St George's Healthcare NHS
NHS Trust

Emergency Department

Emergency Department pathway for patient with suspected sepsis

Name:	Hosp. no.:	Date:	Nurse 1: Nurse 2: Doctor:

Patient at triage → Obtain history
Record vital signs within 15mins of arrival

Next

Patient unwell or pyrexial (>38°C) and had **chemotherapy** in the last 6 weeks?
- Yes → Follow 'Neutropenic Sepsis Pathway' on intranet
- No ↓

Is the patient likely to have an infection or a condition that could lead to sepsis?
- No → Triage as normal
- Yes ↓

Does the patient have two or more SIRS criteria?
(*Please complete 'Sepsis Screening Tool' in ED notes*)
- No → Triage / treat as normal
- Yes = SEPSIS ↓

Vital signs to be recorded

- Temperature ☐
- Pulse rate ☐
- Respiratory rate ☐
- Blood pressure ☐
- Oxygen saturations ☐
- Mental status (GCS or AVPU) ☐
- Glucose ☐

SIRS criteria

1) Temperature <36 or >38°C ☐
2) Heart rate >90 beats/ min ☐
3) Resps. >20/min or pCO2<4.2 ☐
4) WCC <4 or >12 x 10^9 ☐
5) Confusion (new) ☐
6) Blood glucose >7.7 mmol/l in the absence of diabetes ☐

Perform the following investigations

- Lactate (Venous blood gas) ☐
- Blood cultures ☐
- Full blood count ☐
- Urea, Creatinine & Electrolytes ☐
- Liver function tests ☐
- C-reactive protein ☐
- Clotting screen ☐
- Urinalysis (and M,C&S if UTI present) ☐
- Chest Xray if chest infection suspected ☐
- Pneumonia- Urine for Pneumococcal & Legionella Ag ☐
- Swabs / microbiology specimens from other source ☐

Lactate ≥ 4 →

Box C
Hypoperfusion shock

Obtain arterial lactate
If arterial lactate ≥4 mmol/l:
1) Give treatments in Box A ☐
2) High flow oxygen ☐
3) Record fluid balance ☐

Goals:
i) Lactate reduction: 10% in 2 hrs ☐
or 36% in 6 hrs ☐
ii) MAP ≥65 mmHg ☐
iii) Urine output >0.5ml/kg/hr ☐

If above goals are not achieved, consider EGDT (see Box D) and referral to ICU.

The simplified MISSED score

Score 1 if present

- Age ≥65 yrs ☐
- Albumin ≤27 g/l ☐
- INR** ≥1.3 ☐

** Do not score INR if patient is on oral anticoagulants

Note: Treat other organ dysfunction as per usual protocol.

Box B
Severe sepsis by simplified MISSED score

1) High flow oxygen ☐
2) Catheterise ☐
3) Record fluid balance ☐

Goals to be achieved in 3 hours
i) MAP ≥65 mm Hg ☐
ii) Urine output > 0.5ml/kg/hr ☐

Treat ↓

Box A **Commence within 60 minutes**

1) Appropriate antibiotics as per hospital guidelines ☐
2) Commence 30ml/kg of crystalloids (caution in CCF) ☐
3) Maintain oxygen saturations of ≥97 % ☐
(if contraindicated, please document in notes ☐)
4) Urgent (referral for) source control ☐
5) Senior Review (ST4 and above) ☐

Next

Following the above fluid bolus, does the patient have a systolic BP <90mmHg or 40mmHg below normal or a MAP <65mmHg?
- Yes → **Box D**
- No ↓

Simplified MISSED score ≥ 2?
- Yes → Box B
- No → Treat and use clinical judgement regarding admission/ discharge

Box D
Hypotensive shock
Commence EGDT* within 2 hours

1) Commence high flow oxygen ☐
2) Insert urinary catheter ☐
3) Crystalloids to achieve CVP goal ☐
4) Record fluid balance ☐
5) Insert central line (IJ or subclavian) ☐
6) Measure $ScvO_2$ ☐
7) Insert arterial line ☐
8) Commence Noradrenaline infusion @ 0.1mcg/kg/min and titrate to target MAP ☐
9) If hypotension resistant to Noradrenaline, give hydrocortisone 50-100 mg bolus ☐

Goals to be achieved in 6 hours
i) CVP ≥8cm ☐
ii) MAP 65 -70 mm Hg ☐
iii) $ScvO_2$ ≥70% ☐
iv) Hb ≥70 g/l ☐
v) Urine output >0.5 ml/kg/hr ☐
vi) Decreasing lactate ☐

If any of the above goals are not achieved or continued vasopressor treatment or respiratory support required, refer to ICU.

* For patients in whom commencing EGDT is not appropriate, set ceiling / goals of care, and if appropriate, complete a DNAR form.

PLEASE COMPLETE SEPSIS AUDIT TOOL IN ED NOTES (page 9)

Ag= Antigen
CCF=Congestive cardiac failure
CVP=Central Venous Pressure
DNAR=Do Not Attempt Resuscitation
EGDT=Early Goal Directed Therapy
ICU=Intensive Care Unit
MAP=Mean Arterial Pressure
MISSED= Mortality In Severe Sepsis in the ED
$ScvO_2$= Central venous oxygen Saturations

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