

SEPSIS IN NUMBERS

STATISTICS

48.9 million cases in **2017**

3.4 million individuals develop sepsis each year in **Europe**

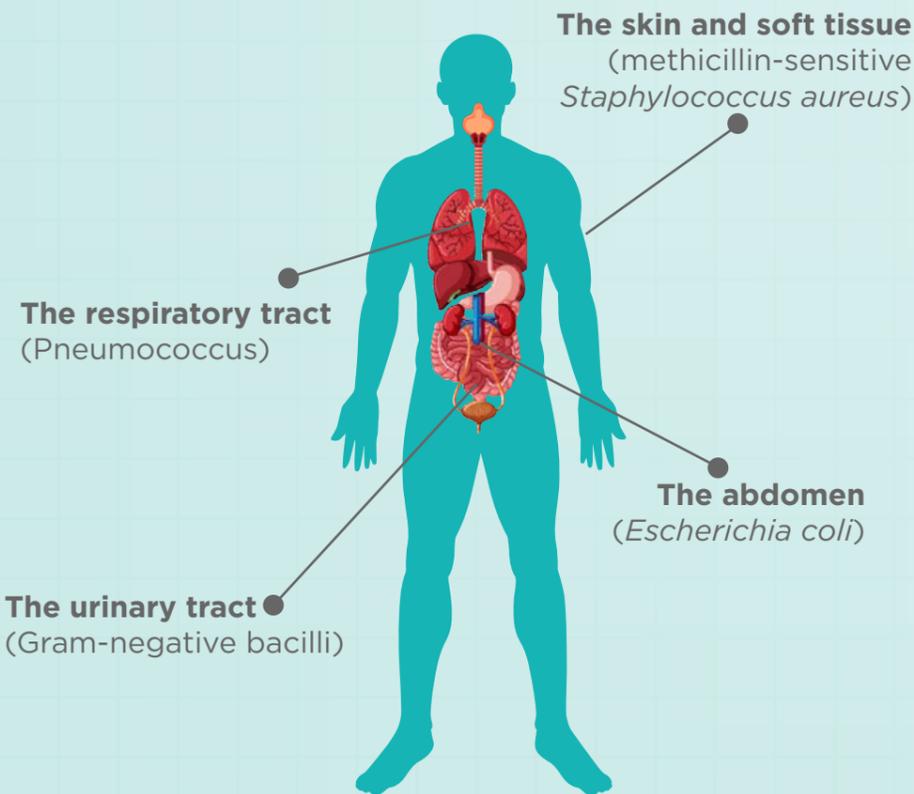


11 million sepsis-related deaths globally in 2017

Nearly 700,000 deaths per year in Europe

CAUSES

Common sites of infection and causative microorganisms



WHO IS AT RISK?

More likely to occur in:



Neonates



Older adults



People with chronic medical conditions



Immunosuppressed patients



Pregnant and recently pregnant females

SCREENING

Tools facilitating early identification in patients with known or suspected infection



Sequential Organ Failure Assessment (SOFA)

Based on oxygen levels, Glasgow Coma Scale score, mean arterial pressure, bilirubin level, serum creatinine level, and platelet count

Systemic Inflammatory Response Syndrome (SIRS) Criteria

Based on fever ($>38\text{ }^{\circ}\text{C}$) or hypothermia ($<36\text{ }^{\circ}\text{C}$); heart rate >90 beats/min; respiratory rate >20 breaths/min; and leukopenia ($>4,000$ white blood cells/ mm^3) or leukocytosis ($>12,000$ white blood cells/ mm^3)

Quick Sequential Organ Failure Assessment (qSOFA)

Score of ≥ 2 . Based on low systolic blood pressure (≤ 100 mmHg), tachypnoea (≥ 22 breaths/min), and altered mentation (Glasgow Coma Scale <15)

Modified Early Warning Score (MEWS)

Based on consciousness level, hourly urine output, respiratory rate, systolic blood pressure, and temperature

MANAGEMENT

Administer antimicrobials, ideally within 1 hour of sepsis recognition



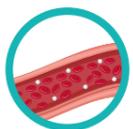
Source control, within 6-12 hours of diagnosis



Crystalloids as first-line fluid for resuscitation



For patients who require vasopressors, initially target a mean arterial pressure of 65 mmHg. Norepinephrine recommend as the first-line agent



References

- World Health Organization (WHO). Sepsis. 2020. Available at: <https://www.who.int/news-room/fact-sheets/detail/sepsis>. Last accessed: 7 January 2022.
- Dolmatova EV et al. The effects of sepsis on endothelium and clinical implications. *Cardiovasc Res.* 2021;117(1):60-73.
- Thompson K et al. Sepsis and septic shock: current approaches to management. *Intern Med J.* 2014;49(2):160-70.
- National Institute for Health and Care Excellence (NICE). Sepsis: recognition, diagnosis and early management. Available at: <https://www.nice.org.uk/guidance/ng51/ifp/chapter/who-is-more-at-risk-of-sepsis>. Last accessed: 7 January 2022.
- Sepsis Alliance. Aging. Available at: <https://www.sepsis.org/sepsisand/aging/>. Last accessed: 7 January 2022.
- Dugar S et al. Sepsis and septic shock: guideline-based management. *Cleve Clin J Med.* 2020;87(1):53-64.
- Evans L et al. Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021. *Intensive Care Med.* 2021;47(11):1187-247.
- van der Woude SW et al. Classifying sepsis patients in the emergency department using SIRS, qSOFA or MEWS. *Neth J Med.* 2018;76(4):158-66.
- Colorado Hospital Association (CHA). Alphabet soup: SIRS, SOFA, qSOFA and MEWS. Available at: <https://cha.com/wp-content/uploads/2019/04/6.1-Alphabet-Soup-SIRS-SOFA-qSOFA-and-MEWS-1.pdf>. Last accessed: 11 January 2022.