As part of Healthcare Improvement Scotland’s Improvement Hub (ihub), SPSP activities support the provision of safe, high quality care, whatever the setting.
To improve the recognition and timely management of Sepsis in acute hospitals

Outcome: To reduce mortality and morbidity from sepsis

**Reliable Recognition & Assessment**
- Reliable Sepsis screening (NEWS + suspicion of infection)
  - [Link](http://ihub.scot/media/2631/spsp-sepsis-position-statement.pdf)
- Ensure reliable communication across clinical teams of at risk patients
- Ensure timely rescue of deteriorating patient by competent teams
- Facilitate reliable triage and assessment of patients who have been identified as potential sepsis by Primary Care or Scottish Ambulance Service

**Reliable Care Delivery**
- Ensure reliable delivery of Sepsis Six within 1 hour
- Source Control
- Ensure reliable escalation of septic patients to higher level of care
- Improve Antimicrobial stewardship

**Education & Awareness**
- Education on burden of illness & current performance
- Provide training to staff on clinical knowledge and improvement skills

**Culture of safety and Quality Improvement**
- Executive Sponsorship
- Clinical Leadership
- Multidisciplinary team working
- Develop measurement frameworks to guide improvement

**Patient & Family Centred Care**
- Raise awareness on signs & symptoms
- Involve patients & families in treatment process and care planning
Change Package
Testing and implementation of these change ideas can be supported by a number of resources:


**ihub Sepsis Toolkit:** [http://ihub.scot/sepsis-toolkit/](http://ihub.scot/sepsis-toolkit/)

<table>
<thead>
<tr>
<th>Reliable Sepsis Screening</th>
<th>Identify sepsis using NEWS charts + suspicion of infection</th>
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<tbody>
<tr>
<td></td>
<td>Implement screening tool:</td>
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<td>• NEWS trigger - see recommendations from Royal College of Physicians which recommend a trigger of NEWS = 5 <a href="https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2">https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2</a></td>
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<td>• Suspicion of infection – ‘could this deterioration be due to infection?’</td>
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<tr>
<th>Ensure reliable communication across clinical teams of at risk patients</th>
<th>Consider including representatives from SAS / GP and Out of Hours in sepsis teams</th>
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<tr>
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<td>Include at risk patients in safety brief</td>
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<td>Use visual cues to identify deteriorating patients</td>
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<td>Standardise communication and handovers between wards/departments - use SBAR to ensure reliable communication</td>
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<td>Multi-disciplinary rounds &amp; Daily Goals</td>
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<td>Early senior review to document treatment escalation plans for all deteriorating patients</td>
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<tr>
<th>Ensure timely rescue of deteriorating patient by competent teams</th>
<th>Reliable process of escalation to consultant in charge of patient’s care</th>
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<tr>
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<td>Link with ward safety brief to identify septic patients</td>
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<td></td>
<td>Reliable process for identifying at risk patients for handover – nursing and medical</td>
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<td>Ideas to test include:</td>
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<td>• Outreach teams to include ward sweeping</td>
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<td>• Wipe Boards to highlight patients at risk</td>
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<td>• IT solutions (e.g. electronic track &amp; trigger systems)</td>
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### Ensure reliable delivery of Sepsis Six within 1 hour

Implement Sepsis Six Checklist

1. **Give oxygen appropriately** – target SpO2 between 94-98% (exception is patients at risk of hypercapnic respiratory failure, who should have oxygen administered to a target saturation of 88-92%).

2. **Take blood cultures and consider source control**

3. **Give IV antibiotic according to local formulary**

4. **IV fluid challenge using balanced crystalloid (minimum 500 mls. within 1 hour), reassess and repeat as indicated**


5. **Measure lactate**

6. **Monitor accurate urine output**

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**The Surviving Sepsis Campaign Bundle: 2018 update:** Mitchell M. Levy, Laura E. Evans and Andrew Rhodes


### Source Control

Include on checklist

- Formally evaluate patient for a focus of infection amenable to source control measures
- Implement source control measures as soon as possible following successful resuscitation

### Ensure reliable escalation of septic patients to higher level of care

Include on Checklist

- Review time
- Consultant informed
- Critical Care review
| Antimicrobial stewardship | Early Consultant review of antibiotic therapy – before 3rd dose  
Antibiotic management component of sepsis six management bundle  
Antibiotic review – rationalise antibiotic management within 72 hours of starting therapy  
- continuing need for antibiotic and review of indication for antibiotic  
- review of available microbiology and de-escalation of treatment according to susceptibility  
- daily review of need for IV therapy and potential for switch to oral therapy  
- consult local antibiotic policy |
|--------------------------|----------------------------------------------------------------------|
| Education on burden of illness & current process reliability | Local & national awareness campaigns  
Medical staff induction, foundation training & undergraduate curriculum  
Support clinical teams to use data on process reliability to understand opportunities for improvement  
Link with critical care to generate learning from unscheduled admissions |
| Provide training to staff on clinical knowledge and improvement skills | Include on nursing staff induction and updates  
Medical staff induction, foundation training [DOTS] & Undergraduate curriculum  
Access NEWS eLearning module  
Support clinical staff to identify and undertake tests of change based on local process data |
| Executive Sponsorship | Include data and discussion of process reliability in Executive Walkrounds  
Provide visible Medical Executive Sponsorship |
| Clinical leadership | Identify local clinical leadership to drive improvement |
| Multi – disciplinary team working | Implement multi – disciplinary mortality & morbidity reviews that include General Ward and Critical Care |
| Develop measurement framework to guide improvement | Identify local data collection roles within the multi – disciplinary team  
Build local teams understanding of measurement for improvement  
- Sepsis six bundle compliance  
- Time to 1st antibiotic dose  
- Antibiotic compliance (local policy) and antibiotic review  
Consider inclusion on local QI dashboards |
| Include patients & families in treatment process and care planning | Use patient stories to build awareness  
Ensure patients and families are informed of risks on discharge  
Promote open communication between clinical team and patient/family |