

Assessment and early management of sepsis

Time = 0 min

RECOGNITION – [link to normal values](#)

Fever or hypothermia
 Tachycardia
 Hypotension
Warm shock – wide pulse pressure, rapid capillary refill
Cold shock – narrow pulse pressure, prolonged capillary refill
 Tachypnoea +/- hypoxia
 Altered conscious state
 Unwell appearance

Normal values

Age	Min sys BP (mmHg)	HR (bpm)	RR (bpm)
Term	50	100 - 170	40 - 60
3m	50	100 - 170	30 - 50
6m	60	100 - 170	30 - 50
1y	65	100 - 170	30 - 40
2y	65	100 - 160	20 - 30
4y	70	80 - 130	20
6y	75	70 - 115	16
8y	80	70 - 110	16
10y	85	60 - 105	16
12y	90	60 - 100	16
14y	90	60 - 100	16
17+y	90	60 - 100	16

Call for help from experienced clinician
 Apply oxygen 8L/min via face mask
 (→ [Resuscitation guideline](#))
 Continuous cardiorespiratory monitoring

Time < 15 mins

IV ACCESS

If no IV access within 15 minutes insert IO
 Take BC, venous gas and blood glucose (if easy bleed consider FBC, UEC, coags). Do NOT delay other therapy to take blood tests.
 Lactate >4 mmol/L is a sign of severe illness

Time < 30 mins

ANTIBIOTICS

Give initial antibiotics on cannulation as a push

- Age < 1 month – Cefotaxime iv 50mg/kg + Benzylpenicillin iv 60mg/kg
- Age ≥ 1 month – Cefotaxime iv 50mg/kg OR Ceftriaxone iv 50mg/kg (2g) + Flucloxacillin iv 50mg/kg (2g)

→ [Antibiotics guideline](#), [Febrile neutropenia guideline](#)

If no IV/IO access within 30 minutes:

- give IM Ceftriaxone 50mg/kg and seek assistance in obtaining IV access
- Once IV access is obtained immediately give full IV antibiotic doses as listed above

IV FLUID

Give initial 20ml/kg of Normal Saline **as a push** over a maximum of 10 minutes (not through an infusion pump)
 Monitor for improvement in vital signs / conscious state
 If only transient improvement occurs, consider additional fluid boluses to a maximum total volume of 40ml/kg
 Total volumes >40ml/kg should be discussed with senior clinician

Time < 60 mins

INOTROPE

- If no improvement in vital signs/conscious state occurs after fluid bolusing correct hypocalcaemia and consider:
 - Noradrenaline for warm shock
 - Dobutamine for cold shock (→ [drug doses](#))
- Inotropes can be given via a peripheral IV. A central line is not required at this stage.
- Contact Sick Kids Hotline (03)9345 7007 if inotropes are required

VENTILATORY SUPPORT

- For respiratory distress/hypoxia in a patient with *normal* conscious state consider non-invasive ventilation
- For respiratory distress/hypoxia in a patient with *altered* conscious state consider intubation/ventilation.

FURTHER MANAGEMENT

- If initial lactate >4mmol/dL it should be repeated after ~2 hours of resuscitation. Lactate clearance of >10% should be targeted.
- Correct hypocalcaemia.
- Monitor BSL.
- Secondary resuscitation measures including second inotrope, steroids, haemofiltration, and ECMO should be discussed.