

To champion the prevention,
diagnosis, and treatment of chest
diseases through education,
communication, and research.

June 9, 2023

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The American College of Chest Physicians (CHEST) wishes to express strong support for the adoption of The Severe Sepsis and Septic Shock Early Management Bundle – commonly known as “SEP-1” – into the Center for Medicare and Medicaid Services’ (CMS) hospital value-based purchasing (VBP) program, as was recommended in the FY 2024 Inpatient Prospective Payment System (IPPS) and Long-Term Care Hospital Prospective Payment System (LTCH PPS) Proposed Rule.

Sepsis impacts 1.7 million people in the U.S. every yearⁱ and takes more lives annually than prostate cancer, breast cancer, and opioid overdose combined.ⁱⁱ At approximately \$62 billion in acute hospitalization and skilled nursing costs,ⁱⁱⁱ sepsis is the number one cost of care in the acute setting,^{iv} as well as the number one cause of death in U.S. hospitals.^v Over one million Americans survive sepsis every year,^{vi} many of them with lingering costs and after-effects, which can include amputations (14,000 annually),^{vii} post-traumatic stress disorder^{viii}, and other physical, cognitive, and psychological complications.^{ix}

By emphasizing comprehensive screening for every patient, early administration of therapies for those at risk, and standardization of sepsis care processes, the SEP-1 bundle strongly encourages equitable, effective, and evidence-based care for all patients with severe sepsis or septic shock. This kind of timely and evidence-based intervention works to save lives and limbs and to prevent other debilitating after-effects. Since its 2015 incorporation into CMS’s Hospital Inpatient Quality Reporting Program (IQR), data collected on SEP-1 has demonstrated its effectiveness. A 2021 CHEST-published study of data reported to Medicare by 3,241 hospitals showed that compliance with SEP-1 was associated with a lower 30-day mortality, leading the study’s authors to conclude that SEP-1 compliant care “reduce[s] the incidence of avoidable deaths.”^x

Adoption into the VBP program would work to further strengthen hospital performance on SEP-1 and better support the needs of sepsis patients. By rewarding acute care hospitals with incentive payments for the quality of care provided in the inpatient hospital setting, the VBP program provides assurance that clinicians and hospital leadership are maintaining

their focus on providing the highest quality care and eliminating or reducing adverse events in the inpatient setting. A condition like sepsis is complex, deadly, and fast-moving, which leaves little room for delay or error: for every hour that sepsis care is delayed, the risk of mortality from sepsis increases by 4-9%.^{xi} As many as 80% of septic shock patients can be saved with the kind of rapid diagnosis and treatment^{xii} that SEP-1 guides clinicians toward. It is, therefore, incumbent upon CMS to incentivize and recognize SEP-1-compliant care under relevant programs designed to improve the quality of care for hospital patients, such as the VBP program.

We urge CMS to follow the recommendation in the IPPS/LTCH PPS Proposed Rule to adopt SEP-1 into the VBP program. Doing so will help to save lives and limbs from this devastating condition.

Sincerely,
American College of Chest Physicians (CHEST)

ⁱ Rhee C, et al. "Incidence and Trends of Sepsis in US Hospitals Using Clinical vs Claims Data, 2009-2014." JAMA. 2017;318(13):1241-1249.
<http://jamanetwork.com/journals/jama/fullarticle/2654187>

ⁱⁱ Rhee C, et al. "Incidence and Trends of Sepsis in US Hospitals Using Clinical vs Claims Data, 2009-2014." JAMA. 2017;318(13):1241-1249.
<http://jamanetwork.com/journals/jama/fullarticle/2654187>; "Cancer Stat Facts: Cancer of Any Site." National Cancer Institute. Accessed June 2, 2020.
<https://seer.cancer.gov/statfacts/html/all.html>; "Overdose Death Rates. National Institute on Drug Abuse." March 2020. Accessed June 2, 2020. <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>; "Leading Causes of Death." CDC National Center for Health Statistics. Jan 13, 2022. <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>

ⁱⁱⁱ 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

^{iv} Torio C, Moore B. "National Inpatient Hospital Costs: The Most Expensive Conditions by Payer, 2013." HCUP Statistical Brief #204. May 2016. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb204-Most-Expensive-Hospital-Conditions.pdf>

^v Liu V, et al. "Hospital Deaths in Patients With Sepsis From 2 Independent Cohorts." JAMA. 2014;312(1):90-92. <https://jamanetwork.com/journals/jama/fullarticle/1873131>

^{vi} Rhee C, et al. "Incidence and Trends of Sepsis in US Hospitals Using Clinical vs Claims Data, 2009-2014." JAMA. 2017;318(13):1241-1249.
<http://jamanetwork.com/journals/jama/fullarticle/2654187>

^{vii} Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2012. Accessed April 6, 2016

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- viii “Post-Traumatic Stress Disorder (PTSD).” *Sepsis Alliance*, 3 May 2022, <https://www.sepsis.org/sepsisand/post-traumatic-stress-disorder-ptsd/>.
- ix Prescott H and Angus D. “Postsepsis Morbidity.” *JAMA*. 2018;319(1):91. <https://jamanetwork.com/journals/jama/fullarticle/2667724>; Buchman TG, 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; Winters BD, et al. “Long-term mortality and quality of life in sepsis: a systematic review.” *Critical Care Medicine Journal*. 2010;38(5):8.2010. <http://www.ncbi.nlm.nih.gov/pubmed/20308885>; Lund-Sorensen H, et al. “A Nationwide Cohort Study of the Association Between Hospitalization With Infection and Risk of Death by Suicide.” 2016. <https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2542681>; Iwashyna TJ, et al. “Long-term Cognitive Impairment and Functional Disability Among Survivors of Severe Sepsis.” *JAMA*. 2010;304(16):8. <https://jamanetwork.com/journals/jama/fullarticle/186769>
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- xi Rhee C, et al. “Incidence and Trends of Sepsis in US Hospitals Using Clinical vs Claims Data, 2009-2014.” *JAMA*. 2017;318(13):1241-1249. <http://jamanetwork.com/journals/jama/fullarticle/2654187>
- xii Kumar A, et al. “Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock.” *Crit Care Med*. 2006;34(6):1589-1596. <https://pubmed.ncbi.nlm.nih.gov/16625125/>