

**Scottish Antimicrobial Prescribing Group /
Scottish Patient Safety Programme
Sepsis Collaborative Measurement Plan
2013 Update**

Measurement Plan Guidance Notes

The measurement plan builds on the first 2 years experience of reporting progress on the Sepsis Collaborative.

The reporting requirement has been reduced to

- Screening (SSP1)
- Time to First Antibiotic (SSP2) – now available on the extranet, see example below
- Percent Antibiotic < 1 hour (SSP5)
- Percent Sepsis Six < 1 hour (SSP9)
- Percent Antibiotic choice compliant with local policy (SSP10)

Clinical teams may want to continue to measure each element of the Sepsis Six separately to inform their improvement journey. This approach is highly recommended, particularly for teams starting on improvement work.

It is no longer a requirement to report Acute & Specialty areas separately although teams who have established this pattern may wish to continue in the interest of continuity of data.

Similarly, there is no longer a requirement to report local outcome measures although teams may wish to continue for local learning.

Initial Patient Identification: Patients with elevated Early Warning Score (EWS > 4 or locally defined) should be screened for evidence of sepsis. **Patients may meet criteria on admission or at any time subsequently.**

Inclusion criteria:

Patients who score 4 or more on EWS (or locally defined trigger) with two or more Systemic Inflammatory Response Syndrome (SIRS) criteria and there is a suspicion of sepsis

Systemic Inflammatory Response Syndrome (SIRS):

Temperature: <36°C or >38°C

Pulse: ≥ 90 beats per minute

White Blood Count <4 or >12 cells/mm³

Respiratory Rate >20 breaths per minute OR P_{CO2} <4 kPa

ACUTE – (Emergency and AMU) Time zero = triage time

SPECIALTY (in-patients) Time zero = time of meeting inclusion criteria

Patients who develop sepsis should have interventions done within 1 hour of time zero

Sampling guidance:**ACUTE**

Each participating area should sample 5 patients with sepsis per week. If total patient numbers are less than 10 per month, all patients should be included in sample. Outcome measures can be tracked by use of CHI numbers on data collection tool. A sample form is included in this plan

SPECIALTY

1. Identify one Medical and one Surgical ward to start data collection.
2. Collect data on one day each week.
 - a. Look at all patients on the ward that day. Identify any with EWS of >4 at any time during the past week
 - b. Find out if any patients have been transferred to ICU or HDU in the past week. If so review their case notes to see if they had evidence of sepsis before transfer
 - c. Identify any patient from (a) and (b) who meets the SPSP / SAPG entry criteria
 - d. Record all of the process measures as per protocol
 - e. Start a run chart of individual patient data about Time to first Antibiotic Dose

Exclusion Criteria: Patients with a terminal illness should NOT be excluded unless the decision not to escalate care clearly excludes further active treatment with antibiotics or IV fluids in the ward. There may be a requirement to exclude patients from specific elements of Sepsis Six based on patient specific clinical criteria.

Primary data source: The patient's medical notes, medication chart, EWS chart, and fluid balance chart.

Documents: Use the Sepsis Six *Data Collection* and *Data Aggregation* form available on the SPSP Extranet

Process Measures

Extranet Identifier	Measure Name	Operational Definition	Data Collection Guidance
<p>SSP1</p>	<p><u>ACUTE & SPECIALTY</u></p> <p>Percent of patient with elevated EWS score who had documented SIRS score</p>	<p>Numerator: The total number of patients who had elevated EWS(> 4 or local trigger) and had documented SIRS score</p> <p>Denominator: The total number of patients with elevated MEWS (>4 or local trigger)</p> <p>Compliance: (Numerator / Denominator) * 100</p>	<p>Inclusion Criteria Patients who score 4 or more on EWS (or locally defined trigger)</p> <p>Data Collection Sample 5 patients weekly per ward/department or include all patients if numbers less than 10/month</p> <p>Primary data source: The patient's medical notes, medication chart, EWS chart, and fluid balance chart.</p> <p>Documents: Use the Sepsis Six <i>Data Collection</i> and <i>Data Aggregation</i> form available on the Community website.</p>

<p>SSP2</p>	<p>ACUTE & SPECIALTY Median Time to First Antibiotic Dose (TFAD)</p>	<p>Record time in hours & minutes from time zero to commencing administration of IV antibiotics.</p> <p>Calculate median time weekly/monthly for groups or enter per patient if number < 10</p>	<p>Inclusion Criteria (Time Zero) - Patients who score 4 or more on EWS (or locally defined trigger) with two or more Systemic Inflammatory Response Syndrome (SIRS) criteria and there is a suspicion of sepsis ACUTE – (Emergency and AMU) – time of triage SPECIALTY (in-patients) Time zero = time of triggering Early Warning Score <i>Patients who develop sepsis should have interventions done within 1 hour of time zero</i></p> <p>Data Collection Sample 5 patients weekly per ward/department or include all patients if numbers less than 10/month</p> <p>Primary data source: The patient’s medical notes, medication chart, EWS chart, and fluid balance chart.</p> <p>Documents: Use the Sepsis Six <i>Data Collection</i> and <i>Data Aggregation</i> form available community website</p> <p>N.B. See guidance on page 3 of this plan</p>
<p>SSP5</p>	<p>ACUTE & SPECIALTY Percent of patients who are commenced on IV antibiotics within 1 hour of time zero</p>	<p>Numerator: The total number of patients that have commenced IV antibiotic therapy within 1 hour of time zero.</p> <p>Denominator: The total number of patients in the sample.</p> <p>Compliance: (Numerator / Denominator) * 100</p>	<p>Inclusion Criteria Patients who score 4 or more on EWS (or locally defined trigger) with two or more Systemic Inflammatory Response Syndrome (SIRS) criteria and there is a suspicion of sepsis ACUTE – (Emergency and AMU) Time zero = triage time SPECIALTY (in-patients) Time zero = time of triggering Early Warning Score <i>Patients who develop sepsis should have interventions done within 1 hour of time zero</i></p>

			<p>Data Collection Sample 5 patients weekly per ward/department or include all patients if numbers less than 10/month</p> <p>Primary data source: The patient's medical notes, medication chart, EWS chart, and fluid balance chart.</p> <p>Documents: Use the Sepsis Six <i>Data Collection</i> and <i>Data Aggregation</i> form available on the Community website.</p>
SSP7	<p><u>ACUTE & SPECIALTY</u> Percent of patients with Lactate measured within 1 hour of time zero</p>	<p>Numerator: The total number of patients that have had Lactate measured within 1 hour of time zero.</p> <p>Denominator: The total number of patients in the sample.</p> <p>Compliance: (Numerator / Denominator) * 100</p>	<p>Inclusion Criteria Patients who score 4 or more on EWS (or locally defined trigger) with two or more Systemic Inflammatory Response Syndrome (SIRS) criteria and there is a suspicion of sepsis</p> <p>Time Zero = ACUTE – triage time SPECIALTY – time of meeting inclusion criteria</p> <p>Data Collection Sample 5 patients weekly per ward/department or include all patients if numbers less than 20/month</p> <p>In specialty ward areas it will be helpful to batch similar wards together to ensure a denominator of >10</p> <p>Primary data source: The patient's medical notes, medication chart, EWS chart, and fluid balance chart.</p> <p>Documents: Use the Sepsis Six <i>Data Collection</i> and <i>Data Aggregation</i> form available on the Community website.</p>

<p>SSP9</p>	<p><u>ACUTE & SPECIALTY</u> Percent of patients with Sepsis Six performed within 1 hour of time zero</p>	<p>Numerator: The total number of patients that have all elements of Sepsis Six (SSP3 – 8) completed within 1 hour of time zero.</p> <ul style="list-style-type: none"> • Oxygen therapy to target saturation • Blood culture performed • Commenced on IV antibiotics • IV fluid challenge • Serum lactate and full blood count • Accurate assessment of urinary output <p>Denominator: The total number of patients in the sample.</p> <p>Compliance: (Numerator / Denominator)* 100</p>	<p>Inclusion Criteria Patients who score 4 or more on EWS (or locally defined trigger) with two or more Systemic Inflammatory Response Syndrome (SIRS) criteria and there is a suspicion of sepsis ACUTE – (Emergency and AMU) Time zero = triage time SPECIALTY (in-patients) Time zero = time of triggering Early Warning Score <i>Patients who develop sepsis should have interventions done within 1 hour of time zero</i></p> <p>Data Collection Sample 5 patients weekly per ward/department or include all patients if numbers less than 10/month</p> <p>Primary data source: The patient’s medical notes, medication chart, EWS chart, and fluid balance chart.</p> <p>Documents: Use the Sepsis Six <i>Data Collection</i> and <i>Data Aggregation</i> form available on the Community website.</p>
<p>SSP10</p>	<p><u>ACUTE & SPECIALTY</u> Percent of patients whose Antibiotic Choice was Compliant with Policy or Microbiology</p>	<p>Numerator: The total number of patients that had antibiotics compliant with policy within 1 hour of time zero</p> <p>Denominator: The total number of patients in the sample.</p> <p>Compliance: (Numerator / Denominator) * 100</p>	<p>Antibiotic Compliance: Choice is compliant if local antibiotic policy has been followed or a clearly documented reason for deviation from policy (e.g. microbiology advice) is written in the patient’s medical notes.</p> <p>Antibiotic Non-compliance: An antibiotic is not compliant if local antibiotic policy has not been followed and no documented reason for deviation from policy.</p> <p>Inclusion Criteria</p>

	advice		<p>Patients who score 4 or more on EWS (or locally defined trigger) with two or more Systemic Inflammatory Response Syndrome (SIRS) criteria and there is a suspicion of sepsis</p> <p>Data Collection Sample 5 patients weekly per ward/department or include all patients if numbers less than 10/month</p> <p>Primary data source: The patient's medical notes, medication chart, EWS chart, and fluid balance chart.</p> <p>Documents: Use the Sepsis Six <i>Data Collection</i> and <i>Data Aggregation</i> form available on the Community website.</p>

SPSP/SAPG SEPSIS SIX DATA COLLECTION FORM

Date: _____ Time Zero: _____ EWS: _____ ACUTE or SPECIALTY (delete as appropriate)

Tick if the following were done within 1 hour meeting inclusion criteria (Time Zero):**ACUTE – (Emergency and AMU) Time zero = triage time****SPECIALTY (in-patients) Time zero = time of meeting inclusion criteria**

Patients who score 4 or more on MEWS (or locally defined trigger) with two or more Systemic Inflammatory Response Syndrome (SIRS) criteria and there is a suspicion of sepsis

Process Measures	
SIRS documented where EWS triggered	
Oxygen Administered to saturation of 94 - 98% (or target saturation of 88-92% if at risk of hypercapnic respiratory failure)	
Blood Cultures Taken	
Commenced IV Antibiotics	
Lactate and FBC Measured	
IV Fluids Commenced	
Accurate Urine Output Assessment and Urinary Catheter Considered	
Sepsis Six Performed	

Outcomes	
Alive at 30 Days	
Length of Stay (days)	
HDU Admission after 24 hours	
ICU Admission after 24 hours	

Time to First Antibiotic Dose (TFAD) (Record hours and minutes)	____:____
Antibiotic Choice Compliant with Policy or Microbiology advice	Y / N