HealthManagement
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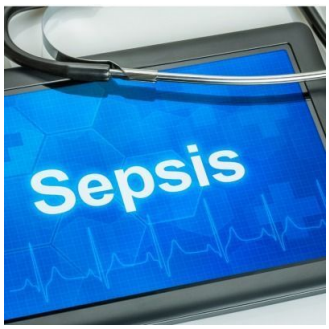
Algorithm that Predicts Deadly Hospital Infection Misses 67% of Cases



A study published in *JAMA Internal Medicine* found that a system used to identify cases of sepsis missed most instances and frequently issued false alarms.

Sepsis accounts for nearly 1 million hospitalisations in the US annually and is a major contributor to hospital length of stay, healthcare costs, and in-hospital mortality (up to 15%).

Early sepsis detection allows healthcare teams to promptly implement goal-directed therapy and lessen effects on patients.

Wong and colleagues wanted to evaluate how accurately the EPIC Sepsis Model (ESM), a prediction tool which is used extensively in US hospitals, can predict the onset of sepsis.

The ESM is available within the Epic electronic health record and is designed to generate automated alerts that warn clinicians that patients may be developing sepsis.

Researchers from the University of Michigan included 27 697 patients in 38 455 hospitalisations between December 2018 and October 2019. Sepsis occurred in 7% of the hospitalisations. Despite generating alerts on 18% of all patients, the ESM did not detect sepsis in 67% or roughly two-thirds of sepsis cases, rarely found cases medical staff did not notice, and frequently issued false alarms.

The surprising results of this large-scale study signals that models and algorithms used in healthcare need external evaluation to assess performance.

“They’re very widely used, and yet there’s very little published on these models,” says Karandeep Singh, an assistant professor at the University of Michigan who led the study. “To me that’s shocking.”

Source: JAMA Internal

Photo: iStock

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