



A Comparison of Two Sepsis Risk Identification Methods in the ED



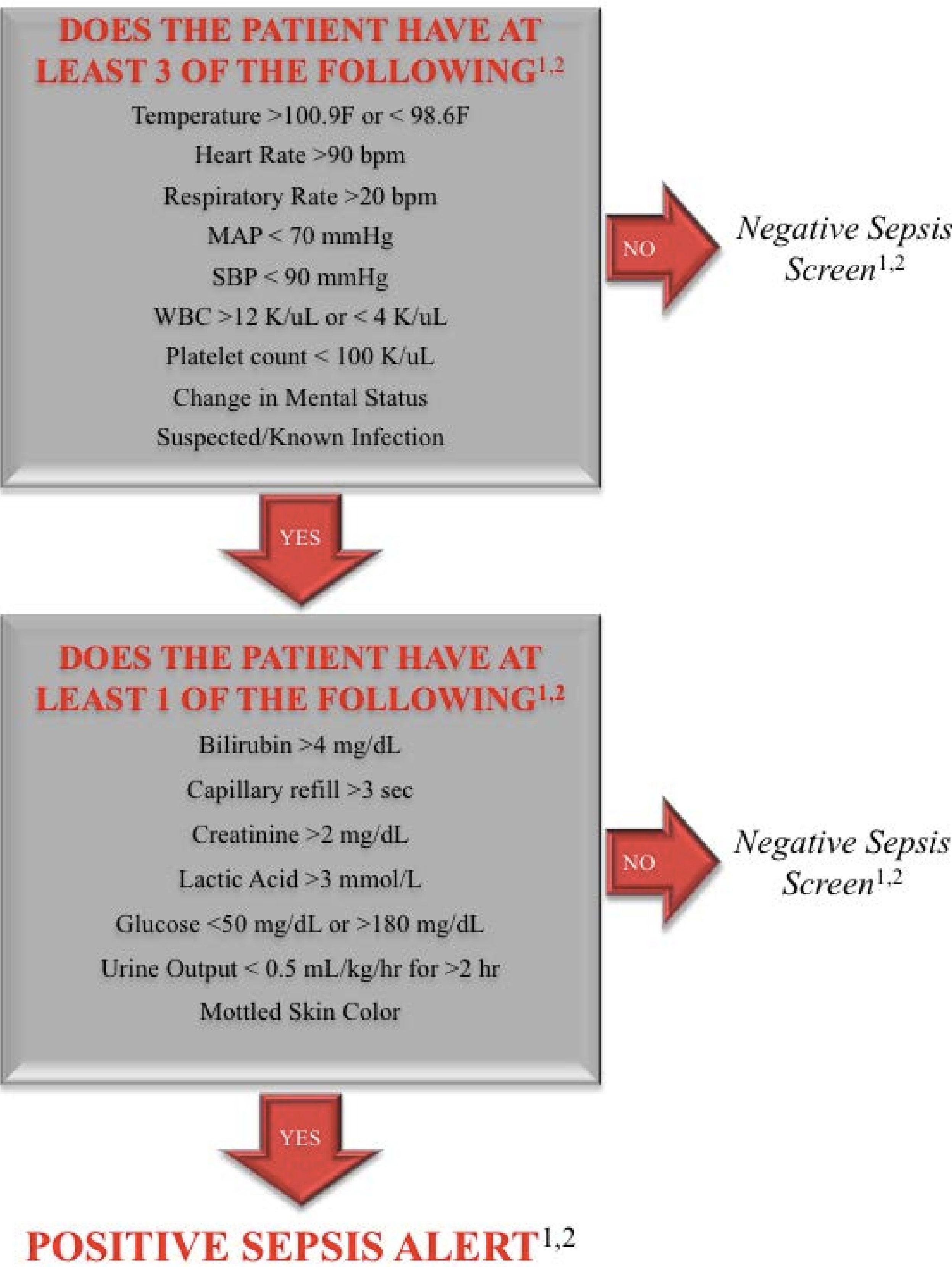
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PICOT Question

In the Emergency Department, is an EHR algorithm compared with clinical assessment more effective in identifying patients at risk for developing sepsis?

EHR Sepsis Algorithm

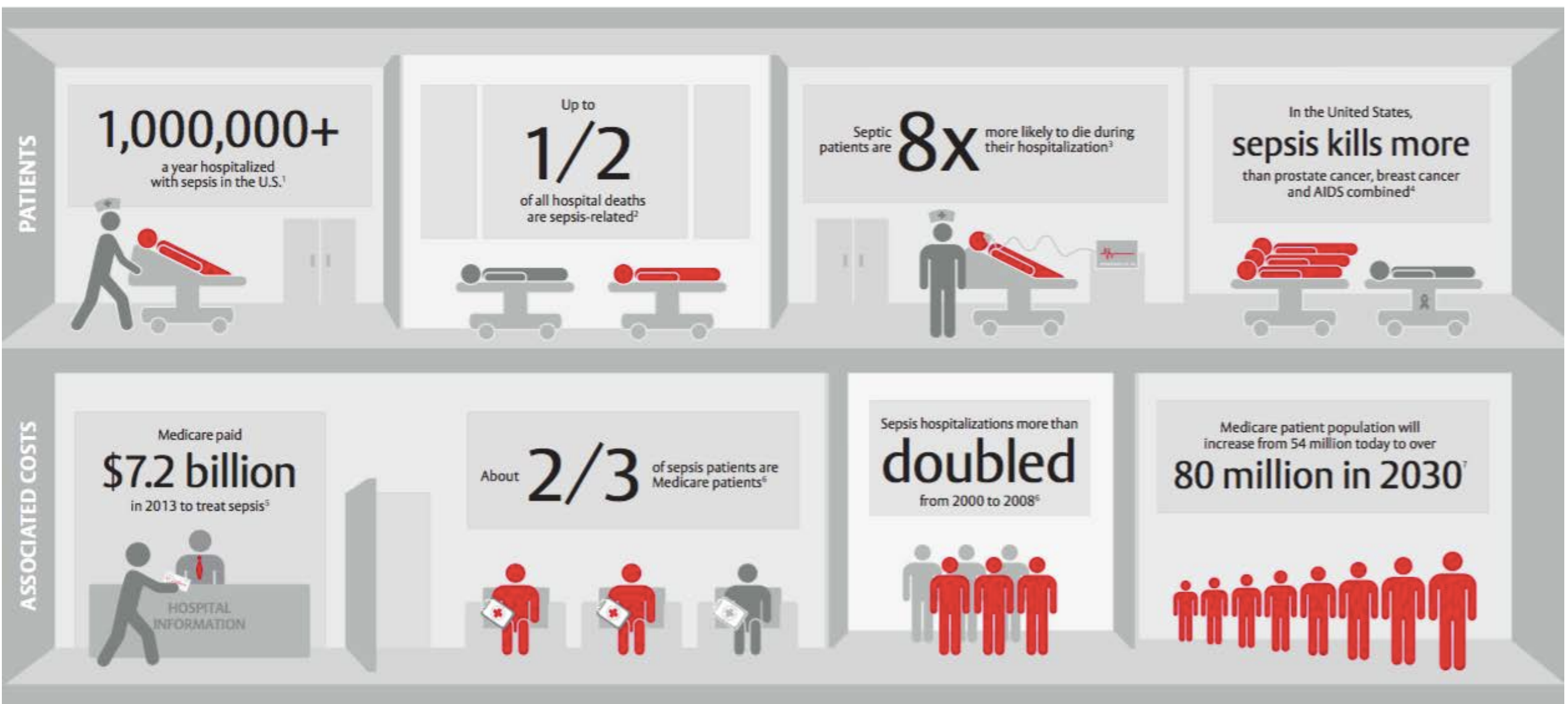


Literature Review

- Databases Used: CINAHL, Ovid, PubMed, Google Scholar, Wiley
- Key Terms: Electronic Sepsis Screening, Emergency Room, Electronic Health Record
- Article Selection Criteria: Peer-reviewed journals (2013-2018)

Synthesis of the Findings

- 26.56% decrease has been observed in patient mortality rates based off electronic sepsis screening tools.^{1, 7, 10}
- False-positive sepsis alerts due to high sensitivity still result in an improving patient outcomes, as these patients tend to be high acuity, requiring admission and treatment.⁶
- 8-hour reduction in amount of time to treatment of sepsis using an electronic tool due to simultaneous analysis of real-time patient data.^{2, 3, 4, 5, 8, 12, 13}
- 75% of sepsis cases were identified faster using the electronic screening method vs. manual screening.^{1, 2, 4, 15}
- Without the implementation of more specific screening tools, early recognition of sepsis is challenging as symptoms can be non-specific and ambiguous.^{3, 8}
- 50.14% decrease in sepsis-related 30-day readmission rates and 9.55% decrease in sepsis-related hospital length of stay due to rapid identification and treatment.^{12, 14}
- 13% reduction in the number of missed sepsis diagnoses is possible by using a tool that combines various data available in the EHR.^{1, 16}



Decision to Change Practice

- EHR Sepsis Screening Tool
- Mandatory Annual Staff CE
- Sepsis Handoff Report for Charge Nurses
- Alert Compliance Protocol

Evaluation

- ↑ Early Recognition of Sepsis
- ↑ Staff Knowledge and Compliance
- ↑ Compliance with Treatment Bundles
- ↓ Patient Mortality Rates
- ↓ Risk of Patient Care Fallout

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