Improving The Quality Of Care For High-Risk Surgical Patients

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UK
Sources of funding/Ci.

- Health Foundation ‘Shine Award’. 2012
- Health Foundation ‘Scaling Up’ award 2015
- LiDCO: provided cards/training for CO monitors
- Travel expenses/Honorarium paid by LiDCO
Inclusion criteria: emergency laparotomy

Open, laparoscopic, or laparoscopically-assisted procedures:

Procedures involving the stomach, small or large bowel, or rectum for conditions such as perforation, ischaemia, abdominal abscess/haematoma, bleeding or obstruction

Bowel resection/repair due to incarcerated umbilical, inguinal and femoral hernias (but not hernia repair without bowel resection/repair)

Laparotomy/laparoscopy with inoperable pathology (e.g. peritoneal/hepatic metastases)

Return to theatre for repair of substantial dehiscence of major abdominal wound

Patients requiring non-elective GI surgery following prior gynaecological surgery
Exclusion criteria

1. Elective/diagnostic laparotomy / laparoscopy
2. Appendicectomy / Cholecystectomy
3. Non-elective hernia repair without bowel resection
4. Vascular surgery, including abdominal aortic aneurysm repair
5. Caesarean section or obstetric laparotomies
6. Gynaecological laparotomy
7. Blunt or penetrating trauma
8. All surgery relating to organ transplantation (including returns to theatre for any reason following transplant surgery)
Identification and characterisation of the high-risk surgical population in the United Kingdom

- There were 4,117,727 surgical procedures; 2,893,432 were elective (12,704 deaths; 0.44%) and 1,224,295 were emergencies (65,674 deaths; 5.4%).
- A high-risk population of 513,924 patients was identified (63,340 deaths; 12.3%), which accounted for 83.8% of deaths but for only 12.5% of procedures.
- High risk population often elderly, comorbidities and emergency surgery
- Despite high mortality rates, fewer than 15% of these patients are admitted to the ICU.

Crit Care 2006. Pearse et al.
## Mortality rates for selected Healthcare Resource Group procedure codes

<table>
<thead>
<tr>
<th>Hospital Resource Group procedure code</th>
<th>n</th>
<th>Urgency</th>
<th>Deaths (n)</th>
<th>Mortality rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q01: Emergency aortic surgery</td>
<td>6,598</td>
<td>Emergency</td>
<td>2,721</td>
<td>41.24</td>
</tr>
<tr>
<td>F33: Large intestine; major procedures with complicating condition(s)</td>
<td>5,765</td>
<td>Emergency</td>
<td>1,290</td>
<td>22.38</td>
</tr>
<tr>
<td>F41: General abdominal; very major or major procedures aged over 69 years or with complicating condition(s)</td>
<td>11,648</td>
<td>Emergency</td>
<td>1,843</td>
<td>15.82</td>
</tr>
<tr>
<td>H05: Complex hip or knee revisions</td>
<td>1,667</td>
<td>Elective</td>
<td>186</td>
<td>11.16</td>
</tr>
<tr>
<td>H33: Neck of femur fracture; aged over 69 years or with complicating condition(s)</td>
<td>170,804</td>
<td>Emergency</td>
<td>15,780</td>
<td>9.24</td>
</tr>
<tr>
<td>F11: Stomach or duodenum; complex procedures</td>
<td>3,714</td>
<td>Elective</td>
<td>312</td>
<td>8.40</td>
</tr>
<tr>
<td>Q02: Elective abdominal vascular surgery</td>
<td>17,791</td>
<td>Elective</td>
<td>1,321</td>
<td>7.43</td>
</tr>
<tr>
<td>F01: Oesophagus; complex procedures</td>
<td>5,954</td>
<td>Elective</td>
<td>375</td>
<td>6.70</td>
</tr>
<tr>
<td>F32: Large intestine; very major procedures</td>
<td>44,814</td>
<td>Elective</td>
<td>1,521</td>
<td>3.39</td>
</tr>
<tr>
<td>Q03: Lower limb arterial surgery</td>
<td>18,247</td>
<td>Elective</td>
<td>480</td>
<td>2.63</td>
</tr>
<tr>
<td>L02: Kidney major open procedure; aged over 49 years or with complicating condition</td>
<td>17,549</td>
<td>Elective</td>
<td>343</td>
<td>1.95</td>
</tr>
<tr>
<td>H02: Primary hip replacement</td>
<td>123,785</td>
<td>Elective</td>
<td>507</td>
<td>0.41</td>
</tr>
<tr>
<td>L27: Prostate transurethral resection; aged over 69 years or with complicating condition</td>
<td>6,196</td>
<td>Elective</td>
<td>24</td>
<td>0.39</td>
</tr>
<tr>
<td>B02: Phakoemulsification cataract extraction with lens implant</td>
<td>89,444</td>
<td>Elective</td>
<td>50</td>
<td>0.06</td>
</tr>
<tr>
<td>F82: Appendicectomy procedures; aged less than 70 years with no complicating condition</td>
<td>88,067</td>
<td>Emergency</td>
<td>15</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Emergency Laparotomy Network Audit.

Data collection 3 months in 2011
37 hospitals submitted data. 1853 patients
Average 30 day mortality rate 14.9%
Mortality range 3.7-41%
Wide variation in:
  Consultant Anaesthetic /Surgeon involvement
  ICU admission
  Goal directed resuscitation

When is death inevitable after emergency laparotomy? Analysis of the American College of Surgeons National QIP database.

Retrospective data 2005-9
37,553 patients/similar criteria as UK ELN
Overall crude mortality rate at 30 days was 14.1%
Identified highest risk patients over 90 years with significant pre-morbid state and shock. 90% mortality rate

High mortality following emergency gastrointestinal surgery: a cohort study.

Use of Danish national database
4920 patients over 1 year
All cause 30 day mortality 19% (CI 16.9-19.1)
Almost 50% had severe coexisting disease
Only 16% went to ICU

Vester-Andersen et al. eBJA 2014
Emergency laparotomy in octogenarians: A 5-year study of morbidity and mortality.
Gemma Green, Irshad Shaikh, Roland Fernandes, Henk Wegstapel

100 pts >80 yrs old
70% had post operative complications
Overall mortality 45%
Leading causes of death:
  Sepsis 42%
  Underlying malignancy 29%
  Myocardial and intestinal ischaemia
  Dementia

World J Gastrointest Surg 2013 July 27; 5(7): 216-221
The scale of the problem.

Incidence of emergency laparotomy 1:1000 per annum
Mortality rate UK 15%
(Elective surgical outcomes 1-2%)
UK 9000 deaths per annum (2000 deaths per annum RTA)
Europe: Pop 500M. 500,000 operations/yr. 50,000 deaths.

Modest improvement in outcomes save many lives
In UK evidence of ‘substandard’ care
Improving outcomes after emergency laparotomy.

Identify the problem
Quantify the size of the problem
**Work out the solution**
Implement solution and measure its effects
The future
The Higher Risk General Surgical Patient
Towards Improved Care for a Forgotten Group

The Royal College of Surgeons of England and Department of Health
Report on the Peri-operative Care of the Higher Risk General Surgical Patient
2011

24 ‘experts’
84 pages
268 ‘standards’ of care (11.17/expert!)
Variable evidence base
Further references were available
?user friendly
Emergency Laparotomy Pathway Quality Improvement Care Bundle

Small group developed ‘care bundle’ ELPQuiC

Five elements
Evidence based
Measurable
Emergency Laparotomy Quality Improvement Care Bundle

- All emergency admissions to surgical assessment area have an EWS completed. Outreach to review all patients with EWS of 4 or more.
- Broad spectrum antibiotics to be given to all patients with suspicion of peritoneal soiling or septic shock.
- Once decision is made to carry out laparotomy, the patient takes next available slot on emergency list (or within 6 hours of decision made).
- Start resuscitation using goal directed techniques as soon as possible or within 6 hours of admission.
- Admit all patients after emergency laparotomy to ICU.

Consultant Involvement throughout
Improving outcomes after emergency laparotomy.

Identify the problem
Quantify the size of the problem
Work out the solution
**Implement solution and measure its effects**
The future
Emergency Laparotomy Pathway Quality Improvement Care Bundle

Four general hospitals in England
Baseline data for 299 patients
Eight month prospective data collection (427 patients)
Use of ‘statistical process control’ to identify changes
Meet every 4-6 weeks for results/learning
Underlying Pathology
(proportion of all patients %)

- Perforation
- Small Bowel Obstruction
- Malignancy
- Large Bowel Obstruction
- Ischemic bowel
- Collection
- Diverticular disease
- Anastomotic breakdown
- Hemorrhage
- Inflammatory bowel disease
- Unknown/not recorded

Pre (299) vs Post (427)
Crude 30-day mortality

- **Site 1**: 20.4%
- **Site 2**: 13.5%
- **Site 3**: 14.0%
- **Site 4**: 13.2%
- **All**: 13.6%

**Post-ELPQuiC**
- **Site 1**: 8.2%
- **Site 2**: 7.8%
- **Site 3**: 10.5%
- **All**: 10.5%

**25% reduction**
ASA 3+ mortality

Site 1: Baseline 27.8%, ELPQuiC 17%
Site 2: Baseline 22.7%, ELPQuiC 19.7%
Site 3: Baseline 16.1%, ELPQuiC 10.5%
Site 4: Baseline 23%, ELPQuiC 14.0%
ALL: Baseline 22.6%, ELPQuiC 15.8%

p = 0.08
30% reduction
Summary

30 day outcomes

- Pooled data risk adjusted mortality 15.6 to 9.6% (38% reduction)
- 6.0 additional lives saved per 100 patients treated
- NNT 16.4

In hospital outcomes

- Pooled data risk adjusted mortality 17.4 to 10.1% (42%)
- 8.1 additional lives saved per 100 patients treated
- NNT 12.4
Results

Process compliance
Pre-op antibiotics

<table>
<thead>
<tr>
<th>Site</th>
<th>Baseline</th>
<th>ELPQuiC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1</td>
<td>49.0%</td>
<td>53.2%</td>
</tr>
<tr>
<td>Site 2</td>
<td>47.9%</td>
<td>69.4%</td>
</tr>
<tr>
<td>Site 3</td>
<td>75.0%</td>
<td>64.9%</td>
</tr>
<tr>
<td>Site 4</td>
<td>48.6%</td>
<td>85.7%</td>
</tr>
</tbody>
</table>
Decision to theatre less than 6 hours

- **Site 1**: Baseline 47%, ELPQuiC 77%
- **Site 2**: Baseline 46%, ELPQuiC 62%
- **Site 3**: Baseline 50%, ELPQuiC 66%
- **Site 4**: Baseline 43%, ELPQuiC 74%
Intra-op GDFT (%)
Post-op ITU (%).

- **Site 1**: Pre-ELPQuiC 75%, Post-ELPQuiC 88%
- **Site 2**: Pre-ELPQuiC 51%, Post-ELPQuiC 29%
- **Site 3**: Pre-ELPQuiC 44%, Post-ELPQuiC 28%
- **Site 4**: Pre-ELPQuiC 62%

[Diagram showing the percentages for each site]
**Post CCT Surgeon in theatre (%)**

<table>
<thead>
<tr>
<th>Site</th>
<th>Pre-ELPQuiC</th>
<th>Post-ELPQuiC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1</td>
<td>44%</td>
<td>94%</td>
</tr>
<tr>
<td>Site 2</td>
<td>43%</td>
<td>54%</td>
</tr>
<tr>
<td>Site 3</td>
<td>93%</td>
<td>82%</td>
</tr>
<tr>
<td>Site 4</td>
<td>76%</td>
<td>99%</td>
</tr>
</tbody>
</table>
Use of a pathway quality improvement care bundle to reduce mortality after emergency laparotomy

S. Huddart, C. J. Peden, M. Swart, B. McCormick, M. Dickinson, M. A. Mohammed and N. Quiney on behalf of the ELPQuiC Collaborator Group

Open Access. BJS Jan 2015.
How did it happen

Team in each hospital with executive ‘buy in’
Lived ELPQuiC (m and m/data/the good bad and the ugly)
Multidisciplinary meetings (radiology/ ED/medicine)
Made quality ‘easy’
Regular network meetings every 6 weeks
Data (run charts)
What other evidence is out there?
Multicentre trial of a perioperative protocol to reduce mortality in patients with peptic ulcer perforation

<table>
<thead>
<tr>
<th>Table 2  Compliance with the trial protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. of patients</strong></td>
</tr>
<tr>
<td><strong>(n = 117)</strong></td>
</tr>
</tbody>
</table>

**Before surgery**
- Evaluation by a consultant anaesthetist and a consultant surgeon with discussion of therapeutic options: 104 (88·9)
- Surgery within 6 h of admission: 74 (63·2)
- APACHE II scoring: 97 (82·9)
- Sepsis screening: 105 (89·7)
- Standard blood samples and electrocardiogram: 110 (94·0)
- Packed red blood cells if patient anaemic: 23 (19·7)
- Broad-spectrum empirical antibiotics: 113 (96·6)
- Measurement of bodyweight: 108 (92·3)
- Respiratory and circulatory stabilization in the high-dependency unit: 105
- (89·7) Oxygen treatment leading to arterial oxygen saturation ≥ 94%:
- Insertion of central venous catheter, arterial line, NGT and indwelling bladder catheter: Early goal-directed fluid therapy: 34

**During surgery**
- Fluid balance chart: 106 (90·6)
- Early goal-directed fluid therapy: 93 (84·6)
- Maintenance of normothermia using convective air warming system: 112 (95·7)
- Insertion of double-barrelled NGT: 89 (76·1)
- Early goal-directed fluid therapy in recovery room: 106 (90·6)
- Oxygen treatment leading to arterial oxygen saturation ≥ 94% on postop. days 1–2: 111 (94·9)
- Sepsis screening daily on postop. days 1–3: 83 (70·9)
- Standard systemic analgesia with opioids + paracetamol (acetaminophen), + continuous epidural analgesia, if indicated: 117
- (100) Chest physiotherapy on postop. days 1–3: 99
- Standard blood samples and electrocardiogram on postop. days 1–3: 105 (90·7)
- Proton pump inhibitor treatment: 115 (98·3)
- Evaluation by anaesthesiologist if postop. condition deteriorates in recovery room: 117 (100)
- Postop. plan of nutrition within 12 h of admission: 103 (88·0)
- ≥12 h ireposcovery room: 110 (94·0)
- Removal of central venous catheter, arterial line and indwelling bladder catheter when no longer indicated: 117
- (100) Written plan of treatment and monitoring in first 24 h in regular surgical ward after discharge from recovery room: 97
- (82·9) Monitoring of blood pressure, heart rate, respiratory rate, oxygen saturation and level of consciousness 3 times daily on postop. days 1–3: 63
- Fluid balance chart on postop. days 1–3: 101 (86·3)
- Bodyweight measurement daily on postop. days 1–3: 62 (53·0)
- Early mobilization: 115 (98·3)
- Use of medical emergency team-calling criteria in regular surgical department: 12 (10·6)
Multicentre trial of a perioperative protocol to reduce mortality in patients with peptic ulcer perforation

• Conclusion: The 30-day mortality rate in patients with PPU was reduced by more than one-third after the implementation of a multimodal and multidisciplinary perioperative care protocol, compared with conventional treatment

Moller et al. BJS 2011
Reduced mortality following the introduction of a multimodal multidisciplinary perioperative protocol in high risk emergency gastrointestinal surgery patients. A single center intervention study of a consecutive cohort

Tengberg LT, Bay-Nielsen M, Bisgaard T, Cihoric M, Lauritsen ML, Foss NB

600 pts vs control

**Bundle:** Early resuscitation
  - Antibiotics
  - GDT
  - Risk stratification and ICU
  - Consultant input
  - Feeding, analgesia, ambulation

**Results:**
- 30 day mortality: 21.8 vs 15.5% (29%)
- 180 day mortality: 29.5 vs 22.2 (24%)
- Total LOS: 10872 vs 9902d (8%)
- ICU stay: 1622 vs 1242d (23%)
37 point care bundle! (but maybe 6 now)

Started Spring 2014

Stepped wedge cluster randomised trial of quality improvement

90 NHS Trusts, 15 clusters

27,450 patients over 85 weeks

Results 2016
Common goals of all published data to date

Identify sick patients (lactate/PPOSSUM/EWS)
Aggressive antibiotics
Early surgery
Senior involvement
GDT
ICU usage
Scaling Up Improvement.
Improving outcomes in emergency laparotomy
NELA: patient report summary

Geeta Aggarwal
Scaling up ELPQuiC

29 hospitals, three AHSN’s
2 year program (launched September 2015)
Model for improvement
Collaborative learning (AHSN’s and local networks)
Understand NELA data
Scaling up ELPQuiC

Plenary meetings:
   Care bundles, sepsis, care of elderly

Local AHSN QI meetings:
   Driver diagrams, variation, driver diagrams, CUSSUM.

Webex/webinar meetings:
   ‘Show and tell’

QI macro run chart maker
Posters and pamphlets, educational videos and publications
Video presentations from our meetings
ELC Quality Improvement training

Key Milestones

September 2015
ELC LAUNCH

October
own site work
- Creating engagement
- Situational awareness

November
- Regional AHSN meetings
- Sharing ideas, data, progress
- Systems thinking
- Using data for improvement

March - May
own site work
- Improving care processes
- Improvements to secondary drivers

March 2016:
Cross Collaborative meeting II
- The Model for Improvement
- Driver diagrams
- Data clinic

December - February
own site work
- Data collection
- Identify change goals
- Continue to engage stakeholders

June 2016 AHSN meetings
- Review progress
- Learn from each other
- Adapt change efforts

June - September
own site work
- Continue to improve care processes

September 2016
Cross Collaborative meeting III
- Developing communities of practice
- Other analysis methods

Further meetings in 2017
Emergency Laparotomy Collaborative Comparative Dashboard

- Baseline
- ELC Q1
- Hospital vs Average
- Area and Overall Averages
- All Hospitals

Front Page
Thank you.

Dr Sam Huddart
Prof Carol Peden
Dr Bruce McCormick
Dr Mike Swart
Dr Geeta Aggarwal
And many others
A medical geriatric service for elderly patients undergoing emergency laparotomy

Geeta Aggarwal, Nial Quiney
Royal Surrey County Hospital
Guildford, Surrey UK.
The world is on the brink of a demographic milestone
Ageing

- The number of people aged 65 or older will outnumber children under 5.
- Population aging will continue
- Worldwide, people aged 65 and older is projected to grow from 524 million in 2010 (8%) to 1.5 billion in 2050 (16%).

The increased life expectancy ranks as one of society’s greatest achievements.

http://www.who.int/ageing/publications/global_health.pdf
Ageing in Europe

- Europe is the world’s oldest continent. Highest median age of all continents (38 years).
- By 2050, 33% will be over 60, compared to 13% under 16.
- Number of people over 60 will increase by 44% between today and 2050.
- The number of ‘oldest old’ aged 80+ is expected to grow by 180%.
- Population ageing both an outcome of and a challenge of European healthcare systems.
- Nearly one in five people in the UK will live to see their 100th birthday.

Ageing and healthcare in UK

- In 2011 32% of people aged 65+ who were admitted to hospital were found to be malnourished at the time of their admission.
- Of people aged over 70 admitted to an acute hospital:
  - 27% have previously diagnosed dementia
  - 50% have cognitive impairment
  - 27% have delirium
  - 24% have possible major depression
UK's oldest person Gladys Hooper turns 113

18 January 2016 | Hampshire & Isle of Wight

The UK’s oldest person, Gladys Hooper, is celebrating her 113th birthday.

The great-grandmother, who lives on the Isle of Wight, is the country's most senior supercentenarian, according to the Gerontology Research Group records.

Last year, she became the oldest person in the world to have a hip replacement, aged 112.

The former concert pianist, who lives at Highfield Nursing Home, said: “I don’t feel very different to when I was 75.”

She said she would be happy to celebrate with family and friends, a cup of tea and a slice of cake.

Her son Derek Hermiston, 85, said she had also told him she “wouldn’t mind a nice tooth”.

113-year-old Gladys Hooper on the secret of happiness
Emergency general surgery makes up 8-26% of all hospital admissions. (US data)

Mortality increases by each decade of life

Overall risk of cancer increases with age

Age is an independent risk factor.
Emergency Laparotomy Network

Saunders et al (2012)

- 1835 patients from 35 NHS hospitals in UK
- Unadjusted 30-day mortality:

14.9% overall

24.4% if > 80 years

Compared with:

Elective colorectal resection 2.7%
Oesophagectomy 3.1%
Gastrectomy 4.2%
Liver met. Resection 1%
Al-Temini et al 2012

- NSQIP database
- 37,500 patients
- Overall 30-day mortality 14%
- Patients older than 90 had 10% probability of survival
Further publications

- National Danish study showed overall mortality 18.5%
- Further study showed a mortality of 47.8% in those aged 75+ years
- From UK, one study in octogenerians found mortality was 43%
- Another found a 30-day mortality of 22% and a 1-year mortality of 38% in > 70 year olds
why is this important?

- Complex patients

Frailty:

*Distinctive health state related to the ageing process where multiple body systems gradually lose their in-built reserves.*

- 10% of people aged over 65 have frailty, rising to approx. 25-50% aged > 85
- cannot compensate for physiological stress of surgery
- Increased risk of mortality
Frailty

- 2 broad models
- Phenotype model: describes group of characteristics:
  - Unintentional weight loss
  - Reduced muscle strength
  - Reduced gait speed
  - Self-reported exhaustion
  - Low energy expenditure
- Cumulative Deficit (Rockwood):
  - Symptoms, signs and disease.

NOT an inevitable part of ageing. Long term condition and can be improved or worsened.
Orthogeriatrics in UK

- 10% of fragility fracture patients die within 30 days of injury and 33% within one year
- 10-20% will go to a 24 hour care facility
- Hip fractures indicate a patient's general frailty and high fall risk
- Defined as the care of elderly orthopaedic inpatients, mainly after a fractured hip
- Subspecialty to address the poor outcomes of these patients: care alongside orthopaedic surgeons and with MDT team
Orthogeriatric care

Collaborative working between orthopaedic surgeon and geriatrician leads to:

- Decreased length of stay
- Reduced in patient mortality
- Reduced long term mortality
- Reduced hospital costs
Best practice guidelines

British Orthopaedic Association with British Geriatric Society developed best practice care:

- 1. prompt admission
- 2. Rapid assessment with medical, surgical and anaesthetic input
- 3. Minimal delays to surgery
- 4. Prompt mobilisation
- 5. Early MDT rehabilitation
- 6. Early discharge and community rehabilitation
- 7. Secondary prevention of fractures
Further specific standards

- All hip fracture patients to be admitted within 4 hours of presentation
- All patients medically fit to have surgery within 48 hours of admission
- Assessed and cared for to reduce pressure sores
- Routine orthogeriatric support
- All patients to be offered MDT assessment to reduce risk of further falls
- Assess all patients for medication to reduce further fractures
Implementing care of the elderly physicians

- Using similar model of care for emergency laparotomy patients
- 5 NHS district general hospitals involved across South of England
  
  Royal Surrey County Hospital, Surrey and Sussex, Royal Bournemouth, Great Western, Swindon, Royal United, Bath

- 8-12 weeks baseline data for patients > 70 years
  
  6 months of proactive care by Care of Elderly Physician
Emergency Laparotomy and Care of Older People Research Document

Confidential patient information.

Fill in this document if age > 70 and requiring an emergency laparotomy.

Patient Label

Age: _______
Date of admission: _______
Time of admission: _______
Surgical Consultant: __________________________

*Next of kin details
(someone who knows the patient the best, this may be the home or friend)

Name: __________________________
Relationship: __________________________
Phone number: __________________________

1. ASA PS score (please tick)

[ ] I  [ ] II  [ ] III  [ ] IV  [ ] V

ASA PS classification  |  Definition  |  Example
----------------------|-------------|-------------------
ASA I  |  A normal healthy patient  |  Healthy, non-smoking, no or minimal alcohol use
ASA II  |  A patient with mild systemic disease  |  Mild disease without functional limitations. Examples include: current smoker, social alcohol drinker, pregnancy, obesity (BMI between 30-40), well-controlled DM/Hypertension, mild lung disease
ASA III  |  A patient with severe systemic disease  |  Substantial functional limitations and/or one or more moderate to severe diseases. Examples include: poorly controlled DM or Hypertension, COPD, morbid obesity (BMI >40), alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, ESRD undergoing regularly scheduled dialysis, history (>3 months) of MI, CVA, TIA, or CAD/STS.
ASA IV  |  A patient with severe systemic disease with a constant threat to life  |  Examples include: recent (<3 months) MI, CVA, TIA, or CAD/STS; ongoing cardiac ischaemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis, DIC, ARF or ESRD not undergoing regularly scheduled dialysis
ASA V  |  A moribund patient who is not expected to survive without the operation  |  Examples include: ruptured abdominal/thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischaemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction

http://www.ehwc.org/medical-clinical-information/asa-physical-status-classification-system

2. P POSSUM score (see www steerford org uk)  
   morbidity % [ ]  
   mortality % [ ]

3. What was the patient’s lactate pre-operatively? [ ]
Clinical Frailty Scale*

1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.

3 Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.

4 Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “slowed up”, and/or being tired during the day.

5 Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.

7 Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9 Terminally Ill - Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In moderate dementia, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In severe dementia, they cannot do personal care without help.


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focus areas

- Frailty index
- nutrition
- medication review
- pain scores
- cognitive function
- mobility
- level of care required on admission and discharge
- Health outcomes: EQ-5D-5L
- Use of services in community
Implementation

- Care of Elderly physician sees all patients over age 70 as soon as possible after admission
- Year 3 registrar up to consultant
- Multi-disciplinary team discussions
- Discharge planning
- Follow up by research nurse at 2, 4 and 6 months: EQ-5D-5L and community services
results out later on this year...
Thank you
Questions?