



SEPSIS ALLIANCE

Suspect Sepsis. Save Lives.

The Global and National Burden of Sepsis: Findings from New Research

Two research studies released in 2020 have provided a new and clearer picture of the burden of sepsis on a global and national scale. Significant statistics from these reports are detailed below.

Global Burden of Sepsis¹ Critical Facts

- Based on data from 2017, sepsis affects 49 million people around the world each year. This is twice that of previous estimates of sepsis incidence.
- More than half of all sepsis cases worldwide occur in children. Sepsis affects more than 25 million children each year.
- More than 40% of all sepsis cases occur in children under age 5. (20.3 million)
- Sepsis takes 11 million lives around the world each year, contributing to 20% of all deaths globally. This is more than 20 deaths every minute.²
- Sepsis takes the lives of nearly 3.4 million children every year. Approximately 85% of pediatric sepsis deaths occur in children under age 5.
- The majority (85%) of sepsis-related deaths occur in low- to middle-income countries. The highest sepsis burden is found in sub-Saharan Africa.
- There are more deaths from sepsis than from cancer globally each year (11 million vs 9.6 million cancer deaths).⁶

Burden of Sepsis Among Medicare Beneficiaries²⁻⁴ Critical Facts

- The cost to Medicare for inpatient sepsis care and skilled nursing care after sepsis hospitalization exceeds \$41.5 billion annually.
- The lower bound, conservative estimate for the cost of sepsis inpatient hospitalization and skilled nursing care for all patients for 2019 is \$62 billion. The last estimate of sepsis inpatient costs was \$23.7 billion in 2013.
- There was a 40% increase in sepsis hospitalizations for Medicare beneficiaries over the seven year period from 2012 to 2018. This increase was observed at all levels of sepsis severity (sepsis, severe sepsis and septic shock) and is not accounted for simply by the increase in Medicare enrollment over this time.

- There is an increase in mortality risk after sepsis hospitalization for as long as three years after discharge, even among the least severe sepsis cases.
- Medicare beneficiaries who survive a sepsis hospitalization have an all-cause mortality rate of 60% 3 years after hospitalization, in contrast to those who had non-sepsis inpatient stays with an all-cause mortality rate of 40% after 3 years.
- Present-on-admission sepsis cases make up the majority of inpatient sepsis cases and increased in number over the time period from 2012 to 2018. Sepsis cases acquired during hospitalization (non-present on admission cases) declined over the same time period (from 13% in 2012 to 7.5% of cases in 2018).
- Approximately 30% of Medicare beneficiaries were discharged to skilled nursing facility care after a sepsis hospitalization in 2018. (This is a decrease from 37% in 2012.)

References

1. Rudd KE, Johnson SC, Agesa KM, et al. Global, regional, and national sepsis incidence and mortality, 1990-2017: analysis for the Global Burden of Disease Study. Lancet. 2020;395(10219):200-211 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)32989-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)32989-7/fulltext)
2. Kempker JA, Martin GS. A global accounting of sepsis. Lancet. 2020;395(10219):168-170.
3. Buchman TG, Simpson SQ, Sciarretta KL, et al. Sepsis Among Medicare Beneficiaries: 1. The Burdens of Sepsis, 2012-2018. Crit Care Med. 2020;48(3):276-288. https://journals.lww.com/ccmjournal/fulltext/2020/03000/sepsis_among_medicare_beneficiaries_1_the.2.aspx
4. Buchman TG, Simpson SQ, Sciarretta KL, et al. Sepsis Among Medicare Beneficiaries: 2. The Trajectories of Sepsis, 2012-2018. Crit Care Med. 2020;48(3):289-301. https://journals.lww.com/ccmjournal/FullText/2020/03000/Sepsis_Among_Medicare_Beneficiaries_2_The.3.aspx
5. Buchman TG, Simpson SQ, Sciarretta KL, et al. Sepsis Among Medicare Beneficiaries: 3. The Methods, Models, and Forecasts of Sepsis, 2012-2018. Crit Care Med. 2020;48(3):302-318. https://journals.lww.com/ccmjournal/FullText/2020/03000/Sepsis_Among_Medicare_Beneficiaries_3_The.4.aspx
6. Global Cancer Facts & Figures. American Cancer Society accessed 3/10/20. <https://www.cancer.org/research/cancer-facts-statistics/global.html>

Global Burden of Sepsis – Rudd Data

I	Incidence	%	Deaths	%	
All	48.9 M		11 M		
Pediatric	25.1 M		3.4 M		
Peds < age 5	20.3 M	40% all cases	2.9 M	85% of all peds cases	