Developing Perioperative Pathways

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Paisley
Perioperative Medicine

• A dream?
Perioperative Medicine

- A dream?
- A vision?
Perioperative Medicine

• A dream?
• A vision?
• A plausible reality?
Perioperative Medicine

- A dream?
- A vision?
- A plausible reality?
- A continuation of what we have been doing?
Enhanced Recovery

- The “Team Sky” approach.
- Lots of little changes (some big) leading to marked improvements.
Perioperative Medicine

• Lots of little steps, coming together to deliver what is best for the high-risk patient.
Perioperative Medicine

• Lots of little steps, coming together to deliver what is best for the high-risk patient.

• This should work for all patients.
My Remit

• Delivering a patient pathway for before, during and after surgery.

• How do we move from Enhanced Recovery to Perioperative Medicine?
My Remit, Contd.

- How do we cater for all high risk patients regardless of specialty.
- Emergency and Elective surgery.
- Our experience in Paisley and Glasgow.
In My Opinion
But I Could Be Persuaded...
Our Population

- Smokers: 30% patients smoke
- Alcohol excess: highest mortality from cirrhosis in Western Europe
- Diabetes: 5% have diabetes with 2.5% more undiagnosed
- Cardiac disease: 45-64 years: 10% males have IHD; 6% females
- BMI/excess weight: Overweight: 66% men, 50% women. Obese: 22% and 24%
- Low physical activity: 61% do not <30 minutes/5x week
- Deprivation: Area in Paisley most deprived in Scotland

http://www.scotland.gov.uk/Topics/Health/Services/
http://simd.scotland.gov.uk/publication-2012/simd-2012-results
Periop. Pathways

• Which patients?
• Only high-risk?
• Can the same pathway be used for all?
Enhanced Recovery

• We have colorectal / orthopaedic / gynaecology / urology.

• Around Glasgow pancreatic + oesophageal / plastics / vascular surgery / maxillofacial.
Enhanced Recovery

• We have colorectal / orthopaedic / gynaecology / urology.

• Around Glasgow pancreatic + oesophageal / plastics / vascular surgery / maxillofacial.

• They don’t all use the same pathway.
Before

- We have no anaesthetist present at pre-assessment.
- Patients are flagged up to specific consultants or to those of us who have some pre-assessment sessions.
Before

• High – risk patients flagged up and further decisions then made on further tests or referrals.
• Meetings arranged.
• Results on Clinical Portal.
High – Risks and Complications

1. Cardiovascular disease.
2. Respiratory disease.
3. Renal disease.
4. CNS disease.
5. Diabetics.
6. Obese.
What Can Be Improved?

• CVS

• Involve the cardiologists, not for an echo, but to see if anginal or antihypertensive Tx can be improved.
What Can Be Improved?

• CVS

• Involve the cardiologists, not for an echo, but to see if anginal or antihypertensive Tx can be improved.

• CPEX testing?
What Can Be Improved?

- CVS
- Involve the cardiologists, not for an echo, but to see if anginal or antihypertensive Tx can be improved.
- CPEX testing?
- Exercise programme?
What Can Be Improved?

- Respiratory, Renal, CNS and Diabetic disease can all be approached in the same way.
- Obesity a bigger problem.
Diabetic Control

• Increasingly complex medication.

• Poor control around time of surgery.

• We have introduced a new diabetic protocol whereby each drug is treated separately, short-acting insulins are usually given half their dose.
Diabetic Control

• Markedly less complications.
• Less cancellations.
• Less hypoglycaemias (and high glucose).
• Much less insulin sliding scales.
• Glasgow now adopting this protocol.
During

• Attempt to standardise anaesthetic.

• Use low TV ventilation, PEEP >5 and recruitment manoeuvres.

• Always use TOF.

• Desflurane / Remifentanil for high risk cases.
High risk patients (and all emergency laparotomies) get Sugammadex.
NELA

- RAH one of only 5 hospitals in Scotland.
- Voluntary.
- 18 months of data collection, including EPOCH.
NELA

• All emergency laparotomies get Sugammadex.

• Over 90% go to HDU.

• EPOCH means we always prescribe fluids for afterwards.
NELA

- Mortality has dropped since first 6 months (17.4% to 8.7%).
- We’re not absolutely sure why!
Our In-hospital Mortality is Getting Better…

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<th>Mar 14 - Dec 14 NELA</th>
<th>Jan 15 - Jul 15 NELA</th>
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<td>In-hospital Mortality %</td>
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7hrs and 10 min: average time from consultant decision to CT and CT scan reported. **performed within two hours of the decision to scan**

2hrs (30 min-4hrs 50 min): Average time (range) from first presentation to receiving antibiotics.

80%

83%

Performed 2% cases

54min (5min-120min): average time (range) from first presentation to receiving analgesia **within the first hour within the first hour of medical assessment**

7hrs and 10 min: average time from consultant decision to CT and CT scan reported. **performed within two hours of the decision to scan**

We recommend objective risk assessment as part of the preoperative preparation of every patient requiring an emergency laparotomy.
EPOCH Pathway: Intra-operative Care

Consultant delivered anaesthesia
Consultant delivered surgery
Goal Directed Fluid Therapy
Protective Ventilation
WHO checklist
Maintain normothermia
Antibiotic therapy
Glucose management
Prescribe post-op medications
ABG analysis
Document Temperature
Measure Lactate
Confirm NMB reversal
Document fluid plan

End of surgery risk evaluation

Patient leaves theatre
Critical Care admission

Re-evaluate mortality risk

96% to level 2/3

91.5%

96.5%

Ongoing QI
EPOCH Pathway: Post-operative Care

- Analgesia + pain team review
- Early nutrition review
- CCOT and EWS when on ward
- Chest physiotherapy
- Daily bloods
- Maintain normothermia
- Glucose management
- Nausea & vomiting prophylaxis
- VTE prophylaxis

Patient discharged to ward

- EPOCH Pathway ends

- Patient discharged home
NELA and ER

- Emergencies will get a patient pathway soon, with goals for days post-op and incorporating data collecting and risk scoring.
- ER patients now all get EPOCH sticker for post-op fluids.
Emergency Nurse?

- Similar to ER nurse, overseeing, educating, data collecting.
- Our ER nurse has been removed twice, each time increasing our LOS and doubling our readmission rate. Can we apply the same principles to Emergencies?
Conclusions

• You don’t find out anything until you audit yourself. Then change.

• The high risk patient needs care and common sense.
Conclusions

Buy more vinyl.