Emergency Laparotomy
Peri-operative Care Pathway

This pathway should be started for **ALL patients presenting with acute abdominal conditions that may need emergency surgery**. The pathway is designed to provide guidance and improve the peri-operative care of these high-risk emergency cases.

### Pre-operative information

<table>
<thead>
<tr>
<th>NHS No.:</th>
<th>Hospital No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<table>
<thead>
<tr>
<th>Patients Name:</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Address:</th>
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<tbody>
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<table>
<thead>
<tr>
<th>D.O.B.:</th>
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</tbody>
</table>

### Risk Factors:

- Ischaemic heart disease
- Congestive cardiac failure
- Respiratory disease
- Renal failure (creatinine >150μmol/l)
- Diabetes Mellitus (requiring insulin)
- Anticoagulants

### Past medical history:

#### Pre-operative information

- Date of admission
- Admitting specialty
- Surgical Consultant
- Age
- ASA
- Weight (kg)
- Height (m)

### Risk Factors:

#### Past medical history:

- Please attach addressograph label

### Surgical Consult:

- Date and time seen by surgical Spr: 
  
  
- Date and time seen by surgical consultant: 
  
  
- Working diagnosis: 

#### Planned procedure: 

- Initial management: 
  - Operative
  - Non-operative

### Theatre booking:

- Date and time of decision for theatre: 
  
  
- Date and time booked: 
  
  
- Anaesthetist informed
- PERRT / ITU informed

### NCEPOD classification:

- Immediate
- Urgent
- Expedited

### Anticipated level of post-operative care:

- Level 2/3 (PACU/ICU)
- Level 1 (Ward)
- Bed booked

### Clinician completing pathway (Print and sign):

- Bleep number
- Designation: FY1/FY2/CT1-2/ST3+
## Pre-operative ED/ Ward Checklist:

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV Fluid prescribed <strong>AND</strong> administered</td>
<td></td>
</tr>
<tr>
<td>Antibiotics prescribed <strong>AND</strong> administered</td>
<td></td>
</tr>
<tr>
<td>Analgesia prescribed <strong>AND</strong> administered</td>
<td></td>
</tr>
<tr>
<td>Fluid Balance chart started hourly</td>
<td></td>
</tr>
<tr>
<td>Urinary catheter inserted</td>
<td></td>
</tr>
<tr>
<td>Recent blood results reviewed</td>
<td></td>
</tr>
<tr>
<td>Blood cross-matched</td>
<td></td>
</tr>
<tr>
<td>ECG – checked and documented</td>
<td></td>
</tr>
<tr>
<td>Chest X-ray – checked and documented</td>
<td></td>
</tr>
<tr>
<td>Blood glucose checked and management plan in place</td>
<td></td>
</tr>
<tr>
<td>Blood gas checked, documented</td>
<td></td>
</tr>
<tr>
<td>VTE risk assessment completed</td>
<td></td>
</tr>
<tr>
<td>VTE prophylaxis prescribed <strong>(IF</strong> appropriate)**</td>
<td>Y ☐</td>
</tr>
<tr>
<td>Coagulopathy / thrombocytopenia present</td>
<td>Y ☐</td>
</tr>
<tr>
<td>Management plan for coagulopathy in place</td>
<td></td>
</tr>
<tr>
<td>(refer to guidelines or on-call haematologist)</td>
<td></td>
</tr>
<tr>
<td>Naso-gastric tube inserted <strong>(if appropriate)</strong></td>
<td>Y ☐</td>
</tr>
<tr>
<td>Patient discussed with ITU outreach (SpR 07939135452)</td>
<td></td>
</tr>
</tbody>
</table>

## Fluid management

### Maintenance fluids:
Total 1-1.5 ml/kg/hour
Consisting of oral fluids (if not contraindicated) or IV compound sodium lactate (Hartmann's)

### Resuscitation:
If systolic BP <90 give 250-500 ml colloid bolus
Repeat if patient remains hypotensive 15 minutes after administration (provided no congestive cardiac failure)

### Replacement of electrolytes:
With appropriate supplements guided by blood test / ABG results (exercise caution with renal impairment)

If the patient develops cardiac failure, or hypotension continues despite fluid resuscitation, call Senior team member for urgent review and consider PERRT/ITU outreach review

<table>
<thead>
<tr>
<th>Clinician completing pathway (Print and sign)</th>
<th>Bleep number</th>
<th>Designation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>..................................................</td>
<td>..............</td>
<td>FY1/FY2/CT1-2/ST3+/SG/Cons</td>
</tr>
</tbody>
</table>
Intra-operative management

To be completed by the Anaesthetist in addition to the anaesthetic record

Date and time of arrival in theatre

Most senior anaesthetist present
(at any point during the procedure)

Consultant
Staff grade/Clinical fellow
ST (please specify grade)
CT 1-2
Consultant Anaesthetist informed Y N

Surgical procedure performed:

Most senior surgeon present
(at any point during the procedure)

Consultant
Staff grade/ Clinical Fellow
ST (please specify grade)
CT1-2
Consultant Surgeon informed Y N

Invasive monitoring used:

Arterial line
Central venous catheter
Oesophageal Doppler
LiDCO rapid/plus

Invasive monitoring not appropriate ☐
Reason:

Vasopressor infusion required

Phenylephrine/ metaraminol ☐
Noradrenaline ☐

Inotropes required Y N

Blood products required

PRC ☐
FFP ☐
platelets ☐
cryoprecipitate ☐

Surgical Site Infection Prophylaxis:

Antibiotics: Given prior to induction ☐
Given on induction ☐
Time ... : ...
Dose ...

Antibiotic regimen reviewed based on surgical findings ☐
Consider escalation and additional agents (e.g. gentamicin, antifungal)

Temperature monitoring and appropriate warming techniques ☐

Post-operative plan:

Patient transferred to: ICU (level 3) ☐ PACU (level 2) ☐ PACU in recovery ☐

Recovery

If Level 2/3 care to be continued in recovery the anaesthetist is to remain with patient

Post-op

CXR, CVC, NG correct placement checked, blood sugar, ABG
Fluids/antibiotics/analgesia prescribed and administered

Anaesthetist (Print and sign)

Bleep number

Designation:
FY1/FY2/CT1-2/ST3+/SG/Cons
<table>
<thead>
<tr>
<th>FROM WARD</th>
<th>Operation Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Operation Proposed</td>
</tr>
<tr>
<td></td>
<td>Operation Notes:</td>
</tr>
<tr>
<td></td>
<td>Surgeon:</td>
</tr>
<tr>
<td></td>
<td>Incision:</td>
</tr>
<tr>
<td></td>
<td>Assistant:</td>
</tr>
<tr>
<td></td>
<td>Operative Findings:</td>
</tr>
<tr>
<td></td>
<td>Operation:</td>
</tr>
<tr>
<td></td>
<td>Drains:</td>
</tr>
<tr>
<td></td>
<td>Packs:</td>
</tr>
<tr>
<td></td>
<td>POST-OPERATIVE INSTRUCTIONS:</td>
</tr>
</tbody>
</table>
# Initial post-operative management - ITU/PACU/Recovery

**Handover:**
- Anaesthetist to ITU Doctor
- Theatre staff to ITU Nurse

**Date and time of ITU Admission:** ...

**Investigations checked and documented:**
- Admission bloods
- ABG
- ECG
- CXR (central line/NGT placement)

**Respiratory management:**
- Aim $\text{PaO}_2 > 10\text{kPa}$ and $\text{PaCO}_2 < 6\text{kPa}$
- If intubated: ensure ventilation in line with low volume moderate PEEP lung protective strategy
- If extubated: early chest physiotherapy if appropriate with hourly appropriate ABG monitoring

**Cardiovascular management:**
- Aim MAP > 65 mmHg (adjust for hypertension)

**Fluid management:**
- Hartmann’s maintenance 1-1.5 ml/kg/hour in total including enteral feed

**Inotrope/vasopressor:**
- If fluid management fails to maintain MAP > 65 mmHg
  - Consider starting noradrenaline
  - Consider starting inotrope if CO < 4.0 L/min
  - Discuss with ITU consultant if clinical deterioration or any concerns

**Hydrocortisone** – consider if on-going septic shock / increasing inotrope or vasopressor requirements

**Renal management:**
- Aim urine output > 0.5 ml/kg/hour
  - Ensure adequate intravascular volume and appropriate MAP sustained with fluid therapy +/- vasopressors/inotropes (as required)
  - Consider CVVHF if oligo-anuria and fluid overload / persistent metabolic acidosis / hyperkalemia (discuss with ITU consultant)

**Microbiology:**
- Antibiotic plan prescribed in accordance with trust guideline
  - Discuss all emergency laparotomies with on-call ITU/microbiology team

**General:**
- VTE prophylaxis – prescribed in line with surgical plan
- GI prophylaxis – PPI prescribed in line with ITU protocol
- Analgesia – prescribed and administered with good effect, plan pain team review
- Metabolic – aim blood glucose 6-10 mmol/l (insulin sliding scale if necessary)
- Nutrition – oral / NG / NJ / TPN feed (follow surgical plan)
- Relatives – next of kin contacted (aim early family discussion)

**Bleeding/coagulopathy** – stop anticoagulants, inform Surgical Registrar, check Hb and coagulation, correct as necessary (discuss with on-call ITU/Haematology consultant)

**Inform Surgical Registrar for urgent review** – if bleeding, acute infection, sepsis, cardiac event, acute surgical complications

**Clinician completing ITU pathway** (Print and sign)

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**Bleep number**

**Designation:** FY1/FY2/CT1-22/ST3+/SG/Cons
**Ongoing post-operative management – ward**

This section is to be completed by the surgical team upon return to the ward area from ITU/PACU/Recovery.

Date and time returned to ward: … / … / … … : … Handover completed □

<table>
<thead>
<tr>
<th>Initial observations:</th>
<th>Analgesia prescribed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>Epidural</td>
</tr>
<tr>
<td>BP</td>
<td>Morphine PCA</td>
</tr>
<tr>
<td>RR</td>
<td>Regular/PRN</td>
</tr>
<tr>
<td>Sats O₂</td>
<td></td>
</tr>
<tr>
<td>FiO₂</td>
<td></td>
</tr>
<tr>
<td>Temp</td>
<td></td>
</tr>
<tr>
<td>U/O</td>
<td>Oral (+/- supplements)</td>
</tr>
<tr>
<td>EWS</td>
<td>NG/NJ</td>
</tr>
<tr>
<td></td>
<td>TPN</td>
</tr>
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**Fluid management**

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**Replacement of Electrolytes:**

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If the patient develops cardiac failure, or hypotension continues despite fluid resuscitation call Senior team member for urgent review and consider Critical Care Outreach/ITU review

**Cardiorespiratory goals:**

<table>
<thead>
<tr>
<th>HR</th>
<th>&lt;100</th>
<th>&gt;60</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP systolic</td>
<td>&lt;160</td>
<td>&gt;90</td>
</tr>
<tr>
<td>ScvO₂</td>
<td>&gt;70%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>U/O</th>
<th>&gt; 0.5 ml/kg/hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Sats O₂</td>
<td>&gt;92% on oxygen</td>
</tr>
<tr>
<td>Glucose</td>
<td>6-10 mmol/l</td>
</tr>
</tbody>
</table>

If goals are not being met or NEWS is 3 or more – senior team member/PERRT/ITU outreach must review
<p>| Date | Continuation sheet |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuation sheet</td>
</tr>
</tbody>
</table>

Patient's Name: ........................................ Hospital Number ....................................

GENERAL SURGERY