JUL 15
Rhea Patel

Johns Hopkins AI spinout launches clinical diagnostics tool

Article

The news: **Johns Hopkins** spinoff **Bayesian Health** has **$15 million** in VC backing to offer an AI-based clinical decision support platform designed to make health systems' electronic health records (EHRs) more predictive.

Here's how it works: The system analyzes EHR-collected patient data and sends providers real-time clinical signals when a critical moment is detected. It targets high-priority areas such

as **clinical deterioration, sepsis, pressure injury,** and **transitions of care.**

Results: One of the first studies released on Bayesian's sepsis module screened **500,000 patients** over 3 years across 5 hospitals, with upward of 2,000 providers using it.

- The study's results reveal the platform's clinical signals can help physicians diagnose and treat sepsis **1.85 hours faster** than those not using it—with an **89%** clinician adoption rate.
- Early intervention for a condition like sepsis, in particular, is critical—**sepsis kills nearly 270,000 patients a year,** according to the CDC.

How we got here: Providers have been hesitant to fully embrace AI for high-stakes clinical decisions due to lack of trust**.**

AI is typically seen as a "black box" in healthcare and clinicians often won't trust the risk scores generated by the tech without being informed of the contributing reasons for the risk.

It's challenging to distinguish sepsis in its early stages—and while developers have integrated early warning systems into providers' EHR systems, the effectiveness of these predictive tools has been criticized.

- Recent data from **University of Michigan Medical School** researchers suggest that a sepsis prediction model developed by EHR vendor **Epic** performs worse than what the vendor tells its customers.
- The tool **did not identify 67%** of patients with sepsis, according to a sample of 27,000 adult patients.

Trendspotting: There's no shortage of AI/machine-learning startups in healthcare, but clinical adoption of the tools they're producing has been slow. It's currently easier to apply AI to an administrative process—like medical coding for billing and reimbursement purposes, for example.

(wanted to add this chart of ours on top 3 priorities for AI deployment in healthcare).

For many clinicians, it still comes back to who's teaching the AI—and there's bias in the humans who design the systems, as well as the underlying data sets on which they're trained.

This is why we could see health systems lean more on their in-house AI models for the time being—or tech spun out from respected health systems like Hopkins.

- For example, **Duke** has its own augmented intelligence tool that has significantly reduced sepsis-induced patient deaths and is now part of a federally registered clinical trial.
- And **Mount Sinai's** spinout **RenalytixAI** is designed to optimize care management by enabling early intervention for patients with kidney disease, and was recently tapped by **DaVita,** one of the largest kidney care service providers in the US.