Sepsis Screening Pathway

HAS a decision been documented NOT to escalate care?

Sepsis Screening Pathway

- Heart rate > 90 (bpm)
- Respiratory rate > 20 (bpm)
- Acutely altered mental status
- Temperature <36 or >38.3 (°C)
- Bedside glucose >7.7mmol/L (in the absence of diabetes mellitus)
- WCC < 4 or >12 x 10⁹/L
- Temperature <36 or >38.3 (°C)

OR Unwell and at risk of Neutropenia* OR In at risk group for severe sepsis*

*Note: Some groups of patients, such as older people or immune compromised may not meet these SIRS criteria, even though infection is suspected and they are very unwell. When this occurs check lactate, blood pressure, organ dysfunction criteria and C reactive protein (CRP) before ruling sepsis.

Sepsis Six Regimen to be completed within 1 hour

Look for signs of organ dysfunction:
- Systolic BP < 90 or Mean Arterial Pressure (MAP) < 65 or Systolic BP more than 40 below patient’s normal
- New need for oxygen to achieve saturation > 90%
- Lactate > 4 mmol/L (following administration of fluid bolus)
- Urine output < 0.5ml/kg for 2 hours – despite adequate fluid resuscitation
- Acutely altered mental status
- Glucose > 7.7 mmol/L (in the absence of diabetes)
- Creatinine > 177 micromol/L
- Bilirubin > 70 micromol/L
- INR > 1.5 or APTT > 50s
- Platelets < 100 x 10⁹/L

Look for signs of septic shock (following administration of fluid bolus of up to 2L)
- Lactate > 4 mmol/L
- Hypotensive (Systolic BP < 90 or MAP < 65)

If either present: THIS IS SEPTIC SHOCK

Clinical Suspicion of INFECTION Site

- Respiratory rate > 20 (bpm)
- Heart rate > 90 (bpm)
- Acutely altered mental status
- Temperature <36 or >38.3 (°C)
- Bedside glucose >7.7mmol/L (in the absence of diabetes mellitus)
- WCC < 4 or >12 x 10⁹/L
- Temperature <36 or >38.3 (°C)

Pathway Modification
All Pathway modifications need to be agreed by the Hospital’s Sepsis Steering Committee and be in line with the National Clinical Guideline.

National Early Warning Score (NEWS) Key

<table>
<thead>
<tr>
<th>SCORE</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Rate (bpm)</td>
<td>≤ 8</td>
<td>9 - 11</td>
<td>12 - 20</td>
<td>≥ 21</td>
</tr>
<tr>
<td>SpO₂ (%)</td>
<td>≥ 91</td>
<td>92 - 93</td>
<td>94 - 95</td>
<td>≤ 90</td>
</tr>
<tr>
<td>Inspired O₂ (Fr O₂)</td>
<td>Air</td>
<td>21 - 24</td>
<td>≥ 25</td>
<td></td>
</tr>
<tr>
<td>Systolic BP (mmHg)</td>
<td>≤ 90</td>
<td>91 - 100</td>
<td>101 - 110</td>
<td>≥ 111</td>
</tr>
<tr>
<td>Mean Arterial Pressure (MAP)</td>
<td>≤ 6</td>
<td>41 - 50</td>
<td>51 - 90</td>
<td>≥ 91</td>
</tr>
<tr>
<td>APACHE II Score</td>
<td>≤ 7</td>
<td>8 - 13</td>
<td>14 - 24</td>
<td>≥ 25</td>
</tr>
<tr>
<td>Vital Signs Response</td>
<td>Alert (A)</td>
<td>Unresponsive (U)</td>
<td>Mortal (M)</td>
<td>None (N)</td>
</tr>
</tbody>
</table>

Note: Where systolic blood pressure is a 21mmHg, request Doctor to review.

National Early Warning Score (NEWS)

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Minimum Observation Frequency</th>
<th>ALERT</th>
<th>RESPONSE</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>12 Hourly Nurse in charge</td>
<td>Nurse in charge</td>
<td>Nurse in charge to review if new score 1</td>
</tr>
<tr>
<td>2</td>
<td>6 Hourly Nurse in charge</td>
<td>Nurse in charge</td>
<td>Nurse in charge to review</td>
</tr>
<tr>
<td>3</td>
<td>4 Hourly Nurse in charge &amp; Team/On-call SHO</td>
<td>Nurse in charge</td>
<td>1. SHO to review within 1 hour</td>
</tr>
<tr>
<td>4-6</td>
<td>1 Hourly Nurse in charge &amp; Team/On-call SHO</td>
<td>Nurse in charge</td>
<td>1. SHO to review within 1 hour</td>
</tr>
<tr>
<td>≥ 7</td>
<td>1/2 Hourly Nurse in charge &amp; Team/On-call Registrar</td>
<td>Nurse in charge</td>
<td>1. SHO to review immediately</td>
</tr>
</tbody>
</table>

Note: Single Score triggers

1. SHO to review immediately
2. Continuous patient monitoring
3. Plan to transfer to higher level of care
4. Activate Emergency Response System (ERS) (as appropriate to hospital model)

Pathway Review

Document Number during this Admission
### Early Warning Score System

<table>
<thead>
<tr>
<th>Year</th>
<th>Time</th>
<th>AVPU</th>
<th>Patient</th>
<th>Health Care Record No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<td>3</td>
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</tbody>
</table>

**AVPU Score**

- **A**: Alert (A)
- **V**: Voice (V)
- **P**: Pain (P)
- **U**: Unresponsive (U)

**AVPU Score**

- **AVPU Score**: 0 1 2 3
- **AVPU Score**: 0 1 2 3
- **AVPU Score**: 0 1 2 3
- **AVPU Score**: 0 1 2 3

**Heart Rate Score**

- **Heart Rate (beats per minute)**

**Room Air**

- **Room Air (L/min)**
- **Room Air (%)**
- **Room Air (%)**
- **Room Air (%)**

**BP Score**

- **BP Score**: 0 1 2 3
- **BP Score**: 0 1 2 3
- **BP Score**: 0 1 2 3
- **BP Score**: 0 1 2 3

**Respiratory Rate**

- **Respiratory Rate (breaths per minute)**

**SpO2 (%)**

- **SpO2 (%)**
- **SpO2 (%)**
- **SpO2 (%)**
- **SpO2 (%)**

**Temperature (°C)**

- **Temperature (°C)**
- **Temperature (°C)**
- **Temperature (°C)**
- **Temperature (°C)**

**Blood Glucose**

- **Blood Glucose (mg/dL)**
- **Blood Glucose (mg/dL)**
- **Blood Glucose (mg/dL)**
- **Blood Glucose (mg/dL)**

**Bowel Movement**

- **Bowel Movement**
- **Bowel Movement**
- **Bowel Movement**
- **Bowel Movement**

**Weight (kg)**

- **Weight (kg)**
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- **Weight (kg)**
- **Weight (kg)**

**Urine Output**

- **Urine Output**: If there are concerns about urine output (<0.5 ml/kg/hr), contact Doctor for review

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**Respiratory Distress**

- **Consider**: Airway
- **Intervention**: Immediate medical review
- **Intervention**: ABCDE assessment
- **Intervention**: Give Oxygen to target: 90% in COPD patients, 96% or more in all other patients
- **Intervention**: Request CXR & ABG
- **Intervention**: Airway Obstruction: activate Emergency Response System
- **Intervention**: Respiratory Acidosis: Consider early non-invasive ventilation

**Hypertension**

- **Consider**: Pain
- **Intervention**: Immediate medical review
- **Intervention**: 12-lead ECG
- **Intervention**: Check BP manually
- **Intervention**: Myocardial Infarction
- **Intervention**: Sepsis

**Hypotension**

- **Consider**: Bleeding
- **Intervention**: Immediate medical review
- **Intervention**: Check BP manually
- **Intervention**: 12-lead ECG
- **Intervention**: No heart failure: stat IV fluids - 500ml
- **Intervention**: If no improvement after 20ml/kg, immediate review by doctor
- **Intervention**: Systolic BP ≤ 90: consider activating ERS

**Tachycardia**

- **Consider**: Seagull Sign**
- **Consider**: Loss of consciousness
- **Consider**: Myocardial Ischaemia on ECG
- **Consider**: Heart failure: if YES - consider activating ERS
- **Intervention**: ACLS Algorithm as appropriate

**Brady Cardia**

- **Consider**: Electrolyte Disturbance
- **Consider**: Drug Side-effect
- **Consider**: Complete Heart Block
- **Intervention**: Immediate medical review
- **Intervention**: 12-lead ECG
- **Intervention**: Telemetry
- **Intervention**: Heart Rate ≤ 40: consider activating ERS

**Neurological Deterioration**

- **Consider**: Hypoglycaemia
- **Consider**: Acute brain injury
- **Consider**: Pupil response
- **Intervention**: Immediate medical review
- **Intervention**: Capillary glucose
- **Intervention**: Sudden fall in level of consciousness: consider activating ERS

**Pyrexia or Hypothermia**

- **Consider**: Sepsis
- **Consider**: Immediate medical review
- **Consider**: C-Reactive protein
- **Consider**: Two or more Sepsis indicators present
- **Intervention**: Commence SEPSIS SIX Regimen

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**Screen for Sepsis**

- **If NEWS ≥4 (5 on supplementary O2) and infection suspected**