Guideline 9.2.3 – Recognition and First Aid Management of the Seriously ILL person, including Shock and Sepsis

Summary

Who does this guideline apply to?

This guideline applies to adults, children and infants.

Who is the audience for this guideline?

This guideline is for use by bystanders, first aiders and first aid training providers.

Summary of Recommendations

The Australian and New Zealand Committee on Resuscitation (ANZCOR) makes the following recommendations:

1. First aiders learn to recognise a seriously ill person [Good Practice Statement].

2. If serious illness is suspected, send for an ambulance, as any delay in treatment can lead to more serious illness and death. (Emergency call number 000 in Australia and 111 in New Zealand) [Good Practice Statement].

Abbreviations

Abbreviation	Meaning/Phrase
ANZCOR	AustralianandNewZealandCommitteeon Resuscitation

1.0 | Introduction

Many medical conditions encountered in the community require urgent assessment and treatment by health care professionals. Most of the time, the nature of the illness is immediately apparent; however, others can be difficult to detect and diagnose even under ideal circumstances in well-resourced hospital settings. One frequent example of an illness that may be difficult to recognise and diagnose is sepsis (a life-threatening condition that arises when the body's response to an infection injures its own tissues and organs).[11] Another serious example is shock which is a condition where there is failure of the body to supply sufficient blood to the tissues to meet basic requirements for oxygen and nutrients and the incomplete removal of wastes.[1]

For First Aiders, recognising the specific condition is not the priority. Instead, it is far more important to recognise the symptoms and signs that indicate that the person is critically unwell and requires urgent medical attention. Many serious conditions share signs and symptoms as mentioned below in 3.0 | Recognition.

Although there is limited literature focused specifically on first aid recognition and response to these complex medical emergencies, there is growing evidence about the broader concept of recognising the deteriorating, or increasingly unwell, patient.

The aim of this guideline is to give First Aiders the knowledge to recognise when a person may be seriously unwell and to respond quickly and appropriately. First Aiders are not expected to diagnose medical conditions, as that is the role of health professionals, but to identify when urgent help is needed and take the right immediate actions.

2.0 | Risk Factors

Anyone can deteriorate quickly with a serious illness, but certain people are at higher risk including:[1]

- children under the age of 10 [2]
- people over 65 years of age [3,4,5]
- people with chronic conditions
- people with weakened immune systems
- Aboriginal and Torres Strait Islander peoples, Māori and Pacific Peoples.

3.0 | Recognition

Early recognition of serious illness is critical, as timely intervention significantly improves clinical outcomes. The signs and symptoms listed below may indicate the presence of a serious illness.These symptoms and signs are common to many conditions, but it is their combination that alerts health professionals to the possibility of serious illness and prompts further assessment and urgent medical intervention. Generally, the more symptoms and signs present, the higher the likelihood that the underlying illness is a serious illness, including sepsis and/or shock. For a classification system of shock – see Appendix A - Shock Classification.

One of the most important indicators is the person's own perception of their illness. A statement such as "I don't feel right" or "I think I am going to die" should never be dismissed, especially when accompanied by observable changes in behaviour noted by family or friends. These subjective cues, although often overlooked, should be considered as a red flag for serious illness.[7,10]

Sepsis, in particular, remains challenging to identify, even for trained clinicians, and is considered beyond the scope of diagnosis by First Aiders.[8] However, the possibility of sepsis mandates the need to act when general signs of serious illness are observed because early treatment improves the outcome of sepsis.

3.1 | Red Flags for serious illness

Red flags are specific signs, symptoms (or immediate test findings) that raise suspicion of a serious or life-threatening underlying condition and therefore trigger urgent assessment, escalation or referral. The more red flags present, the greater the concern that the person is seriously ill.

Most evidence on serious illness in adults comes from hospital-based studies. As a result, the indicators used to recognise serious illness in adults are largely extrapolated from this in-hospital research.

The indicators of serious illness in adults include:[9-14]

- **Breathing:**
  - rapid breathing [4] (breathing rate ≥ 22 breaths per minute) is the most reliable indicator of serious illness in adults. The ambulance dispatcher may be able to help count the respiration rate
  - breathlessness or difficulty breathing (may be associated with noisy breathing, gasping or struggling to speak).
- **Circulation and Skin:**
  - rapid heart rate (>100/min for adult not exercising), but may become weak or slow or

new irregular heart rate
- cool, sweaty, pale, blotchy, or discoloured (often described as mottled) skin
- new skin rash, especially widespread or associated with a rapidly evolving illness.

- **Neurological changes:**

  - restlessness, agitation, anxiety, dizziness, or collapse
  - confusion, disorientation, slurred speech, or deteriorating level of consciousness
  - sudden weakness (face drooping, arm or leg weakness)
  - seizures.

- **Temperature and systemic features:**

  - shivering or chills
  - fever (≥ 38.0 °C) or feeling very cold. Note: In elderly or vulnerable people, low body temperature (hypothermia) may be a red flag for serious infection. Elderly persons may not be able to develop a fever
  - nausea and/or vomiting
  - passing little or no urine
  - unexplained pain or discomfort.

- **Other concerning features:**

  - Sudden illness following recent hospitalization.
  - The person says they “don’t feel right,” feels like they are “going to die,” or describes a sense of “impending doom”.

3.2 | Serious illness in children and infants

Serious illness in infants and children can deteriorate quickly. Signs and symptoms of serious illness in infants and children may include:[15]

- **Breathing problems:** rapid breathing, weak breathing, struggling to breathe (grunting, nostril flaring, chest retractions), persistent drooling.
- **Altered responsiveness:** hard to wake, unusually sleepy or floppy, decreased responsiveness.
- **Seizures:** any seizure activity.
- **Skin changes:** rash that does not fade when pressed, skin that is very pale, discoloured (mottled), bluish or grey in appearance.
- **Temperature changes:** fever (≥ 38.0 °C) or feeling very cold; in infants and some older children, low body temperature (hypothermia) can also be a warning sign.
- **Circulation/urine output:** not passing urine (or no wet nappy) for several hours.
- **Feeding difficulties:** poor or no feeding/drinking, persistent vomiting.
- **Persistent pain/cry:** inconsolable, weak or high-pitched cry, or severe irritability.

Children often cannot clearly articulate how they feel so look for the combination of an infection with any of the signs and symptoms listed.

In children, a parent’s worry that their child is more unwell than their usual childhood illness, or a first aider’s sense that “something is not right,” should always be treated as a red flag. These

concerns can signal serious illness, including sepsis, even before changes in vital signs are obvious.[6]

4.0 | Management

Serious illness is a medical emergency and typically requires in-hospital management and the prompt administration of medications and/or an operation [all Good Practice Statements].

1. **Ensure safety** for all at the scene.

2. **Send for an ambulance:** phone 000 for Australia or 111 for New Zealand if there is any concern of the presence of a serious illness or if care providers (including parents, other carers and First Aiders) think “something is wrong”.

3. **Person unresponsive and not breathing normally:** commence resuscitation following the Basic Life Support Flowchart (Refer to ANZCOR Guideline 8 Cardiopulmonary Resuscitation (CPR)).

4. **Conscious person:** assist them to lie on the floor. If they are not comfortable/unable/ do not want to lie on the floor, offer them a chair. Bring the chair to them.

5. **If unconscious and breathing normally:** place the person on their side (Recovery Position) and ensure the airway is clear and frequently check breathing (Refer to ANZCOR Guideline 3 Recognition and First Aid Management of Unconscious person).

6. **Seizure:** if the person is having a seizure, place them on their side once the seizure stops and ensure the airway is clear (Refer to ANZCOR Guideline 9.2.4 First Aid Management of a Seizure).

7. **Bleeding:** control any bleeding promptly (Refer to ANZCOR Guideline 9.1.1 First Aid for Management of Bleeding).

8. **Other conditions:** consider the possibility of hypoglycaemia (Refer to ANZCOR Guideline 9.2.9 First Aid Management of a Diabetic Emergency) or anaphylaxis (Refer to ANZCOR Guideline 9.2.7 First Aid Management of Anaphylaxis) if there is a history of diabetes or severe allergy. These persons will often be identified by their family or themselves and may have treatment with them. If this is the case, treatment of these conditions should be given but the person should still be reviewed by a Healthcare Professional.

9. **Oxygen:** administer oxygen if available and trained to do so (Refer to ANZCOR Guideline 9.2.10 The Use of Oxygen in Emergencies).

10. **Temperature:** maintain body temperature (prevent hypothermia) with a blanket but do not apply if the person already feels hot touch. If the adult/child feels very hot to touch, remove excess clothing.

11. **Reassure and monitor:** reassure and constantly re-check the person’s condition for any change.

Appendix A: Shock Classification

Shock is classified according to the underlying cause:

1. Loss of circulating blood volume (hypovolemic shock), e.g.:
    - severe bleeding (internal and/or external)
    - major or multiple fractures or major trauma
    - severe burns or scalds
    - severe diarrhoea and vomiting
    - severe sweating and dehydration.
2. Cardiac causes (cardiogenic shock), e.g.:
    - heart attack
    - abnormal heart rhythm
    - weak heart muscle (cardiomyopathy).
3. Abnormal dilation of blood vessels (distributive shock), e.g.:
    - severe infection with organ dysfunction (sepsis)
    - severe allergic reactions (anaphylaxis)
    - severe brain / spinal injuries
    - fainting (generally brief).
4. Blockage of blood flow in or out of the heart (obstructive shock), e.g.:
    - punctured lung, causing increased pressure in the chest causing reducing return of blood to the heart (tension pneumothorax)
    - blood around the heart reducing blood return to the heart (cardiac tamponade)
    - blood clot in the lung (pulmonary embolus)
    - compression of the large abdominal veins by the uterus in pregnancy.

References

1. Shock article - https://www.britannica.com/science/shock-physiology, accessed 21.07.2025

2. MelanieKPrusakowskiMDandAudreyPChenPNP(2017).“PediatricSepsis.”Emergency MedicineClinicsofNorthAmericaVolume35,Issue1,February2017,Pages123-138

3. FernandoSM,ReardonPM,McIsaacDI,etal.(2018)Outcomesofolderhospitalized patientsrequiringrapidresponseteamactivationforacutedeterioration.CriticalCare Medicine2018; 46(12): 1953-60.

4. Considine J, Street M, Hutchinson AM, et al. (2020) Vital sign abnormalities as predictors of clinical deterioration in subacute care patients: a prospective case-time-control study.InternationalJournalofNursingStudies2020;108:103612.

5. Jayasundera, R., Neilly, M., Smith, T. O., & Myint, P. K. (2018). Are early warning scores useful predictors for mortality and morbidity in hospitalised acutely unwell older patients? A systematic review. Journal of clinical medicine, 7(10), 309.

6. Harley A, Latour JM, Schlapbach LJ. (2019) The Role of Parental Concerns in the Recognition of Sepsis in Children: A Literature Review. Front Pediatr. 2019;7:161.

7. Kumar A, Roberts D, Wood KE, Light B, Parrillo JE, Sharma S et al. (2006) Duration of hypotensionbeforeinitiationofeffectiveantimicrobialtherapyisthecriticaldeterminant of survival in human septic shock. Crit Care Med 2006;34:1589-96.

8. Kule A, Bradley R, Flores-Bauer G, Stassen W, and Djarv T on behalf of the International Liaison Committee on Resuscitation First Aid Task Force. Recognition of Sepsis in First Aid. First Aid Task Force Synthesis of a Scoping Review Brussels, Belgium: International Liaison Committee on Resuscitation (ILCOR) First Aid Task Force, 2023. Available from https://costr.ilcor.org/document/first-aid-recognition-of-sepsis-a-scoping-review

9. Knight, C. and L. Glennie (2010). "Early recognition of meningitis and septicaemia." The journal of family health care 20(1): 6-8.

10. Olander A, Andersson H, Sundler AJ, Bremer A, Ljungström L, Hagiwara MA. Prehospital characteristics among patients with sepsis: a comparison between patients with or without adverse outcome. BMC emergency medicine. 2019 Dec;19(1):1-8.

11. Singer M, Deutschman CS, Seymour CW, et al. The third international consensus definitions for sepsis and septic shock (sepsis-3). (2016) Journal Of The American Medical Association. 2016;315(8):801-810.

12. Cretikos M, Chen J, Hillman K, Bellomo R, Finfer S, Flabouris A. (2007) The objective medical emergency team activation criteria: a case-control study. 2007;73(1):62-72.

13. Burrell AR, McLaws M-L, Fullick M, Sullivan RB, Sindhusake D. (2016) SEPSIS KILLS: early intervention saves lives. Med J Aust. 2016;204(1):1.e1 - 1.e7.

14. Bleyer AJ, Vidya S, Russell GB, et al. (2011) Longitudinal analysis of one million vital signs in patients in an academic medical center. 2011;82(11):1387-1392.

15. VandenBruelA,Haj-HassanT,ThompsonM,BuntinxF,MantD,EuropeanResearch NetworkonRecognisingSeriousInfectioninvestigators.Diagnosticvalueofclinical features at presentation to identify serious infection in children in developed countries: a systematic review. The Lancet. 2010 Mar 6;375(9717):834-45.

About this Guideline:

Searchdate/s	March2025

Question/PICO:	PICOST 1: Population: Adults, children and infants out of hospital with serious illness including sepsis or serious injury requiring escalation of care to health care professional (HCP) Intervention: Any method of recognition available to lay person (not HCP). Comparators: Any other method or none. Outcomes: Improve survival to hospital discharge, length of stay, complications or disabilities from presenting illness or injury . Study Designs: Randomized controlled trials (RCTs) and non-randomized studies (non-randomized controlled trials, interrupted time series, controlled before-and-after studies, cohort studies) are eligible for inclusion. It is anticipated that there will be insufficient studies from which to draw a conclusion, hence case series may be included in the initial search. The minimum number of cases will be set by the lead author after discussion with the subcommittee. Grey literature and social media and non-peer reviewed studies, unpublished studies, conference abstracts and trial protocols are eligible for inclusion as well. All relevant publications in any language will be included as long as there is an English abstract. Timeframe: All years PICOST 2: Population: Adults, children and infants out of hospital with serious illness including sepsis or serious injury manifesting shock (reduced tissue perfusion) Intervention: Any method of treatment available to lay person (not HCP). Comparators: Any other method available to lay person or none. Outcomes: Improve survival to hospital discharge, length of stay, complications or disabilities from presenting illness or injury . Study Designs: Randomized controlled trials (RCTs) and non-randomized studies (non-randomized controlled trials, interrupted time series, controlled before-and-after studies, cohort studies) are eligible for inclusion. It is anticipated that there will be insufficient studies from which to draw a conclusion, hence case series may be included in the initial search. The minimum number of cases will be set by the lead author after discussion with the subcommittee. Grey literature and social media and non-peer reviewed studies, unpublished studies, conference abstracts and trial protocols are eligible for inclusion as well. All relevant publications in any language will be included as long as there is an English abstract. Timeframe: All years

Method:	Scoping review
Primary reviewers:	George Lukas, Finlay Macneil,
Other consultation	Tracy Kidd
Minor changes	Exact diagnosis has been de-emphasised and recognition and treatment combined in the one guideline
Approved:	December 2025
Guidelines superseded:	9.2.3 – Shock: First Aid Management of the Seriously Ill or Injured Person November 2019 9.2.12 – Recognition and First Aid Management of the Seriously Ill person including Sepsis April 2021

Referencing this guideline

When citing the ANZCOR Guidelines we recommend:

ANZCOR, 2026, Guideline 9.2.3 – Recognition and First Aid Management of the Seriously ILL person, including Shock and Sepsis, accessed 12 February 2026, https://www.anzcor.org/home/new-guideline-page-2/guideline-9-2-3-shock-first-aid-management-of-the-seriously-ill-or-injured-person