

Emergency Department pathway for Suspected Sepsis

Patient Name: _____ Hosp. no.: _____
 Clinician: _____ Date: _____

Vital signs to be recorded

Temperature

Pulse rate

Respiratory rate

Blood pressure

Oxygen saturations

Mental status (GCS or AVPU)

Glucose

Sepsis screening tools

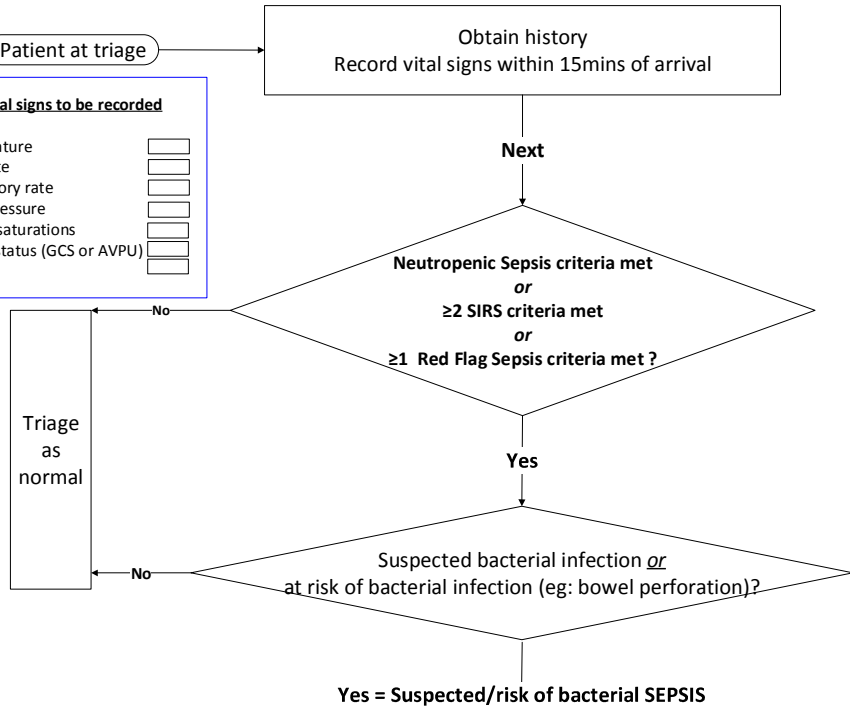
(i) Neutropenic Sepsis
 (If criteria met- triage as V. Urgent to Resus)
 Patient unwell or pyrexial (T >38°C)
AND one of the following
 Had chemotherapy in the last 6/52
 Likely to be neutropenic

(ii) Red Flag Sepsis criteria
 (If 1 criteria met- triage as V Urgent to Resus)

- 1) Respiratory rate >25
- 2) Systolic BP <90 mm Hg
- 3) MAP <65 mm Hg
- 4) Heart rate >130 beats/ min
- 5) AVPU = V, P or U
- 6) New requirement for oxygen to maintain O₂ saturations >90%
- 7) Lactate >2
- 8) Non-blanching rash
- 9) Mottled / Ashen / Cyanosed

(iii) SIRS criteria
 (If 2 criteria met- triage as V Urgent to Majors)

- 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 10⁹
- 5) Confusion (new)
- 6) Blood glucose >7.7 mmol/l in the absence of diabetes



Quick SOFA (qSOFA) score

Score 1 if present

Systolic BP <100 mm Hg

Altered mental state

Respiratory rate >22

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

Investigations Bundle

Lactate (Venous blood gas)

Blood cultures (before antibiotics)

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 → Treatment Bundle C

Treatment Bundle C

For Hyperlactaemic Sepsis
see next page

Treatment Bundle B

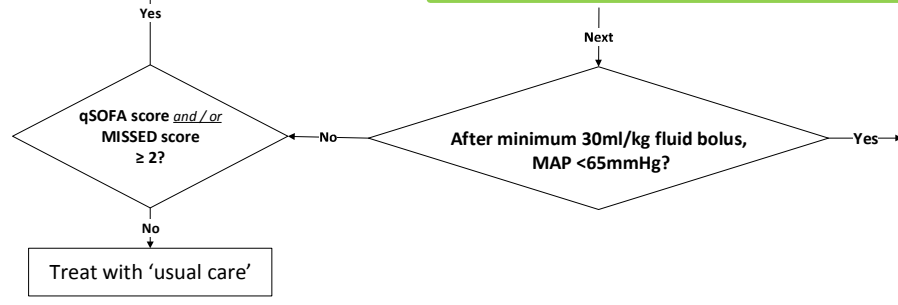
For qSOFA or MISSED score positive Sepsis
see next page

Treatment Bundle A -For all Suspected Sepsis - Commence in 60 mins

- 1) Appropriate antibiotics as per hospital guidelines
- 2) Crystalloids 20ml/kg (minimum 1l, caution in CCF)
- 3) Maintain oxygen saturations of ≥95 %
 (if contraindicated , please document in notes)
- 4) Urgent source control / referral for source control
- 5) Senior Review (ST4 and above)

Treatment Bundle D

For Hypotensive Sepsis & Septic shock
Commence* within 3 hrs and complete within 6 hrs
- See next page



Treatment Bundle B - for qSOFA or MISSED score positive Sepsis

- 1) Complete Treatment Bundle A
- 2) Record fluid balance

Goals:

- i) MAP \geq 65 mmHg
- ii) Urine output $>$ 0.5ml/kg/hr

If lactate \geq 4, complete Treatment Bundle C.

If MAP $<$ 65 mm Hg, complete Treatment Bundle D.

Treatment Bundle C - for Hyperlactaemic Sepsis

- 1) Complete Treatment Bundle A
- 2) Minimum 30ml/kg crystalloid
- 3) Re-measure lactate
- 4) Record fluid balance

Goals:

- i) Lactate reduction: 10% in 2 hrs
or 36% in 6 hrs
- ii) MAP \geq 65 mmHg
- iii) Urine output $>$ 0.5ml/kg/hr

If above goals are not achieved, consider Care Bundle D and referral to ICU.

Treatment Bundle D - for Hypotensive Sepsis & Septic shock Commence** within 3 hrs & complete within 6 hours

Actions

- 1) Commence high flow oxygen
- 2) Insert urinary catheter
- 3) Continue IV fluids (Crystalloids)
- 4) Record fluid balance
- 5) Insert central line (IJ or subclavian)
- 6) Measure ScvO₂
- 7) Insert arterial line
- 8) Start Noradrenaline infusion @ 0.1mcg/kg/min and titrate to target MAP
- 9) If hypotension resistant to Norad., give hydrocortisone 50-100 mg bolus

Goals to be achieved in 6 hours

- i) Peripheral oxygen saturation $>$ 95%
- ii) Urine output $>$ 0.5ml/kg/min
- iii) Lactate $<$ 2 mmol/l
- iv) Hb \geq 70g/l
- v) CVP \geq 8cm
- vi) ScvO₂ \geq 70%
- vii) MAP 65- 70 mm Hg

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

** If commencing Care Bundle D is not appropriate, set ceiling / goals of care, and if appropriate, complete a DNAR form.

Glossary:

Suspected bacterial infection= Presence of symptoms & signs consistent with a bacterial infection

Suspected Sepsis = Presence of Suspected bacterial infection + 2 SIRS criteria **OR** 1 Red flag sepsis criteria

Sepsis = An increase in SOFA score of \geq 2 caused by sepsis (for SOFA score see chart below)

Septic shock = Requirement of vasopressors to maintain MAP \geq 65 mmHg **AND** lactate $>$ 2mmol/l

Sequential Organ Failure Assessment (SOFA) Score					
System / Score	0	1	2	3	4
Respiratory PaO ₂ /FiO ₂ (kPa)	\geq 53.3	$<$ 53.3	$<$ 40	$<$ 26.7 with resp. support	$<$ 13.3 with resp. support
Coagulation Platelets	\geq 150	$<$ 150	$<$ 100	$<$ 50	$<$ 20
Liver Bilirubin	$<$ 20	20-32	33-101	102-204	$>$ 204
Cardiovascular MAP mmHg *mcg/kg/min	MAP \geq 70 mmHg	MAP $<$ 70 mmHg	Dopamine $<$ 5 or Dobutamine any dose	Dopamine 5.1-15 or Adren. \leq 0.1 * or Norad. \leq 0.1 *	Dopamine $>$ 15 or Adren. $>$ 0.1 * or Norad. $>$ 0.1 *
CNS GCS	15	13-14	10 - 12	6 - 9	$<$ 6
Renal Creatinine	$<$ 110	110-170	171-299	300-440	$>$ 440
Urine output (ml / day)				$<$ 500	$<$ 200

SOFA score:

Usual SOFA score:

Change in SOFA score:

Presumed source: