WHAT IS SEPSIS?
Sepsis is a life-threatening, extreme immune response to infection. Without early detection and appropriate treatment, sepsis can rapidly lead to tissue damage, organ failure, and death. More than 1 million Americans develop sepsis each year, and 250,000 will die. Sepsis most often occurs in people over the age of 65, infants less than one year of age, and those who have other chronic diseases or weakened immune systems. It is also one of the most expensive conditions to treat in U.S. hospitals.

TAKEAWAYS FROM OUR RESEARCH ON SEPSIS

SEPSIS IS A MAJOR PUBLIC HEALTH CONCERN

1/3
Sepsis remains significantly underrecognized, and contributes to 1/3 of all deaths in hospitals.
Complications and rehospitalizations among sepsis patients are common.
Sepsis causes cognitive impairment and/or disability in 3 out of 5 older survivors.

OUR EVIDENCE SHOWS HOW TO IMPROVE SEPSIS CARE ACROSS THE DELIVERY SYSTEM

More rapid sepsis identification and treatment saves lives.
More intensive sepsis treatment in intensive care units (ICUs) can save lives without increased costs.
Better follow-up care is needed to improve outcomes and prevent rehospitalizations.
Post-ICU clinics and peer support can help patients and families recover from sepsis.
Requirements for hospitals to adopt evidence-based sepsis response plans (such as New York’s “Rory’s Regulations”) have contributed to reduced deaths from sepsis, lengths of stay, and average time to treatment.

EVIDENCE-BASED POLICIES ARE NEEDED TO IMPROVE SEPSIS CARE

Our research indicates that states should consider reforms such as New York’s “Rory’s Regulations” to support hospitals in developing protocols for early diagnosis and treatment of sepsis.

Hospital response plans should:
• Develop ways that work for their hospital to promptly identify patients with sepsis and quickly deliver antibiotics, and, as appropriate, intravenous fluids.
• Distinguish patients for whom standard therapy should be customized.
• Ensure post-discharge support and follow-up care.
• Use the CDC-recommended definition of sepsis for benchmarking and ongoing quality improvement.
Mortality changes associated with mandated public reporting for sepsis: the results of the New York state initiative.
Am J Respir Crit Care Med. 2018 Sep 7. PMID: 30189749 doi:10.1164/rccm.201712-2545OC

Reporting of sepsis cases for performance measurement versus for reimbursement in New York state.
Prescott HC, Cope TM, Gesten FC, Ledneva TA, Friedrich ME, Iwashyna TJ, Osborn TM, Seymour CW, Levy MM.

Enhancing recovery from sepsis: a review.
Prescott HC, Angus DC.

Postsepsis morbidity.
Prescott HC, Angus DC.

Increased healthcare facility use in veterans surviving sepsis hospitalization.
DeMerle KM, Vincent BM, Iwashyna TJ, Prescott HC.


Time to treatment and mortality during mandated emergency care for sepsis.

Late mortality after sepsis: propensity matched cohort study.
Prescott HC, Osterholzer JJ, Langa KM, Angus DC, Iwashyna TJ.
BMJ. 2016 May 17;353:i2375. PMID: 27189000 doi:10.1136/bmj.i2375

Peer support as a novel strategy to mitigate post-intensive care syndrome.

Variation in the contents of sepsis bundles and quality measures: A systematic review.
Kramer RD, Cooke CR, Liu V, Miller RR 3rd, Iwashyna TJ.

Association of intensive care unit admission with mortality among older patients with pneumonia.
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Association of intensive care unit admission with mortality among older patients with pneumonia.
Valley TS, Sjoding MW, Ryan AM, Iwashyna TJ.

Increased 1-year healthcare use in survivors of severe sepsis.
Prescott HC, Langa KM, Liu V, Escobar GJ, Iwashyna TJ.

Long-term cognitive impairment and functional disability among survivors of severe sepsis.
Iwashyna TJ, Ely EW, Smith DM, Langa KM.

SEPSIS CARE STUDIES BY IHPI MEMBERS:

Sepsis mandates: improving inpatient care while advancing quality improvement.
Cooke CR, Iwashyna TJ.

Hospital deaths in patients with sepsis from 2 independent cohorts.
Liu V, Escobar GJ, Greene JD, Soule J, Whippy A, Angus DC, Iwashyna TJ.

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