dascena

InSight®– Early Sepsis Prediction

AI-powered sepsis prediction can help you save lives. InSight is a clinical decision support software tool that leverages readily-available data in the EHR to help clinicians identify sepsis earlier. Built with advanced machine learning capabilities, InSight can identify patterns to predict the risk of sepsis onset more accurately than rules-based tools. Our technology and alerts seamlessly integrate into existing clinical workflows, improving outcomes with little additional effort from the care team.

"We are seeing a positive impact for our patients through **improved rates of survival."**

Hoyt J. Burdick, MD
Chief Medical Officer
Cabell Huntington Hospital

Problem: Rules-based tools are not enough

HARD-TO-CATCH CASES

Of all septic shock patients,

40% present with **vague symptoms,**

leading to:[1]

- **2x greater** mortality
- **2x less likely** to receive a compliant bundle

TIME-CRITICAL CONDITION

Each hour delay in treatment yields

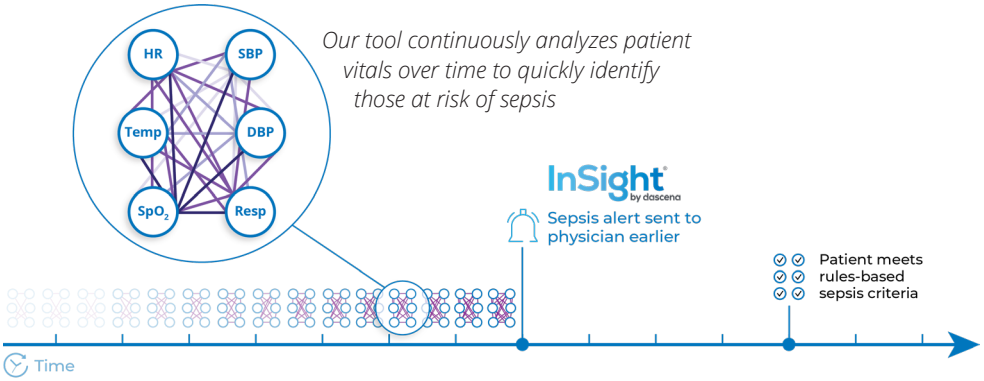
8% **increase** in patient mortality,

leading to:[2]

- **poor quality metrics**
- **high emotional burden** on clinical staff

Existing tools like SIRS and SOFA can't address these issues.

Solution: ML algorithms can help you improve outcomes



Seamless Workflow Integration

Data Ingestion
Data is autonomously fed into Dascena's HIPAA compliant cloud

Data Analysis
Algorithm analyzes each patient over time for signs of sepsis

Notification
InSight alerts care team with potential sepsis cases

Intervention
Care team performs independent assessment and delivers intervention

Improved care
Algorithm-enabled care leads to improved patient outcomes, including reduced rate of mortality and length of stay

InSight® Features

Target Population — General adult inpatient and ED population

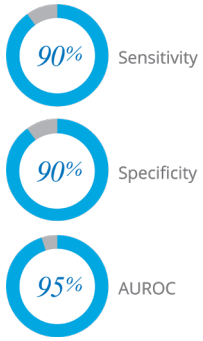
Algorithm Input — Continuous vital sign data from point of admission, requiring at least one measurement of each feature

Core Features *(measured over time)*

- Temperature
- Heart rate
- Respiratory rate
- Systolic blood pressure
- Diastolic blood pressure
- Oxygen saturation (SpO2)

Algorithm Output — Patient risk of sepsis – single alert per patient is generated when patient risk exceeds a prevalidated threshold

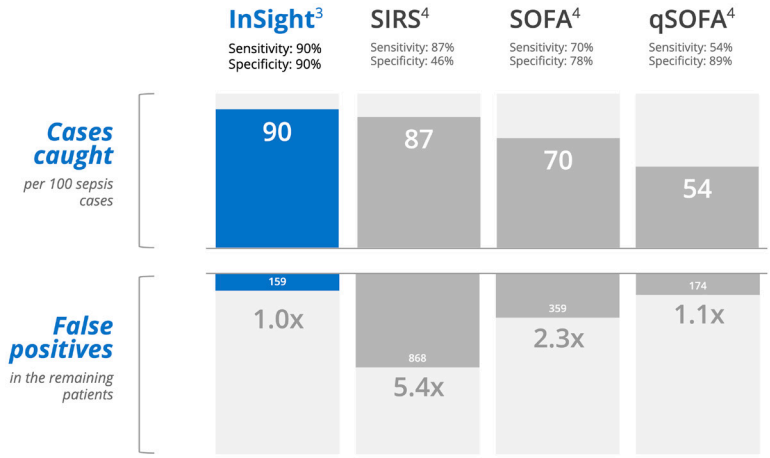
Algorithm performance demonstrated in the clinical setting[3]



More Cases Caught, Fewer False Alarms

InSight has demonstrated higher sensitivity and specificity than traditional rules-based tools. In fact, an **InSight alert is 2-4x more likely to be a real sepsis case**, as measured by positive predictive value.*

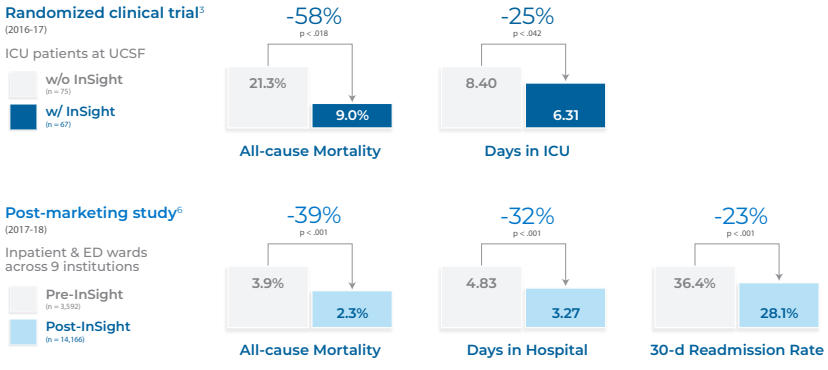
*Figures calculated using an in-hospital incidence of 5.9%.[5]



Clinical Validation

InSight is one of the only **prospectively validated** ML-based clinical decision support tools, backed by a **randomized clinical trial** and a **post-marketing study.**

Additional validation can be found at www.dascena.com/publications



Partial customer list:

CAPE REGIONAL HEALTH SYSTEM · Cabell Huntington Hospital, Member of Mountain Health Network · McLaren Health Care · Oroville Hospital · GHVHS Greater Hudson Valley Health System

1. Filbin MR, Lynch J, Gillingham TD, Thorsen JE, Pasakarnis CL, Nepal S, Matsushima M, Rhee C, Heldt T, Reisner AT. Presenting Symptoms Independently Predict Mortality in Septic Shock: Importance of a Previously Unmeasured Confounder. Crit Care Med. 2018 Oct;46(10):1592-1599. doi: 10.1097/CCM.0000000000003260. PMID: 29965833.
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3. Shimabukuro DW et al. Effect of a machine learning-based severe sepsis prediction algorithm on patient survival and hospital length of stay: a randomised clinical trial. BMJ Open Respir Res. 2017 Nov 9;4(1):e000234.
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6. Burdick H, Pino E, Gabel-Comeau D, et al. Effect of a sepsis prediction algorithm on patient mortality, length of stay and readmission: a prospective multicentre clinical outcomes evaluation of real-world patient data from US hospitals. BMJ Health Care Inform 2020;27:e100109. doi:10.1136/bmjhci-2019-100109