

Beyond the EHR: IT Transformation for a Digital World

White Paper



IT leadership is under tremendous pressure to become more responsive to the changing healthcare market and the needs of clinicians, administrators, and patients. Driven in part by the digital revolution, IT leaders must reimagine how their departments operate, build expertise, and modernize infrastructure. These efforts support advanced data management, enterprise-wide analytics and the deployment of technology that engages and retains a customer base that increasingly expects personalized self-service capabilities. Regulatory, compliance and security requirements are increasing, year over year, right along with the complexity and volume of data and patient expectations for quality care, improved health outcomes, and hospitality-like services. It's a significant challenge that requires moving beyond the implementation of electronic health records (EHRs) to the adoption of an IT strategy that fulfills the needs of the entire healthcare ecosystem. Budget constraints, a lack of specialized expertise and experience, and disappearing margins prevent a total infrastructure overhaul, yet there are significant risks if hospitals and health systems do not invest in a holistic, long-term IT strategy.

Address Health IT Transformation Challenges

Health data can provide both strategic and actionable insights for patients, clinicians, and administrators; however, in order to advance business goals, IT must be able to collect, refine and store data. Data growth and complexity is one of the biggest challenges to this effort, and the challenge becomes even greater as the Internet of Things (IoT) and digital service models gain momentum.

Making strategic investments in IT continues to be a struggle for most healthcare organizations, with the majority of budgeted dollars going to EHR optimization, associated bolt-on solutions and labor to “keep the lights on.” With patient care moving to an outpatient or even home-based model, both clinical and administrative leaders need new ways to use IT strategically.

As health information moves far beyond the four walls of a hospital, modern infrastructure and mature security capabilities are necessary to support data management, along with enterprise analytics in the form of software and different end user applications. IT needs to champion infrastructure modernization, especially when it comes to security, to drive success in managing big data, IoT, and emerging digital service models.

Tackle Health IT in a Digital, Information-Driven Environment

Delivering quality, cost-effective care requires that all staff and patients can access relevant insights in a timely manner from IT systems. In fact, accessing and managing the underlying data that drives insights are the two of the most important components when developing a modern IT strategy. The ability to secure, aggregate, analyze, automate, and draw insights from data can ultimately define your success. Transitioning to an IoT-based infrastructure lays a secure, scalable foundation for responsive, integrated analytics.

In order to make the right investment in data management that enables clinical and financial analytics, it's critical to think about the long-term implications of any technology solution. Be sure to evaluate whether your organization's infrastructure capabilities can support the processing needs of your clinical and financial software applications and future business needs—or will you end up further constrained? Consider that mounting pressures will continue to drive big data and analytics needs including:

- Balancing regulatory, compliance and security requirements with patient-facing technology
- Increasing patient expectations for self-service capabilities
- Optimizing IT resources and making data-driven decisions based on analytics
- Protecting patient privacy

A modern approach to IT enables patients, care providers, and administrators to leverage technology in order to achieve business goals and remain compliant. The right IT and data strategy will span multiple requirements, including these three key technology areas:

Align Data Management and Analytics with Business Strategy

Evolving business needs require an aligned approach to IT transformation. Hospitals and health systems are focused on building innovative care models that deliver higher quality; however, most are unable to allocate enough resources to unlock insights from across their increasingly expansive and complex information ecosystems. Most focus on closing immediate information gaps, like clinical, supply chain, or revenue cycle analytics.

Hospitals must move to new information paradigms, learn to think like a business, and advance their data management capabilities alongside business strategies. This approach ensures:

- Consistent data management and participation across all functions in the practice
- The ability to make informed decisions through data and analytics
- The “democratization of information,” a process that puts information in the hands of those who make the decisions and can run the analytics
- A single view of disparate but interdependent data formats
- Improved care, research, and strategy
- An infrastructure strategy that features virtualization and cloud technology

Connect Clinical, Operational, and Financial Systems

The information ecosystem is complex, with pertinent data housed at various organizations and on different devices and systems. This requires more of a platform-driven approach to data management and analytics, one where the right information can be mined in a timeframe that matches end user needs. Also, as patients bear more and more responsibility for healthcare costs, their expectations rise. The proliferation of new ways to interact with patients means patients need to be engaged via new channels, including mobile devices and applications, hotel lobby systems and kiosks, and technologies in waiting, exam, procedure, and patient rooms. All of these channels increase the flow of data and have a collective impact on the patient experience.

To evolve successfully, leadership must leverage technology to perpetuate the brand and deliver the experience they want patients to have. They must also deliver personalized content and tools to patients, administrators and clinicians where, when and how they need it.

Protect Information Through Secure IT Operations

Healthcare organizations manage large volumes of highly confidential, protected health and personally identifiable information (PHI and PII), which require them to implement the necessary security, privacy, and compliance practices to maintain the trust of patients and the community. While most healthcare organizations have taken steps to protect patient and other confidential information, many remain unprepared to address vulnerabilities within their system and rapidly increasing cyber threats.

IT leaders must develop close partnerships with their clinical and administrative peers to proactively identify and address risks across the enterprise and manage all active threats. IT infrastructure needs to be scalable yet dynamic if it

is to tackle security in the digital age, where IoT; social, mobile, analytics and cloud capabilities; and higher customer experience standards demand new models and a strategic, swift response to all security, privacy, and compliance incidents. Adapting to emerging, increasingly sophisticated threats that new technologies and environments often pose requires a modern approach to protect information across a growing number of access points.

Optum IT Transformation Solutions

Optum partners with IT, clinical, and administrative leaders to solve healthcare's most pressing technology challenges, following a "gap and goal" approach that draws on over 30 years of applied healthcare and technology expertise. Our experience in selective sourcing can help your organization understand what improvements are possible with existing in-house resources and where you need an experienced partner. We begin by optimizing existing IT assets and processes to avoid costly systems and infrastructure replacement. Our global footprint provides the necessary scale and flexibility to uncover actionable insights and drive innovation from your data, enhance the customer experience and retain patients, and maintain appropriate security, privacy, and compliance programs. With the transition to a digital world in mind, our 20,000 professionals work side-by-side with your clinical, business, and IT teams to build a secure, reliable, and efficient foundation for cloud-enabled "as-a-service" capabilities that offer all end users the insights they need to advance care and increase efficiency.

Conclusion

The transformational power of healthcare technology has arrived. With information systems flourishing across the industry and connecting in the cloud, IT must provide the modernization that healthcare needs to respond to the changing opportunities and demands for greater innovation across the ecosystem.

IT leaders must advance the needs of the business through innovative digital service models across data management and analytics, customer-facing technology, and infrastructure capabilities that maintain the trust of patients and the community through secure and compliant IT operations. Using this modern approach to IT not only protects hospitals and health systems, it links care pathways to patient satisfaction, joins facts and figures to coordinate care, distills petabytes of data into focused insight, and lays the framework needed for collaboration and value-based growth.

In the next few years, evolving business imperatives and emerging technology will force IT to fundamentally change the way healthcare organizations function. This new orchestration and alignment of all stakeholders will call for a nuanced and strategic CIO perspective.

Modernizing the approach to information and network security, data management, and analytics is at the core of an IT transformation strategy, and it's imperative to seek out a trusted technology services provider. Optum IT transformation solutions help IT leaders leverage data across the practice to find actionable insights, evolve the organization, improve security, patient privacy, regulatory compliance, and improve the patient experience. Our expertise and methodology allow the practice to use IT infrastructure already in place and expand the strategy over time.

Optum: Advancing Business Imperatives to Deliver Better Care and Value

Already serving 4 out of 5 U.S. hospitals, 300 health plans, processing 400 million claims annually, and with proprietary data covering 200 million lives, Optum understands how technology can deliver business outcomes within the day-to-day realities of a continually shifting marketplace. With over 30 years of healthcare and technology expertise, Optum partners with IT leaders in healthcare to transform the care they provide and drive the growth they expect.

A leading information and technology-enabled health services business, Optum is dedicated to delivering intelligent, integrated solutions to modernize the health system and helping make the health system work better for everyone. For more information, visit www.optum.com/ITTransformation.



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