



University Hospital Galway

EMERGENCY DEPARTMENT
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Sepsis

<https://galwayem.ie/guidelines/medical-emergencies/sepsis>
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Category

[Medical Emergencies \(https://galwayem.ie/guidelines/medical-emergencies\)](https://galwayem.ie/guidelines/medical-emergencies)

Sepsis is often unrecognised and under-treated. It kills more patients in the USA than acute MIs. Recent studies have shown that early goal directed therapy reduces mortality by 14.5%. The number of patients needed to treat (NNT) to save one life is 7. This compares with 23 for thrombolysis in AML. The Sepsis 3 guidelines replaced SIRS with qSOFA, but sensitivity has been as low as 54%^

SIRS - Systemic Inflammatory Response Syndrome

Patients with any 2 of the following:

- Temperature $>38^{\circ}\text{C}$ or $<36^{\circ}\text{C}$
- Pulse >90 beats/min
- Resp rate >20 breaths/min or $\text{PaCO}_2 < 4.3\text{kPa}$
- WBC $>12 \times 10^9$ or $< 4 \times 10^9$

Sepsis

Life-threatening organ dysfunction caused by dysregulated host response to infection

Septic shock

Subset of sepsis with circulatory and cellular/metabolic dysfunction associated with higher risk of mortality □ Persistent hypotension i.e. any of following □ $\text{SBP} < 90\text{mmHg}$ □ $\text{MAP} < 60\text{mmHg}$ □ Fall in $\text{SBP} \geq 40\text{mmHg}$ i.e. hypertensive patient whose SBP is normally 160 is in shock when $\text{SBP} < 120\text{mmHg}$

Work up

- Septic screen, including blood cultures. Consider atypical sources.
- Measure lactate level (can be done on blood gas machine in resus)

Management

- High flow O₂
 - Aggressive correction of Hypotension with IV fluids +/- vasopressors
 - Early and appropriate antibiotics (See microbiology guidelines)
 - Inform senior ED doctor
 - Early involvement of ICU/HDU staff
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*Rivers M et al. Early Goal-Directed Therapy in the Treatment of Septic Shock. NEJM Volume 345:1368-1377 November 8, 2001
Prognostic Accuracy of the SOFA Score, SIRS Criteria, and qSOFA Score for In-Hospital Mortality Among Adults With Suspected Infection Admitted to the Intensive Care Unit.
Raith EP, Udy AA, Bailey M, McGloughlin S, MacIsaac C, Bellomo R, Pilcher DV; Australian and New Zealand Intensive Care Society (ANZICS) Centre for Outcomes and Resource Evaluation (CORE).
JAMA. 2017 Jan 17;317(3):290-300. doi: 10.1001/jama.2016.20328.

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