



## Sepsis Care - Faster is Better



A University of Pittsburgh School of Medicine-led study covering nearly 50,000 patients from 149 New York hospitals provides scientific evidence that early sepsis care regulations work. The study was presented at the American Thoracic Society's International Conference in Washington, D.C. and simultaneously published in the New England Journal of Medicine (NEJM).

New York is the first state to require that hospitals follow a protocol to quickly identify and treat the condition. The move was prompted by the tragic and widely publicised death of Rory Staunton, 12, from undiagnosed sepsis in 2012. Sepsis is a condition that arises when the body's response to an infection injures its own tissues and organs. More than 1 in 5 of patients with sepsis do not survive.

"Rory's Regulations" require hospitals to follow protocols for early identification and treatment of sepsis, and submit data on compliance and outcomes. The hospitals can tailor how they implement the protocols, but must include a blood culture to test for infection, measurement of blood lactate (a sign of tissue stress) and administration of antibiotics within three hours of diagnosis – collectively known as the "three-hour bundle."

"Some question the benefit of rapid treatment with protocols, saying they can have unintended side effects and be a distraction in busy emergency departments. After reviewing the data, we can finally say that faster is better when it comes to sepsis care," said lead author Christopher W. Seymour, MD, MSc, assistant professor in Pitt's departments of Critical Care Medicine and Emergency Medicine, and member of Pitt's Clinical Research Investigation and Systems Modeling of Acute Illness (CRISMA) Center.

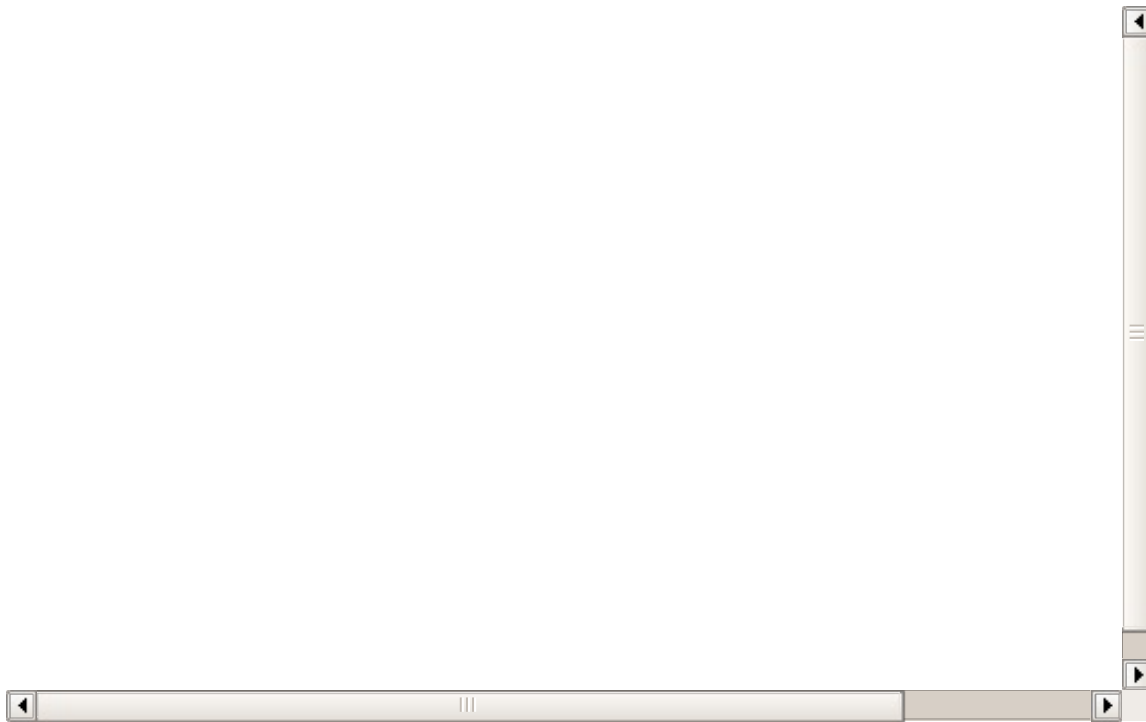
Dr. Seymour and colleagues found that 83 percent of the hospitals completed the bundle within the required three hours, overall averaging 1.3 hours for completion. For every hour that it took clinicians to complete the bundle, the odds of the patient dying increased by four percent.

"With the implementation of Rory's Regulations, New York State has been a leader in the fight against sepsis," said Marcus Friedrich, MD, MBA, FACP, medical director, New York State Department of Health Office of Quality and Patient Safety. "It is my hope that with this study, combined with the efforts of the New York State Health Department, other states will see that this is a model for combating and improving sepsis-related outcomes and reducing mortality rates."

In an editorial in the same issue of NEJM, Tina Batra Hershey, JD, MPH, of Pitt's Graduate School of Public Health, and Jeremy M. Kahn, MD, of Pitt Public Health and Pitt's Department of Critical Care Medicine, as well as CRISMA, examine the potential of additional state sepsis mandates in light of Seymour's study and the

regulations. The pair note that Rory's Regulations represented a major shift in the use of health policy to improve the quality of healthcare, rather than using market-based incentives and reimbursement penalties.

"Sepsis is a public health crisis worthy of a policy response," they state in the editorial, while also noting that any such policies should give hospitals the flexibility to ensure they can evolve as the science of sepsis care advances. "More direct efforts are needed to ensure that the government response to sepsis maximises benefits, minimises harms, and remains responsive to a complex and evolving evidence base."



A study led by the University of Pittsburgh School of Medicine sought to answer the question: Do early sepsis care regulations work? This video explains the process.

Source: [University of Pittsburgh Schools of the Health Sciences](#)

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