

HEALTHCARE LIABILITY

LEADERSHIP & INNOVATION

The Global Burden of Sepsis

In January 2020, *The Lancet* published a new analysis on the incidence and mortality rates across 195 countries. This was the first time that the illustration of the global burden of sepsis included high, low and medium income countries. This analysis revealed that the incidence of sepsis is higher than previously thought, and detailed the changing causes of sepsis over a period of 17 years by sociodemographic index (SDI).

What is sepsis?

Sepsis is life-threatening organ dysfunction due to dysregulated host response to infection. Patients can often display a vague presentation of symptoms, and therefore this syndrome can be hard to detect. Sepsis has a mortality rate of around 35% in the United Kingdom. Early recognition is vital in order to improve morbidity and mortality.

What did the study show?

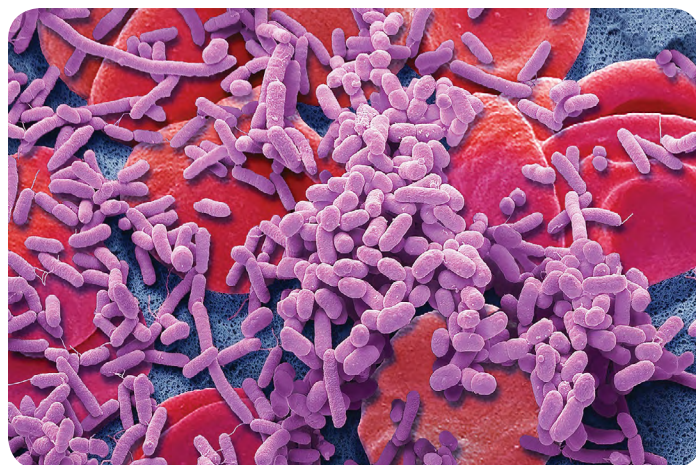
We can take the results in two parts: firstly, the incidence rates, and secondly, the mortality rates:

The Incidence

- There were 48.9 million cases of sepsis in 2017, which represented a reduction of 18.7% from 1990 to 2017.
- The most common cause of sepsis globally is diarrheal disease.
- The most common cause of sepsis, as a result of underlying injury, was the road traffic accident.
- Maternal disorders were the most common non-communicable disease complicated by sepsis.

Mortality

- There were 11 million deaths due to sepsis in 2017, representing a reduction of 29.7% from 1990 to 2017.
- Sepsis was responsible for 19.7% of total global deaths.
- Lower respiratory tract infections are the most common cause of sepsis related death globally.
- Road traffic accidents were the most common injury-related cause.
- Neonatal disorders were the most common non-communicable disease.
- In countries with a low SDI, the majority of deaths were due to infection, whereas in countries with a high SDI, the majority of deaths were due to non-communicable diseases.



Sepsis

"...ongoing need for robust infection prevention strategies at national, hospital and ward level."

What does this mean?

The incidence of sepsis is highest in countries with low to medium SDIs and is largely due to infectious diseases. Often, these countries are least equipped to manage sepsis on account of their population's access to healthcare, the availability of staff and other healthcare resources including antibiotics. This highlights the importance of continuing to understand these healthcare disparities and to develop adequate policy to tackle infectious diseases on a national and local level. Interestingly, for countries that demonstrated a higher proportion of cases due to non-communicable diseases, such as those locations with a high SDI, the data suggests that a number of such cases arose as a result of nosocomial infections. Patients admitted to hospitals are at risk of nosocomial infections from IV lines, catheters and poor staff, visitor and patient hand hygiene.

These findings demonstrate the ongoing need for robust infection prevention strategies at national, hospital and ward level. When considering the most common underlying causes of sepsis that result in death for these locations, the following areas of risk should incorporate robust sepsis management policy:

1. Antimicrobial stewardship;
2. Obstetric care;
3. Neonatal care;
4. Trauma; and
5. Care for chronic conditions.

Sources and further reading

Rudd et al. Global, regional, and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study. *The Lancet*. Published Online January 16, 2020 [https://doi.org/10.1016/S0140-6736\(19\)32989-7](https://doi.org/10.1016/S0140-6736(19)32989-7)

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