Enhanced Perioperative Protocol
Nurse Enhanced Patients
CPX Score 2, Mortality Risk = ~3% (Major Elective Colorectal)

Date of surgery: ............................................................
Surgeon: ........................................................................
Surgery: ........................................................................
Periop Consultant:............................................................

Monitoring:
• Standard monitoring plus arterial line.
• EV1000 monitor and FloTrac (to go to ward).
• Consider central line if LRCRI factors present.

Intraoperative:
• Provide goal directed fluid therapy.
• Use Hartmanns solution 250ml boluses.
• Fluid optimise to stroke volume variation < 12%.
• Metaraminol infusion to maintain MAP.
• Please record EBL on anaesthetic chart.

Post-operative:
• After discussion with surgeon discontinue maintenance fluid in PACU. If maintenance fluid is required we suggest 1ml/kg/hr dextrose saline (+/- KCL 20 mmol).
• If metaraminol >3mg/hr please consider HDU.

Anaesthetist checklist:
□ Perform surgical APGAR at end of surgery and consider HDU care if necessary
□ Prescribe 4x 250ml fluid boluses (if some are used in PACU please prescribe more for the ward if appropriate).
□ Prescribe metaraminol for ward and saline for transducer (stickers available)
□ Set target parameters on yellow observation chart

<table>
<thead>
<tr>
<th>Points</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBL</td>
<td>&gt;1000</td>
<td>601-1000</td>
<td>101-600</td>
<td>≤100</td>
<td></td>
</tr>
<tr>
<td>Lowest MAP</td>
<td>&lt;40</td>
<td>40-54</td>
<td>55-69</td>
<td>≥70</td>
<td></td>
</tr>
<tr>
<td>Lowest HR</td>
<td>&gt;85</td>
<td>76-85</td>
<td>66-75</td>
<td>56-65</td>
<td>≤55</td>
</tr>
</tbody>
</table>

Score:..................................................

0-4 points = very high risk 14% mortality, 75% major complications, 97% specific for ICU, upgrade to enhanced pathway
5-6= high risk, 4% mortality, consider upgrading to enhanced pathway
7-8 = moderate risk, 1% mortality
9-10 Low risk 0% mortality

Plan/Notes:

Version 1.0 (1/10/2016)
## Enhanced Perioperative Protocol

### Post-Operative Destination
- **Nurse Enhanced Unit**: Intermediate risk (3.1% mortality)
- **High Dependency Unit**: High risk (9.1% mortality)

### Check list:
- Pathway obs chart
- Target parameters set
- Fluid boluses prescribed
- Vasopressor prescribed
- Cardiac Monitoring in place

### Check List:

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Pathway obs chart</td>
<td></td>
</tr>
<tr>
<td>□ Target parameters set</td>
<td></td>
</tr>
<tr>
<td>□ Fluid boluses prescribed</td>
<td></td>
</tr>
<tr>
<td>□ Vasopressor prescribed</td>
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<td>□ Cardiac Monitoring in place</td>
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</tbody>
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### Observe

**Hourly Observations/6 hourly ABGs**

### Parameters outside target range?

- **Yes**
  - **Assess for fluid responsiveness**
    - Perform passive leg raising test
  - **Is the patient fluid responsive?**
    - **Yes**
    - **MAP within target limits?**
      - **Yes**
      - Consider HDU transfer if on ward
      - **No**
      - **Lactate > 3.0**
        - **Yes**
        - **Lactate > 4.0**
          - **Yes**
          - **Maximum vasopressor dose reached**
          - **No**
      - **No**
    - **Yes**
    - **Urgent Medical Review**
      - Treat as NEWS 7 or more & escalate accordingly
      - Consider HDU transfer if on ward
  - **No**

### Crystalloid bolus

- 250ml over 15min

### Perform ABG

- **Lactate > 4.0**
  - **Yes**
  - **Urgent Medical Review**
    - Treat as NEWS 7 or more & escalate accordingly
    - Consider HDU transfer if on ward
  - **No**
  - **Lactate > 3.0**
    - **Yes**
    - **Lactate > 4.0**
      - **Yes**
      - **Maximum vasopressor dose reached**
      - **No**
    - **No**

### Vasopressor Support

- **Titrate to target MAP**

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1. Fluid responsiveness is shown with a >10% increase in stroke volume after a passive leg raise or fluid bolus.
2. After four fluid boluses please take an ABG and seek a medical review.
3. Ensure baseline ABG is taken prior to starting vasopressors. On the ward use the metaraminol protocol described in the Perioperative Manual and on the pharmacy monograph.