

Sepsis: the silent killer that claims around 44,000 lives every year in the UK



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The UK Sepsis Trust estimates that sepsis may kill more than 44,000 people every year in the UK (Nutbeam and Daniels, 2017). We know that sepsis goes unrecognised by members of the public, and that they present to healthcare too late as a result. We also know that healthcare professionals could be better educated, so that sepsis diagnoses can be made more quickly, and treatment administered as fast as possible. Because earlier identification and treatment could save thousands of lives a year (Nutbeam and Daniels, 2017).

WHAT IS SEPSIS?

Sepsis, or blood poisoning, is the reaction to an infection in which the body attacks its own organs and tissues. If not spotted and treated quickly, it can rapidly lead to organ failure and death. The numbers are staggering — every year in the UK 250,000 people are affected by sepsis; 44,000 people die because of sepsis and 60,000 suffer permanent, life-changing after-effects (Nutbeam and Daniels, 2017).

Sepsis is an indiscriminate killer, claiming young and old lives alike and affecting the previously fit and healthy. It is more common than heart attacks and kills more people than bowel, breast and prostate cancer and road accidents combined (Cancer Research UK, 2014; National Confidential Enquiry into Patient Outcome and Death, 2015). Current practice for diagnosis and treatment could be costing the UK economy up to £15.6 billion annually (Hex et al, 2017). But despite the statistics and the condition's devastating impacts, awareness of sepsis is astonishingly low (UK Sepsis Trust, 2016).

Headed by world leader in sepsis and NHS Consultant Dr. Ron Daniels, the UK Sepsis Trust has a clear mission to save lives and improve outcomes for survivors of sepsis by instigating political change, educating healthcare professionals, raising public awareness, and providing support for those affected.

Earlier identification and treatment across the UK would save 14,000 lives and result in 400,000 fewer days in hospital for patients every year (Nutbeam and Daniels, 2017).

As a self-funded organisation, UK Sepsis Trust has made significant progress. Last year alone

has seen a new National Institute for Health and Care Excellence (NICE, 2017a) guideline on sepsis, recognition from the Royal Colleges and the launch of a much-needed public awareness campaign on sepsis in children developed in partnership with NHS England, the Department of Health and Public Health England. In 2017, efforts spearheaded by the UK Sepsis Trust led the World Health Organization to adopt a resolution to improve sepsis care in all UN member states, making the condition a priority for policy makers and healthcare authorities all over the world (World Health Assembly, 2017).

THE HUMAN AND ECONOMIC COST

Sepsis is an indiscriminate condition, claiming young and old lives alike and affecting the previously fit and healthy. Approximately six million deaths are caused by sepsis worldwide every year, but many of those could be saved by increased public awareness, education for healthcare professionals and other basic care provisions (Fleischmann et al, 2015).

Data from a recent study commissioned by the UK Sepsis Trust and carried out by the independent York Health Economics Consortium (YHEC) has found that there are likely to be at least 260,000 cases of sepsis annually in the UK — over 100,000 more than initial projections suggested.

According to the report, the cost of sepsis is likely to be £15.6 billion every year for the UK economy, rather than the £2.5 billion previously estimated (Fleischmann et al, 2015). However, government intervention to improve access to healthcare and reliability of basic care could make a huge impact, saving thousands of lives and reducing the economic burden by as much as £2.8 billion (largely through minimising indirect costs incurred by lost productivity) (Hex et al, 2017).

IMPROVING CARE IN THE UK

The new NICE sepsis guideline — published in 2016 and updated in 2017, building on care

recommendations developed by the UK Sepsis Trust — provides best practice guidance for healthcare professionals confronted with potential cases of sepsis (NICE, 2017a).

If someone is identified in the community as being high-risk, NICE says they should be admitted to hospital urgently by ambulance. Once in hospital they should be seen by a senior doctor or nurse straight away so that treatment may be commenced. The guideline also advocates responsible use of antibiotics. Antibiotics should only be given to the sickest people: those who meet the high-risk criteria set out in the guideline, or alternatively those with a particular combination of moderate risk criteria (NICE, 2017a). The UK Sepsis Trust screening tools encapsulate both patient groups under the term 'red flag sepsis': those patients warranting urgent intervention (UK Sepsis Trust, 2017).

NICE, the UK Sepsis Trust and the international Surviving Sepsis Campaign all recommend the delivery of a set of basic care elements for patients within the first hour — in the UK and in many other countries these are described by the Trust's 'Sepsis Six' care bundle (UK Sepsis Trust, 2017).

Most patients will begin to improve rapidly once the Sepsis Six is delivered in a timely fashion. For those who don't, or who continue to deteriorate, early contact with seniors and with critical care is of paramount importance: patients with sepsis have a 30% risk of death so nothing should be left to chance (Daniels and Nutbeam, 2017).

For 2016/17 and into the next financial year, NHS England has (via commissioners) put in place a national lever to drive improvement in hospitals, requiring that they screen for sepsis and deliver antimicrobials promptly. The Royal College of General Practitioners has developed a sepsis toolkit, NHS England has issued a Safety Alert, and Health Education England has developed a suite of resources (Parliamentary and Health Service Ombudsman, 2013). These all aim to increase the awareness of the condition and its treatment.

With increasing levels of public awareness, and following the Parliamentary and Health Service Ombudsman's report of 2013, complaints around sepsis are on the rise. Guidelines have led on to a NICE Quality Standard, which will make deviation from accepted protocol harder to defend (NICE, 2017b).

ACT NOW

The UK Sepsis Trust is doing all it can to seize opportunities for progress, but with every day that passes before they are able to implement their three major work streams (clinical improvement, counseling bereaved families and increasing public awareness) 117 adults and three children in the UK will die (Nutbeam and Daniels, 2017). We must act now. **WUK**

REFERENCES

- Cancer Research UK (2014) *Cancer Statistics for the UK*. Available at: <http://www.cancerresearchuk.org/health-professional/cancer-statistics-for-the-uk> (accessed 15 March 2018)
- Daniels R, Nutbeam T (2017) *The Sepsis Manual (4th edn)*. Available at: https://sepsistrust.org/wp-content/uploads/2018/02/Sepsis_Manual_2017_final_v7-red.pdf (accessed 15 March 2018)
- Fleischmann C, Scherag A, Adhikari NK et al (2015) Global burden of sepsis: a systematic review. *Crit Care* 19(Suppl 1):P21
- Hex N, Retzler J, Bartlett C, Arber M (2018) *The Cost of Sepsis Care in the UK*. Available at: <https://sepsistrust.org/wp-content/uploads/2018/03/YHEC-Sepsis-Report-FINAL.pdf> (accessed 15 March 2018)
- National Institute for Health and Care Excellence (2017a) *Sepsis: Recognition, Diagnosis and Early Management [NG 51]*. Available at: <https://www.nice.org.uk/guidance/ng51> (accessed 15 March 2018)
- National Institute for Health and Care Excellence (2017b) *Sepsis [QS161]*. Available at: <https://www.nice.org.uk/guidance/qs161> (accessed 15 March 2018)
- Nutbeam T, Daniels R (2017) Using Hospital Episode Statistics data, and clinical data collected in the South West, to estimate the frequency of sepsis and severe infection in England for the UK Sepsis Trust in collaboration with Methods Analytics.
- Parliamentary and Health Service Ombudsman (2013) *Time to Act: Severe Sepsis - Rapid Diagnosis and Treatment Saves Lives*. Available at: <https://www.ombudsman.org.uk/publications/time-act-severe-sepsis-rapid-diagnosis-and-treatment-saves-lives-0> (accessed 15 March 2018)
- UK Sepsis Trust (2017) *Clinical Tools*. Available at: <https://sepsistrust.org/education/clinical-tools/> (accessed 15 March 2018)
- World Health Assembly (2017) *Improving the Prevention, Diagnosis and Clinical Management of Sepsis*. Available at: http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_R7-en.pdf (accessed 15 March 2018)