The Future of Healthcare Is Digital

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Over the past decade, the healthcare industry has pursued two parallel evolutionary tracks—one toward digitization and the other toward value-based care. Unfortunately, the digitization track has not fully supported all the capabilities (such as interoperability) needed to evolve toward value. It's time to bring these two evolutionary paths into greater alignment so that providers can succeed in value-based arrangements and improve the health and wellness of their patient populations.

In industry after industry, digitization has transformed the consumer experience, making processes easier and faster (for consumers and workers), expanding convenience and choice, enhancing consumer engagement, surfacing market demands, and providing valuable data that improves performance. In contrast, healthcare's first wave of digitization, which focused on the EHR, fortified the traditional fee-for-service (FFS) reimbursement business model, secured data in silos, complexified processes, increased burdens on workers, and did little to improve patient experience and outcomes.

Value-based care and population health require a profound shift from "sick care" services and internal administrative priorities toward health and wellness services and consumer priorities. This is necessary for several reasons. Under FFS sick care medicine, overall healthcare costs continue to grow unsustainably without achieving exponential improvements in health outcomes. Meanwhile, patients are increasingly motivated by consumer priorities, such as convenience, service, and price, to seek alternatives for their care. And major competitors, such as CVS, Amazon, and United Health/Optum, are rapidly positioning themselves to take ever-more market share from hospitals and physician clinics.

The shift to value and population health is only possible at scale, however, through contemporary digital technology. For that reason, we are in the relatively early stages of the next great wave of digital transformation today.

If health systems are to transition from the current "sick care" system to one more focused on health outcomes, patient/clinician experience, optimal business performance, and growth, then boards must own this vision. That means making the right technology investment decisions, developing supportive performance measures, and guiding executive teams in redesigning organizational functions and adopting new business models.

That's a heavy lift for many health system board members, particularly those at not-for-profit organizations who are traditionally concerned with fundraising, community representation, and gaining support for new facilities. This article provides a framework to help board members with their digitization journey.

92 percent of Americans say changes are needed [to our healthcare system]. And a majority of Americans want either major changes or a complete overhaul of the system.[1]

Healthcare's Second Wave of Digitization

More than a decade ago, health system boards faced another momentous technology decision related to digitization. Which EHR technology platform should they adopt? The federal government allocated tens of billions to encourage health systems, hospitals, and providers to adopt EHRs.[2] It worked. As of 2021, nearly four in five physician offices (78 percent) and nearly all non-federal acute care hospitals (96 percent) have an EHR system. This is up from 2011, when 28 percent of hospitals and 34 percent of physicians had an EHR system.[3] And while the investment and impact was significant, the choice was fairly simple: Epic, Cerner, or one of the other top 10 EHR systems.[4]

Thus began the first wave of digitizing healthcare data. Instead of pushing health systems towards value, population health, and consumerism, however, this digitization journey helped hospitals wall off their patient data in silos. That's because EHR systems were built primarily to process claims data for volume-based reimbursement, and not to share clinical data and enhance care coordination.

In essence, EHRs put reimbursement, not the patient, at the center of care. The unintended consequences have been significant. Think of your own experience as a patient. Every trip to the hospital, ER, or clinic requires you to enter your personal data over and over again. Information doesn't readily follow you from encounter to encounter. And if you need to seek treatment or testing outside of the four walls of the clinic or hospital, your information is basically locked away and unavailable.

The experience is no better for clinicians and administrative workers.

Key Board Takeaways

- Make consumer experience, convenience, engagement, and value central factors in technology investments. Meeting consumer expectations is key to competing with disruptive new entrants.
- Adopt technologies that create a seamless patient experience, enabling data to follow the patient across all care settings. This improves care coordination.
- Re-evaluate the technology strategy and investment framework to align with the health system's vision for value-based care and population health.
- Set goals and performance metrics to track the health system's transition to value-based care and adoption of supporting technologies. Regularly assess progress.
- Evaluate how investments in interoperable technologies can support both fee-for-service and value-based care models during the hybrid transition period.
- Use dashboards and analytics to gain real-time insights that support proactive interventions and care management at the point of care.
- Consider whether to build, buy, or partner for new technologies. Building requires competencies and becoming best-in-class. Buying may bring integration challenges. Partnering offers flexibility.

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1 Christine Herman, "Americans Want a 'Complete Overhaul' of Healthcare System, National Survey Says," NPR, February 10, 2020.
2 Brian Schilling, "The Federal Government Has Put Billions into Promoting Electronic Health Record Use: How Is It Going?," The Commonwealth Fund.
3 The Office of the National Coordinator for Health Information Technology, "National Trends in Hospital and Physician Adoption of Electronic Health Records."
4 Definitive Healthcare, "10 Most Common Inpatient EHR Systems by Market Share."

In fact, the first wave of digitization has increased, rather than eased, the burden on clinicians. Instead of focusing on the patient, the doctor is focused on data entry, and that labor continues long after clinical hours are over. Workflows are also clunky and labor-creating rather than labor-saving. That's not the way digital technology was supposed to work, and the strain on systems and people only grows with population health.

As a result, we are undergoing another great wave of investment in digital technology today. The first responsibility of the board is to make sure this wave positions the health system for success in value-based care, population health, and with healthcare consumerism and consumers, while also enhancing profitability in the legacy FFS system.

Digitization is the enablement factor for that change because it gives clinicians and administrators the capability and capacity to better understand patients and their needs. This enables them to provide more personalized care at scale and be proactive rather than reactive in preserving patient health and wellness, while mitigating or preventing existing conditions from becoming more acute.

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A Seamless Patient Experience through Unified Patient Data

EHRs can't provide those kinds of data-management capabilities. Instead, a unified data platform is needed to aggregate disparate data sources and process those data streams to make data normalized, accessible, and actionable.

With a unified health data platform, hospitals can exponentially expand their use cases to unlock other drivers of performance. This includes developing better clinical insights, establishing new engagement strategies, coordinating care more effectively, reducing errors, increasing automation, improving reporting, and, ultimately, improving patient quality and outcomes that generate cost savings.

Getting there requires bridging a very big gap. But the necessary technologies for such an infrastructure exist now. The question is, how can they be assembled?

Many organizations, especially health systems, have an understandable desire to keep their technology with the same vendor because that creates accountability around modules working and talking together. The biggest game changer in this digitization wave is interoperability because it allows technology modules to work together across platforms. Think of how the iPhone operating system enables apps to work on the same device while accessing new data channels and tapping the user's unified data source.

Similarly, a digital health data platform allows health systems to stay with their existing EHRs while leveraging new modules and solutions that can communicate and work together, tap the same data sources, and continue to aggregate new data into unified patient records.

We have seen how digital interoperability works in other industries, such as air travel. All airlines use Sabre Global Distribution System, which used to be owned by American Airlines, but is now a freestanding company that manages inventory and back-end processing. Airline customers don't log into the back-end systems. Instead, they employ a variety of easy-to-use apps to make reservations, check flight status, and so on. In healthcare, we can apply the same notion. We don't have to swap systems to create a different patient experience.

We just need to build on and extend existing systems and focus on the customer or patient journey.

How does a platform bridge the gap between front-end and back-end technology differently than a software database? Software, by and large, is programming that works within a database. And that database is designed and only works within that software. But a *data platform* allows you to take a database and use it for multiple applications, through multiple different organizations, as opposed to just being proprietary to one. It enables other companies to build software products for the same database architecture and infrastructure.

Millions of patients today already receive better care as a result. The aim is to extend seamless care for patients regardless of who they are, where they seek care, whether they access it through virtual or physical channels, and which doctors they see.

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Proof Points: Improved Outcomes with a Data Platform

A Midwest ACO achieved primary care services and reduced readmissions by using a digital data platform. It is one of the largest accountable care organizations (ACOs) in the Midwest with more than 400 different locations, 300,000 patients, and over 20 different value-based care arrangements. It's very complicated for organizations of this size to manage many different sites of care and arrangements. In a traditional sense, there would be a variety of different, uncoordinated handoffs. Information would be locked in one system, so that when a patient receives care from one site to another, their complete record would not be able to be seen.

This ACO was able to share patient information across the ACO network by leveraging a data platform. In doing so, there are now automated and efficient patient assignment processes. As a result, care management staff can be

assigned to specific patients to monitor and coordinate with the care team in real time. Further, they can track outcomes and create personal care plans that enable care managers to plug gaps in care. They have reduced readmissions by more than 7 percent. And they now have the ability to generate better patient outcomes and cost savings.

This cross-organization coordination also enables an increase in primary care services. Primary care traditionally accounts for a very small percent of the total spend, and increases in primary care services can result in fewer admissions and less costly care down the road.

A Chicago-based health system simplified data aggregation and lowered costs through coordinated data. This health system entered their risk tracks in the early 2000s through a Medicaid health plan partnership. They then entered the Medicare Shared Savings Program in 2012 and moved into downside risk in 2018. The health system had been thinking about all their different payer arrangements, and how they can ultimately transform care and harmonize the variety of different arrangements that they have.

In 2018, the health system turned to a cloud-based data platform to simplify their data aggregation process. Their source data came from various EHRs, but the platform also took in claims data, care management data, and social determinants of health data to be aggregated and normalized.

Pulling that disparate data together ultimately allowed a more efficient and longitudinal view of the patient. As a result, care managers could work with a comprehensive view of the patient to better track appointments, medications, and documentation across multiple engagements, outreaches, and payer contracts. Patients ultimately started seeing better outcomes and, again, the organization saw more cost savings.

A Washington-based ACH created integrated dashboards to provide a real-time 360-degree patient view. This Accountable Community for Health (ACH) was able to integrate a variety of community data resources, creating dashboards that could be managed more specifically, drilled down to the patient level, and ultimately get to point-of-care insights. This holistic patient data made it possible for the data platform to engage providers at the point of care with a pop-up message that essentially asked,

"Hey, have we thought about this for this patient?" Providers could then address potential care gaps they might not have otherwise recognized.

With that data platform, providers were able to intervene at bedside and achieve better outcomes. As a result, they were able to make better referrals and better coordinate care, generating substantial cost savings of over $6 million. In such a way, data platforms enable automation that simplifies, rather than creates additional burden for providers, while improving outcomes and reducing costs.

Big Board Decisions

To ride the second wave of digitization, the board has a number of major decisions to make:

1. What is our mission and vision, and how does value-based care, population health, and consumerism fit into them? What goals should we establish to meet our vision, and how do we measure our progress?
2. How do we currently evaluate technology investments (ROI/time horizon), and will that framework support technology investment decisions in line with our mission and vision?
3. How do we manage risk today, and do we have the competencies to manage risk at a much greater scale? How much of operations should be devoted to value-based care, and how fast should that transition be made? What's an appropriate timeline?
4. How will the adoption of digital technologies that support value-based care and population health affect the current healthcare model? A winning model will likely be a hybrid of digital platform, virtual channels, and brick-and-mortar infrastructure that encompasses both FFS and value-based contracts, and is flexible enough for all markets. How will this support the health system's current strategy and need for growth and revenue? What traditional thinking needs to change?
5. Should the organization build, buy, or partner to create its new technology portfolio?
   » A health system that decides to build a technology solution must be confident that it can be best-in-class, and that the resources devoted to the endeavor aren't better used elsewhere. A good question to ask is: If we build X, can we turn it from a cost center to a profit

center by selling that solution to other providers?
   » Buying raises other questions. Is it less costly to buy than to build or partner? How strategically important is the solution? Can a purchased solution be relied upon for years to come, or will it become obsolete and need to be swapped out before the investment pays off?
   » Partnering offers leading technology with flexibility and access to ongoing service and expertise. How do those long-term costs compare to building or buying a similar solution? Does the partner's vision for care align with the health system's own? Will the relationship with the partner create a long-term strategic advantage? Will the partner's solutions work and play well with existing systems and capabilities? What's the partner's plan for evolving and developing its solution, and how will that affect our organization?
6. What is the optimal internal leadership structure for executing a new digitization strategy? Does the organization need a holistic or integrated view of all technology versus a department-by-department approach? Can the chief technology officer assess, adopt, and apply new technologies that are beyond current EHR-centric capabilities? Should technology directors continue to report individually to the CFO or operate more as a team?

Perhaps the biggest question should be: Will your technology investment dramatically enhance your ability to innovate in service of the patient while also improving organizational performance?

Conclusion: The Innovation Imperative

Health system boards are often risk averse—and for good reason. They tend to be reluctant to make dramatic course corrections and major capital decisions, believing that change in healthcare takes decades, and organizations that are primarily FFS-based must adopt a deliberate transition to value- and risk-based contracting, testing the waters with small segments of the patient population. But this can put them in a vulnerable position as the value tsunami grows.

The truth is that health systems today must function in both FFS and population health worlds at once, and the percentage of risk-based models in that mix is going to increase over time. Fortunately, this wave of new digital technology encompasses and supports strategies that enable consumerism and population health. In both cases, the central concern is the individual patient—whether that patient is visiting the hospital for an emergency or scheduled procedure, or part of a large cohort of people grappling with chronic illness or behavioral health challenges.

The future of healthcare technology is the digital singularity—a system and a platform built around and in service of the consumer/patient.[5] In every consumer-facing industry, the consumer is a key driver of innovation. What does the consumer want? What do they need?

What enhancements would increase the value of our services? What would make the consumer's experience better, less costly, and more convenient? These are questions that health systems must learn to ask and address frequently.

Perhaps the biggest question should be: Will your technology investment dramatically enhance your ability to innovate in service of the patient while also improving organizational performance?

With the benefit of hindsight, think of that question in the context of your EHR. It's unlikely that many health system leaders see the EHR as a driver of innovation that improves outcomes and experience. That's because EHRs created, preserved, and fortified data silos rather than enabling data to be shared across the organization. Despite that, no health system would give up its EHR. They were and remain a necessary first step, if not a

giant leap, in the digitization journey. But the EHR is not the end state.

There's one more thing the board needs to do to make this contemporary digitization journey worthwhile. With the right technology in place, imbue the organization with a culture of innovation. It must be okay to move fast. It must be okay to fail—not in health outcomes, of course, but in solutions, services, new approaches, and new strategies. After all, failure spurs learning. And if the patient is at the center of those efforts, then more often than not, the health system and the patient will win.

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5   Abhinav Shashank, "The Coming Healthcare Singularity," Innovaccer, August 9, 2021.