



# Managing Sepsis in Urgent Care Centres

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# Managing sepsis – the basics

- Sepsis makes blood vessel walls leaky and loose
- Treat sepsis by filling the blood vessels with saline and squeezing the blood vessel walls tight (**FILL AND SQUEEZE**)
- Give antibiotics and oxygen

**Recognise**

**Resuscitate**

**Refer**

**Reassess**

Sepsis kills approach (NSW)

# Recognise

- qSOFA score of 2 or 3
  - Respiratory rate  $\geq 22/\text{min}$
  - Altered thinking
  - Systolic blood pressure  $\leq 100 \text{ mm Hg}$

# Resuscitate

## Inadequate or extremely poor perfusion

IV access available:

- If sepsis is suspected **and** chest is clear **and** doctor/NP/MICA is not immediately available
  - Request GP/NP/MICA
  - Prepare +/- give up to **10 - 20 ml/kg normal saline** infusion over 30 mins

If poor <sup>minutes</sup> perfusion remains:

- Give up to **20 ml/kg normal saline** as a bolus or over 30 minutes

## Fill the leaky vessels

# Resuscitate

## Inadequate or extremely poor perfusion persists

- **Adrenaline infusion (6 mg in 100 mL D5W/Normal Saline) commencing at 5 mcg/minute (5 mL/hr)**
  - Increase by **5 mcg/minute at 2 minute intervals** until adequate perfusion or side effects
  - If poor perfusion persists, reassess Pt and delivery system prior to increasing rate beyond **50 mcg/minute**
- If syringe pump unavailable
  - **Adrenaline 6 mcg iv at 2 minute intervals** until adequate perfusion or side effects
    - Repeat at 2 minute intervals until adequate perfusion
  - If poor response
    - **Adrenaline 60 mcg IV** as required

## Squeeze the loose vessels

# Titrating adrenaline

## For Infusions

- Mix 6 x 1 ml vials of 1:1000 Adrenaline with 94 ml of normal saline or D5W (60 mcg/ml)
  - Run through iMed pump
  - Start at 5 ml/hr

## For Boluses (if you can't run an infusion)

- Add 1 ml above solute to 9 ml of saline in a 10 ml syringe (6 mcg/ml)
  - Give 1-10 ml at a time

## Resuscitate

- Take cultures before antibiotics if it causes no delay
- Give IV antimicrobials (often ceftriaxone 1 g) within one hour (or if the transfer will take more than one hour).
- Give oxygen 5 – 10 L/min via mask

Give antibiotics and oxygen



## Refer – reasons to refer

- Drain, debride, remove < 6 to 12 hours
- May require ongoing inotropes (usually noradrenaline) or intubation
- May require specialised investigations or medications
- Easier to transfer early

## Refer – reasons not to refer

- Remember septic shock mortality rate about 40 %
  - 40 times more lethal than cardiac surgery
  - 8 times more risky than a myocardial infarct
  - 4 times worse than a stroke
- Age and comorbidities increase mortality and quality of life reduced for years after recovery
- Consider limiting treatment

# Reassess

## Inadequate or extremely poor perfusion persists

- Monitor BSL and urine output and consider IDC
- If chest clear and fluid boluses briefly helping blood pressure and perfusion
  - Continue **Normal Saline 20 ml/kg**
- If chest not clear or fluid boluses not helping blood pressure and perfusion
  - Increase Adrenaline infusion rate by **5 mcg/minute at 2 minute intervals** until adequate perfusion or side effects
- Consider arterial line and central lines (although all inotropes can be run through a peripheral line)
- Consider intubation
- Keep blood sugar under 10 mmol/L

# Summary

- Fill the leaky blood vessels
- Squeeze the loose blood vessels
- Give antibiotics and oxygen