

Low-cost, data-driven tool identifies sickest hospital patients

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A team of Yale researchers developed and tested an automated tool that uses electronic health records to identify patients most at risk of deteriorating while in the hospital.

Led by associate professor of medicine Robert Fogerty, the team used

criteria originally established to rapidly detect patients with sepsis, one of the most expensive and potentially deadly medical conditions in the United States. The researchers created software that directs the [electronic health](#) record system to notify an attending physician, via pager, as soon as a patient meets the criteria. When key vitals such as heart rate, [blood pressure](#), and temperature change for the worse, the attending receives an automated text message.

The tool—designed from the outset to be low-cost, easy to use, and highly sustainable—was used to monitor more than 15,000 patients in real time over one year and identified individuals at increased risk for admission to the ICU and for mortality. It is a cost-effective yet powerful strategy for spotting seriously ill patients who might otherwise get missed, the researchers noted.

"We made things easier for the providers and safer for the patients, and we did it on a really small budget," said Fogerty.

The study is published in the *Journal of Patient Safety*.

More information: Robert L. Fogerty et al. Using System Inflammatory Response Syndrome as an Easy-to-Implement, Sustainable, and Automated Tool for All-Cause Deterioration Among Medical Inpatients, *Journal of Patient Safety* (2018). [DOI: 10.1097/PTS.0000000000000463](#)

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