OUR TAKE

for life sciences organizations

How Clinicians Will Use Evidence in 2032

Implications for life sciences leaders

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How clinicians use evidence to guide clinical decision-making is changing due to many different but related factors. Evolving health care ecosystem dynamics, institutional forces, and clinician preferences will demand changes in both individual clinician competencies and the landscape of clinical practice.

This report outlines four predictions for the next decade of clinical decision-making and the implications for medical device and pharmaceutical companies.

Advisory Board

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What is clinical decision-making?

Clinical decision-making is a contextual, continual, and responsive process that integrates diagnosis, assessment, and management. This includes the tools used to gather, interpret, assess, and synthesize data to recommend evidence-based action.

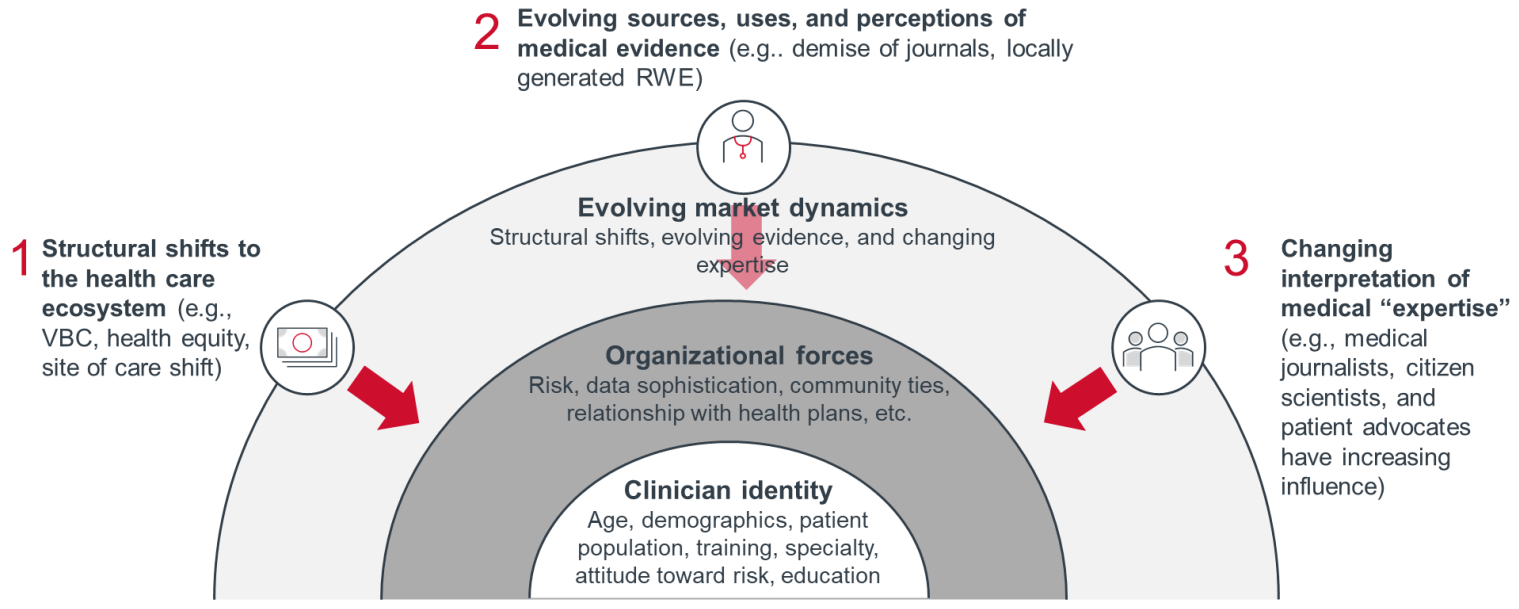
Our take

Clinical decision-making is complex and becomes more so everyday. A multitude of factors influence how clinicians make decisions.

The framework below provides an overview of how we view the future of clinical decision-making. As new and evolving market influences drive change in the health care ecosystem, clinical decision-making will be shaped less by clinician identity and training than by the confluence of market dynamics and organizational forces. Therefore, the future of how clinicians make decisions will not be defined by any one stakeholder.

There are three trends that will influence clinical decision-making in the next 10 years. On the next page, we explain each of these trends in detail.

Factors influencing clinical decision-making



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Structural changes to the health care ecosystem

Structural changes to the health care ecosystem are driving evolution across the industry. These changes include site-of-care shifts, the transition to value-based care (VBC), increasing focus on health equity, and digital transformation. The proliferation of wearable technology and remote patient monitoring (RPM) is generating a wealth of real-world evidence (RWE) allowing access to novel, real-time data. The shift to alternative sites of care means that customers are increasingly seeking evidence that demonstrates the value of products in non-clinical settings.

Evolving sources, uses, and perceptions of medical evidence

While medical journals still serve a useful purpose, they are no longer the go-to for busy clinicians looking to stay on top of the latest studies and medical innovations. In 2010, medical knowledge doubled in three and a half years. By 2020, that time was cut to just two months. As a result, clinicians are turning to technology and digital solutions to augment their knowledge. The influx of alternative channels to disseminate clinical information, beyond the traditional journals and conferences, means manufacturers must bolster their digital strategy to ensure the right information is being shared in the right places.

Changing interpretation of medical "expertise”

Medical expertise is becoming increasingly dispersed as more people are weighing in. For example, patients and journalists can provide their insights via social media and health-oriented news sites—and traditional experts are paying attention. Clinicians have access to knowledge beyond their own with the advent of e-consulting platforms and online clinician communities. The physician is no longer the pinnacle of expertise in many contexts.

1. Advisory Board is a subsidiary of Optum. All Advisory Board research, expert perspectives, and recommendations remain independent.

Sources: Obermeyer Z, et al., “Algorithmic Bias in Health Care: A Path Forward,” *Health Affairs*, Nov 2019, https://www.healthaffairs.org/do/10.1377/hblog20191031.373615/full/; Advisory Board interviews and analysis.

4 predictions for how clinicians will use evidence in 2032

In the following pages, we'll delve into four predictions about how clinicians will use evidence 10 years from now. For each prediction, we'll detail what life sciences leaders should be thinking about to prepare for the future of clinical decision-making. .

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Clinical practice will transition from memory-based to technology-assisted

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01 Clinicians will need more nuanced evidence to support narrower populations

Prediction summary

The U.S. population is becoming older and more medically complex. According to the CDC, 6 in 10 U.S .adults have a chronic disease. Clinicians will segment their patient population into subgroups by factors like treatment history, social determinants of health, and genetic makeup—and they'll want evidence specific to those groups.

In addition, personalized and precision medicine will continue to become more common, thus increasing the need for nuanced evidence. Precision diagnostics and treatment require highly specific data, so clinicians will increasingly leverage pharmacogenomic and biomarker data to inform treatment selection. Clinical communities will progressively turn to evidence and information that helps them assess how a specific patient may benefit from a specific treatment.

Factors favoring prediction

- ✓ Rapidly increasing availability of new and different types of data (e.g., RPM, biomarker data)
- ✓ Precision diagnostic and treatment options require clinicians to segment patients based on precise criteria
- ✓ Increasing investment in personalized medicine

Factors standing in the way

- ✗ Data integration and access continuing to trail behind availability, impeding applicability at point of care
- ✗ Clinical leadership resistance to changing standards of care
- ✗ Limitations set by payer guidelines

Sources: Barocas S, et al., Problem Formulation and Fairness, Jan 2019, https://arxiv.org/abs/1901.02547; Advisory Board interviews and analysis.

02 Clinicians will take a dynamic, rather than static, approach to diagnosis

Prediction summary

Traditionally, clinicians follow treatment algorithms that take a binary approach to diagnosis and treatment based on whether patients reach broadly accepted threshold of disease.

But today, advances in technology and delivery models are generating a wealth of patient data that can lead to a more dynamic approach to diagnosis and treatment decision-making. Data from wearable devices, remote patient monitoring, and innovations in diagnostics provide real-time and longitudinal insight that allows clinicians to monitor patient progress and disease progression in real time. These increases in available data, and the decisions that can be made using this data, will accelerate in the next 10 years.

The next 10 years will see a significant growth in health technology and data integration. As a result, clinical diagnosis and decision-making will evolve to a more dynamic process that looks holistically at the patient.

Factors favoring prediction

- ✓ Growing comfort with and adoption of hybrid or fully remote models in clinical research and care delivery
- ✓ Mass adoption of consumer hardware and software with clinical applications
- ✓ Growing access to non-clinical data like out-of-pocket costs, SDOH

Factors standing in the way

- ✗ Data fragmentation and lack of transparency across new sites of care
- ✗ Lack of standardized output from novel sensors
- ✗ Degree to which new data will enable new interventions is condition-specific

03 Clinical practice will transition from memory-based to technology-assisted

Prediction summary

Technological advances throughout history have changed how clinicians learn, absorb, and apply information to patient care. And now those advances are coming at a pace never before seen. Today's medical breakthroughs can be disseminated almost as quickly as they are generated. Gone are the days when a clinician would have to be exposed to new medical technology during their education or practice to employ it. Now, clinicians are in constant communication with the greater medical community through journals, online clinician communities, social media, etc. Unfortunately, this is leading to information overload, as clinicians try to stay on top of the torrent of medical knowledge and innovation to provide the best care possible.

Clinicians can no longer rely on memory alone to keep track of constantly evolving guidance and treatment options. The future of clinical decision-making will be enabled by technology. Routine, evidence-backed decisions will be automated. This will free up clinician time, allowing highly trained practitioners to leverage their expertise and experience on more complex patient decisions and in spaces where evidence is not yet clear.

Factors favoring prediction

- ✓ Digital transformation across the ecosystem driving automated solutions
- ✓ Expansion of cloud platforms enabling real-time and functional data-sharing
- ✓ IT solutions allowing integration and interoperability of new devices

Factors standing in the way

- ✗ Lack of capital to implement new technological solutions
- ✗ Resistance of clinician leaders to change traditional clinical decision-making processes
- ✗ Institutional dedication to legacy EHR systems

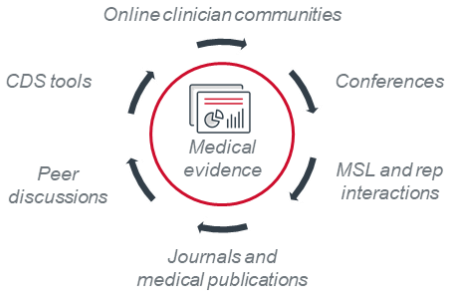
Sources: Wang G, "Humans in the Loop: The Design of Interactive AI Systems," Stanford Institute for Human-Centered Artificial Intelligence, Oct 2019, https://hai.stanford.edu/news/humans-loop-design-interactive-ai-systems; Advisory Board interviews and analysis.

04 Clinicians will require evidence that better aligns with the decision-making process

Prediction summary

The constant influx of medical information, coupled with physician burnout and limited capacity, is causing clinicians to have less and less time to stay up to date on the latest medical evidence and apply that evidence to patient care. As a result, clinicians will demand new formats and channels of medical evidence to help them quickly digest, interpret, and translate complex information into real-time, individualized decisions. Clinicians will increasingly turn to peers in online clinician communities to understand evolving medical consensus and receive patient-specific guidance on treatment decisions. These communities will be an important part of decision-making alongside point-of-care clinical decision support (CDS) tools.

The new landscape of evidence circulation



Factors favoring the prediction

- ✓ Growing preference for digital tools driven by demographic shifts
- ✓ Increased complexity of both the patient population and clinical evidence
- ✓ Adoption of value-based care models with downside risk

Factors standing in the way

- ✗ Uncertain regulation and policy surrounding current and emerging sources of RWE
- ✗ Lack of time to stay up to date on novel evidence
- ✗ Inability to integrate new data into legacy EHR systems

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