



# The EHR: Your engine to accelerate digital health



# State of the EHR and digitalization: great progress, huge potential

The electronic health record (EHR) is mission-critical technology for health care organizations and the center of clinical and operational strategy. In an industry essentially based on knowledge, workflows, interactions and financial implementations, the EHR is fundamental to delivering high-quality, cost-efficient health care and seamless patient experiences. Organizational success relies on the effective integration with clinical and administrative workflows.

The demand for significant care transformation through technology has put a greater focus on EHR optimization and digital health solutions. In response, we've seen the EHR market and health innovation evolve in major waves in the past 10 to 15 years. Supported by growing evidence of benefits and potential, national policies and incentive programs are a significant driver of investments in digital health.

The EHR is more than a data repository and transaction system. Technology and integrations are key, but workflows are even more important to care delivery and business goals. Managing the sequence of events – and using the right information at each step of the workflow – is critically important. All of it working together can help organizations:

- **Adopt** clinical best practices to improve patient outcomes
- **Drive** operational efficiencies
- **Improve** patient experience
- **Eliminate** mistakes and/or redundant procedures
- **Be more intentional** in how we design and optimize future tools
- **Monitor** ongoing activities and performance

## Big picture: The EHR is only the beginning

The EHR plays a pivotal role in the digital health care landscape and is the foundation on which clinical and operational workflows are built. There is no limit to how sophisticated these specialized solutions can become.

But reaching that level of sophistication requires additional investment and optimization. There is growing interest across the industry in solutions that drive EHR consolidation, integration, patient engagement and optimization.

Health systems should evaluate the current state of existing systems to determine where they should repurpose, divest or invest to increase interoperability, unlock interaction data, and modernize the consumer and staff experience. At the same time, health systems must still manage day-to-day operational challenges, clinical outcomes and ever-changing health care requirements.

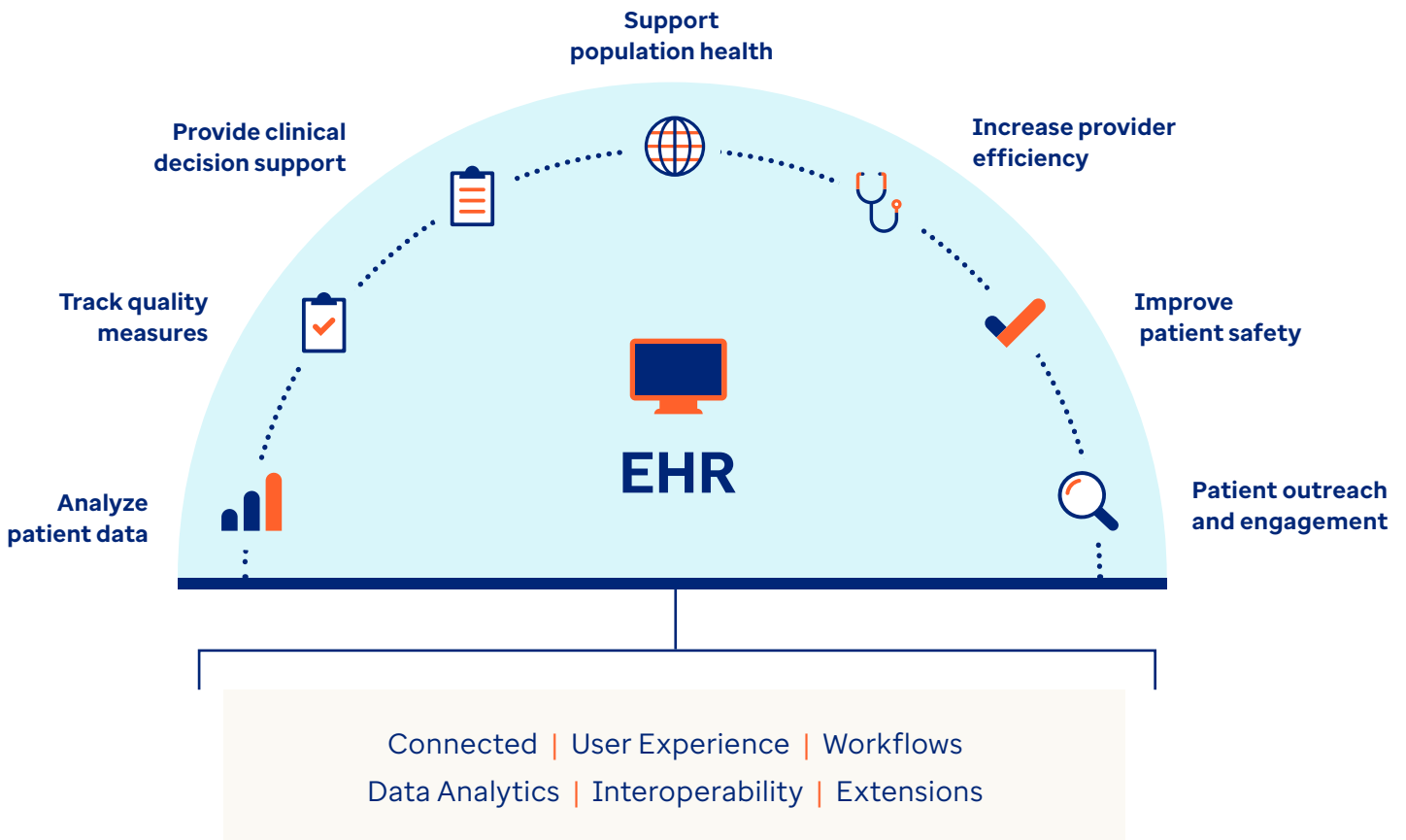
Optum partners with health care organizations to ensure they maximize their EHR systems through an innovative, comprehensive EHR-managed service using the collective expertise of our clinical, care delivery, technology and operations advisory teams. Our holistic approach to EHR optimization and transformation preserves in-house EHR systems services and layers on new capabilities and technologies – like digital front door – to help organizations meet their goals.

## Key functions of a typical EHR

The EHR's centralized system documents and tracks health-related patient information through the continuum of care.

For most organizations, their initial investments in EHR systems were for basic data functionality, meeting regulatory requirements and to improve documentation. But there is unmet potential in these systems that health care leaders are now focused on maximizing. These intelligent systems drive the sequence of events occurring in care delivery including promoting best practices, standardizing workflows to enhance efficiencies, improving patient experiences and tracking quality metrics. The EHR is an operating system that also tracks trends and guides clinical decision support with integration of artificial intelligence (AI). They enable consistent, streamlined interactions between provider teams which help drive better communication between providers and patients to improve care delivery and outcomes. They also set the foundation and course for an organization's digital future.

Organizations looking to enhance their core EHR system should partner with vendors who can offer flexibility to meet changing needs and advise on the best technology to enable capabilities to improve operational efficiencies, patient experiences and outcomes.



# Trends driving EHR optimization and digital health

Digital enablement is the key at the strategic level for health care systems in their efforts to reach new levels of efficiency, improve the patient experience, and provide care beyond the traditional walls of the organization allowing for health care delivery to be transformed. Digital enablement lifts the weight of processes, upgrades legacy systems, eliminates information silos, streamlines workflows and improves patient engagement.

## Market trend

More than  
**40%**

CAGR growth of U.S. virtual care market by 2025 (Frost & Sullivan) with more than 40% of all encounters being virtual by EOY 2021 (Gartner)<sup>1</sup>

**\$173**  
billion

Size of home care market by 2026, representing fastest growth (Business Insider)<sup>2</sup>

**41%**

of consumers would prefer to use telehealth in specific circumstances, post-COVID-19 (HIMSS)<sup>3</sup>

**19%**

Average hospital staffing shortage in the U.S. as of November 2020; simple average across 50 states (NPR)<sup>4</sup>

**53%**

Health system CFOs expect to decrease spending on new facilities (Deloitte)<sup>5</sup>

1. Fernandez M. Frost & Sullivan. Frost & Sullivan reveals virtual care's enormous potential in the United States. Last updated March 1, 2021. Accessed March 2022. [frost.com/news/press-releases/frost-sullivan-reveals-virtual-cares-enormous-potential-in-the-united-states/](https://www.frost.com/news/press-releases/frost-sullivan-reveals-virtual-cares-enormous-potential-in-the-united-states/).

2. Lineaweaver N. Business Insider. THE U.S. Home Healthcare Report: How the healthcare industry is tapping into the booming home care market in 2020. December 17, 2019. [businessinsider.com/us-home-healthcare-market](https://www.businessinsider.com/us-home-healthcare-market).

3. Havasy R. HIMSS Media. Consumer perspectives on telehealth. Fall 2020. [himssmedia.com/sites/himssmedia.com/files/himss\\_acceleratehealth\\_consumertelehealth\\_fall2020\\_final.pdf](https://www.himssmedia.com/sites/himssmedia.com/files/himss_acceleratehealth_consumertelehealth_fall2020_final.pdf).

4. McMinn S, Simmons-Duffin S. NPR. 1,000 U.S. hospitals are 'critically' short on staff - and more expect to be soon. November 20, 2020. [npr.org/sections/health-shots/2020/11/20/937152062/1-000-u-s-hospitals-are-short-on-staff-and-more-expect-to-be-soon](https://www.npr.org/sections/health-shots/2020/11/20/937152062/1-000-u-s-hospitals-are-short-on-staff-and-more-expect-to-be-soon).

5. Deloitte Insights. Building resilience during the COVID-19 pandemic and beyond. September 2020. [deloitte.com/us/en/insights/industry/health-care/healthcare-cfo-challenges.html](https://www.deloitte.com/us/en/insights/industry/health-care/healthcare-cfo-challenges.html).

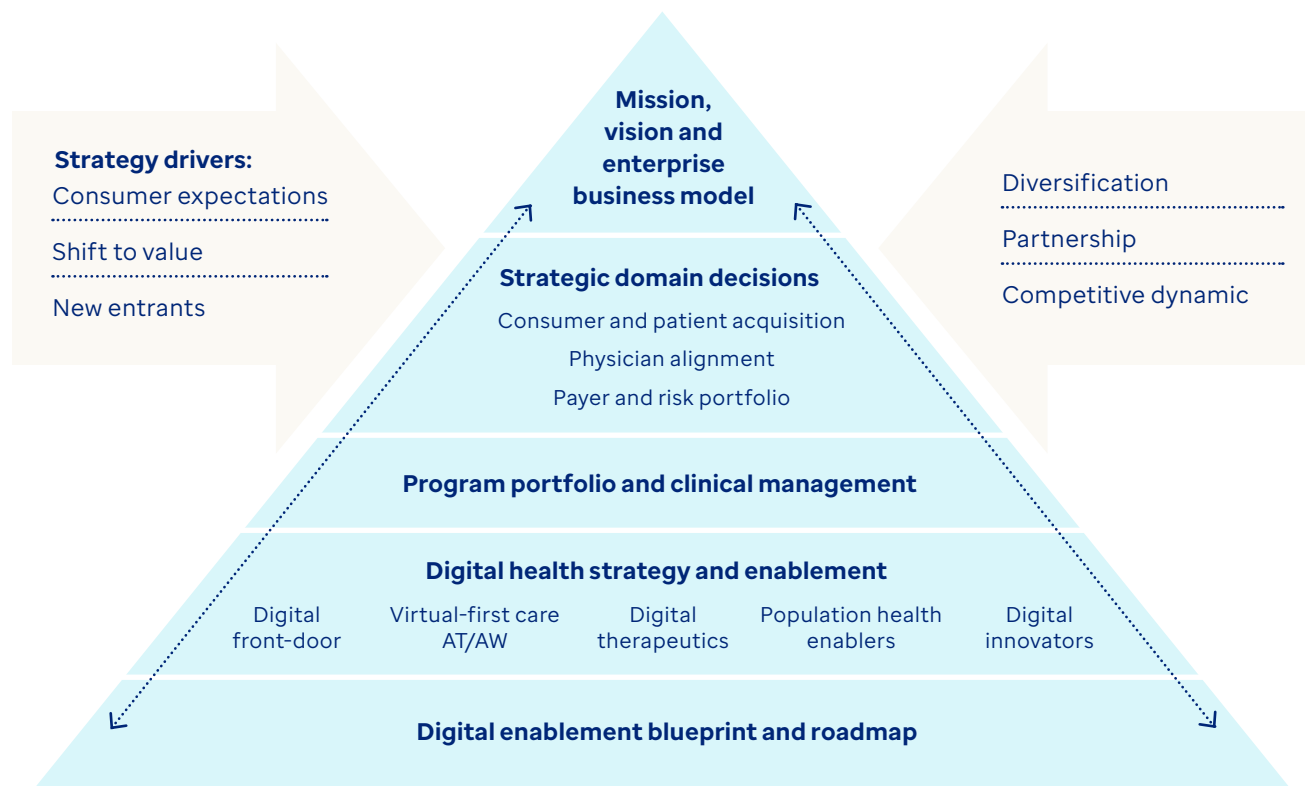
## Different priorities, similar journey

Health systems may have different priorities, but one thing they have in common is the realization that digital health is a core component of the strategy. Digital enablement supports the overall strategy of the organization. It leads to more user-friendly and efficient health care interactions for consumers while modernizing the organization's operations and overall technology adoption. For most organizations, the transition to digital health happens in a consistent sequence – starting with the implementation of basic digital capabilities (like electronic check-in) and building in sophistication (such as interactive care coordination) and scale.

Organizations should look for tools and solutions that will enhance their initial EHR system investment. Digital enablement technologies such as cloud, mobile and cognitive computing create new application opportunities to deliver care, save costs, create efficiencies, improve patient experience, drive consumption and improve quality.

A strong digital health strategy helps organizations:

- Drive consumer and patient engagement
- Strengthen provider alignment and experience
- Grow payer portfolio and improve risk adjustment
- Compete and grow through digital enablement
- Advance health equity
- Benefit from new care delivery models and expand service lines
- Improve virtual care models
- Enable population health



Digital transformation doesn't happen overnight. It is a process that takes significant time and a methodical approach. Continuous evaluation ensures alignment with goals and demonstrated value. The framework below is a common approach to digital transformation.

**Virtual-first model acceleration**

- Virtual primary care
- Hospital at home
- Pre- and post-acute visits
- eConsults
- At-home monitoring

**Strategic enabler**

- Competing against virtual players
- Enabler for growth (targeted campaigns, digital front door)
- Readiness for digital-first model
- Drive the digital innovation agenda
- Service line growth
- Behavior health
- Specialty care

**Population health**

- Personalized care management
- Real-time connected care
- Patient engagement

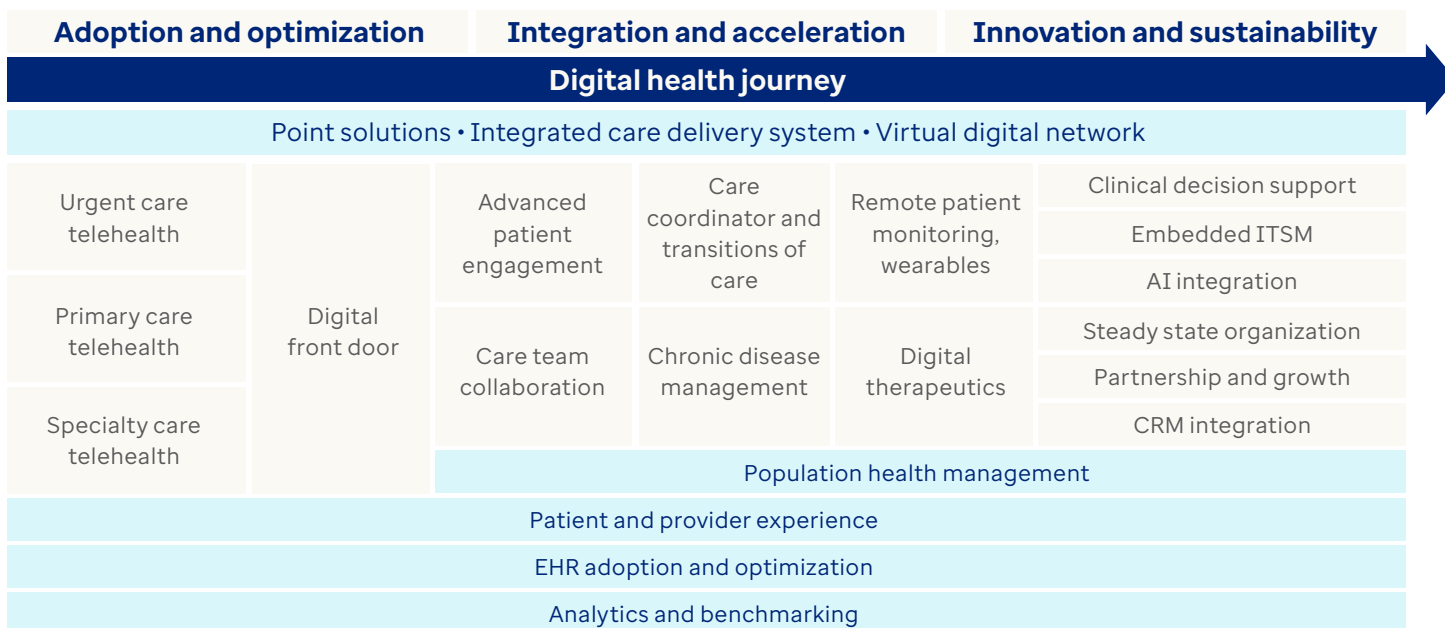
**Digital therapeutics**

- Prescribe the app
- Personalized medicine
- Smart therapeutics



**The worldwide market for electronic health record (EHR) systems was estimated at nearly \$28 billion in 2020. It's expected to reach more than \$35 billion by 2028.<sup>1</sup>**

**Common digital enablement roadmap**



1. Grand View Research. Electronic health records market size, share and trends analysis report by type (post-acute, acute), by end-use (ambulatory care, hospitals), by product (web-, client-server based), by business models, and segment forecasts, 2021-2028. Published April 2021.

# Making digital enablement real in a time of financial stress

It's important to think of digital strategies as business strategies supported by the implementation of technology solutions, not the other way around. Aligning digital roadmaps with your organizational strategy hardwires success and helps you work at a new level of efficiency while ensuring better care delivery. The transition to digital health is challenging, but the payoff is real, predictable results to drive improved outcomes. Health systems must understand the undertaking or partner with an organization that does.

There are key areas of the business where organizations should look to accelerate the digital health journey.

## **Optimize foundational capabilities to create a differentiated patient experience**

- Synchronous telehealth solutions expand reach of key service lines
- Digital front door streamlines patient and consumer experience with improved access to care
- Provider engagement strategies promote adoption
- Data-driven performance and benchmarking drive value assessment (utilization, optimization)

## **Expand digital solution offerings to drive patient acquisition and retention**

- Connected health solutions enhance care beyond clinic walls
- Foundational population health management solutions engage patients across the care continuum
- Coordinated care teams create operational efficiency

## **Clinical transformation through continuous improvement**

- Virtual-first readiness helps meet consumer demand
- Operational and governance structure promote digital performance
- Optimized population health solutions drive quality and outcomes
- Clinical outcomes and quality benchmarking keep mission on track

## **Building the digital health roadmap and foundational, “no regrets” capabilities**

Your roadmap needs to start with a combination of foundational capabilities and a set of “no regrets” initiatives.

The goal is to accelerate your digital journey with a roadmap that addresses competitive pressures and provides your patients with similar digital experiences. It should pave the way for the development of a superior, differentiated experience in future years defined by your enterprise digital strategy.

Successful digital health adoption now and in the future rests on the foundational capabilities you have in place. These include:

**Design a scalable digital operation model** – Evaluate current operating plans for digital programs and develop best practices for managing and scaling digital solutions.

**Build operational and value analytics tools** – Design analytic tools to measure operational performance and value analytics for individual solution and global digital success monitoring.

**Implement patient experience and consumer voice capabilities** – Leverage consumer voice and patient experience surveys in the design and evaluation of program effectiveness.

**Establish industry monitoring capabilities** – Use partners and tools to develop an ongoing industry monitoring capability that will provide systematic market and industry review.

## Creating a consumer voice capability

This foundational capability has two pillars – the consumer journey and a consumer data infrastructure.



**More than 50% of EHR systems either fail, or fail to be properly utilized, resulting in frustrated providers, missed opportunities to engage patients, and a material impact to financial performance.<sup>1</sup>**

### Pillar 1

#### Developing the consumer journey:

- **Persona creation and validation** – Create and refine consumer personas using quantitative and qualitative research methods. [Persona development]
- **Journey map creation** – Identify high-impact journeys for existing and potential patients, including focusing on consumer moments that matter. [Persona needs identification]
- **Competitive analysis** – Determine target and priority for improvements based on internal capability evaluation against competitors. [Persona needs identification]
- **Solution design** – Design ideal state solution to promote consumer journeys, and identify sources of capability. [Service recommendation]

### Pillar 2

#### Developing a consumer data infrastructure:

##### Voice of consumer development and analysis

- Design and implement an automated customer listening system
- Research and develop a customer insights process
- Conduct iterative user testing
- Develop and maintain a digital roadmap (3 to 5 years)
- Design, maintain and report digital program KPIs

1. ScienceDirect.com. Barriers to Electronic Health Record System Implementation and Information Systems Resources: A Structured Review. 4th Information Systems International Conference 2017.



## Expanding the digital journey to include VBC solutions

With digital health care tools becoming more sophisticated, providers, payers and life sciences stakeholders look to use the resulting data-driven insights to expand value-based care (VBC). The COVID-19 pandemic has also accelerated VBC after highlighting technology gaps and changing consumer behaviors about care delivery.

There are numerous opportunities to use digital health tools to drive outcomes in chronic disease management and surgical care. Improving population health outcomes across populations requires high levels of integration and operational transformation.

### Leverage digital health for chronic disease management

- Engage patients with mobile apps to improve adherence with prescribed care pathways
- Leverage telehealth to close care gaps and conduct annual wellness visits
- Use remote patient monitoring for high-risk patient populations
- Construct patient registries
- Integrate digital health tools with care management approaches

### Use digital health tools to drive performance on surgical bundles

- Reduce cost by utilizing virtual health for pre-anesthesia and post-op visits for low-risk patients
- Engage patients with mobile apps to improve adherence with surgical pathways and monitor progress
- Use remote patient monitoring to ensure appropriate patient recovery
- Experiment with virtual therapy sessions

### Long-term factors for success

- Extending digital health solutions and chronic disease management strategies to external partners can drive risk-based performance in patient cohorts. Perfect technology and its adoption before engaging affiliates.
- Incorporating technology and tools as part of clinical transformation efforts is critical to improving patient outcomes in value-based arrangements.

# EHR solution design and validation: The art of the possible

The EHR must be optimized with intuitive, streamlined workflows that drive clinical efficiency and reduce provider burden. Building on your EHR to deploy digital capabilities requires digital health solution design and validation capabilities most health systems have yet to develop.



## Imagine what could be

- Push the virtualization envelope
- Virtual delivery model and experience
- Value drivers
- Market intelligence



## Design what it would take

- Digital capabilities blueprint
- Organizational model and readiness
- Benefits expectations



## Validate experience and value

- Does it work?
- Collect evidence of outcomes
- Can we scale?



## Make it work

- Scope and solution model
- Implementation plan or playbook
- Adoption plan and decisions

## Importance of market intelligence

A registry and corresponding tool that Optum is developing will help industry stakeholders continuously monitor the available solutions and how they could be of value.

The electronic health record system is woven into every facet of a health care organization, be it clinical, financial or operational. Significant internal and external resources are focused on system design, build and implementation. But to achieve the type of lift health care leaders expect, the EHR must be fully optimized, including integration of digital tools. Just as health systems continuously strive to improve quality of care and delivery, the same intent should be applied to achieving optimal efficiency and success within their EHR systems and digital platform.

Repeat the concept of compounding technology innovation – innovation that builds on past innovations, such as incremental and sometimes generational intelligence. Technology drives change in health care more than any other force. Today, the industry is in a great period of technology advancement, driven by past innovation.



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accelerate digital health  
through EHR optimization.

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