H. Continuous infusion of interperitoneal bupivacaine after laparoscopic surgery: a randomized controlled trial. *Obes Surg*. 2008;18(12):1581-1586. 4. White PF, Rawal S, Latham P, et al. Use of continuous local anesthetic infusion for pain management after median sternotomy. *Anesthesiology*. 2003;99(4):918-923.

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Oral Presentations

18004 Implementation of the Enhanced Recovery Laryngectomy pathway: a first step for the Head and Neck service. G Massa, UCLH

Introduction: Evidence shows that Enhanced Recovery After Surgery (ERAS) programs have a positive impact on patients undergoing major surgery. However, ERAS is a relatively new concept in head and neck surgery, particularly for patients undergoing Laryngectomy. It is anticipated that patients on the ERAS pathway would be playing an active role in their recovery through a process of learning to look after themselves. The pathway could also represent a benefit for ward staff as caring for a compromised airway patient can be very challenging; the pathway should be a supportive tool for the nursing team, who would feel reassured to deliver best possible care. The pathway will aim to reduce length of stay and readmission improving both the quality of life for patients and the financial wellbeing of health care system.

Aim: To assess the impact of the Enhanced recovery programs after Laryngectomy surgery

Method: A meeting with key stakeholders to discuss the importance of standardized care led to the development of the pathway. This was followed by an audit of cases for six months prior to intervention and six months after the intervention. The Head and neck unit implemented a new integrated care pathway including a daily medical ward round. Specific elements of the pathway were: patient education, enhanced information in the pre-admission clinic, preoperative optimisation involving the anesthetic and hematology teams, proactive involvement of the pain team physiotherapists postoperatively. This intervention required staff education and engagement with the pathway, improved communication within the nursing team and the community.

Results: The data six months before the ERAS program showed a mean LOS of 32.6 days, with no readmissions within 30 days in the head and neck ward for all the laryngectomy patients. The data after six months of the ERAS program showed a mean LOS of 23 days with no readmissions within 30 days for the entire laryngectomy patient. The ERAS pathway therefore contributed to a decrease in the mean LOS of 9.6 days.

The pathway addressed some of the issues preoperatively, for example equipment such as the suction machine and nebulizer machine are now ordered in the pre-assessment clinic. This allows the patient to have extra time to learn how to use it in the ward and prepares the patient for a safer discharge. Teaching about enhanced recovery was provided for the nursing team who reported they felt more confident looking after laryngectomy patients.

Discussion: The introduction of the ERAS pathway made the ordering of supportive equipment mandatory before surgery (in the pre-assessment clinic) and the enhanced recovery nurse has more time to follow up the request and liaise with the community service if there are any problems. This has reduced delays due to acquiring equipment which happened frequently prior to the introduction of the pathway. It was also noted that the nursing team did not feel comfortable looking after a patient following a Laryngectomy because of lack of

agreement within the medical team about standardized care after surgery. The enhanced recovery nurse disseminated training about enhanced recovery principles and specifically about the pathway for laryngectomy patients. This has resulted in increased confidence of ward staff to participate in the medical ward round and improved communication between the medical and nursing teams. Conclusion: The introduction of the ERAS program produced significant reduction in LOS, improved patient engagement and communication between medical and nursing team. Our results demonstrate that the adoption of the enhanced recovery program can significantly support the patient and the team.

18007 Implementation of a pre-operative physiotherapy service for patients undergoing oesophago-gastric surgery. A Humphries et al, Oxford University Hospitals NHS Trust.

Patients undergoing oesophago-gastric surgery at the Churchill Hospital have traditionally received pre-operative input from the multidisciplinary team, however this has not routinely included contact with a physiotherapist. Physiotherapy input for this patient group was primarily delivered post-operatively as part of routine care, focussing on early mobilisation and airway clearance to enhance recovery and minimise the development of post-operative pulmonary complications.

Since 2016, following a visit to the Seattle and the reorganisation of the physiotherapy service, pre-operative physiotherapy has been offered to patients undergoing oesophagectomy. Pre-operative physiotherapy includes exercise advice, goal setting and prescription of inspiratory muscle training with provision of an inspiratory muscle training device.

Between April 2016 and 2018, data has been collected from 89 patients who did not receive pre-operative physiotherapy (largely due to initial teething problems with organising appointments) and 112 patients who received pre-operative physiotherapy as described above. The data collected includes smoking history, intensive care and hospital length of stay, and post-operative complication grade (using the Clavien-Dindo classification of surgical complications). For the patients who received pre-operative physiotherapy, their maximal inspiratory pressure pre and post inspiratory muscle training was collected.

Preliminary review of the data suggests that all patients who received an inspiratory muscle training device demonstrated an increase in their maximal inspiratory pressure. It also suggests that there is a lower incidence of Grade 2 complications (specifically Hospital Acquired Pneumonia) in those patients who received pre-operative physiotherapy input. We hope that with further exploration of the data, more trends can be identified.

18011 Effect of 4-week multimodal prehabilitation on fitness before pancreatic resection: an interventional pilot study. J George et al, MATTU

Background: Pancreatic surgery is associated with significant morbidity. Objectively measured aerobic fitness can predict postoperative outcomes [1]. Insulin resistance is also associated with postoperative complications. Supervised exercise training can improve fitness and insulin sensitivity.

Immunonutrition may work synergistically with exercise. The aim was to investigate the effect of prehabilitation on aerobic fitness and insulin sensitivity. Methods: We prospectively recruited patients with benign or malignant pathology, listed for pancreatic resection. Subjects underwent a baseline cardiopulmonary exercise test (CPET). Insulin sensitivity was measured using the hyperinsulinaemic-euglycaemic clamp. The 4-week intervention comprised: resistance and high intensity interval training (ten sessions) plus daily omega-3 fatty acids (2g) and extra virgin olive oil (30ml). CPETs and clamps were repeated after four weeks. These were compared with contemporaneous non-randomised patients (controls). Results: Of 20 recruited patients, 12 out of 12 (prehab) and 6 out of 8 (control) completed the study. Prehabilitation led to an improvement in oxygen uptake at anaerobic threshold +2.0 (95% CI 0.1-4.0) ml/kg/min [P = 0.040] and peak exercise +3.0 (0.7-5.3) ml/kg/min [P = 0.023], compared to controls. Within the prehab group, there were significant improvements in peak power [P = 0.001], oxygen uptake at anaerobic threshold [P = 0.017] and peak exercise [P = 0.002]. Aerobic fitness was unchanged amongst controls. Insulin sensitivity did not change in either group. Conclusion: 4-week multimodal prehabilitation can improve aerobic fitness before pancreatic resection.

18020 Analgesia for video assisted thoracoscopic surgery: a multimodal approach to accelerated recovery. Lail-u-mah Zaheer et al, Nottingham University Hospitals NHS Trust

Background: Analgesic practice for thoracic surgery is evolving. With the advent of Video Assisted Thoracoscopic surgery (VATS), the analgesic approach must also adapt, from the more conventional techniques such as Thoracic Epidural and Paravertebral catheters (PVC) to techniques that complement a minimally invasive approach and faster post-operative recovery. Our proposed strategy of Multi level Intercostal blocks (MLIB), coupled with peri-operative gabapnetinoids is in keeping with Enhanced Recovery.

Methods: We prospectively recruited 23 patients undergoing VATS lung resection to receive pre-operative Gabapentin (600mgs>70 years age or e GFR<50, or 900mg if<70 years) and intra-operative MLIB (GROUP 1). We compared them to 23 patients who received conventional peri-operative care of PVC (GROUP 2).

We analysed Post-operative pain scores and rescue opioid consumption from waking to Day 3, to quantify their analgesic efficacy. Groups were comparable with regard age, sex and co-morbidities.

Results:

Mean rescue Opioid requirement - mgs

Group 1 (Gabapentin & MLIB)	vs	Group 2 (PVC)
Recovery - I/V		Recovery - I/V
1.9		6.9
D 0, 1, 2, 3 - PO	vs	D 0, 1, 2, 3 - PO
9.6, 35.1, 16.3, 10.4		18.2, 46.9, 27.5, 26.6

Mean pain scores post op:

Recovery D 0, 1, 2, 3	vs	Recovery D 0, 1, 2, 3
0.52, 0.29, 0.39, 0.24, 0.27	vs	1.22, 0.32, 0.72, 0.66, 0.41

Incidence of severe pain, Group 1 vs 2

- Recovery: 8.7% vs 56.5%
- First 24 Hours: 17.4% vs 34.8%

Incidence of Patient discharge by Day 3, Group 1 vs 2

- 60.87% vs 43.48%

Conclusion: A strategy of peri-operative Gabapentin and MLIB is both opioid sparing and facilitates earlier discharge following thoracic surgery. It also affords a significant reduction in peri-operative opioid consumption.

18024 Could breath testing predict post-OP ileus and recovery following laparoscopic colorectal surgery? N Lemm et al, Yeovil District Hospital NHS Trust

Introduction: Despite implementation of enhanced recovery after surgery (ERAS) and laparoscopic techniques for colorectal cancer, the risk of postoperative ileus (POI) remains invariably high. POI can significantly impact upon recovery and prediction of those likely to develop POI could allow a modified ERAS pathway. Presently there is no predictive test available. The aim of this exploratory study was to investigate the feasibility and application of breath testing for volatile compounds (VCs) to predict POI following colorectal surgery within ERAS.

Methods: After ethical approval, 48 patients undergoing colorectal resection for colorectal cancer between January 2015 to April 2017 within a fully implemented ERAS were recruited. Patients provided breath tests pre-operatively and on the first three post-operative days. Samples were captured in sealed bags and analysed using Gas Chromatography Mass Spectrometry. Outcome measures included VC levels and clinical outcomes including POI, which was defined as presence of nausea and vomiting (with or without insertion of NGT) but without passage of flatus or bowel movement in the first three days after surgery.

Results: Fourteen patients developed POI (28%) within the first 72 hours of surgery. Length of stay was 6 days (IQR 5-9). Samples and data were successfully collected from all patients. Pre-operative ammonia was the only VC that was higher in patients who developed ileus compared to those who didn't (830ppm vs. 510ppm, $p = 0.058$). Multi variate analysis shows that adjusted for age, sex and BMI, Pre-op ammonia levels ≥ 600 pmm were almost four times more likely to develop post-operative ileus.

Conclusion: Pre-operative ammonia level is a potential marker for prediction of POI. However, larger studies are required to validate these findings.

Poster Presentations

18001 Maintain VTE protection for Cancer Patients - Battling the Storm. D Hocking et al, North Bristol NHS Trust

Our ERAS service was developed to provide a programme that empowered, educated and protect patients preparing for Colorectal Surgery. Cancer patients are at an increased risk of developing Venous Thromboembolism (VTE). Over the last few years, the NHS has been under extreme financial pressures. Review of teams in the NHS has become the norm.

When creating our service we built in an established NBT 28 day post-surgery prophylaxis programme for patients with a cancer diagnosis (2006) - with the ERAS team as 'Gate Keepers' for our patients.

The ERAS team contact all our patients at home post discharge for a minimum of 4 days. We use a risk stratified check list to ensure we identify post-operative complications early. Included in this are specific questions relating to signs and symptoms of DVT or PE that a patient might not associate with their surgery. VTE is a large part of this conversation- and if we identify a rare occasion where a patient has been discharged without Clexane, we facilitate immediate dispensing and co-ordinate a plan to administer ensuring the risks are minimized..

VTE is a life-threatening post-operative complication. VTE prophylaxis helps to minimize the risks related to readmissions due to DVT and PE. This impacts greatly on the outcome for the patient, and reduces the bed occupancy issues that are prevalent in the UK today.

Through all the challenges our team have been through, we have maintained our service and after 10 years - we are still ensuring our colorectal patients are protected.

18002 The use of an Enhanced Recovery Grid and Patient Diary for better compliance post operatively. M Moore et al, Kettering General Hospital

We have developed a simple grid that the nursing staff use post operatively to ensure the ERP is followed enabling a consistent pathway of care, no matter who is looking after the post op patient.

The patient diary is an aide to empower the patient in their own recovery and understanding of expectations.

18003 Making the case for prehabilitation in cancer care - An evidence and insight review. J Davies et al, Macmillan Cancer Support

Background

There is growing interest in prehabilitation across Macmillan Cancer Support as part of the broader rehabilitation pathway in cancer care, and a sense that it is an important and valuable aspect of cancer care. However, it is poorly understood and inconsistently provided, with limited centralised knowledge.

Objectives included:

- Developing a centralised synthesis of prehabilitation resources and evidence and an internal shared definition and understanding of prehabilitation.

- Understanding Macmillan's current provision and funding of prehabilitation service models.
- Understand the wider provision of prehabilitation across the UK.
- Embedding prehabilitation into Macmillan's strategic priorities.

Method

These included:

- Literature review
- Interviews with key Macmillan advisors and key external experts
- Workshop with key stakeholders

Results

A definition of prehabilitation was identified as a process in the continuum of care, tailored to the individual and is for anyone with cancer, not just those undergoing surgery.

The prehabilitation model includes: preassessment, prehabilitation interventions and follow up post treatment. Existing evidence suggest there is no defined group of healthcare professionals to deliver prehabilitation however it is clear it can be provided by a multidisciplinary team.

Conclusion

A compelling case has been made for facilitating networking between key stakeholders and influencing policy with the current evidence available including the development of principles and guidance for prehabilitation in cancer care UK wide, developing practical information for both patients and healthcare professionals, developing an investment framework and strengthening the health economic case.

18005 A multimodal review of an established ERAS pathway empowered patients and provided cost savings in breast cancer surgery. R Macdonald et al, UCLH

Introduction: ERAS for breast surgery was launched at UCLH in 2011 as a combined integrated care pathway (ICP) with gynaecology. In 2017, although inpatient length of stay (LOS) was low (mean 1.5 days) patients were discharged to a Hospital at Home service (H@H) for drain care, at a mean monthly cost of £8k.

Aim: Design an ERAS pathway specifically for Breast surgery. Empower patients to care for breast drains independently through improved patient information and staff education on drain care.

Method: An ERAS nurse led a multimodal pathway review. Development of new patient information was supported by a cancer patient information officer. A staff-training programme on post-operative enhanced recovery care supported by the ward CPF (Clinical Practice Facilitator). The MDT (multidisciplinary team) contributed to the ICP design and PDSA (Plan Do Study Act) cycles used to develop the ICP and a drain care guide for patients in clinical practice. A prospective clinical audit of post-operative analgesia looked at pre-operative nerve blocks and morphine PCA use.

Results: Initially there was a rise in mean inpatient LOS from 1.5 days in the previous 12 months to 2.0 days in the first 4 months of the new ERAS pathway

(Sept to Dec 2017). The mean LOS in the following 7 months (January - July 2018) reduced to 1.6 days. Readmissions for the same period reduced; to compare there were 10 readmissions in the previous 12 months (Sept 2016 to Sept 2017), 3 readmissions in the first 4 months of the new ERAS pathway (Sept to Dec 2017) and only 3 readmissions Jan - July 2018. No H@H referrals were required from September 2017, resulting in a monthly cost reduction of £8k. Just two district nurse referrals for drain care were made for elderly patients requiring additional support.

37 patients with a PCA were audited prospectively, 34 had received pre-operative nerve blocks and the mean morphine administered via PCA was 13.8mg. The post-operative analgesia protocol was changed from morphine PCA to 10mg MST 6pm & 6am, with oral morphine PRN for breakthrough. This was well tolerated by patients, improved post-operative mobility and cost reduction of about £15 per patient.

84% of ward staff were trained and reported increased confidence in caring for breast surgery patients including drain care. The accuracy of drain output measurements improved.

Conclusion: This review of an established ERAS pathway has improved the quality of patient care, reduced readmissions through supporting patient self-management and has delivered significant cost savings.

18009 Physiotherapy Supported Discharge Service- from Pilot to Permanent? G Hooper et al, Cardiff and Vale UHB

Background: Despite being safely mobile and medically fit, many patients had prolonged length of stay following total knee replacement in order to fulfil traditional rehab goals. This exposes patients to risk of harm due to prolonged stay within an acute hospital environment. The Physiotherapy Supported Discharge Service (PSDS) was set up, enabling an alternative method of delivering acute physiotherapy for post-operative TKR patients, facilitating a timely, safe discharge.

Outline: Phase 1 (pilot) of PSDS was between Jan 2017 and June 2017 and Phase 2 of PSDS was between July 2017 and March 2018. Clinics were established, utilising the existing in-patient orthopaedic team to review recently discharged patients. They attended up to twice a week for two weeks until their goals are achieved or until out-patient physiotherapy could take over their care

Results

- 158 patients were referred to PSDS between Jan 2017 and March 2018.
- Between phase 1 and phase 2 - 7.3% increase in the percentage of patients discharged within their PDD
- Increase of 14% of patients being discharged after 1 PSDS appointment
- Median length of stay in the PSDS patients had reduced from 5.8 to 4.5 days (1.4 days) when compared to previous data of TKR patients (before start of phase 1).
- Minimum of 158 bed days during both phases.

Conclusion: PSDS continues to demonstrate high patient satisfaction and benefits to the patient and the Orthopaedic service overall by facilitating timely

discharge, allowing potential for increased patient flow and reducing the risks to the patient of prolonged stays.

18010 How pressures within an acute hospital setting affected an established ERAS service. D Gane et al, North Bristol NHS Trust

This year marks the 10th anniversary of a well-established Colorectal ERAS service at North Bristol NHS Trust. In 2016 our gold standard service was recognised when we were awarded “Hospital Team of the Year “at the Bristol Health and Care awards.

The buoyancy of the service changed in 2017, during the financial crisis suffered by many hospitals nationally. Winter pressures and management restructure led to many changes. Non-urgent surgery was cancelled; our colorectal patient bed base moved several times and was ultimately lost. The size of the ERAS Team was reduced as all services were expected to deliver cost savings. The future of the service looked bleak.

Six years in, we had expanded our service to include Vascular, Urology and plastics specialities. Evidentially the workload was far higher than the staffing level could cope with in order to provide the quality service we were used to.

Despite this challenging and emotionally difficult time, it provided us with a good opportunity to re-evaluate. The team worked extremely hard to re-energise and streamline our processes. Our greatest achievement was the introduction of an ‘Enhanced Recovery School’ and we prioritised care for those patients going through the cancer pathway.

We were able to demonstrate through keeping robust data collection as a high priority that without the correct level of staffing and resources, the hospitals length of stay performance was impacted negatively.

In conclusion, it is possible to sustain an enhanced recovery service despite financial constraints and hospital pressures by refocusing priorities and streamlining services, but data is essential evidence for quality improvement.

We are anticipating a positive future for the service again, which now looks brighter.

18012 Using ward based education to improve day zero mobilisation and understanding of the ERAS pathway following elective lower limb arthroplasty. J Dower et al, Cardiff and Vale UHB

Background: ERAS (Enhanced Recovery After Surgery) programs are designed to optimise the recovery of patients undergoing surgery. An ERAS programme currently exists within Orthopaedics at University Hospital Llandough, but hasn’t maintained momentum despite a number of re-launches. The aim of this project was to improve understanding of the pathway, increase confidence mobilising patient’s day zero, and increase the number of patients mobilising on the day of surgery through smaller staff education sessions.

Method: Multidisciplinary team members were split into groups and provided with a 30 minute ward based training session. The education covered key principles of the orthopaedic ERAS pathway and a standardised approach to mobilising patients on the day of surgery. Staff were then provided with a survey to

determine their understanding and confidence. The number of patients mobilising day zero was then recorded.

Results

-94.73% of staff agreed or strongly agreed they felt confident mobilising a patient on the day of surgery, an increase of 26.31% post training.

-89.47% of staff agreed or strongly agreed they had a greater understanding of the ERAS principles, an increase of 10.52% post training.

- The number of patients mobilising on day zero is yet to be fully analysed, but shows a significant increase.

Conclusion: Ward based education has provided greater understanding of the ERAS pathway, improved staff confidence mobilising patient's day zero, and increased the number of patients mobilising on the day of surgery. It's hoped this model can be used in other specialities to improve ERAS compliance.

18013 Cystectomy ERAS pathway - a team approach to care improvement. H Ghafoor et al, Oxford University Hospital NHS Trust

The Oxford Cystectomy and ileal conduit enhanced recovery programme for Urology cancer patients initiated in September 2015. Local data from October 2013 - August 2015 demonstrated median LOS of 11 days (in line with national median).

The purpose of establishing an ERAS programme was to reduce variances and agree team care based on ERAS principles.

In May 2016 the team re-grouped to focus on reducing known post-operative complications of ileus, constipation and GI bleed.

They used current evidence, national and international guidelines, and information from ERAS UK colleagues to agree key changes to the existing pathway:

Pre-op

- stopping bowel preparation

Post-op

- prophylactic antacid therapy
- sugar-free chewing gum
- earlier dietetic support
- earlier nutritional support (prolonged ileus)
- earlier transition to oral pain relief
- earlier consideration of laxatives

The updated pathway was relaunched April 2017 alongside a new ERAS physiotherapy assistant 7 day service, supporting patients with their mobility goals.

Data comparison of the old pathway (December 2015 - April 2017) against update pathway (April 2017 - July 2018) has shown patients received reduction in ileus (39% v 33%), total parental nutrition referral (17% v 13%), constipation (4% v 2%) , GI bleed incidence (9% v 0%) and median LOS (10 v 8). In the new pathway patients received on average 9 physiotherapy assistant contacts.

Conclusions drawn from this experience are that improvements to patient care and reducing complications is an ongoing ERAS process and a collective team

approach helped achieve positive service outcomes. The team are now focusing on starting an ERAS prehabilitation service.

18014 Implementation of enhanced recovery care bundle in patients undergoing major surgery for Gynaecological cancer: how do we compare? M Robertson et al, Leeds Teaching Hospitals NHS Trust

Introduction: Preoperative anaemia is associated with increased postoperative complications, length of stay (LOS) and allogeneic blood transfusion. Intravenous Iron therapy is increasingly used to treat preoperative iron-deficiency anaemia and is supported by recent consensus guidelines.

Objectives: Investigate the effect of anaemia on complications, LOS and transfusion rates in patients undergoing colorectal resection surgery in a large teaching hospital. Data to be used as part of a business case for a preoperative intravenous iron service.

Methods: Retrospective analysis of data collected by ERAS team for the 12-month period June 2017 to May 2018, combined with hospital results server and local blood transfusion service.

Results: 268 patients underwent resection surgery, 206 for cancer. Preoperative Hb

Conclusion: The incidence of anaemia is consistent with the literature for this patient population. Our transfusion rate is relatively low but may improve with the use of preoperative intravenous iron. Considering the median Hb drop and transfusion trigger, a lower preoperative threshold of 120g/L could be considered for therapy.

18015 Implementation of enhanced recovery care bundle in patients undergoing major surgery for Gynaecological cancer: how do we compare? A Arfa et al, Barts Health NHS Trust

Background: Enhanced recovery after Surgery (ERAS) is an evidence-based approach to aid recovery and improve outcomes of patients undergoing major surgical procedures. ERAS aims to optimise patients before, during and after surgery. It has been shown to reduce length of stay (LOS) and cost in several clinical trials. It is now a standard of care.

Methods: In this prospective audit, fifty eight patients who had a major gynaecological oncology (GO) procedures between 1st May 2018 and 30th June 2018 at our tertiary referral cancer centre were included. We used the RCOG and ASGBI-ER guidelines as a gold standard and compared results to our previous audit conducted in 2016.

Results: All patients attended Pre-assessment Clinic, risk factors were identified and appropriate investigations requested. Ten patients identified as high risk were referred to specialist anaesthetic clinic. All patients with pre-operative anaemia were optimised appropriately. Twenty three patients (39.6 %) underwent minimally invasive surgery, thirty three (56.9 %) had laparotomy, and two (3.4 %) had vulvar surgery. Three (5.1 %) patients who underwent laparotomy had an abdominal drain. We were compliant in 80% (16/20) standards. As compared to a previous audit performed in 2016, median length of

stay was reduced by one day (from 7 days to 6) and 13% less patients received pre-operative carbohydrate preload. Twenty four patients (41%) received a telephone follow-up on the day after discharge.

Conclusion: We are compliant in 80% of standards. Improvement in post-discharge telephone follow up is recommended to facilitate a positive patient's experience.

18016 The Role of Prehabilitation for Lumbar Spine Surgery Patients - A Systematic Review. T Wainwright et al, Bournemouth University

The application of ERAS to spinal surgery is an emerging concept. High levels of kinesiophobia associated with lumbar spine surgery pre and postoperatively can lead to physical activity levels that are below population norms. Prehabilitation is an emerging key component of ERAS pathways that can augment functional capacity prior to surgery and encourage increased compliance to postoperative physiotherapy.

A systematic review of randomised controlled trials to assess prehabilitation in lumbar spinal surgery was completed in February 2018, and the electronic databases sourced included: PubMed, Cochrane Library, CINAHL Complete and Medline Complete.

Two relevant studies were yielded. One study reports the effectiveness of a combined preoperative and postoperative rehabilitation programme. The intervention group had improved function at operation, reached postoperative recovery milestones faster (1-6 days versus 3-13 days $p = 0.001$) and had a shorter length of stay (5 versus 7 days) compared to the control group. One study has solely evaluated the use of a preoperative physiotherapy intervention for degenerative lumbar disorders. The physiotherapy group demonstrated small improvements in disability, back pain, quality of life, fear avoidance, self-efficacy, anxiety and depression and activity levels after the intervention. However, post-surgery, the only differences between groups was a higher activity level in the physiotherapy group.

Prehabilitation has a potential role in improving postoperative outcomes for lumbar spine surgery patients by improving functional capacity before surgery and increasing postoperative activity levels. There is a need for more trials of preoperative physiotherapy interventions performed within an ERAS setting for lumbar fusion surgery.

18017 Enhanced recovery pathway has a constructive influence on accelerated post-operative recovery. G Roy et al, Manchester University Hospital Foundation Trust

Aim- To establish impact of enhanced recovery programme /pathway on post-operative recovery and length of stay.

Enhanced Recovery is a new evidence-based approach that helps people recover quicker after having major surgery

ER pathway is designed to be used as a prompt for, standardisation of care, incorporating best clinical practice, compliance and to ensure constant appraisal of clinical outcomes.

Enhanced recovery pathway for general surgery was firstly introduced to UHSM on 2011. It has now expanded to all major specialities Urology, Upper GI, colorectal, orthopaedic, vascular, Thoracic, Gynaecology

Expected outcome:

- To raise the standards of care
- To accelerate post-operative recovery
- To improve the outcomes for all patients
- To reduced length of stay
- To reduced complication rate

To develop an integrated pathway

Conduct an audit to get the average length of stay on the ward

Arrange meetings with all stakeholders

Proof copy developed by medical illustration

Pilot the pathway on the ward

Pathway to be finalised

Obtain approval to ensure trust documentation standards met

Add pathway to ER dashboard.

Our Approach/Methods- Following departmental approval for service evaluation we collected day of discharge data for all patients on enhanced recovery pathway over a period of five years.

Conclusion-Our enhanced recovery pathway has accelerated post-operative outcome for all our patients, improved patients experience, reduced post op complication with reduction in length of stay 1.2 days.

18018 Rectus Sheath Catheters for Analgesia in Open and Converted from Laparoscopic Abdominal Surgery; Reducing Length of Stay. A Yuet Meng et al, Blackpool Teaching Hospital NHS Trust

Introduction: Rectus sheath (RS) catheters are primarily used as an alternative form of providing multimodal analgesia where neuro-axial blockade is either contraindicated or not appropriate.

We aim to present preliminary data from our ERAS database on influencing length of stay of ERAS patients.

Method: Data set collected by ERAS nurse specialists were retrospectively reviewed to obtain the median length of stay of patients with or without RS catheters inserted.

Results: The data reviewed is over a 24 month period from april 2016 to march 2018. 332 patients were identified including malignant/ non-malignant resections.

85 patients had RS catheters inserted (open colorectal resections or converted laparoscopic procedure). They were administered bolus dose of bupivacaine 0.25% 30-40ml followed by automated 6 hourly boluses of 30ml bupivacaine 0.25% via Ambit infusion pumps for 48 hours.

The median length of stay in the non-RS group (247 patients) were 9.5 days. In the RS group (85 patients), the median length of stay was 8.9 days.

Discussion: Patients undergoing open or converted to open colorectal resection have greater incidence of pain. Increased pain leads to greater analgesia requirements. RS catheters are a viable alternative providing superior analgesia and reducing opioid consumption.

Historically patients undergoing open procedures have a higher length of stay. From this data, we demonstrated that the length of stay for open procedures is not inferior to the laparoscopic group when RS catheters were used. Effective multimodal analgesia can lead to early mobilisation, reduced ileus and length of stay.

Conclusion: RS catheter insertion is a key component of our multimodal analgesia pathway for colorectal surgery. The length of stay of both groups were similar. Future data would include opioid consumption, time to mobilisation and time to bowel movement to compare the efficacy.

18019 Enhanced recovery in obstetrics: Where are we 5 years on? F Taylor et al, Aneurin Bevan UHB

Enhanced recovery is a model of care for elective surgery, with the aim of:

- Reducing the physiological stress response
- Reducing organ dysfunction due to surgery
- Enabling patients to recover more quickly.

In 2013 in our Health Board, we introduced pre-operative carbohydrate drinks, along with standardised protocols for mobilisation, removal of catheter and encouragement of post-operative oral intake to minimise fasting periods after elective Caesarean section (LSCS).

At the time of instituting these changes, we audited our practice and assessed these parameters. In 35 patients we demonstrated a median time until mobilisation after LSCS of 8 hours (Interquartile range 7-13.5 hours) and a median time until removal of catheter of 14 hours (IQR 11.5 - 18.25 hours). The median time until discharge at this time was 54 hours (IQR 50-57 hours).

A similar audit carried out in 2018 demonstrated a median time until mobilisation 9 hours (interquartile range 7-13 hours) and a median time until catheter removal of 9 hours (IQR 7-10.75 hours). The median time until discharge was 26 hours (IQR 24-30 hours).

As demonstrated, over a five-year period there has been a notable shift in the way elective Caesarean sections are managed in our Health Board. Partly due to a process of introducing standardisation to certain aspects of care, but probably more importantly a shift in the culture of management of these patients, major improvements can be made in patient care on a larger scale.

18021 Timing of spinal, opioid requirement and time to mobilisation after colorectal cancer surgery. C Gallagher et al, Leeds Teaching Hospitals NHS Trust

Introduction: Early mobilisation after colorectal cancer surgery is of benefit. There are a number of barriers and enablers [1]. In Leeds, spinal anaesthesia is commonly performed in conjunction with general anaesthesia, but the timing of spinal (TS) varies. It may be performed pre- or post-operatively.

Method: We undertook retrospective analysis of the anonymised ERAS dataset for the year June 2017-June 2018. All source data were recorded as part of routine clinical care. We reviewed data in four groups; time to mobilisation where TS was pre-operative, where TS was post-operative, where epidural/CSE was performed and in those with a patient-controlled analgesia (PCA) device alone. Opioid requirement was reviewed.

Results: 233 operations for colorectal cancer were performed. Some records were incomplete.

Spinal pre-operatively +/- PCAS (76) Spinal post-operatively +/- PCAS (24)
Epidural or CSE (24) PCA alone (75)

opioid requirement in mg in first 24h (IV or oral) 35.4 24.9 29.3 45.7

% mobilising day 1 30.2 29.1 16.6 34.6

Discussion: TS does not adversely affect time to mobilisation. Opioid requirement in the first 24 hours is reduced in those where TS is post-operative. Spinal dosages used may be variable however. For the year 2018-19, our electronic dataset will be amended to include spinal dosages and acceptability to patients of TS.

18023 Finding time to optimise: An evaluation of the preoperative pathway for colorectal cancer surgery. J Patel et al, Queen Elizabeth Hospital Birmingham

Introduction: Optimisation of co-morbidities and lifestyle aims to reduce the risk of post-operative complications following major surgery. At our institution this process starts at preassessment clinic (PAC). Examples of preoperative interventions include: treatment of iron deficiency anaemia and a prehabilitation exercise programme, the latter is recommended for a minimum duration of 4 weeks. However, patients with cancer are usually placed on an expedited pathway to surgery.

Aim: To investigate if our current preoperative pathway allows for sufficient time to optimise patients prior to surgery and to identify opportunities for better time utilisation.

Methods: We performed a retrospective observational study of all major colorectal cancer surgery, within the enhanced recovery programme, at our institution over a 3-month period between January and March 2018. Electronic patient records were used to create a timeline of key preoperative events for each patient.

Results: 39 patients underwent colorectal surgery for cancer during the studied period. The median time from PAC to surgery was 6 days (mean 9.7 days). The median time from being listed to the day of surgery was 23 days (mean 26.7 days).

Conclusions: The results demonstrate little time for patient optimisation within our current model of preoperative care. Furthermore, initiating health improvements from the day of listing for surgery may still be too late to allow for beneficial preoperative exercise training. We now aim to redesign our preoperative pathway incorporating an early referral to PAC when surgery is first contemplated and improved collaboration with primary care.

18025 Patient Reported Outcomes of an Established Perioperative “Fit 4 Surgery” School. I Fecher Jones et al, University Hospitals Southampton

Introduction: A preoperative “Fit 4 Surgery” school was established at University Hospital Southampton in May 2016. The aim of the school is to provide patients with advice and tools to enable behaviour modification and improve fitness for surgery. The school consists of a two-hour classroom based session covering the benefits of exercise, nutrition, the Enhanced Recovery approach, and lifestyle modification advice regarding smoking and alcohol intake. All patients undergoing elective major colorectal, urological and upper GI resections are invited to attend.

Method: Data was collected between May 2016 and April 2018. All patients attending the school were asked to complete an evaluation of the session, as well as a lifestyle questionnaire post-surgery to ascertain patient reported behaviour changes. The responses to the lifestyle questionnaire were compared with those of a similar control group of patients who had not attended school.

Results: During the 2 year data collection period 848 patients were invited to the surgery school with 450 patients attending. 63% of school patients stated they intended to make a lifestyle change as a result of attending. 98% stated that they would recommend the school to a friend having surgery.

Of those who completed a lifestyle questionnaire postoperatively, 232 had attended school and 182 had not. Improvements in physical activity were higher in school attenders, with a particularly marked effect in those who were not physically active prior to school attendance.

There were similar numbers of patients who smoked and drank alcohol in the school and non-school attenders. The proportion of smokers who reduced tobacco consumption was similarly high in both groups (88% and 81%). Similarly reduction of alcohol intake prior to surgery was also seen to be high in both groups (71% vs 67%).

With regard to diet modification, 42% of school patients made positive changes to their diet, compared with 36% of patients who did not attend school. These values were not found to be statistically significant.

Conclusion: Fit 4 surgery school is found to be useful for patients and leads to lifestyle change prior to surgery, particularly in relation to increasing exercise levels. More work is required to improve school attendance, and to focus more closely on targeted alcohol and smoking interventions.

18026 Could Pre-Rehabilitation Commence Before Diagnosis? A Dinham et al, Guys & St Thomas' NHS Trust

Background: Pre-rehabilitation (pre-hab) is a complex intervention aiming to maximise patients' physical and mental preparedness before a healthcare-challenge. The purpose is to mitigate the impact of medical/surgical-treatment and promote recovery. A key component of pre-hab is exercise-training, however, sufficient exposure-time is required for exercise-induced changes to occur.

In the UK, the short time-period between diagnosis and treatment in Head and Neck Cancer (HNC) is typically insufficient to observe exercise-benefits. However, it is unknown whether pre-hab exercise-training could commence before diagnosis, during the investigation-period instead.

Objectives: To inform the design of a future pre-hab intervention study at a single UK cancer centre, this project aimed to i) ascertain patients' interest in an exercise-intervention if offered at the point of investigation for HNC, ii) establish the preferred intervention format, and iii) describe other preferences, perceived barriers, or enablers.

Methods: A questionnaire was designed to capture patients' perceptions of exercise. Following ethical-approval, a 3-month single-site pilot was undertaken with UK adult volunteers referred for operating-theatre-based biopsy as part of the investigation of suspected HNC.

Results: The sample (n=32) was representative of the eligible cohort; with no significant differences in key demographic variables.

Most (90%) participants expressed interest in pre-diagnosis exercise-advice; wanting individualised recommendations and encouragement/reassurance. Explanatory themes included 'aiding preparation (for future investigation/treatment)', 'raising awareness of potential benefit', and receiving 'safety advice'.

85% were prepared to attend an exercise-intervention to 'gain benefit', 'maintain normality' and 'prepare'. Whilst some exercise preferences were clear (e.g. frequency, time of day), others were inconsistent (e.g. venue, supervision level). Perceived desire and ability to participate were not without barriers. Physical symptoms, time, and psychological concerns were the highest-ranked barriers, rather than traditional motivational issues. Nevertheless, the capacity for exercise to improve physical/psychological state was highlighted as an enabler to taking-part.

Conclusion: A participation rate was attained in keeping with other pre-hab studies, which indicates feasibility for a larger sample, to permit regression analyses to determine factors associated with willingness to participate.

Clinical Implications: This pilot-study found a group keen to receive exercise-guidance whilst under investigation for suspected cancer. The best format for this remains to be determined, though an individualised approach may be most favourable.

18027 A Systematic Approach to Develop an Integrated Prehab-ERAS Pathway for Colorectal Cancer Patients. A Dias et al, Yeovil District Hospital

Background: The concept of prehabilitation programme is well accepted as it is aimed to optimise patient's wellbeing prior to an intervention. Application of prehabilitation within the cancer pathway is faced with logistical challenges due to cancer waiting time targets. In addition, there is no standardised protocol encompassing all elements of prehabilitation.

Aim: The aim of this pilot project was to develop a structured multi modal prehab pathway for colorectal cancer patients that is feasible and applicable within the NHS.

Methods: A multidisciplinary team was assembled including surgeons, anaesthetist, colorectal nurse specialist (CNS), nutrition lead, physiotherapist, psychologist, geriatrician, iron/blood transfusion lead, substance misuse support lead, hospital manager, cancer lead, admin support and patient representatives. Several meetings took place in order to finalise the pathway and integrate it with the established ERAS pathway.

Methods of monitoring, measuring compliance and outcomes were also sought.

Results: The prehab pathway was developed as follows: (i) Early patient identification by CNS who triggered the pathway at time of diagnosis; (ii) Patient triaged by CNS: Fried index for frailty; MUST score for nutrition, iron levels, substance misuse for alcohol/smoking and HADS scale for anxiety; (iii) Prehab masterclass: meeting between patients and experts delivering physical exercise, nutritional optimisation, iron replacement if required, support with alcohol/smoking cessation and anxiety management advise; (iv) The pathway is individually tailored for patients and allows for sufficient time with all teams to ensure the best outcome; (v) Fit watches, online diary and regular phone calls to monitor progress and ensure compliance; (vi) Clinical and functional outcomes data are collected including length of hospital stay, postoperative complications, readmission, compliance with ERAS protocol and 6 minute walk test.

Conclusion: An integrated Prehab- ERAS pathway has been developed and is currently undergoing evaluation.



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