



# EMERGING TRENDS

In Digital Health Investment  
Priorities and Associated ROI

## Introduction

More than four years after the start of the COVID-19 pandemic, U.S. hospitals and health systems face a substantially different market landscape than they're accustomed to. With a median year-to-date U.S. health system operating margin of **2.3% through June**, hospitals today are juggling rising operational costs, reduced reimbursements, clinician shortages of all types, new care delivery or reimbursement models, and increasing competition from non-traditional players. Simultaneously, **the rise of consumerism** in healthcare has impacted patient expectations and is transforming organizational strategies around digital health and patient engagement.

U.S. funding for digital health startups has dropped every year since hitting its zenith of **\$29.2 billion in 2021**, a result of increased borrowing costs and a spate of high-profile **digital health failures** or **bankruptcies**. And amidst all these moving dynamics is an ever-growing world of vended digital health solutions—each of which promises to solve hospitals' most pressing challenges in the most efficient and effective way imaginable. How are health system executives to make sense of all this noise? And what do we know about what is happening in the digital health market today and where it's headed in the next few years?

**Although there are a myriad of multifaceted forces influencing the adoption of digital health solutions today, recent industry survey data—including a survey of healthcare executives commissioned by Panda Health in June 2024—have unearthed some of the most salient industry trends, themes, and market forces impacting the current state of digital health investment.**

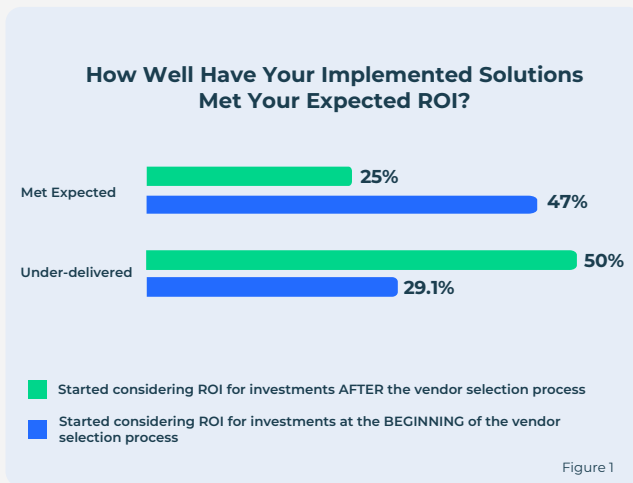


## Key Industry Trends

### Enhanced Emphasis on ROI:

In today's healthcare landscape, the focus on ensuring a tangible return on investment (ROI) from digital health technologies has intensified. Healthcare leaders are increasingly scrutinizing the financial benefits and measurable outcomes of their investments. This shift is driven by the need to justify the high costs associated with digital transformation initiatives, particularly in an environment where profit margins are historically low.

All of the 2024 healthcare executive surveys reviewed for this analysis indicate that healthcare organizations are now prioritizing technologies that offer clear and quantifiable returns, such as advanced analytics and artificial intelligence (AI), over those with less direct financial impact.



### Importance of AI and Advanced Analytics:

As healthcare organizations seek to maximize the value of their digital health investments, the focus on AI and advanced analytics is expected to grow. These technologies offer the potential to revolutionize healthcare by providing deeper insights into patient care, optimizing operations, and reducing costs. While 88% of healthcare executives believe that investments in advanced analytics and AI-powered solutions would have the biggest potential impact to their organizations of any digital investment they could make, they've yet to implement them at the rate or scale of many other legacy digital health products such as telehealth solutions or patient portals.

The shift towards AI-driven solutions is pronounced in larger organizations, which are better positioned to invest in the necessary infrastructure and talent. As these technologies mature, their impact on the healthcare industry is likely to be profound, driving further investment and innovation.

### Operational Efficiency:

One of the reasons why hospitals and health systems are so keen on AI and advanced analytics solutions is that improving operational efficiency remains a critical goal for most of them. AI and machine learning, in particular, are seen as essential tools for automating routine processes, optimizing workflows, and reducing administrative burdens.

As organizations continue to refine their digital strategies, investments in technologies that enhance operational efficiency are likely to remain a priority, offering the potential for significant cost savings and improved patient outcomes.

## Key Industry Trends (Continued)

**Outsourcing and Partnerships:** The substantial market shifts that have occurred since the pandemic have forced most health systems to chase an [asset-light strategy](#) of growth or expansion (foregoing the traditional growth path of building or acquiring additional brick and mortar locations). This new market landscape has caused many provider organizations to re-imagine their own business models and consider opportunities to access new digital health capabilities. However, most U.S. health systems today are not well positioned to build these [new businesses on their own](#). While some have the capital and/or expertise required to grow these capabilities, many others are turning to M&A to accelerate their strategies. From 2010 to 2019, the 10 largest public payers and healthcare providers in the [Global 2000](#) collectively made more than 360 acquisitions, a significant portion of which were deals that involved adjacent market segments. But the costs of these acquisitions tend to be quite high, leaving many health systems unable to compete.

Scale is also critical to digital health value creation. To manage costs and access to cutting-edge technologies without the significant capital outlay, many healthcare organizations are turning to outsourcing non-core functions and [forming strategic joint ventures](#) or alliance partnerships with tech companies or other non-traditional healthcare players. This trend is particularly pronounced among smaller organizations that may lack the resources to independently develop and maintain complex digital infrastructures. For example, partnerships with technology vendors for cybersecurity and cloud-based solutions have become common, enabling these organizations to leverage the latest innovations while focusing on their core mission of patient care.

The market intelligence team at Panda Health is actively monitoring new digital health products or solutions that come into the market that are heavily reliant on AI or machine learning. Eight such AI-powered digital health categories (listed below) are fully defined within the Panda platform:

- Patient Flow Automation
- Process Automation Platforms
- RCM Automation
- AI Capacity Optimization Platforms
- AI Scribes
- Autonomous Medical Coding
- Conversational AI Platforms
- Automated Clinical Data Abstraction Software

**Digital Divide by Health System Size:** A clear digital divide is emerging between large healthcare organizations and their smaller counterparts, as measured by reported annual operating revenue. [Larger health systems](#) are most likely to meaningfully participate in value-based care (VBC) initiatives or contracting, which is why improving patient experience and outcomes—of which they are increasingly held financially accountable for—ranks higher on the priority list than smaller systems. Smaller systems are less likely to be financially or clinically stable—which is why they tend to place a higher emphasis on reducing costs, improving efficiencies, and keeping their dwindling clinical workforce content.

Figure 3 on page 4 further illuminates some of these differences across health systems by revenue size. This divide highlights the challenges smaller organizations face in keeping pace with the rapid advancements in digital health technologies, as they must balance the need for innovation with the realities of limited resources.

## Top Strategic Objectives for Digital Health Investments Over the Next Three Years:

### Small Health Systems (Less than \$350M)

- Improve Clinician Satisfaction/Reduce Burnout
- Improve Patient Experience
- Reduce Technology Cost & Complexity
- Improve Administrative Workflow & Operational Productivity
- Improve Clinical Workflows & Throughput

### Medium-Large Health Systems (\$750M – \$1.5B)

- Improve Patient Outcomes
- Improve Clinical Workflows & Throughput
- Improve Patient Experience
- Attract New Patient Volumes
- Reduce “Leakage”/Improving “Keepage”

### Small-Medium Health Systems (\$350M – \$750M)

- Improve Patient Experience
- Advance Health Equity
- Improve Administrative Workflow & Operational Productivity
- Reduce Denials
- Improve Patient Outcomes

### Large Health Systems (More than \$1.5B)

- Improve Patient Outcomes
- Improve Patient Experience
- Improve Clinician Satisfaction & Reduce Burnout
- Improve Clinical Workflows & Throughput
- Advance Health Equity

Figure 3

## Tailwinds

### Satisfaction Levels with Current Investments:

While [recent survey data](#) indicates that as much as 70% of healthcare organizations have yet to see an adequate ROI for their digital health investments, there are many digital health product categories where hospitals and health systems are quite satisfied. Healthcare systems that have invested in digital health solutions such as advanced analytics (80%), virtual care (74%), digital front door (73%), revenue cycle management (RCM) automation (72%), contracting or VBC enablement (71%), cross-site capacity management (71%), and remote patient monitoring (70%) report very high levels of satisfaction. This indicates that when these specific technologies or digital solutions are implemented correctly, they can deliver significant value, both in terms of improved patient outcomes and operational efficiencies.

### Growth in Digital Health Spending:

Since 2019, [75% of providers](#) have increased their digital health/HIT budgets, with one in five citing budget increases of more than 30 percent. The same survey found that 86% of health systems anticipate that their digital health/HIT budgets will increase during 2024. At the same time, [a different survey](#) of healthcare executives indicated that budget constraints or capital limitations are the second biggest challenge for health systems executing a digital transformation over the next two years. This likely reflects the diversity of challenges that hospitals and health systems across the country face and perhaps indicates that digital health/HIT budgets aren't increasing at a fast enough rate to meet burgeoning demand.

## Headwinds

### Financial Constraints Amidst Challenging Hospital Climate:

Despite the enthusiasm and expanding budgets for digital health technologies, many healthcare systems face significant financial constraints that limit their ability to invest in new innovations. Non-profit hospitals, in particular, are operating on razor-thin profit margins, typically **between 1-3 percent**. It isn't surprising that in the current macroeconomic climate, health system executives ranked budget or capital limitations as the **number one challenge** that is preventing their organization from executing their digital transformation. This financial reality forces healthcare systems to be highly selective in their digital health investments, prioritizing those that promise the most substantial or direct ROI.



**Non-profit hospitals**, in particular, are operating on **razor-thin profit margins**, typically **between 1-3%**

### Complex Digital Implementation Challenges:

Operationalizing digital health investments remains a daunting challenge for many hospitals and healthcare systems. Integrating new technologies with legacy systems, managing the complexity of technology stacks, and ensuring that staff are adequately trained are common obstacles. The absurdly high switching costs (both financial and operational) of changing digital health vendors was, unsurprisingly, **the top listed challenge** to health systems executing a digital transformation in the next two years. These challenges are particularly pronounced in organizations with limited IT resources, where the burden of implementing and maintaining new technologies can overwhelm existing capabilities. Consequently, even when digital health solutions are implemented, the full benefits may not be realized due to these persistent barriers.

## Where the Industry is Headed: The Next Three Years of Digital Health Investment

So which areas of digital health are expanding vs. contracting? For better or worse, the digital health industry seems to be rife with hyperbolic headlines and company superlatives galore. We have mountains of empirical data at our fingertips today that simply wasn't available to us 10 to 15 years ago, but it's far too easy for digital health organizations to give in to the temptation of manipulating data interpretation to serve their marketing agenda and needs. And the arrival of the misinformation age has only further exasperated health system executives trying to credibly assess the various solutions and vendors on the market.

Cutting through all of that distracting information, we're highlighting the digital health domains and categories where health system interest is trending up or down, based on the latest empirical survey findings across the industry.

## Areas Where Digital Health Interest Remains High

**Cybersecurity:** In response to the [record-breaking number](#) of data breaches and malware attacks in the healthcare industry, cybersecurity has seen a significant spike in demand and interest. This shift is also partially due to the healthcare industry significantly [under-investing in cybersecurity](#) infrastructure historically—relative to every other industry—for decades.

A January 2024 survey of health system executives found that [55% cited cybersecurity](#) as their top digital health investment priority for 2024. As healthcare systems become increasingly digitized, the need to protect sensitive patient data has never been greater.

### **Workforce Optimization:**

As growing [clinical labor shortages](#) continue to plague the healthcare industry, investments in digital solutions that optimize workforce management and reduce staffing inefficiencies are becoming increasingly prioritized. Technologies that support workforce optimization, such as clinician scheduling software and patient flow automation software, are becoming essential components of healthcare organizations' digital strategies. These investments not only help to address immediate staffing challenges but also contribute to longer-term improvements in workforce satisfaction and retention.

### **Patient Experience and Outcomes:**

Improving patient experience and outcomes remains a major priority, especially for medium to large health systems (over \$750M in operating revenue)—who are also the most likely to be seriously engaged in [VBC contracting](#) and thus are more at-risk with patient experience and outcomes.

Unsurprisingly, clinical executives consistently rate patient experience and outcomes as their most important strategic objectives. However, there is a noticeable shift in focus among CFOs and IT leaders, who are placing less emphasis on this area in the near-term. This divergence may reflect a more cautious approach by financial and technology leaders who are prioritizing investments that offer more immediate returns, such as operational efficiencies and cost reductions.

### **Staff Satisfaction and Burnout:**

Addressing clinician burnout and improving staff satisfaction are critical priorities for healthcare systems, particularly as these issues are reaching a [fever pitch](#) across the industry. Investments in tools that reduce administrative burdens, streamline care delivery, and provide decision support are seen as essential to retaining healthcare workers. For example, the adoption of care transition management software and chronic care management platforms can help alleviate some of the pressures faced by clinicians, leading to better job satisfaction and reduced burnout.

In a January survey,  
**55% of health system executives** cited cybersecurity as their **top digital health investment priority for 2024.**

## Areas Where Digital Health Interest Is Waning

### Improving Patient Engagement:

Interest in improving patient engagement appears to be in decline, as many healthcare organizations view existing digital tools like patient portals and digital front doors as standard product offerings, no longer areas to meaningfully differentiate themselves from the competition. Instead, the focus is shifting to technologies like AI, cybersecurity, and workforce optimization, which offer more immediate benefits. With ongoing budget constraints and pressures to demonstrate clear and tangible ROI, patient engagement has become a lower priority compared to solutions that directly impact efficiency and cost savings.

### Reputation Management:

Interest in reputation management among provider organizations has fallen to its lowest point in recent memory. While it was a moderate priority in the past, it appears less frequently on ranked digital health priority lists for the short- and medium-term. The shift towards more quantifiable and impactful digital health investments likely reduces the focus on reputation management. Health systems may also perceive some of these other more novel digital health solutions as beneficial to their reputation, thereby diminishing the need for a single reputation management solution.

### Collection Rate/The Cost to Collect:

There has been a noticeable drop in demand for certain functions of the RCM process: improving collection rates and reducing the cost to collect within healthcare systems. This trend aligns with the broader focus towards more transformative investments like AI and cybersecurity, which are seen as offering greater potential for operational efficiency improvements. As organizations prioritize these broader initiatives, more targeted areas like cost collection are receiving less attention.

Considering your orgs' decision making on vended digital health solutions for this year vs. the next 3 years.

Which strategic objectives do you believe are most important to your investments?

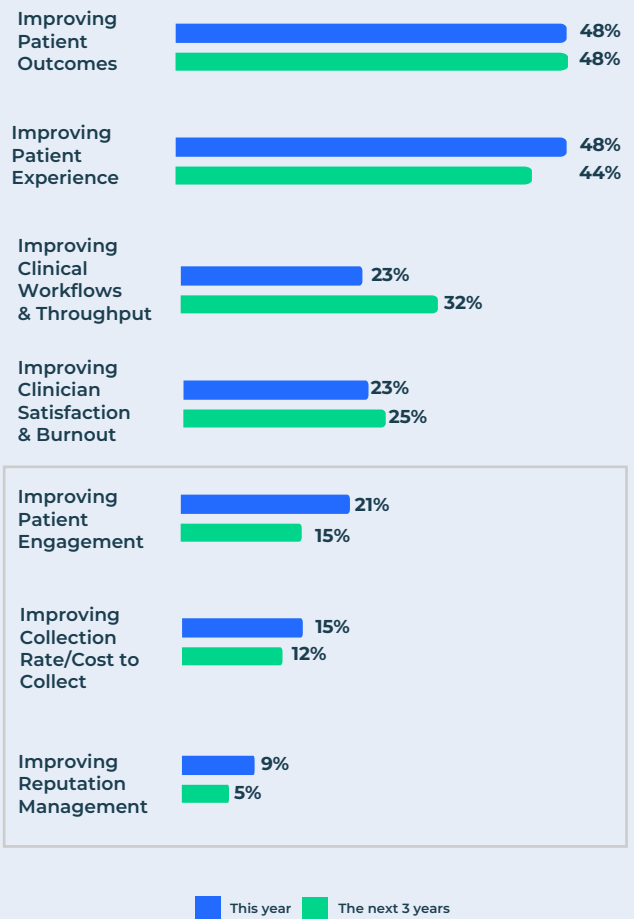


Figure 4

Figure 4 shows how interest is declining amongst health systems looking to improve patient engagement, reputation management, or their collection rate/cost to collect.



## Conclusion

Healthcare executives consistently rank budget limitations and/or sky-high switching costs as the top reasons preventing them from executing their respective digital transformations or strategic plans. And while some health systems will be able to allay some of these challenges by striking new creative strategic partnerships, many hospitals and health systems will understandably feel unable to single-handedly change the fortunes of their quest towards full digital transformation.

However, recent [survey findings from McKinsey](#) indicate that five of the top nine cited impediments preventing hospitals and health systems from executing their digital transformation strategies are areas where they have a higher locus of control to influence change.

### Survey: Top 3 Impediments to Health System Digital Transformation in the Next 1-2 Years\*

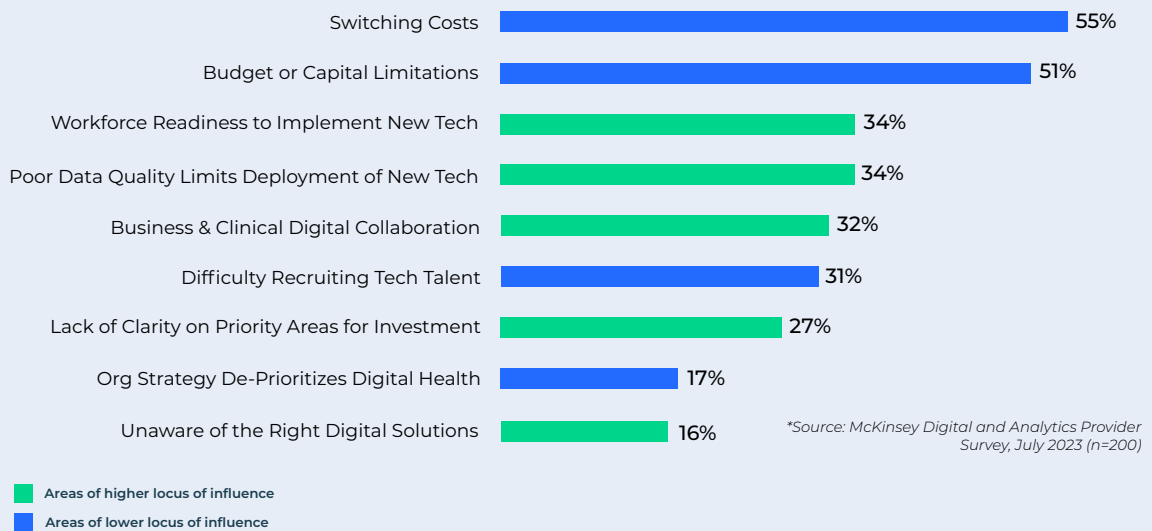


Figure 5

In order to ameliorate organizational challenges such as workforce readiness, poor data quality, lack of digital solution clarity, or digital collaboration between the business and clinical sides of an enterprise, healthcare leaders will need a community of like-minded provider systems to field targeted questions or share best practices regarding their vended digital health solutions. They will need curated, actionable intelligence distilled to help them differentiate between an array of seemingly like-minded products or services and to ultimately make more informed decisions on the vendors that they use. And they'd benefit substantially from having a fully integrated marketplace for digital health solutions that cross-pollinates shared community intelligence with deep dives on digital health categories and proprietary data insights.

**This whitepaper is authored by Chris Loumeau, MHA, Senior Manager, Market Intelligence at Panda Health.**