Volume 13, Number 11 November 2020

ANALYTICS TECHNOLOGY EDITION

Care Analytics NEWS

It's Time to Look Beyond EHR AI Capabilities and Move Towards True Prescriptive Clinical AI

By Jay Deady, CEO of Jvion

EHR systems were supposed to unlock value-based care. Advocates claimed their data sharing capabilities would enhance care coordination, while their data storage capabilities would enable clinical decision support. With electronic access to their data, patients would be more engaged with their care. As a result, EHRs would improve patient outcomes, prevent negative quality events and lower the costs of care.

But 11 years after the HITECH Act incentivized their use, EHRs have yet to live up to their expectations. Last year, Mayo Clinic reported that physicians gave EHRs an F for usability. Another study found clinicians spend two hours with their EHR for every hour with patients. Not surprisingly, 70% of physicians using EHR technology report it stresses them out, fueling an epidemic of burnout among clinicians when we need them most.

The frustration that comes with EHRs has downstream impacts on the quality of care, and consequently, the success of value-based care models. 49% of primary care providers (PCPs) say that using EHR detracts from their clinical effectiveness. Another 44% say the primary benefit of EHRs is data storage, not improving patient outcomes. While EHRs are great for capturing medical data, they are poor at actually using this data to improve the quality of care.

In order for providers, payers and patients to get the most out of value-based care models, hospitals need the right systems in place to not only capture data, but harness that data to improve clinical decision-making and optimize the quality and delivery of care — without putting unnecessary burdens on clinicians or compromising the outcomes of patients.

Enter prescriptive clinical AI.

Prescriptive clinical AI: The next step in healthcare's digital transformation

Prescriptive clinical AI is the next step for EHRs on the path to value-based care, delivering actionable, personalized and data-driven recommendations to improve patient outcomes.

At its core is machine learning, which is uniquely suited for analyzing enormous volumes of patient data that providers simply don't have the time to analyze themselves, nor should they have to. By analyzing this data, AI can detect patterns, which, in turn, deliver valuable insights on patient risk that providers would otherwise miss, even if they spent hours scouring the EHR.

This means providers can spend more time with the patient and less time in the EHR, reducing burnout associated with the EHR. Armed with AI-driven insights on hidden patient risk, clinicians can also have more productive and revealing conversations with patients, which will improve the quality of care.

AI can also synthesize information from EHRs with external information that is often invisible to providers, such as social determinants of health (SDOH). This includes data from a range of public and private datasets, including sources such as the US Census, EPA, HUD, and USDA. This data can reveal important risk factors, such as poverty or limited access to housing, food, and transportation, that can have major impacts on patient outcomes — and that clinicians rarely hear about during patient encounters cut short by the administrative burdens of EHR.

Predictive analytics tools that leverage patient data from the EHR are hardly new. But AI's ability to look beyond the patient record takes it to another level. The sheer number of data points that machine-learning based tools can analyze reveal patients at risk or on the cusp of risk that traditional predictive analytics tools wouldn't flag. This enables care teams to prevent patients from slipping through the cracks, improving the patient outcomes and quality at the cornerstone of value-based care.

continued on page 2

It's Time to Look Beyond EHR AI Capabilities and Move Towards True Prescriptive … continued

Actionable Insights that Make a Difference

AI is a powerful tool for predicting patient risk. But predicting patient risk is only half the battle. To improve outcomes, care teams need to be able to act on this predictive information to proactively reduce patient risk. Fortunately, when clinical AI is prescriptive, it doesn't just predict risk, it also provides individualized recommendations for how providers can intervene to address each patient's unique risk factors.

By cross-referencing patients' circumstances with those of thousands of other patients and their outcomes, as well as the latest clinical research, prescriptive AI can generate individualized intervention recommendations based on what has been successful in the past for similar patients. This can help providers develop treatment plans that account for risk factors they may not otherwise have anticipated, including SDOH, to treat the whole patient rather than any one condition in isolation.

For example, a patient diagnosed with Deep Vein Thrombosis (DVT) might not appear to be high-risk at first glance. But AI can predict that the patient has two relevant socioeconomic risk factors: poor transportation access and low household income. As a result, the patient may miss appointments, or struggle to afford their medication. A prescriptive AI model can then take this information and recommend that the patient be enrolled in a drug assistance program and scheduled for telehealth appointments, helping to avoid a potentially serious hospitalization.

These recommendations can help providers take proactive and informed action to prevent avoidable admissions, readmissions, and other preventable harm incidents such as sepsis or pressure injuries, improving quality scores and lowering costs for providers operating under value-based care models.

As a case study in clinical AI's potential, consider Baptist Health, a three-hospital health system and the largest healthcare provider in central Alabama. By using clinical AI to more effectively target clinical resources towards more timely patient interventions, Baptist Health was able to reduce readmissions by 18% over years, ultimately saving the health system $13M. The AI implementation was so successful that Baptist Health became a rare provider with a profitable provider-sponsored health plan.

A Turning Point for Healthcare

Implementing prescriptive clinical AI will be particularly valuable now during the pandemic, as millions defer regular appointments with primary care doctors, cancer screenings, preventive care and chronic disease management visits. Experts fear that many patients will deteriorate in the meantime, leading to more severe admissions and readmissions down the road.

Implementing prescriptive clinical AI will be particularly valuable now during the pandemic, as millions defer regular appointments with primary care doctors, cancer screenings, preventive care and chronic disease management visits.

This expected surge will come as hospitals face capacity limits and unprecedented financial strain due to Covid-19. Value-based care providers in particular have an imperative to proactively intervene to prevent admissions and readmissions arising from deferred care, or face the financial consequences of avoidable hospitalizations. Prescriptive clinical AI will be a valuable aid in their efforts, identifying patients at risk and recommending interventions suited to their individual circumstances.

The pandemic has shown how quickly providers can adapt their practices. To adapt to value-based care in the long term, it's time for providers to augment their EHR with prescriptive clinical AI.