MedicalXpress

It's time to fight sepsis like we fight heart attack, researchers say

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A decade ago, America's health care community took on heart attacks with gusto, harnessing the power of research and data to make sure that every patient got the best possible care.

It worked: Death rates for heart attack have dropped. The same has happened with heart failure and pneumonia. Now, say a pair of University of Michigan Medical School experts, it's time to do the same for sepsis.

Sepsis may not have the same name recognition as heart attacks—but it now affects more hospital patients, and leads to more hospital costs, than any other diagnosis. Half of all in-hospital deaths involve sepsis.

Caused by a body-wide over-reaction to any kind of infection, it can lead to damage of vital organs and now kills one in every six people diagnosed with it. More people die from sepsis than die from prostate cancer, breast cancer and AIDS combined.

In a new viewpoint article in the *Journal of the American Medical Association*, the authors lay out the case for a national system that would hold hospitals and care teams accountable for sepsis diagnosis and care.

Just as it has done for other diseases, the federal government should set clear standards and targets for the kind of care that gives sepsis patients the best odds of surviving, they say. But unlike in previous efforts, the approach should incentivize better detection, start with regional

collaboratives to determine the best approaches, and respond to new evidence from rapidly evolving sepsis research.

The authors have both studied sepsis care for years, and treated many patients with the condition themselves in intensive care units at the U-M Health System. Currently, they note, only about one-third of sepsis patients nationwide receive the best possible care – despite national guidelines to help hospitals and doctors recognize and treat it. Late and missed diagnoses are common.

"Now's the time to focus on quality improvement in sepsis, because it has become one of the most important conditions in hospitals, it attacks more and more patients, and we can learn from the years of work in other conditions," says Colin Cooke, M.D., M.Sc., M.S., a U-M critical care physician who authored the article. "We believe that by creating a framework for quality improvement in sepsis care that takes into account evolving knowledge of this condition, we can improve patients' odds of survival and reduce variation in care."

If done right, he and co-author Theodore Iwashyna, M.D., Ph.D., note, it could become a model for new ways to take on other conditions that send many patients to the hospital.

The lack of a single diagnostic tool or test to quickly tell doctors that a patient has developed sepsis poses a major challenge, they say. So efforts to improve and speed detection must be part of any sepsis quality initiative.

"There is not just one magical test to detect sepsis," says Iwashyna. "Excellent sepsis care requires careful clinical judgment and good teamwork, but at the same time it has to happen fast. This is not easy. But we have to improve our quality of care even when it is not easy."

A key path forward, they say, will be an effort to learn from the experience of hospitals and health systems that have cut their own sepsis mortality rates by studying and improving the care they provide and the systems that support it.

Taking those lessons and testing them in a broader setting, for instance a single state, would help the federal government phase in sepsis quality measures. This approach keeps the process moving forward, while avoiding the mistakes that can come from setting out a national mandate without testing whether it will work in the way they hope.

Since sepsis research is still yielding important new knowledge about how the condition arises, masquerades as other syndromes and responds to treatment, quality measures must adapt to new findings, the authors say.

The federal Centers for Medicare and Medicaid Services, which oversees a wide array of health care quality measurement, reporting and incentive efforts, has approved a set of measures that it will begin tracking for all hospitals in 2017.

While this is a good step, say Cooke and Iwashyna, it follows the pattern of past such efforts. "This is an opportunity to make quality improvement more responsive, to emphasize recognition and diagnosis in a way that doesn't create perverse incentives against honest reporting, and that takes advantage of what we're still learning about sepsis care," says Cooke.

More information: *JAMA* Viewpoint, October 8, 2014 Volume 312, Number 14

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