Embracing Healthcare's Digital Transformation

HURON

ACCELERATING STRATEGIES TO TRANSFORM COST, CARE AND THE CONSUMER EXPERIENCE

For years, fundamental changes to how healthcare uses technology, data and analytics to improve business and patient outcomes have been underway. Progress has been choppy, ranging from a decadelong meaningful use journey to the overnight acceleration of digital health during the COVID-19 pandemic. At the same time, business systems have required deep investment as healthcare organizations attempt to keep pace with the digital transformation occurring across all industries.

Today, the pressure is building for organizations to **find new innovations to drive breakthrough improvements in** their business and clinical operations, including bolstering consumer and employee experiences.

Recently, Huron interviewed more than 200 health system leaders to identify the **data, technology and analytics trends most important** to organizations in a constantly changing and increasingly competitive environment. This research adds to earlier market analysis drawn from Huron's annual provider survey and research on the consumer healthcare and payor healthcare markets, all of which provide further insight into how leaders are positioning for the future of healthcare.

Key Takeaways:

▶ Digital, technology and analytics **strategies exist for nearly all organizations**, yet only 30% have begun to execute on those plans.

▶ Enterprise-level technology investments underpin progress in all aspects of healthcare operations, but more strategy will be needed to **realign to consumer-driven and value-based trends** and priorities.

▶ Strategic alliances, including managed services and outsourcing, may be a key solution to **provide the rigor and support organizations** need to accelerate the benefits of their digital, technology and analytics investments.

▶ Cost containment and growth will be enabled by technology as organizations seek to be more agile and efficient to **mitigate pandemic-related financial woes** and build long-term financial health.

▶ Care delivery and consumerism technology investments will focus on providing more integrated, seamless and **contactless care experiences**.

▶ Robotic process automation (RPA), artificial intelligence (AI) and machine learning (ML) remain central to **cost containment, growth, and consumerism and care solutions**, despite the slow progress with advanced analytics thus far.

LEADERS IDENTIFY CURRENT AND FUTURE ORGANIZATIONAL PRIORITIES

Huron's research provides insight into the top organizational priorities of leaders, rated by the level of importance in the next 12 months — and then the next one to three years. These priorities, or "jobs to be done," point to the most important areas leaders expect progress in the near term and beyond (see figure 1).

Notable in the findings is the high importance leaders assign to every priority across their organization in the coming year. And while the ranking of priorities shifts slightly as leaders look one to three years ahead, the importance of each priority only intensifies.

Evident in each of these priorities is the underlying need for the healthcare industry to leverage technology and data to improve how it operates.

Improving care access and the consumer journey, as well as the employee experience, will be driven by technology-focused initiatives and investment in enterprise technology. Cost containment, growth and workforce optimization indicate a clear focus on optimizing business operations, all of which will be brought to life through automation and advanced analytics.

Figure 1. Organizational priorities of healthcare leaders now and in one to three years

Most Important   2nd most important

Organizational Priorities: Next 12 Months
Improved care access
Improved consumer journey and experience
Data sharing, management and security
Payor interoperability
Increased business efficiency and operational agility
Cost containment
Workforce optimization
Automation and advanced analytics
Growth

Organizational Priorities: Next 1 to 3 Years
Payor interoperability
Data sharing, management and security
Growth
Improved consumer journey and experience
Improved care access
Workforce optimization
Cost containment
Automation and advanced analytics
Increased business efficiency and operational agility

Evident in each of these priorities is the underlying need for the healthcare industry to leverage technology and data to improve how it operates.

Across all priorities, organizations will have to address long-standing deficiencies in the ability to access, share and apply data across the care continuum and between stakeholders. With deadlines looming for the Interoperability and Patient Access final rule from the Centers for Medicare & Medicaid Services (CMS), both payors and providers will be working to make technical and workflow adjustments consistent with implementation guidelines. It is imperative that organizations develop a comprehensive view of the implications of the CMS regulations, including governance, technology infrastructure, security, processes and data quality.

Leaders will continue to reorganize their priorities and goals in response to the financial and operational challenges of the pandemic. While dynamics can quickly change, Huron's current research finds that 68% of healthcare leaders expect to progress beyond COVID-19 response and management by the end of 2021. The remaining 32% foresee an end to COVID-19 response and management by June of 2022. For most leaders, transformation imperatives related to cost, growth, care and consumerism are pushing ahead with urgency.

Narrowing In: Digital, Technology and Analytics Opportunities

With leaders' most important jobs to be done identified, Huron's research uncovered the specific digital, technology and analytics challenges leaders are facing and the initiatives they are taking to address them.

These top challenges directly tie to care access, business optimization and consumerism. As shown in figure 2, leaders identify challenges as those attached to telehealth, interoperability, data-driven decision making, consumer-facing digital tools and workforce.

To address these pressing challenges, leaders' current initiatives also reveal a focus on care access and growth as they work to increase telehealth capacity, implement artificial intelligence (AI), and increase patient engagement and experience. Initiatives to enhance cybersecurity should be well established for organizations as they scale initiatives and work to build digital trust for growing consumer-focused offerings.

Figure 2. Digital, technology and analytics challenges and initiatives in healthcare

Current Challenges — Digital, Technology and Analytics	Current Initiatives — Digital, Technology and Analytics
Adopting telehealth and digital care delivery methods	Integrating and increasing telehealth capacity
Collecting COVID-19-specific data (vaccines, tests)	Enhancing cybersecurity
Interoperability between telehealth, independent and ERP systems	Increasing network broadband and bandwidth capacity
Utilizing data to drive decision making and business strategy	Evaluating opportunity for artificial intelligence
Navigating reimbursements and payment models for telehealth	Strengthening patient engagement and experience
Managing risk and compliance amid changing regulation	Integrating data across equipment and devices
Developing or enhancing consumer-facing tools	Ensuring adequate reimbursements for telehealth
Adoption of technology to aid remote workforce	Expanding remote patient monitoring technology offerings
Addressing variation in data provided by payors	Utilizing cloud and SAS data analytics offerings
Ensuring data integrity across partner organizations	Increasing funding for optimized tech stack
Monitoring and increasing staff productivity and efficiency	
Securing patient data and medical devices	
Providing communication tech between patients and family members	
Time-consuming data loads and testing	

Challenges are ranked by order of importance.

OPPORTUNITY EXISTS IN EXECUTING STRATEGY

While leaders universally understand the urgency behind a well-defined digital, technology and analytics strategy, it is clear many are struggling to create a road map that incorporates these plans into broader organizational goals.

Nearly all (99%) of healthcare organizations have a one-to-three-year digital, technology and analytics strategy in place. However, figure 3 highlights how more than half have not yet begun executing those plans.

Closing the Strategy and Execution Gap

As the data indicates, leaders have a big-picture vision for data and technology, but strategy and execution quickly fragment as leaders attempt to push out platforms, programs and data to departments or enterprisewide. Moreover, organizations tend to have an excess of disjointed data and technology point
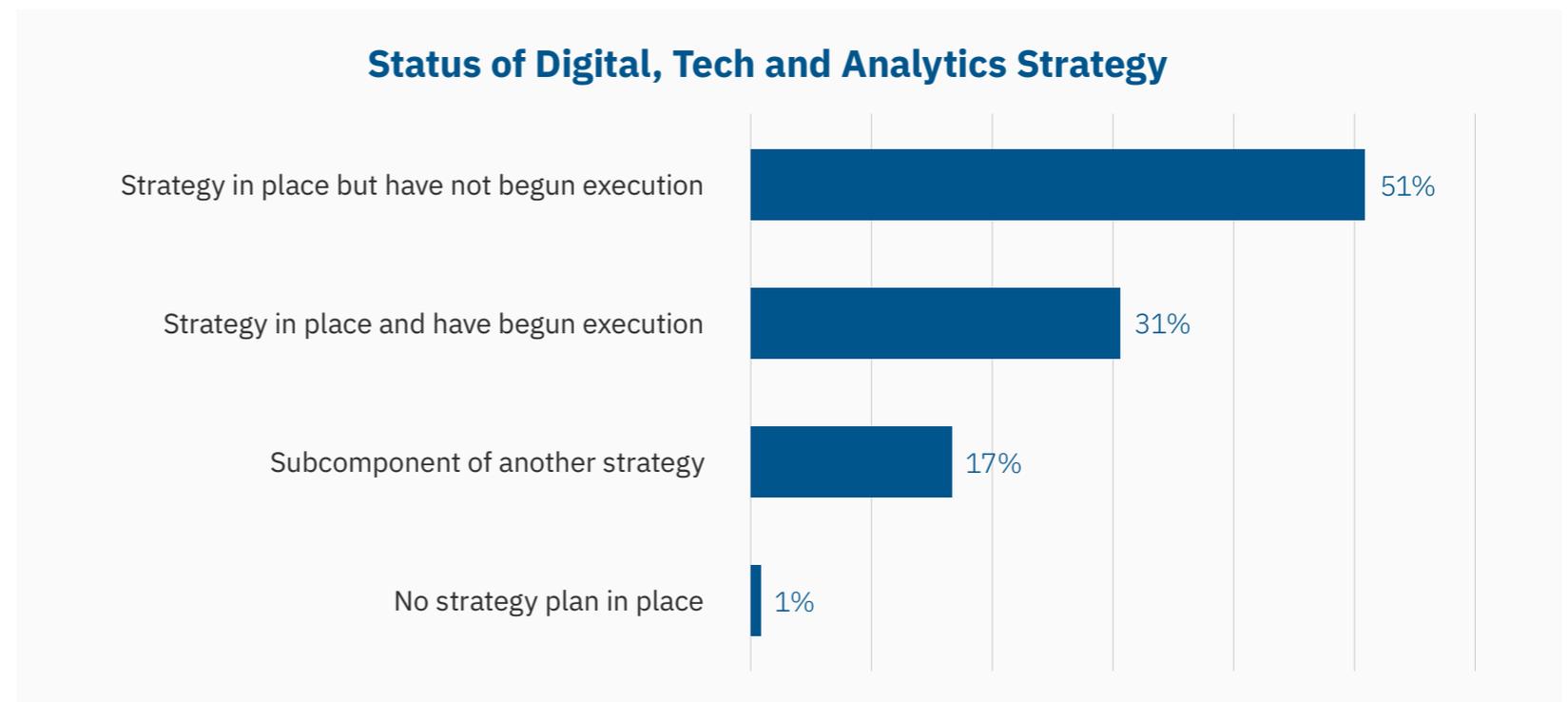
Status of Digital, Tech and Analytics Strategy

Strategy in place but have not begun execution	51%
Strategy in place and have begun execution	31%
Subcomponent of another strategy	17%
No strategy plan in place	1%

Figure 3. Status of digital, tech and analytics strategies

solutions across their enterprise intended to solve a variety of problems.

To close the gap between strategy and execution, leaders should be building governance structures and a sustainability model that links their strategic plans to their increasingly complex ecosystem of digital assets. For optimal results, leaders need a

thorough understanding of the current analytics footprint and capabilities that exist across their cloud technology platforms — and intentionally plan to integrate those with their data models.

Technology should provide value to providers, employees and consumers while maintaining the appearance of simplicity and efficiency for the user. Organizations will have to ensure

data strategies map seamlessly to end-user workflows to eliminate parallel paths of work or point solutions that pull people away from the consistent use of technology. Otherwise, end-user compliance will wane as people seek workarounds and fall back to old ways of operating. A sustainability structure combined with ongoing change management efforts helps leaders maintain alignment to business and clinical data intelligence generated from analytics programs that result in improved execution.

Building Smarter Alliances

Despite efforts to formulate and implement digital, technology and analytics strategies to spark organizational transformation, leaders are struggling to make progress. Huron's research shows that leaders are looking for outside help from outsourcing and managed services. These alliances help reduce risk, increase compliance and drive value from digital and data assets for the organization.

Figure 4 shows that more than half of leaders see themselves benefiting from collaborations in data management as organizations look for ways to improve their cost structures and care delivery. As value-based care and risk-based models gain traction, clean and accurate data becomes even more critical to improving business and clinical outcomes.

Data as a service (DaaS) will become more important to data management strategies as organizations seek to maximize the value of their data assets to create population insights. Providers can look to outsourcing or strategic alliances to help anonymize, aggregate, validate and develop governance for their data, ensuring it remains a trusted and valued asset internally or for research-based data sharing collaborations externally.

Evolving business models — inclusive of strategic relationships, managed services and outsourcing — will provide an opportunity for organizations to strengthen their data analytics expertise and talent, while upskilling their workforce to gain competitive advantage.
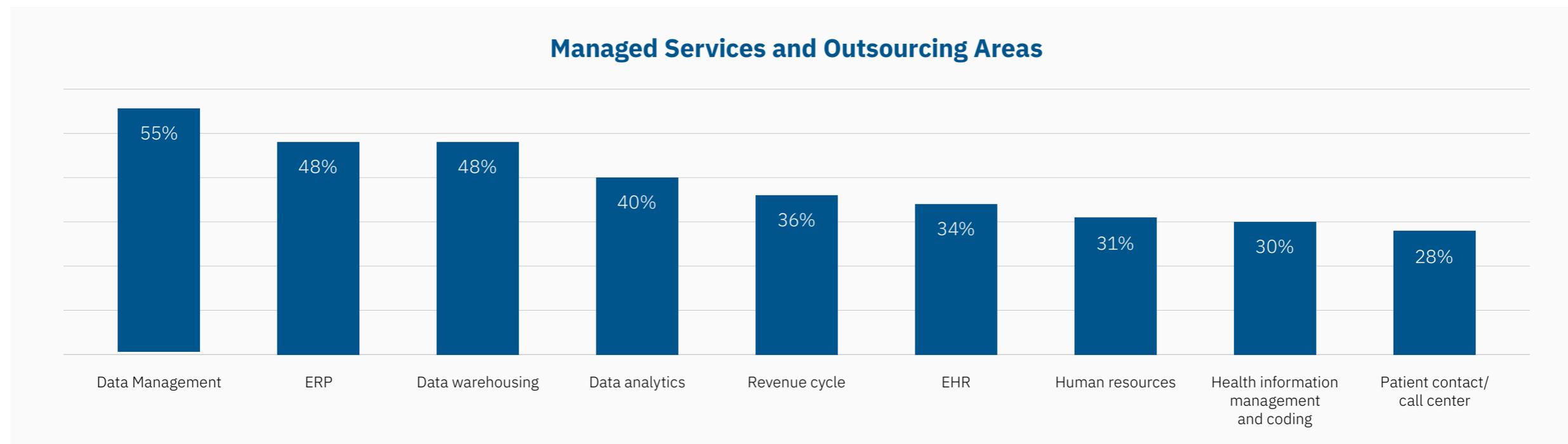
Managed Services and Outsourcing Areas

Data Management	ERP	Data warehousing	Data analytics	Revenue cycle	EHR	Human resources	Health information management and coding	Patient contact/ call center
55%	48%	48%	40%	36%	34%	31%	30%	28%

Figure 4. Opportunities for managed services and outsourcing in healthcare

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PRIORITIZING CORE AND EMERGING TECHNOLOGY

Core and emerging enterprise-level technology provides the foundation to power healthcare organizations into the future and sets the pace for their digital transformation. Huron's research finds that organizations expect to continue investing in these technologies for the next 18 months.

According to Huron's research, 62% of leaders expect to make investments in their electronic health record (EHR) and enterprise resource planning (ERP) platforms; a third of leaders will do the same for customer relationship management (CRM) and enterprise performance management (EPM) systems.

Given the financial focus executive leaders recently noted, it is expected that ERP will garner a large investment. Similarly, EHR investments are high, given priorities related to business and clinical efficiencies, payor interoperability, and improving the consumer and clinician experience.

In the desired future state, consumers and physicians should interact with one technology entry point, supported by seamless back-end interoperability of all systems.
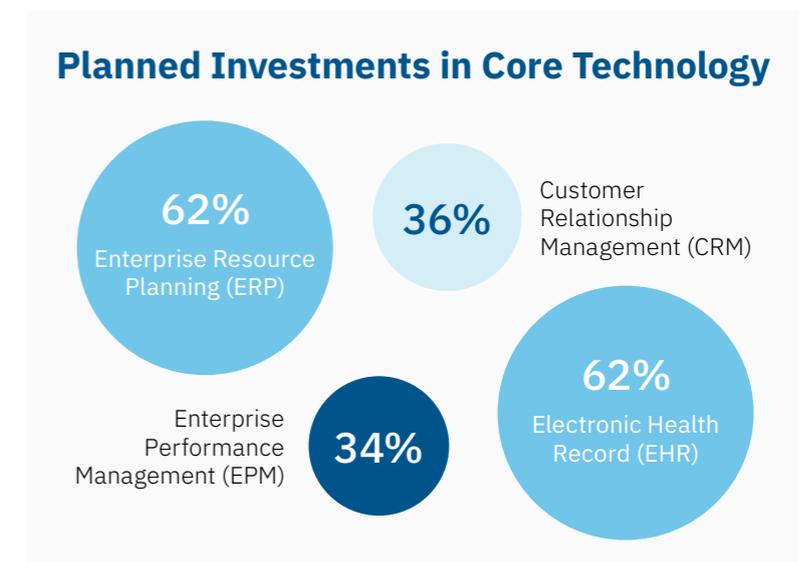
As shown in figure 5, leaders' current focus on CRM lags that of ERP and EHR. This lack of planned investments in CRM may present unintended challenges for organizations given their expressed priorities such as improving care access and the consumer journey. CRM systems provide the important infrastructure to support patient engagement in a value-based, consumer-driven landscape.

As leaders may also be struggling to unite disparate CRM systems and vendors spread across the health system, there is an opportunity to refine strategy. Creating a vision for the organization's long-term CRM approach that aligns to its technology-led consumerism plans will require deeper prioritization in the months ahead.

With the recent acceleration of digital health, portal strategies are being reemphasized. As leaders execute on final-stage connectivity or umbrella strategies for patient portals, they will continue to explore and define the intersection points of CRM, patient portals and consumers. In the desired future state, consumers and physicians should interact with one technology entry point, supported by seamless back-end interoperability of all systems.

Figure 5. Healthcare leaders' planned investment in core technology

Planned Investments in Core Technology

- **62%** Enterprise Resource Planning (ERP)
- **36%** Customer Relationship Management (CRM)
- **34%** Enterprise Performance Management (EPM)
- **62%** Electronic Health Record (EHR)

COST CONTAINMENT, GROWTH AND THE FUTURE OF FINANCIAL HEALTH

During the pandemic, leaders made digital adjustments that were necessary for their organizations to continue delivering care safely while stabilizing financially. Today, economic pressures have intensified with regulatory uncertainty, shifts in payor mix, and the dynamic of rising costs and shrinking reimbursements.

Building financial health through cost containment and growth is vital. In the next 12 months, organizations must go beyond the basics to find breakthrough improvements in business efficiency and operational agility, all of which will be enabled by technology and data-driven analytics and insights.

Improving Business Operations With Technology-Led Innovation

Huron's research finds that 60% of leaders foresee RPA and AI driving cost reductions, followed closely by revenue management, clinical documentation improvement (CDI) and interoperability initiatives (see figure 6).

Cost Containment Measures

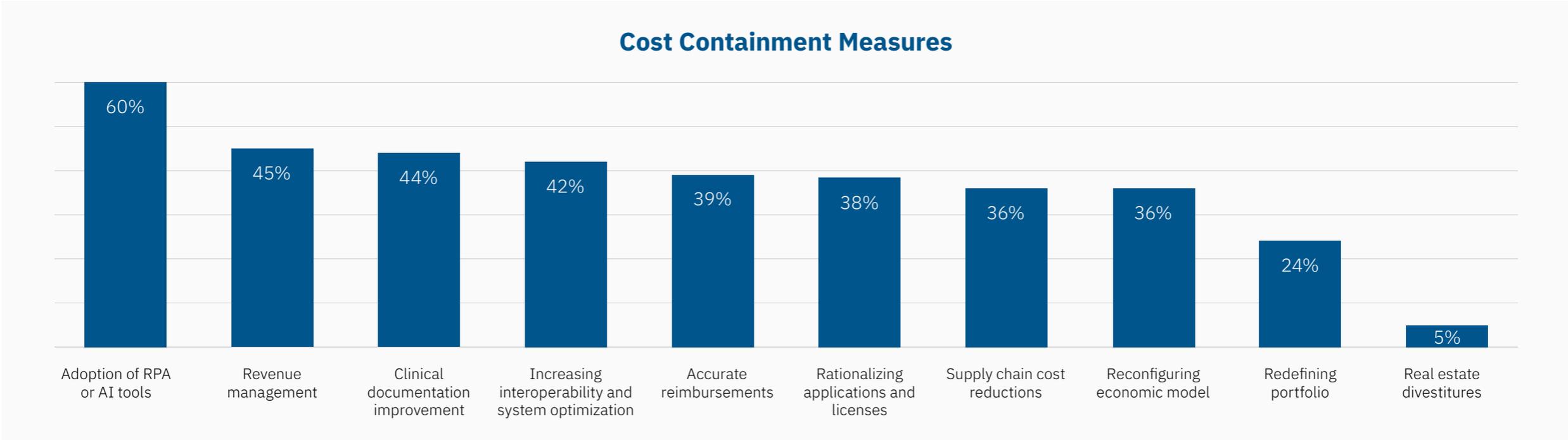|		
Adoption of RPA or AI tools	60%	
Revenue management	45%	
Clinical documentation improvement	44%	
Increasing interoperability and system optimization	42%	
Accurate reimbursements	39%	
Rationalizing applications and licenses	38%	
Supply chain cost reductions	36%	
Reconfiguring economic model	36%	
Redefining portfolio	24%	
Real estate divestitures	5%	

Figure 6. Measures healthcare leaders will utilize in the next 12 months to support cost containment

Technology-driven programs that optimize fundamental functions such as [revenue cycle](#) and [supply chain](#) will require [optimizing core technology](#) and using advanced analytics to drive efficiency and decision making. Additionally, in Huron's research, leaders foresee technology being most important in helping redefine their portfolio and supporting CDI efforts.

A full 66% of leaders say that ERP investments will underpin efforts to modernize supply chain, which will enable both cost containment and scale as organizations grow through ambulatory expansion, alternative delivery modes of care, and mergers and acquisitions (M&A). More than half will look to EHR optimization to increase revenue cycle and clinical functionality.

The combination of natural language processing (NLP) tools from cloud platforms, as well as from traditional voice recognition vendors, will continue to drive financial and clinical benefits — from improvements in documentation, order entry, billing and coding. Ambient listening, NLP, AI and ML have the ability to reduce clinician administrative burden and increase the benefits from CDI initiatives.

In a post-COVID-19 landscape, workforce optimization is also top of mind for leaders as they experience issues such as high turnover, aligning staffing needs to shifting patient volume, and burnout. Leaders report they will lean on technology to solve for workforce and productivity challenges, including recruitment, retention and employee engagement.

Workforce and Productivity Tech Investments

Category	Percentage
Leverage AI or ML solution(s)	62%
Employee apps	50%
Care staff alerts and push notifications	50%
Personnel management system	38%

Figure 7. Workforce and productivity technology solutions where leaders expect to invest

create fully optimized workflows. Digital capabilities and data should be guiding decisions with tools such as predictive analytics. By adopting and integrating these tools in a purposeful way across the enterprise, instead of siloed as point solutions, leaders can drive transformation.

Evolving Cost Strategies for the Future

While Huron's research uncovers the key cost improvement controls leaders expect to deploy in the months ahead (figure 6), the measures fall short of addressing the deeper financial dynamics present in the healthcare market.

Typical single-digit cost reduction efforts are necessary but not sufficient to thrive amid rising costs, shrinking margins and intense competition. Instead, leaders should be exploring transformational cost strategies capable of generating the margin improvements necessary to accelerate a growing list of organizational priorities. With these strategies, organizations can change the economics of the market permanently, redesigning both clinical and operational delivery models for market, consumer and system needs.

In Huron's research, 65% of respondents point specifically to the use of automation to streamline staff license retrieval and credentialing; 62% will invest in technology for application screening. These manual human resources processes can leverage

automation to meet the rapid expansion of telehealth and the growing virtual workforce.

There is an opportunity right now for organizations to actively find ways to integrate physical processes with digital data to

Leveraging Technology for Growth

Whether expanding geographical, specialty care or digital footprints, healthcare organizations are striving to serve more people, more efficiently and with better outcomes. Past Huron research on ambulatory growth in the healthcare market reveals deep-rooted trends in the expansion of care outside the hospital. Moreover, the broad and rapidly evolving ecosystem of digital health is accelerating growth across the care continuum.

Huron's research reinforces the connection leaders see between organizational growth and technology. More than half of leaders identify ambulatory expansion as a key driver of growth in the next 12 months, along with technology-enabled virtual care. Initially serving as a COVID-19 response tactic and now a growth strategy, investments in virtual care provide leaders with an opportunity to improve care access and increase patient volume.

While leaders indicate that technology is important for all growth measures, they place highest importance on technology to support virtual care, data-driven decision making and staffing strategies. With the digital push during the pandemic, health systems are in a position to leverage telehealth platforms for geographic and service line expansion and will continue to evaluate new business models amid reimbursement uncertainty.

Additionally, leaders report utilizing EPM to fuel growth in the areas of investment and divestment management, supply and demand modeling, and the monitoring of financial outcomes. Business intelligence gleaned from enterprise-level data will be critical to expanding networks and supporting decisions about new care delivery and business models, service line rationalization, the expansion of virtual services and an overall redefining of the portfolio of an organization.

Growth Measures

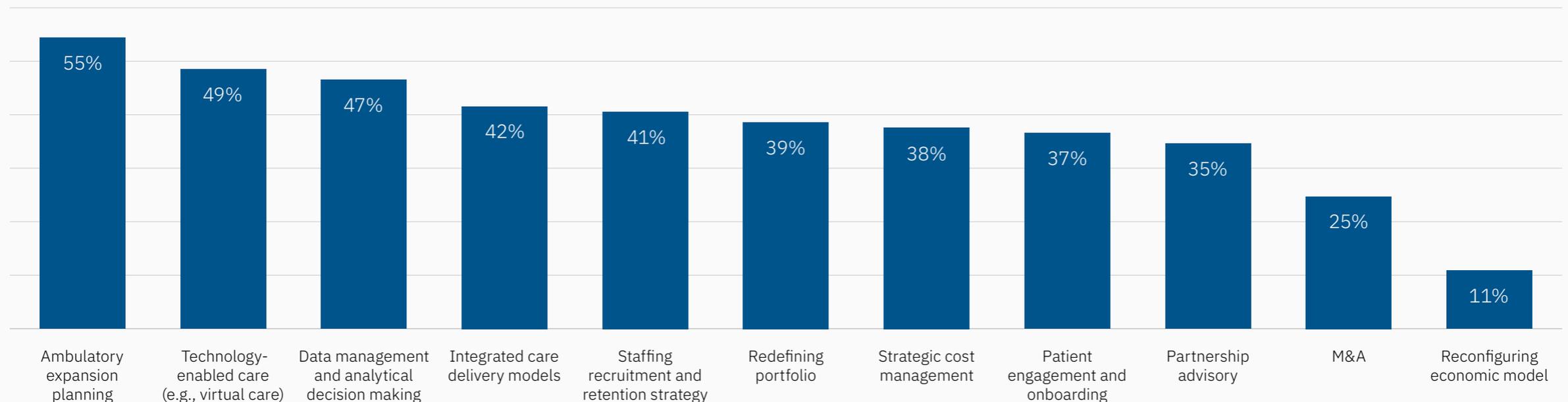| Growth Measure	Percentage
Ambulatory expansion planning	55%
Technology-enabled care (e.g., virtual care)	49%
Data management and analytical decision making	47%
Integrated care delivery models	42%
Staffing recruitment and retention strategy	41%
Redefining portfolio	39%
Strategic cost management	38%
Patient engagement and onboarding	37%
Partnership advisory	35%
M&A	25%
Reconfiguring economic model	11%

Figure 8. Growth measures leaders anticipate over the next 12 months

RELIANCE ON TECH GROWS FOR CARE AND CONSUMER TRANSFORMATION

U.S. health systems continue to redefine themselves as major shifts occur in how and where patients receive care. Across all of Huron's research, the re-imagining of care access, consumerism, and how providers connect with patients and their families is underway and will continue to emerge as key components of care transformation.

Expanding and Enhancing Care

In Huron's most recent analysis, leaders name improved care access as their No. 1 priority in the next 12 months (figure 1). Disruption to consumer volume and evolving care delivery models are pushing leaders to deepen their focus on care transformation. In figure 8, 42% of leaders name integrated care delivery models as a growth priority; 49% will leverage technology-enabled care; and more than half (55%) are planning for ambulatory expansion.

Virtual health delivery, including navigating reimbursement models and regulation, will continue to garner attention and resources. As indicated in figure 2, adopting telehealth and digital care delivery ranks as the top digital challenge for organizations; 55% see integrating and increasing telehealth capacity as their most important change or initiative. Similarly, within the area of clinical care, 63% of leaders report they will focus on technology investments that enable virtual rounds and patient visitation as well as a focus on diagnostic imaging.

Without exception, the ability to access and understand data is paramount to transforming care. Leaders should be looking to leverage population insights and predictive analytics to understand risk factors and inform overall care strategies as well as individual patient interventions to improve outcomes.

More than half of organizations interviewed expect to leverage CRM investments to improve care access and the clinician and consumer experience.

As digital assets that support care delivery mature, more focus is needed on the intersection of an organization's website, EHR, portal and CRM strategies in order to support a positive, consistent consumer digital experience.

Investments in CRM will prove critical as more than half of organizations in Huron's research state that they will leverage the technology to improve care access and the clinician and consumer experience. CRM will also allow organizations to expand their

digital capabilities, attracting new patients and improving interactions across the entire consumer journey. EHR optimizations and investments will include efforts to improve clinician experience and clinical functionality with a focus on transition to the cloud.

Improving Quality and Outcomes

Whether harnessing basic patient data and analytics to make real-time care decisions or developing more transformative strategies, technology and data are critical to the future of quality care delivery. Organizations are already leveraging their EHRs as the primary drivers for fully integrated AI and ML solutions to curtail readmissions and reduce the prevalence of hospital-acquired conditions. Looking ahead, leaders will need to evaluate their investments in clinical informatics, integrating new digital, data and cloud assets to their existing technology footprint.

Analytics will also help improve the clinician end-user experience, providing a better understanding of how physicians interact with their digital tools. Focus should be on how to save time, reduce data entry and deploy alert systems that integrate with workflows instead of disrupting them.

Enhancing Consumer Engagement With Digital Connection

The healthcare consumerism trends gaining momentum in recent years are now finding their way into leaders' near-term strategies and initiatives. Huron's research finds that the consumer journey and experience is a top priority for leaders in the next 12 months (figure 1). The research further indicates that a strong majority of organizations expect to invest in automated and self-service technologies such as kiosks to drive contactless care capabilities. Though self-service tools and patient portals have improved, patients will continue to want more functionality to empower their health journeys, including access to patient data and proof of vaccination.

Previous research from Huron on the healthcare consumer market confirms that consumers increasingly expect to interface digitally with healthcare providers and experience the same convenience they get in other industries such as retail and banking.
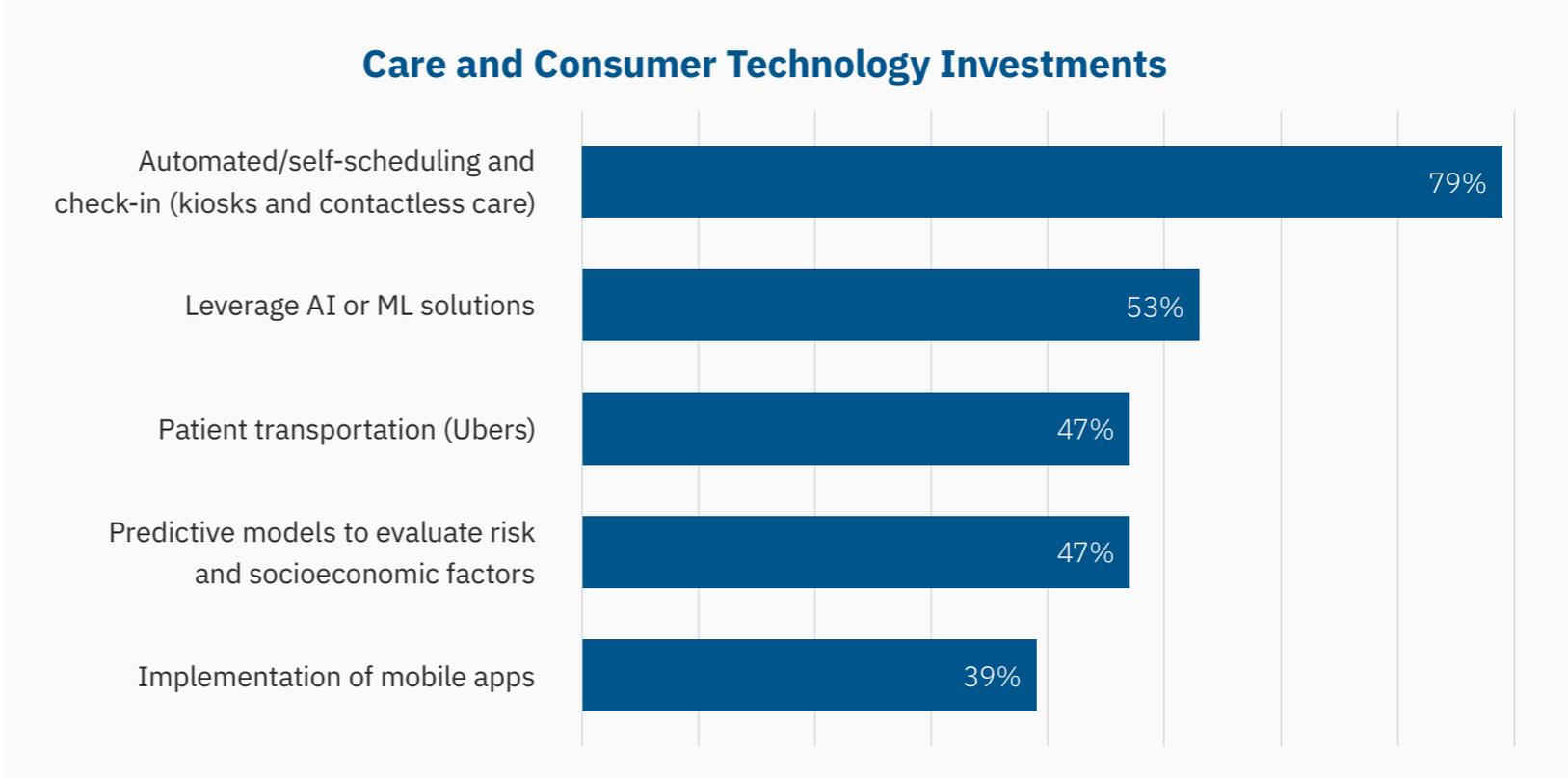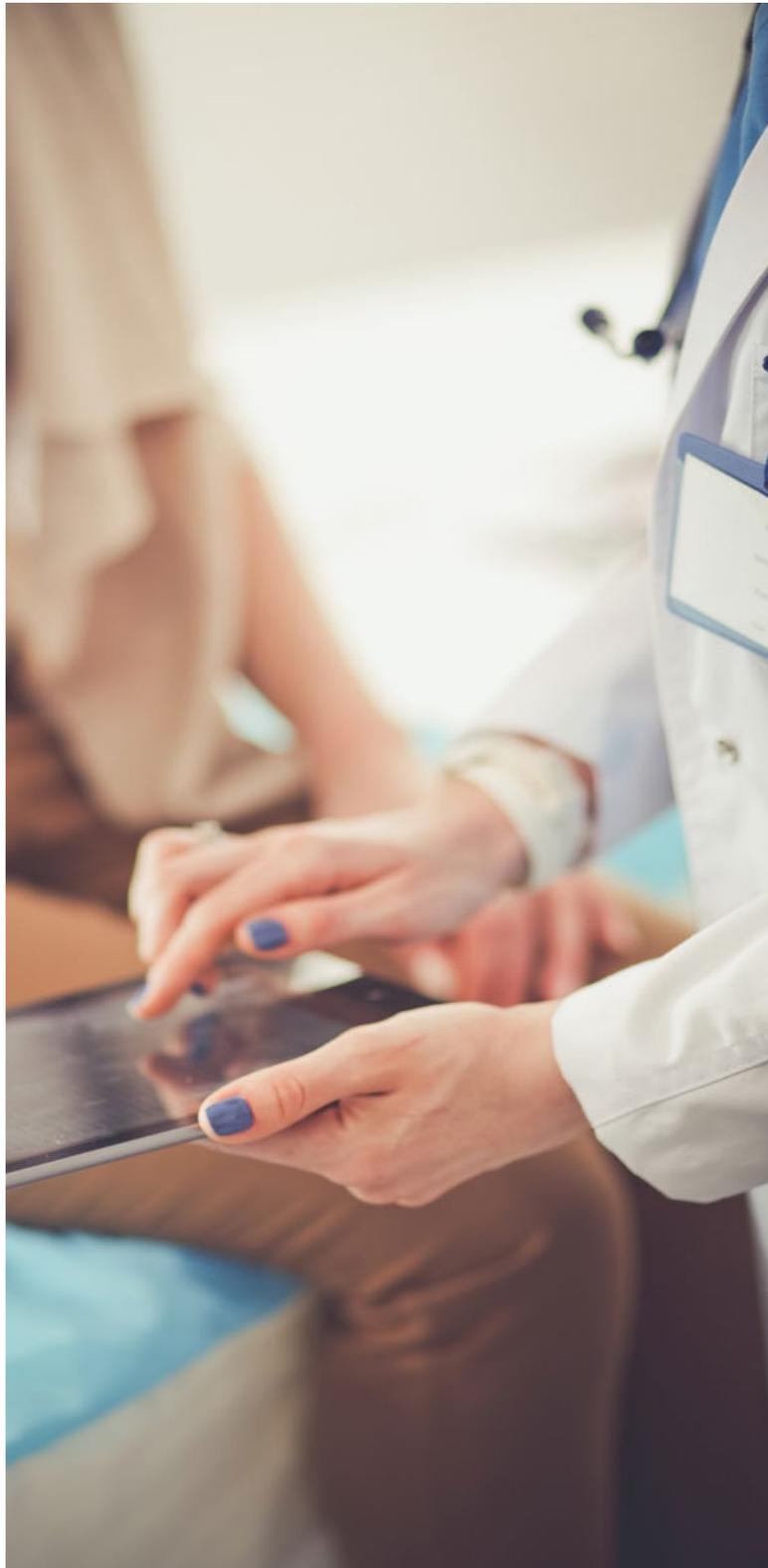
Care and Consumer Technology Investments

Category	Percentage
Automated/self-scheduling and check-in (kiosks and contactless care)	79%
Leverage AI or ML solutions	53%
Patient transportation (Ubers)	47%
Predictive models to evaluate risk and socioeconomic factors	47%
Implementation of mobile apps	39%

Figure 9. Leaders planned investments in contactless care

In response, organizations should be evaluating how their CRM platforms and patient portal strategies can utilize technology to scale their patient communication and create more timely, relevant and seamless consumer interactions. Leading organizations are making progress building AI and ML into specific EHR and CRM functionality that supports outputs such as provider messaging, self-scheduling, online medical records, prescription refills, appointment reminders and provider search.

As organizations invest in new innovations and digital tools to meet demands related to cost, convenience and the overall care experience, they must maintain awareness that digital health is not a "one solution fits all" approach. Organizations should be leveraging the knowledge and technical infrastructure gained during the pandemic to grow digital offerings in a way that reflects their understanding of the preferences of consumers in their market.

Driving Health Outcomes and Equity

Most healthcare organizations do not know or understand their consumers beyond their clinical or financial data. Beyond building patient loyalty, a data-driven understanding of consumers is critical to advancing the social aspects of care that are central for leaders today.

Once again, access is critical. Organizations included in Huron's research report indicate they plan to prioritize digital care access to drive health equity and address social determinants of health (SDOH), as well as leverage digital solutions to ensure equitable vaccine distribution. Resolving interoperability issues and enabling seamless data sharing between the CRM, EHR and third-party systems will be essential to developing this next level of care.

EHR-specific population health applications have evolved rapidly, providing a powerful tool to support organizations' SDOH initiatives as well as the broader need to improve patient outcomes in a value-driven landscape. Leaders should be evaluating these capabilities to support their overall organizational strategies and planning for increased investments in their EHR tools and optimization.

The acceleration of digital tools, technology and analytics within healthcare continue to be the industry's greatest challenge and opportunity. Looking ahead, digital tools and data analytics will underpin the transformation of all aspects of business operations and care delivery.

Leaders report they've formulated digital, technology and analytics strategies — yet few have been able to execute their plans. Leaders cannot achieve the level of breakthrough performance they need in cost, growth and care delivery without deepening their ability to execute, and a competitive advantage exists for organizations that can build internal alignment quickly. Success will be rooted in how well organizations weave together their various tools and platforms to lower costs, improve care and deepen the consumer experience.

Leaders will need to consider how key strategic alliances, including outsourcing and managed services, can accelerate their digital, technology and analytics strategies while they stay focused on broader transformation initiatives. Additionally, leaders will have to look at investments across their enterprise-level technology to ensure they are striking the right balance of focus on ERP, EHR, CRM and EPM systems. As expected, virtual care delivery cuts across all aspects of care, as does using AI and ML to enable organizational cost and growth initiatives.

Methodology

Huron commissioned a research study to understand the most pressing issues and investment priorities within healthcare's digital, technology and analytics landscape. As part of the quantitative discovery, 211 leaders across various provider organizations and functional areas were interviewed in the first half of 2021.

Key Takeaways

As data, technology and analytics strategies evolve, organizations will have to:

Think differently.
Evaluate core and emerging technology investments to ensure organizations are leveraging the tools to build financial health while simultaneously supporting priorities such as care access and consumerism.

Plan differently.
Build a clear road map for aligning digital, technology and analytics strategies to broader organizational priorities.

Act differently.
Leverage the help of key strategic alliances to accelerate the value of digital, data and technology assets while advancing transformation imperatives related to care, cost and consumers.

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