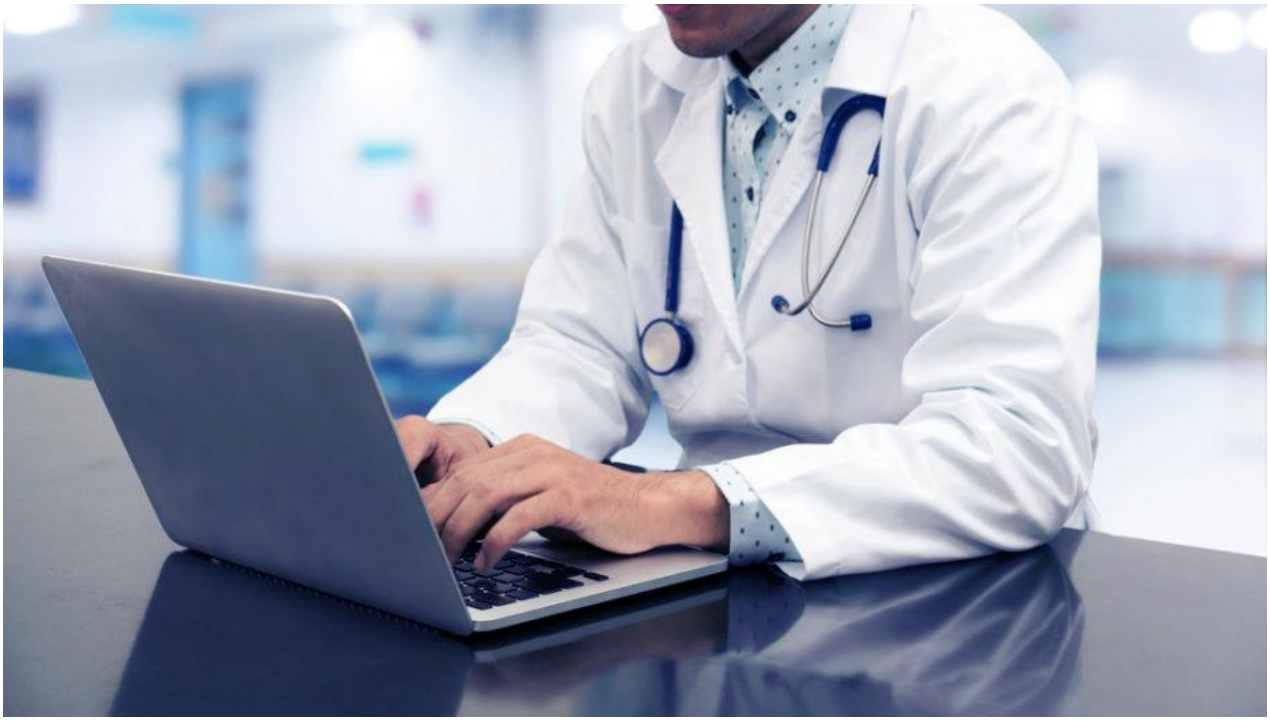
Ronald M. Razmi, MD, CEO, Kinders
Gerry Petratos, MD, CEO, Hiteks

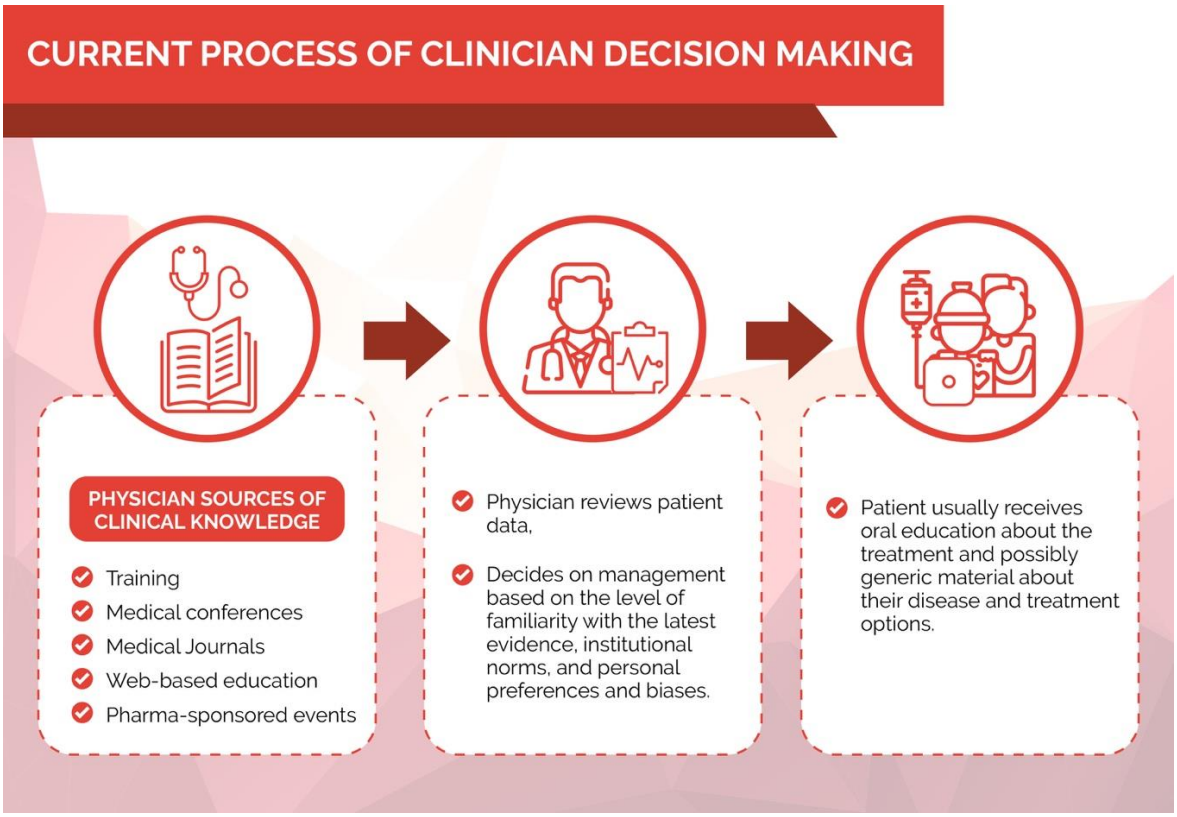
POINT OF CARE DECISION SUPPORT



For years, Big Pharma has marketed its drugs to healthcare providers using a ***tried-and-true*** model: running clinical trials, publishing the results in journals, and presenting them at conferences. To drive awareness, brands leverage the evidence in marketing campaigns and physician detailing. Ubiquitous as it's become, however, this approach has shown mixed effectiveness in commercializing drugs. Its overall return-on-investment is ***inconsistent***, and its effectiveness in new product launches is declining. In many cases, brands underperform because physicians continue to use ***older and cheaper alternatives***, even when a brand offers significant advantages in certain patient populations.

In other cases, several drugs are indicated to treat a single illness, and physicians do not remember the nuances of each alternative at the point of care. Increasingly important

are the workflow distractions of the practicing physician; most of their time is now spent in the digital environment reviewing or entering patient data.

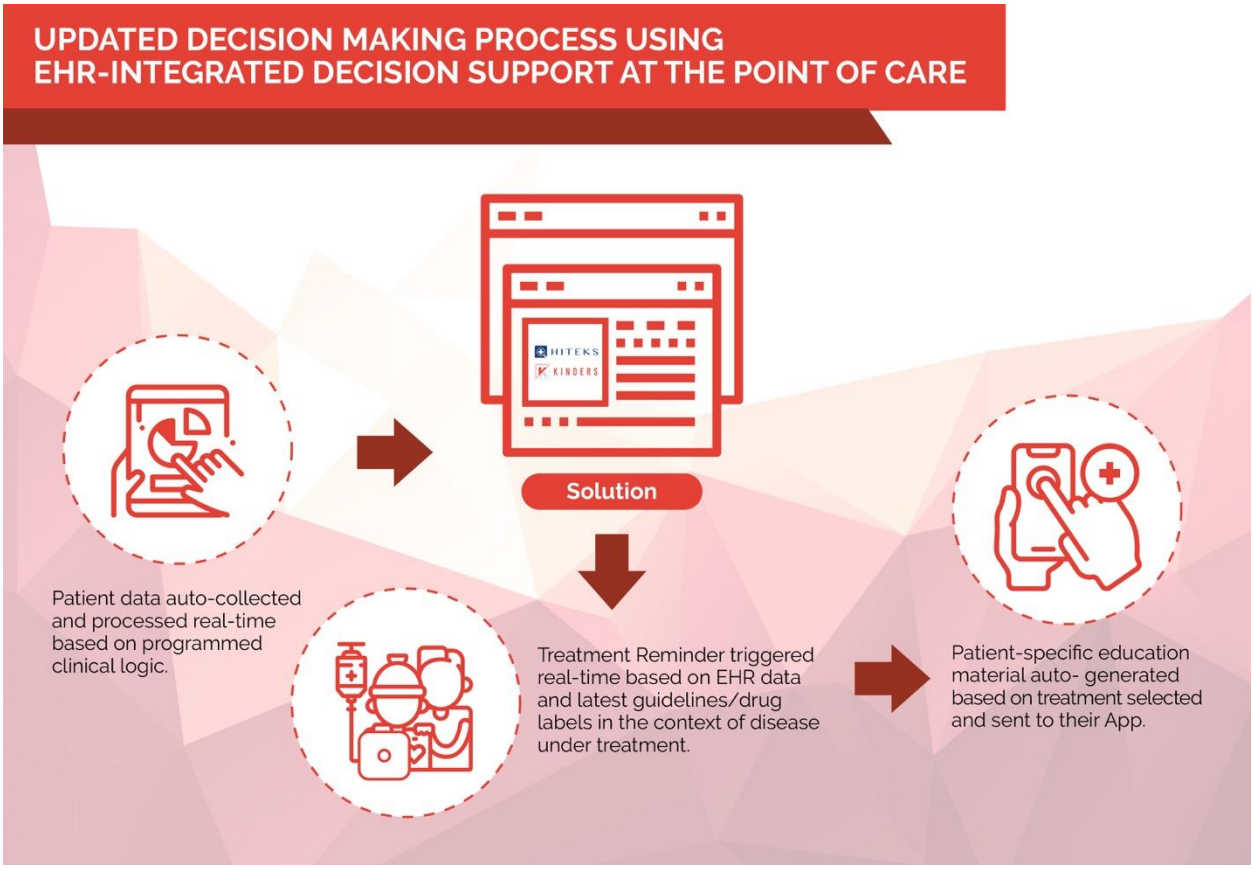


Ubiquitous as it's become, however, this approach has shown mixed effectiveness in commercializing drugs. Its overall return-on-investment is inconsistent, and its effectiveness in new product launches is declining. In many cases, brands underperform because physicians continue to use older and cheaper alternatives, even when a brand offers significant advantages in certain patient populations.

CLINICAL DECISION SUPPORT: THE OPPORTUNITY

So, how do you overcome this issue? By spending even more on physician education to cover every possible clinical scenario and which treatment to use in it? Perhaps. Improving physician education is always a worthy goal. But brands reach a point of diminishing returns when it comes to ***information retention***: physicians simply won't remember each detail, in each scenario, at the point of care. eDetailing, in which interactive digital content is made available for clinicians to review on their own time, has drawn a positive response, but ***information about ROI*** is still limited. Some of the

developments of the last decade offer a new path forward. In recent years, the adoption of Electronic Health Records (EHR) has ***significantly increased***. The newest EHRs have improved functionalities, making relevant clinical information like radiology, pathology, and labs more easily available within the system. Given that clinical workflows are already increasingly digital, there is a natural opportunity to educate physicians about possible treatment options at the point of care, rather than before or after it.



CHALLENGES WITH POC SUPPORT TOOLS

What, then, is keeping point-of-care education and decision support from being widely used today? The answer is that although many things are possible in theory within EHRs, the reality is a long way from this theory. One of the key barriers is the difficulty of interfacing with EHRs. There are many reasons for this. EHR companies ***create obstacles*** to prevent access to their proprietary databases. Medical centers, meanwhile, have a high number of competing projects. Finally, nearly 80% of the data in EHRs is ***unstructured***, meaning it must either be ignored or—often manually—converted before it's accessible and available for analysis.

These barriers would give pause to any Life Sciences company. Indeed, they are some of the
primary reasons that the ROI for such projects to date has been unfavorable.

However, they are not insurmountable, as we discovered when we began to devise a business process and technology solution that could anticipate and overcome them. In fact, our experience building ***Kinders*** and ***Hiteks***—two companies that leverage new technologies and enhance healthcare business models—suggests that with the right tools, Life Science companies can build point-of-care solutions that are highly effective marketing vehicles.

EVALUATING POINT OF CARE SUPPORT TOOLS

Here's what companies should look for as they evaluate potential partners and systems:

– EHR integration: It's no secret that the EHR landscape is ***complex*** and cluttered. But your installation costs will skyrocket if your point-of-care solution doesn't easily integrate with the EHRs that are being used at the majority of medical centers. For Hiteks, we first built software that would integrate easily into of most major commercially available EHRs, especially Epic. Then, we fully integrated this into the Epic main engine to become an application for their customers. Because Epic has the largest base of users, this allows us to achieve the wide-scale adoption of new decision support solutions without additional local installation—and create a turnkey solution on the technical side.

– Effective methodology: False positives and irrelevant suggestions are a ***big problem*** in POC support. To minimize override rates, make sure your decision support solutions providers can work with you to create decision support that results in highly relevant advice. Our approach includes studying the clinical guidelines and drug labels for the brand, understanding current clinical decision making around the specific illness, mapping current workflows within the EHRs and listing the data used by clinicians to arrive at a management plan, clearly defining the pivotal points in decision process, and building logic to generate reminders at the right time.

– ROI measurement tools: You won't be able to improve your POC support tools—or make the case for extending them to other brands—unless you keep rigorous track of your results. By combining software that's fully integrated into the EHR and a robust clinical logic creation methodology, our software can launch point of care decision support reminders quickly and consistently. We then closely monitor engagement with

our reminders, using EHR logs to track clinicians' acceptance of the advice—and any resulting behavioral changes.

CASE STUDY: PUTTING POC TOOLS TO THE TEST

Our experience shows that point-of-care support solutions can be highly effective. One pharma brand we worked with had a novel treatment in sepsis. Yet while clinical evidence showed ***significant advantages*** for their treatment in certain patients—reducing progression from Sepsis and Severe Sepsis to Septic Shock by 25% and shortening the length of stay by half a day—72% of physicians continued to rely on commonly used antibiotics that have been the mainstay of sepsis treatment for decades.

After careful study of the clinical workflows and clinician decision-making process, we identified all of the key data elements that clinicians use in choosing a sepsis therapy. We then mapped where each one of these data elements resides in the EHR. Using the most up-to-date clinical guidelines and the drug label, we created the logic to generate a reminder in the EHR for the clinicians at the appropriate moment during the management process. This guidelines-based reminder showed the novel therapy as one of the options. It also summarized the reason physicians might select it and the potential associated benefits. Within 3 months, this solution led to 12% increase in the usage of the therapy as the first line of treatment.

Summary: Digital workflows now allow for the ongoing support of clinicians at the point of care, using a combination of well-designed technical solutions and clinical logic that's based on patient data and the application of guidelines and drug labels.

Benefits to Pharma/Medical Device Brands

- Rapid creation and deployment of point-of-care decision support to expedite adoption and revenue growth for high-value brands
- Ability to understand clinical decision process inside the EHRs
- Ability to update alerts based on new indications and clinical data

Benefits to Clinicians

- Up-to-date reminders about treatment options at the point of care
- Automatic collection of all relevant data in the EHR
- Ability to click to review the logic for the recommended treatments

Benefits to Patients

- Better outcomes due to optimal treatment decisions by providers based on the latest evidence
- Improved patient safety due to reduction of iatrogenic errors caused by overlooking certain relevant data
- Improved patient-specific education about their management based on patient's own clinical data

Dr. Ronald Razmi

Ronald M. Razmi, MD, MBA began his career as a Cardiologist and as a McKinsey consultant worked with the world's top life sciences companies in strategy, digital health, and product roadmap. He was CEO of Acupera, a digital health company focused on using analytics and digital workflows in improving chronic care management. He advises healthcare companies in a range of areas including commercial strategy, digital health, and Artificial Intelligence.

Dr. GerasimosPetratos

Gerry Petratos, MD, MS, is CEO of Hiteks Solutions and began his career as an NIH-trained Medical Informatics physician with experience in EHR-integrated decision support systems from Intermountain and the University of Utah. Dr. Petratos has 9 years of experience as the former Global Head of Healthcare Data Analytics at Roche and Genentech.