THE ACADEMY
HEALTH MANAGEMENT

Innovating Care Delivery

Leading Health Systems'
Perspectives Shed New
Light on How to Make
Care More Intelligent

Digital Health Seeks to Consumerize Care and Modernize the Clinician Experience in 2024

Leading Health Systems (LHS) are seeking innovative digital solutions to better engage with their patients between visits, deliver higher quality care outcomes, and make clinical workflows more efficient. They desire to improve the consumer experience, especially beyond the walls of the hospital, knowing that positive patient engagement is paramount to long-term loyalty, efficiency, and outcomes. Among LHS CXOs who are focused on patient digital strategy and engagement, priorities center around access, quality, and patient loyalty.

Tech leaders are focused on alleviating admin burden
CIOs ranking of 'care team admin burden' as a strategic priority

Priority rank	% indicating higher priority in 2024 than 2023
#1	86%

Of LHS CXOs who were surveyed about their digital services strategic priorities in 2024:

97%	of respondents prioritized increasing consumer access to care services and enhancing consumer engagement and loyalty
93%	of respondents selected improving personalization of consumer experience and improving consumer service and quality
90%	of respondents selected improving consumer convenience

When implementing digital solutions to support patient needs, LHS must be conscientious about not overburdening clinicians with new tools and processes, which add to their workload. LHS C-suite leaders are keenly aware of workforce shortages and the lack of staff continues to be a prominent concern. According to a 2024 survey, 77% of CXOs identified workforce shortages as the primary barrier to strategic growth. Specifically, LHS technology leaders are focused on utilizing technology to alleviate their care teams' administrative burden. Chief Information Officers ranked "care team admin burden" as the number one strategic priority, with 86% indicating this as a higher priority in 2024 than 2023.

To holistically engage with patients without adding to clinicians' workload, LHS are looking at artificial intelligence (AI) enabled solutions to shift towards care enablement. While the AI landscape has evolved quickly, LHS are eager to utilize emerging intelligence tools with a proven track record and validity to boost efficiency and to craft innovative solutions for time-consuming, manual work. Despite LHS leaders expressing interest in AI-enabled solutions, adoption has been slow. Data from The Health Management Academy's 2023 Technology Investment Market Outlook show that LHS AI adoption across a variety of functions, such as clinical communications (19%), population health management (19%), and customer relationship management (13%), remains low. So, while LHS recognize AI's powerful benefits in keeping pace with patient needs and preferences, they are still in the early stages of adoption and implementation. As such, LHS remain open to AI advancements, with the majority of LHS surveyed (85%) saying they would be willing to wait a year or more for ROI on an individual AI investment/tool/program. Additionally, according to 2024 survey data, Chief Medical Information Officers also see the growing need for AI usage for operations, improving patient access, and avoiding care team administrative burden.

Top 5 Priorities Rated "More Important" in 2024 (vs. 2023)
Percent of CMIOs who rated category "More Important"

Cost management across technology-related initiatives	91%
AI enablement for operations	83%
AI governance	67%
Patient access to services	60%
Care team administrative burden	55%

Report Overview and Profile of Participating Health Systems

The Health Management Academy (THMA) in partnership with Memora Health set out to understand how Leading Health Systems (LHS) approach digital solutions to care enablement beyond the four walls of the hospital. LHS are defined as innovative integrated delivery systems with over $2 billion in net patient revenue.

This research captures perspectives from 9 qualitative interviews, representing a significant share of the Leading Health System market. Additional details on the research methodology and participating health systems are included here.
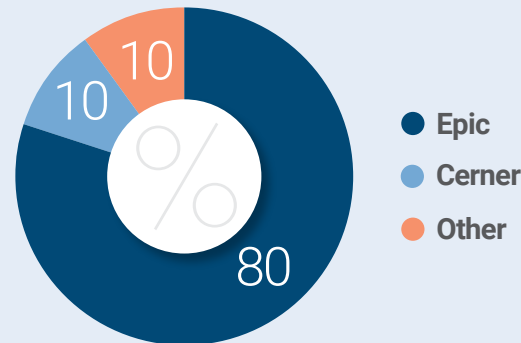
Research Methodology in Brief

Interviewed 9 Digital Health Leaders from Leading Health Systems

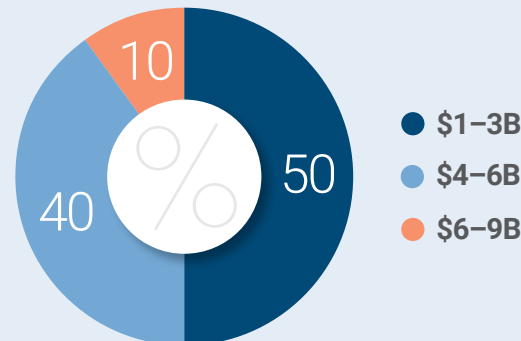## Profile of Participating Health Systems [1]

Participating Executives

- Chief Physician Executive
- Chief Health Information Officer
- Chief Medical Information Officer
- Chief Transformation Officer
- Chief Innovation Officer
- Chief Digital Officer
- Chief Marketing Officer
- VP of Finance for Access and Scheduling
- Senior Director, Communications Strategy and Technology

Participants by EMR Vendor

10 — Other
10 — Cerner
80 — Epic

- Epic
- Cerner
- Other

Participants by Size

10 — $6–9B
40 — $4–6B
50 — $1–3B

- $1–3B
- $4–6B
- $6–9B

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1. Leading Health Systems (LHS) are defined as innovative integrated delivery systems with over $2B in net patient revenue.

Barriers to
Digital Health
Adoption Today

HEALTH MANAGEMENT
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Scalable Platforms, Rather than Point Solutions, Remain High Priority for Successful Adoption

For LHS to invest in care enablement solutions that extend outside of the four walls of the hospital, the technology needs to have enterprise-wide capabilities. To address concerns of cost management across technology-related initiatives, health system leaders frequently shared their preference for scalable platforms, recognizing that point solutions that were too narrow in scope were not sustainable in the long term. A health system cannot juggle 17 different vendors for 17 different conditions, or they risk adding more administrative tasks for clinicians and, more importantly, fragmenting the patient experience.

A key piece of scalability is ensuring interoperability with a health system's electronic medical record (EMR). Technology needs to be able to be translated across hospitals or sites of service (e.g., clinics, ASCs, specialty practices, etc.) to scale effectively and a foundational part of that is being interoperable with the EMR.

As LHS explore care enablement solutions — with scalability and interoperability core to evaluations — they recognize that long-term transformation may require short-term change management. Even adopting EMR-native modules can require a lift from clinicians and necessitates change management strategies. Health system leaders shared that with effective change management in place, they are willing to adopt some short-term adjustments on clinicians' workload if the technology adoption can lead to sustained care quality improvement.

Lack of Clarity Around Key Terms, AI, and ROI Causes Confusion About Care Enablement Solutions

Patient and clinician engagement is crucial for fostering an active involvement in healthcare decisions and treatment adherence. Without it, there's a risk of neither patients nor providers using the tool, leading to decreased health outcomes, and ultimately, a failure to improve patient care and satisfaction. As LHS look to improve patient engagement outside of the four walls of the hospital, confusion remains around several key terms in the care enablement and patient engagement space. Notably, even the term "patient engagement" is seen as overly broad, with LHS executives and third-party vendors often using different definitions. Patient engagement can be generally thought of as patients and health professionals working together in active partnership across a healthcare system and at various levels to improve health and health outcomes.[2] The term can encompass a range of approaches, so even vendors themselves do not consistently present a comprehensive understanding of the exact problems they are addressing with their solutions, resulting in underperforming or ineffective tools and services.

LHS also expressed uncertainty about the use of AI in care enablement solutions. As AI-enabled products proliferate in healthcare, promising solutions to a range of challenges, LHS leaders frequently find that vendors struggle to connect these products with the core issues. As one LHS leader noted, "It's a danger to conflate or to not be specific about the application of AI." LHS have some hesitation in adopting the technology since vendors have struggled to demonstrate they understand the root problem, can speak directly to how they address it, and demonstrate return on the investment. When AI is involved, leaders often interpret this to mean the solution will be more expensive, giving them further pause as they must look past the smoke and mirrors to understand if the vendor has a true grasp on the problem.

> "The number one challenge is **patient engagement is such a vast term. Most of these vendors haven't taken the time to really figure out who they are, what exactly are they selling, and what are they solving for.** So, after they pitch, I think, 'OK, what does it do?'"
>
> – Chief Digital Officer & Executive Vice President,
> Leading Health System

Key Questions Around AI

Where is the automation targeted?

When does it start to offload human work?

How do we ensure the contribution is meaningful enough?

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2. Krist AH, Tong ST, Aycock RA, Longo DR. Engaging Patients in Decision-Making and Behavior Change to Promote Prevention. 2017.

In addition to the lack of clarity around what patient engagement entails, LHS stressed the importance of finding vendors who have a thorough knowledge of clinical workflows and a mind for collaboration. If a vendor does not understand the health system's workflow, then it makes work more difficult for clinicians, harming their ability to deliver patient care and an effective experience. Further, health system leaders emphasized that partners must be able to think beyond generic workflows and adapt to the unique needs of their health system.

"We're optimistic automation will get there, but we're not there today. [AI] hasn't caused problems, but it also hasn't created huge solutions. **It's an improvement, but it's not yet a game changer."**

– Vice President and Chief Medical Information Officer, Leading Health System

Finally, while operating margins for LHS are slowly recovering from a challenging few years, LHS are being strategic and selective in which partnerships they choose to pursue. A key piece of that decision making is return on investment (ROI), and LHS leaders have struggled to determine clear and consistent ROI measures for patient engagement and AI-enabled technologies. CXOs seek specific metrics they can measure when evaluating patient engagement digital solutions, but across all interviews, only one LHS executive could share specific data points he actively monitors, such as readmissions, new patients, clinical outcomes, or full-time employee reduction.
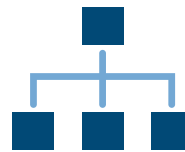
ROI Driven by Key Outcomes
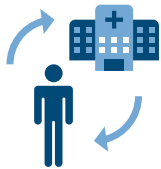
Readmission Reduction

Patient Retention

Improved Staffing Ratios

Improved Clinical Outcomes

Harmonizing Patient and Provider Goals for Effective Care Enablement

Patient Perspective and Preference Remains Critical

Given its importance as part of the patient experience, LHS are growing their technology investment in digital health solutions to improve patient communications. According to 2023 Technology Investment data, 62% of LHS expect to increase spending in this area. Any care enablement technology they invest in will need to be beneficial to patients first. A patient-centric approach is foundational to health systems' missions, and they must ensure that any digital technology implemented aligns with patient needs, preferences, and outcomes. Intelligent solutions can leverage specific language, message frequency, and communication channels to make the experience feel more personalized for the patient. This approach is rooted in a desire for better patient engagement, satisfaction, and ultimately, improved health outcomes. Additionally, focusing on patients helps health system leaders build trust and loyalty among their patients, which are essential for long-term success.

However, given the broad topic of patient engagement and communications, sometimes there isn't a clear owner of these efforts. For example, one CXO shared that the digital innovation work exists more in Information Technology (IT) and excludes digital experience officers. Some LHS executives interviewed noted that the strategy around patient communications is viewed more from the technology and capability lens and excludes the patient perspective.

*"The IT function within the enterprise has run these technology platforms aimed at patient communications, but **we've not had a cohesive strategy around how to leverage those and effectively communicate with our patients."***

Senior Director, Communications Strategy and Technology,
Leading Health System

The Role of Personalization

Another aspect of prioritizing the patient perspective is personalization. LHS seek to ensure patients feel listened to and understood when they seek care or have questions about their specific treatment, especially during the periods outside of the physical hospital. Personalization can be difficult to provide when LHS must keep up with hundreds of thousands of patients, so advanced care enablement solutions should be able to provide individualized attention at scale and to the masses. Relying on demographics, preferences, or other supplemental information can help make technology smarter and more effectively provide a personalized experience for patients.

As LHS seek to improve patient engagement and center the needs of their patient population, it's also critical to be precise with what aspects of engagement they are trying to address. As one LHS leader noted, the issue lies more in enhancing the coordination of information with patients rather than merely increasing messages. LHS seek digital solutions that can help the flow of communication between their patients and care teams.

*"News articles published a few years ago said that doctors and nurses don't communicate well, or patients don't like how they're communicated with and that's such a wrong description of the problem**. It's more about coordination than communication** and that's where I find tools in this space miss the mark."*

Chief Digital Officer & Executive Vice President,
Leading Health System

LHS Continue to Balance Demand for Providers' Time and Their Workload

When seeking to improve patient engagement, LHS must factor in provider workload. Implementing solutions that drastically increase notifications or require providers to answer patients' questions and concerns for hours at the end of their day will contribute stress to an already overworked group. As such, getting provider buy-in is ultimately critical for successful implementations of any patient engagement tool or technology.

LHS have not yet solved the issue of how to balance patient concerns and communications without crowding clinicians' inboxes. Embedded EMR communication tools can garner thousands of messages that clinicians must spend time answering, creating further workload challenges for care teams and straining their ability to provide timely, quality care, or focus on more complex, high-acuity patients. The influx of messages may lead to longer response times, which can negatively impact patient satisfaction and outcomes. Successful care enablement solutions need to have strong integration capabilities, deep configurability, and offer a proactive approach.

*"When you talk about messaging, **there's so many other messages that physicians get from nurses or care teams. So, what's really important?** Managing all that is tough."*

– Senior Vice President and Chief Marketing Officer,
Leading Health System

Moreover, a backlog of unanswered messages may contribute to physician fatigue, as they struggle to keep up with the demands of patient communication alongside their other responsibilities, ultimately impeding their ability to deliver optimal care.

LHS executives plan to lean more into triaging or pooling messages to take the burden off clinicians and not have them be occupied with answering every message that comes in. This reduction in message volumes is a critical area where CXOs hope AI-enabled solutions can play a role. For success, AI technology needs to be adapted for each system and have oversight, with generic solutions being insufficient. From 2023 Technology Investment data, "clinical communications" came in second as both a near- and long-term AI investment interest among LHS, signaling a desire to find specific uses for the technology, such as inbox management.

*"**Another hope of ours is to unburden the staff through some intelligent structural pooling of our messages so that we can share that load.** We've seen some strategies about intelligent pooling in terms of resource management, but it's a concern."*

– Vice President and Chief Health Information Officer,
Leading Health System

Digital patient engagement efforts impact physicians' workloads beyond just patient communications and inbox messages. Ineffective solutions also burden clinicians if the technology is configured by vendors who lack a deep understanding of health system workflows. Clinicians do not have the time or capacity to do more administrative work "teaching" the technology about their processes and so they require engaged and thoughtful technology partners.

Solutions must seamlessly integrate into existing processes to minimize disruption and maximize efficiency for physicians. By aligning with established workflows, care enablement tools can enhance productivity, streamline communication, and improve patient care coordination. Failure to comprehend these workflows can lead to resistance from physicians and hinder adoption and implementation, ultimately undermining the effectiveness and potential benefits of the technology. A thorough understanding of LHS workflows is essential for smooth implementation and long-term success.

Finally, providers have a sense of ownership over their patients and want to be involved in technology that will impact their patients' care in between appointments and outside the site of care. LHS leaders recognize the importance of keeping providers' perspectives in mind when selecting care enablement and patient engagement tools and know their buy-in and encouragement is critical for long-term success.
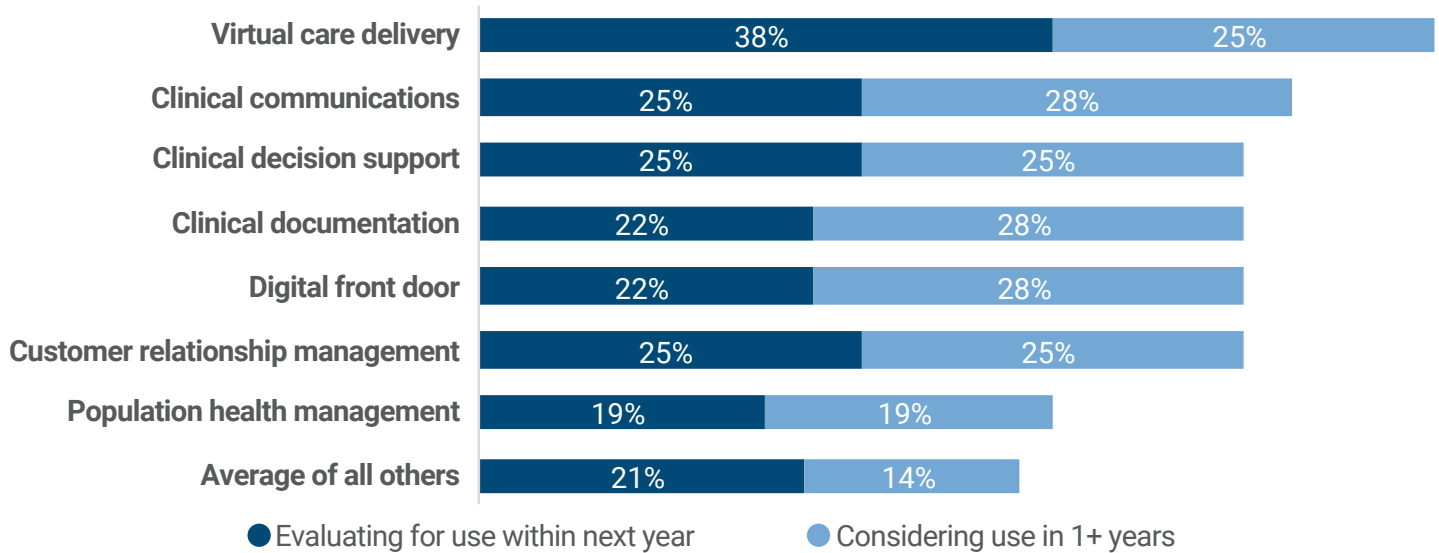
*"Solutions must really, really understand your workflows. **How are you going to move information to the roles and systems that are going to be involved?** I've never seen an AI model be successful without deeply understanding the workflow."*

Chief Health Information Officer,
Leading Health System

Near-Term & Long-Term AI Investment Interests

What is your system's use of artificial intelligence capabilities for the following areas?
Percentage of LHS Respondents

Area	Evaluating for use within next year	Considering use in 1+ years
Virtual care delivery	38%	25%
Clinical communications	25%	28%
Clinical decision support	25%	25%
Clinical documentation	22%	28%
Digital front door	22%	28%
Customer relationship management	25%	25%
Population health management	19%	19%
Average of all others	21%	14%

● Evaluating for use within next year ● Considering use in 1+ years

A Health System's Journey Towards Data-Driven Post-Operative Care
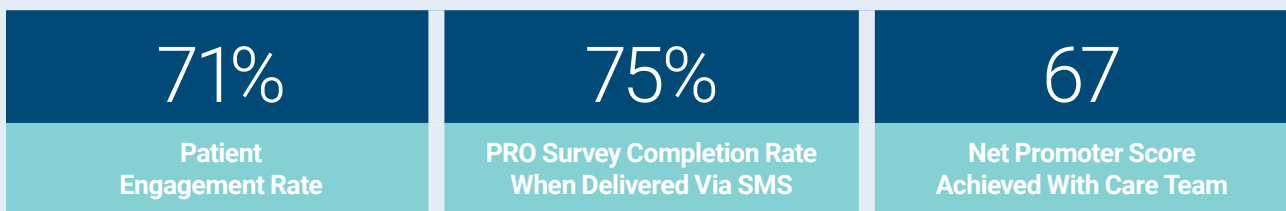
BOSTON MEDICAL CENTER

Challenge

Orthopedic surgery leaders at a Boston Medical Center (BMC) recognized the limited nature of many healthcare communications products and began the search for a partner who could support a high-touch, automated data collection strategy to intelligently capture patient-reported outcomes measures (PROMs).

Solution

Finding a technology partner with the right mindset and technology made for a rare combination. BMC needed a partner willing to go "all in" on a grant-funded project and to do so with a collaborative mindset to understand, construct, and implement orthopedic recovery curves. Success would be measured over time as the relationship grows from intelligent data collection in orthopedics to actively leveraging PROMs and recovery curves to counsel patients through their post-operative care and improve health outcomes.

Progress to date

71%	75%	67
Patient Engagement Rate	PRO Survey Completion Rate When Delivered Via SMS	Net Promoter Score Achieved With Care Team

Looking Ahead

The goal will be to better engage those patients who fail or struggle to advocate for themselves in a proactive and automated manner, while still ensuring the physician owns the relationship with the patient. BMC will continue to work towards having infrastructure that can scalably track data on how patients perform post-operatively and can embed directly into the providers' clinical workflows.

Leveraging AI to Enable More Intelligent Care: Addressing Both Patient and Provider Needs

A More Intelligent Approach to Care and Engagement Is Rapidly Emerging

Patients expect on-demand and real-time responses regarding their healthcare based on their consumer experience in other aspects of their lives and LHS seek to provide not only a better patient experience but also better care outside of the four walls of the hospital. However, given the demands placed on physicians, it's unrealistic to expect them to spend more time virtually communicating with their patients than they already do.

As a result, there is a need for a more thoughtful approach to care enablement from both a provider and patient perspective. To alleviate already stretched-thin care teams, AI will be a key part of this work with its ability to automate tasks, streamline patient communications, and elevate complex episodes so clinicians can use their time most effectively. AI presents a new opportunity for clinical teams to more intelligently engage their patients through their care journeys without adding further burden to physicians, nurses, and their teams.

Intelligent care enablement solutions set themselves apart by deploying AI and automation thoughtfully and seamlessly across tech stacks to create more cohesive touchpoints for patients. These solutions can add value for LHS by relying on asynchronous interaction with patients to track important aspects of treatment and recovery outside of the hospital, such as care plan adherence; while also taking away work from clinicians so they can focus on more complex care cases. Additionally, AI-backed care enablement tools should be crafted to fit directly into workflows and core systems to seamlessly route and triage patient messages.

New technology-enabled care approaches may bring up uncertainty and LHS executives interviewed had questions regarding intelligent care enablement around the following topics:

Patient perspective in the tools and their involvement in the front-end design and delivery of the product
Patient data and how to ensure security
Clear definitions of what medical information the solution would be deploying and ensuring it would not overstep the providers' boundaries

There were three categories of responses to intelligent care enablement: skeptics, enthusiasts, and innovators.

Most CXOs interviewed fell in the "Enthusiasts" grouping, signaling a desire to explore intelligent care enablement further since they did not presently have many partnerships.

Skeptics
Those who had experienced failed pilots before, couldn't see explicit results, or had AI fatigue

Enthusiasts
Those who were interested in the technology and excited by the premise of intelligent care enablement, but had few active partnerships

Innovators
Those who were currently using some form of AI-enabled or sophisticated technology at their own health system and expressed interest in working with technology partners

Overall response to the concept of intelligent care enablement was positive. The ability to utilize these technologies to make care more personalized without adding more work to providers was compelling. Having such AI-powered solutions could help set a LHS apart, resulting in increased patient care plan adherence and a greater likelihood they would return for care at the health system. Ultimately, intelligent care enablement empowers LHS to connect with patients during the crucial moments between appointments, facilitating the care delivery both patients and providers aspire to achieve.

"In medicine we have the concept of the third space, which like the area between cells and in a lot of ways, our life is like the third space. If I totaled the amount of time you spend in the doctor's office, it's a drop compared to where the rest of your health occurs. **Intelligent care enablement sounds like it transcends what we would consider the episodic nature of care** *and you're enabling care around those specific moments that really take place outside the four walls of the hospital."*

– Vice President and Chief Health Information Officer,
Leading Health System

A Leading Health System's Journey to Optimize GI Care Through Innovative AI-Enabled Solutions

Challenge

Given the complexities around specific care pathways, Virtua leaders needed a comprehensive platform they could utilize for coordinated, 2-way communication with their patients without increasing care team burden. Virtua sought to make their patient engagement operations more efficient and effective through AI-enabled technology.

Solution

Partnering with an intelligent care enablement platform provided Virtua with a tool to optimize patient-provider communication and ultimately make care more proactive. The health system leverages AI to address patient concerns and triage messages, elevating complex cases that need clinical attention to Virtua providers. The health system currently utilizes the platform for their gastrointestinal (GI)/colonoscopy journey and specialty pharmacy offerings.

Initial Results

89	73%	97%
Net Promoter Score achieved with GI patients	of patient messages addressed and diverted from the inbox by AI and without care team intervention	of patients completed prep as directed to reduce no-shows and late cancellations

Looking Ahead

After receiving positive patient and provider feedback, Virtua is considering expansion to other care journeys, such as orthopedic joint replacement. Intelligent care enablement solutions serve as an integral part of the health system's digital clinical transformation strategy within their digital transformation portfolio.

Methodology

Research Methodology and Support

In 2024, The Health Management Academy conducted qualitative interviews with Leading Health System executives regarding their perspective on digital patient engagement workflows beyond the four walls of the hospital. The nine qualitative insight conversations represent eight Leading Health Systems.

Respondent roles included: Chief Physician Executive, Chief Health Information Officer, Chief Medical Information Officer, Chief Transformation Officer, Chief Digital Officer, Chief Marketing Officer, Senior Director of Communications Strategy and Technology, Chief Innovation Officer, and VP of Finance for Access and Scheduling.

The Health Management Academy Project Team

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- **Christopher Link**, Senior Director, Member Insights

About The Health Management Academy

The Health Management Academy powers our community to drive health forward. Our community is made up of healthcare's most influential changemakers including executives from the top 150 U.S. health systems and the most innovative industry partners. We power our members by building our community and fostering connections through executive peer learning. We support professional growth through talent and development. We accelerate understanding by delivering timely and actionable data and insights on key challenges. And we catalyze transformation by building alliances in areas where the power of the collective is greater than the power of one.

More information is available at www.hmacademy.com.

About Memora Health

Memora Health helps clinicians focus on top-of-license practice while proactively engaging patients along complex care journeys. The company's platform leverages AI to digitize and automate high-touch clinical workflows — supercharging care teams by intelligently triaging patient-reported concerns and data to appropriate care team members, and providing patients with proactive, two-way communication and support. Memora partners with leading health systems, health plans, and digital health companies to transform the care delivery process for care teams and patients.

The Health Management Academy extends its appreciation to Memora Health for providing the financial support for this report.