Unlocking Value in Digital Healthcare and AI

Contributors including:

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$815 billion

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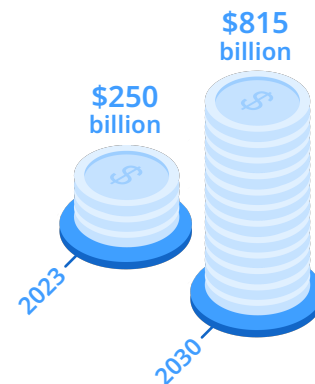
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The value of the digital health market which the FDA categorizes to include mHealth, IT, wearables, telehealth, personalized medicine, and AI,[1] was almost $250 billion in 2023 and is expected to top $815 billion in 2030.[2]

The widespread acceptance that digital tools, and AI, are essential components of healthcare is undeniable. As adoption grows, the focus has widened to realizing a return on investment (ROI). In fact, 94% of investors cited ROI as "important" or "very important" to the success of digital health tools, compared to just 79% who cited clinical evidence and trials as key predictors of success.[3]

Defining ROI for digital health, and AI, in particular, remains challenging. While demonstrating a timely financial return is critical, there is a consensus that ROI should be multifaceted, and consider beyond the traditional cost savings and revenue growth metrics, and encompass value derived from improving workflows, patient care, outcomes, and operational efficiencies.[4,5]

Expectations around returns must also align with organizational maturity around AI as well as the level of transformation that the technology might offer. Value can be considered as one of several maturity domains, and compared to recent benchmarks, these are often mismatched,[6] meaning that value expectations are not realistic, or won't be realized.

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> The digitization of healthcare requires substantial investment,"

says Jennifer Goldsack, founder and CEO of the Digital Medicine Society (DiMe).

"We need to show at all times is a 'double-bottom line' of cost and outcomes. Thinking less about silos of value for different stakeholders and more about collective return is incredibly important."

Despite what Goldsack calls "an embrace of digital health and a general perception of its value," there is a tendency to apply isolated metrics to determine the ROI. It is crucial to evaluate these tools as integral components of healthcare, akin to surgical tools or medications, thereby ensuring a comprehensive assessment of value, that incorporates both financ outcomes, and enhancements to care quality and operational efficiency.

"It's less about putting digital in a box and giving it a special set of evaluation criteria and more about asking, 'Can we define value at large, regardless of whether we're using a digital approach?'" Goldsack says.

Dr. Shubhanan Upadhyay, a physician and medical director for Ada Health, agrees,
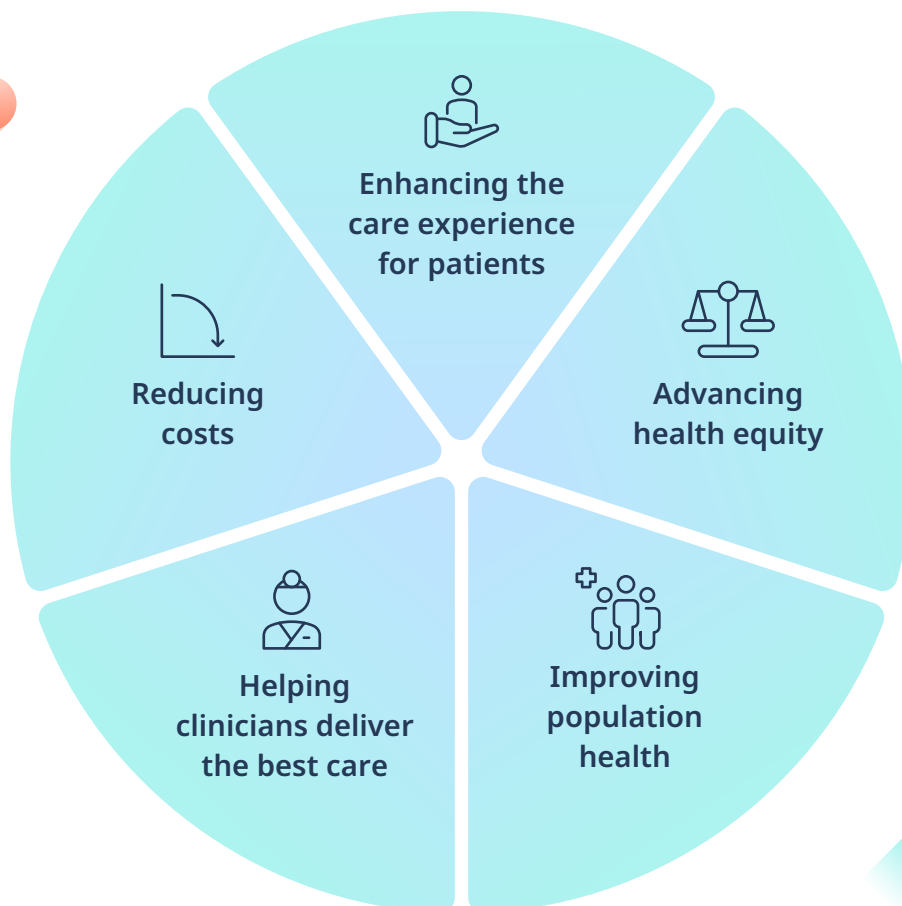
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> When we think of value, there's an immediate skew to ROI and dollars. Clearly this is an important metric, and in parallel we've got a perfect opportunity to be more inclusive of the 'return' on investment, including what these saved costs enable."

4 barriers to identifying value and ROI:

1   Definitions of ROI and value vary greatly, leading to unrealistic expectations and overpromising 'quick wins.'

2   Financial impact is an important ROI measure. Yet measuring it in isolation could mean a missed opportunity to consider the wider impact and the true value yield.

3   Short-term timelines often lack integration into workflows and complementing systems.

4   Measurement metrics lack standardization, and data is underutilized, prohibiting effective interpretation and reporting of ROI.

Focusing on the Quintuple Aim

Health systems can benefit from considering the Quintuple Aim when assessing the value of digital health solutions.[7]

Enhancing the care experience for patients

Advancing health equity

Reducing costs

Helping clinicians deliver the best care

Improving population health

Enhancing the care experience for patients:

Integrating AI into clinical practice to diagnose diseases, develop personalized treatment plans, and assist clinicians with decision-making has also been shown to improve patient care across healthcare settings.[8]

Reducing costs:

The promise of generative AI and higher utilization of some digital technologies could result in an estimated $46 billion savings in annual healthcare expenditures.[9] The numbers are impressive, but Upadhyay cautions against looking solely at the statistics.

"All too often, the industry gets caught up in the notion of 'the quick fix,'" he says. We know that higher utilization of the latest shiny tech will not suddenly create $46 billion in savings. While financial gains are a leading indicator of adoption, to actually achieve this outcome requires so much more transformational work, including partners who really understand patients and clinical workflows."

Helping clinicians deliver the best care:

Digital transformation done right can improve clinicians' well-being and help them deliver high-quality care by streamlining clinical workflows, boosting efficiencies, and improving decision-making.[10] Conversational AI can help patients access the right care sooner, helping reduce burden.[11]

"Costs associated with clinician burnout are enormously high," Goldsack says. "Further, if health systems can increase their patient throughput a little bit, they can increase and diversify their revenue streams, deliver better patient and provider satisfaction, and, over time, provide much more effective and efficient care driven by high-quality data. Recognizing that this value is realized over time, we must embrace the notion of time-to-value realization in our investment decisions."

Improving population health:

Using data in a way that enhances how health systems monitor, support prevention, and stratify risk will help more effective interventions that can move the needle on population-level outcomes, says Upadhyay.

"The measuring horizon is far away," he adds. "But there might be some quicker wins in the insights on data you get at a population level in order to target certain initiatives or interventions."

Advancing health equity:

Well-implemented digital tools can increase access to healthcare, address unmet needs, personalize patient care, and consider the historical context within communities, which are essential elements for bridging the health equity gap.[12]

"It's great to see more and more partners looking at other aspects of the quintuple aim beyond just cost-effectiveness," Upadhyay says.

> "
> At Ada, we're engaged with partners who are committed to the long term and want a partner that can deliver bigger transformational gains and co-create a better future together."

Think beyond ROI

Digital health companies are facing a burden of proof in an economic climate with persistent demands to explain how their tools provide value to patients, providers, and health systems.[13]

Evaluating ROI in terms of financial gain is essential, but it's important not to overlook the broader, non-financial benefits that digital health tools provide. Patient outcomes, provider efficiency, and overall organizational improvements should be factored into a more comprehensive assessment of value.[14]

5 recommendations
for health system leaders to realize value from digital health transformation

1   **Think bigger:**
Adopt a holistic ROI framework that evaluates digital tools beyond financial metrics, considering patient care and operational efficiencies.

2   **Proactively set expectations:**
Engage stakeholders across your ecosystem, such as finance, clinicians, executives, patients, IT, and others, to establish a shared understanding of metrics and your desired ROI.

3   **Set yourself up for success:**
Establish specific, realistic KPIs that track incrementally to the overall outcomes goals, and ensure your organizational maturity correlates to the level of transformation offered by the proposed technology.

4   **Appreciate time-to-value:**
Not all benefits from digital health investments are realized immediately. In your business case, pick your quick wins, but acknowledge that some value may emerge over longer timelines, particularly for more complex or less transactional measures.

5   **Remember the key ingredient - data:**
Measuring and sharing baseline data allows for accurate and meaningful measurement of ROI.

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AI isn't, nor shouldn't be, a silver bullet for all of the problems that we're trying to solve in healthcare,"

says Lucy Orr-Ewing, chief of staff and head of policy for the Coalition for Health AI (CHAI). "Whether we're looking at top-down digital transformation or AI integration use case by use case, there needs to be a lot more internal and external marketing to the stakeholders involved and affected around what the value of digital and AI can be."

A growing recognition of these issues has led to calls for a "reconciliation" in healthcare that shifts thinking toward value as a concept, not a metric, and acknowledges that ROI, on its own, is insufficient for gauging the value of digital health tools.[15]

The problem with value-based care is the lack of a solid definition of value, Goldsack argues.

"We're at a pivotal point in healthcare where we need to define value regardless of whether we're using a digital approach or not, and that's also going to fuel the commensurate advancement of value-based care," Goldsack adds. "If the goal of the healthcare industry is to improve the way we care for people, then we should just be measuring how well we care for people, and digital health should be about outcomes."

The focus on big, quick returns also detracts from the value of tools that offer a long-term impact. A tool that leads to an earlier diagnosis for a single patient or small group of patients justifies the investment, but those cost savings and outcomes won't be visible in an ROI report. A lack of understanding of value can also hinder adoption.

Orr-Ewing believes there is "a real obfuscation right now of how things are working." She cites the need for measuring digital tools so health systems can better understand and chase value that prioritizes metrics like patient outcomes and safety over financial ROI.

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If we can do that at scale and align technologies and solutions to clinical needs, it would save so much time. Focusing on the needs will enable for adoption and allow health systems to realize the value."

Lucy Orr-Ewing, chief of staff and head of policy for the Coalition for Health AI (CHAI).

Understanding ROI Frameworks

Return on investment is multifaceted, and health systems must understand the frameworks that generate value.

Digital health tools can provide financial value, enabling providers to see more patients or increase procedural volume; over the longer term, financial ROI can also come in the form of reduced cost of care or reduced total medical expenses for specific conditions or populations in a value-based care model.[15]

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Take a long view

The concern that projected revenue growth will be insufficient to balance rising costs has 62% of healthcare CFOs expecting further erosion of operating margins.[16]

Digital tools can play an important role, but their impact often takes time to realize; the average time from implementation to realizing a return exceeds one year.[17]

"There's plenty of innovation happening, and there's investment to support that innovation," says Orr-Ewing. "However, we are not doing enough on market readiness to integrate that innovation into care pathways and workflows."

With the right engagement and investment, digital health solutions have the potential to have three times ROI.[18] This shouldn't be the benchmark and there is a danger that these numbers get bandied around as an expectation with little thought of the context and use case benefits; the metric also ignores how long it might take for these to be realized.

Maximizing value realization requires health systems to balance immediate, short-term gains with investments that address longer-term, systemic challenges over a longer time horizon.

Upadhyay continues, "We regularly hear how difficult it is for clients to articulate the value of AI and digital health tools, especially in short-term pilots. Benefits are not always easy to measure for standalone solutions, so we must view it at an ecosystem level and measure longer-term changes and impact in parallel."

At DiMe, the focus is on advancing high-value, evidence-based digital solutions on a tech timeline. There is also an emphasis on long-term value gains resulting from data capture.

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Over time, with high-quality data from digital tools, you can make substantial and differentiated quality improvements within your healthcare environment,"

says Goldsack. "This then positions you to start leveraging that data to make improvements and take informed actions, like proactively offering patients additional or alternative services, resulting in operational efficiencies, improved access, and improved clinical outcomes."

It's important to resist the urge to think of value as static and can be captured in a snapshot moment; ROI is dynamic and the time-to-value realization may change over time, Goldsack adds. Indeed, DiMe worked with the United States Veterans Health Administration (VHA) and together recognized that not all value measures may be achieved immediately, but rather may be realized in a number of years.[19]

When health systems implement a digital tool and expect it to save a specific amount of money in a single areas, this leads to missed opportunities to build on the initial impact and returns of the tool and export potential deeper opportunities to create value across the clinical workflow and the patient journey, says Upadhyay.

"The goal is to help patients to go to the right care at the right time and you can use technology to achieve that," he adds. "Health systems also want patients to have a great experience, and have the system work efficiently. Ultimately, whether it's cost savings or revenue generation, the second order effect is you're helping that health system to continue delivering great care sustainably."

Achieving exponential value beyond rapid financial impact, "will require a culture shift." according to Eric Sutherland, senior health economist at OECD. "Finance itself, for example, needs to play a much stronger role in supporting incentives to align requirements, especially for data and interoperability and policy compatibility."

Looking to a future beyond traditional metrics, Sutherland advocates for a shift in perspective that recognizes that we are collectively trying to achieve an outcome as an ecosystem, and that "how well you have partnered with others" becomes an established measure of value.

However, expectations should be realistic. Holistic ROI might take 5 or 10 years; these are time horizons that are difficult to stomach.

Sutherland echoes what DiME discovered while working with the VHA, explaining,

> "There should be a tangible win that justifies the initial investment. Don't swing for the fences in the first year or two years, you're just trying to break even, but it's two years of working with the intention that you get exponential value after that."

As an industry, we need to evolve our mindsets and approach to ROI in order to truly realize the value of digital health and AI.

Let's continue the conversation: **ada.com/contact**

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