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THE ROLE OF DIGITAL HEALTH IN STRATEGIC DECISION-MAKING

INTRODUCTION

The American Telemedicine Association (ATA) is pleased to present this white paper, developed by its Digital Transformation Special Interest Group (SIG), on the Medical Model of the Future, which includes inputs from many health system members on the role of digital health in strategic decision-making for healthcare organizations. As the catalyst for advancing innovation and the transformation of healthcare through virtual care, digital health, hybrid delivery, and AI-enabled care models, the ATA has long championed the responsible and equitable adoption of digital health solutions across the care continuum.

The ATA embraces the promise of AI as a powerful tool to strengthen clinical excellence, advance health access, and support a more connected, resilient care ecosystem. To ensure this innovation strengthens, rather than disrupts, patient trust, clinical quality, and responsible advancement of care, the ATA supports a clear, balanced framework for the safe, ethical, and scalable deployment of AI in healthcare.

The ATA Policy Principles on Artificial Intelligence [AI Policy Principles, December 2025] reflect a commitment to thoughtful governance, responsible policymaking, and a tech-positive approach that empowers providers, protects patients, and enables the full potential of AI to support a digital-first future of care, including Accountability and Engagement; Transparency and Explainability; Safeguards to Mitigate Against Bias; Clear Regulatory Guidelines; Economic and Workforce Evolution; and Privacy.

We are at an undeniable inflection point. The convergence of unprecedented financial pressures, a shrinking healthcare workforce, and an aging population demands that healthcare leaders move beyond aspiration and take deliberate, strategic action. Digital transformation is no longer a future consideration — it is an operational imperative today.

This paper is designed to support healthcare executives and clinical leaders in understanding the strategic landscape that surrounds digital health adoption, identifying key barriers to transformation, and building the governance structures necessary to move from vision to execution. The ATA believes that when digital tools are thoughtfully integrated into organizational strategy and supported by sound leadership, they have the power to expand access, reduce cost, and meaningfully improve health outcomes for all.

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SUMMARY

“AI, traditional machine learning, and deep learning are projected to result in net savings of up to $360 billion in healthcare spending.” (Eastburn, Fowkes, Kellner, & Swanson, 2024).

This is a bold statement, yet one cannot browse the news, engage in social media or have an industry conversation that does not eventually incorporate some mention of digital transformation buzzwords and how these tools have the potential to revolutionize healthcare delivery and outcomes. Bold statements are rampant, but ultimately, leading digital transformation is a significant undertaking, and a high priority for healthcare executives, many whose organizations lack sufficient planning and resources to operationalize digital transformation priorities. The critical aspects of digital transformation are so numerous that they quickly become overwhelming in a rapidly evolving and complex environment. So the question becomes: where do we start in order to bridge the gap from spoken priority to actual transformation?

The bias toward digital transformation must first be identified in the strategy in order to address the key issues that organizations are facing. Successful digital transformation also requires intentional, strategic leadership and governance to understand the problems that need to be solved, assess the solutions, and allocate the resources necessary to execute and scale these solutions. This encompasses much more than a traditional technology governance approach to fully establish the infrastructure surrounding technical tools and enabling care delivery.

This paper explores the key strategic considerations that need to have clear connectivity to digital transformation efforts. It also sets the stage for the implementation of frameworks and tools that will guide the development of a governance structure in order for healthcare organizations to realize all that digital transformation offers.

BACKGROUND

The challenges of digital health adoption are not unique in the historical context of healthcare innovation. While not always quickly adopted, over time, groundbreaking discoveries and inventions have transformed the field of medicine, enabling us to live longer, healthier lives. From the invention of the compound microscope in the 1590s, to human genome mapping, to the healthcare technology available now – scientific innovations continue to pave the way for advances in healthcare delivery today.

Notably, some innovative tech-enabled ideas have taken years to shape the advancement of medicine:

- In the 1960s, the concept of wearable technology was first proposed by Edward O. Thorp, a mathematics professor at the Massachusetts Institute of Technology in the United States (Lu, et al., 2020).
- In 1968, Massachusetts General Hospital pioneered the practice of medicine over closed-circuit television, the first instance of “telemedicine.”
- In 1991, the Institute of Medicine (IOM) published the Computer-Based Patient Record: An Essential Technology for Health Care (Ambinder, MD, 2005).

While healthcare is inherently human-centered, it is deeply intertwined with technology, and the implementation and adoption of technological advancements have become essential to enhance the efficacy and access efficiency of medical care (Thacharodi, et al., 2024). The landscape of healthcare has the potential to transform dramatically if we were to more fully adopt digital innovations.

Digital technologies span a broad range of capabilities, and technology-supported care models can improve patient engagement and health outcomes and mitigate workforce constraints. Adapting, integrating, and utilizing sustainable technology can yield high quality, affordable, and efficient care.

Today, the healthcare industry is faced with a number of strategic choices amidst a rapidly evolving landscape. A 2025 report by McKinsey & Company noted the following factors facing the U.S. healthcare industry: substantial financial pressure; labor shortages; and constrained reimbursement growth (Singhal, Patel, & Jain, 2025). We are witnessing a seismic shift in the structure and support of the healthcare workforce. Persistent financial challenges and increased consumer expectations are pushing the healthcare industry to undergo fundamental changes in how care is delivered (Dyrda, 2025).

THE PROMISE OF DIGITAL HEALTH TOOLS

Digital health, initially centered on the digitization of patient records to alleviate administrative burdens, has expanded into a vast and intricate landscape encompassing every aspect of health, from wearable devices to telehealth tools to AI-driven diagnostics (Oftedal, Kaiser, & Iakovleva, 2025).

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Financial Pressure

The urgency to transform healthcare is not just clinical or operational—it is fundamentally financial. The United States continues to face unsustainable health expenditures, with total spending reaching $4.5 trillion in 2022 and projected to exceed $7.2 trillion by 2031, nearly 20% of GDP [CMS, 2023].

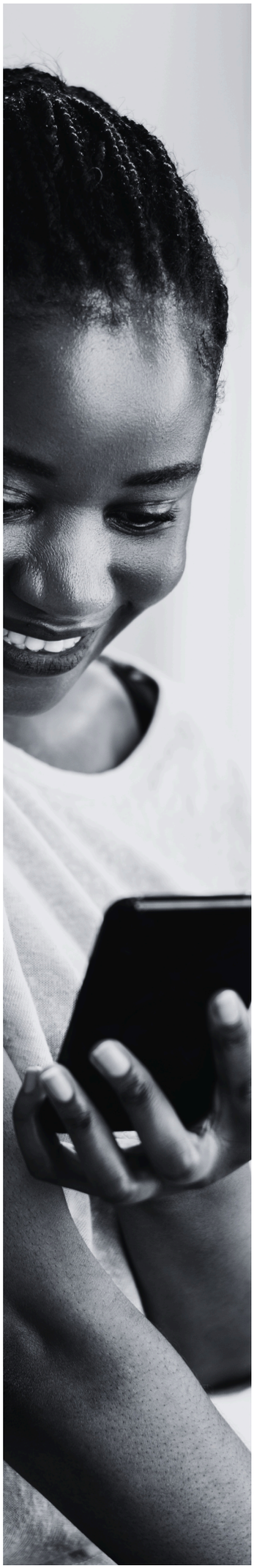
Hospital margins remain volatile due to elevated labor and supply costs, and more than 90% of current healthcare spending is focused on individuals with chronic or mental health conditions—underscoring the inefficiency of a reactive, volume-driven care model [CDC, 2022].

These systemic pressures are magnified for employers and health plans. In 2023 alone, employer-sponsored health plan costs rose by 7%, with 2024 increases projected near 6.5% [Mercer, 2023]. At the same time, employers face an estimated $530 billion in productivity-related losses tied to employee health, making it clear that traditional health benefits models—focused on network access and transactional visits—are no longer sufficient [Integrated Benefits Institute, 2022]. As a result, more employers are demanding digital-first, value-based care models that integrate navigation, coordination, and clinical care.

Capital constraints further highlight the need for a more agile care infrastructure. Amid economic uncertainty and rising interest rates, many health systems have paused or canceled major construction or IT investments. As a result, health leaders are now prioritizing investments that offer faster, scalable returns—such as remote monitoring, clinical automation, and care navigation—over traditional, facility-centric strategies [Fitch Ratings, 2023].

Lastly, regulatory momentum is shifting expectations. CMS and the Centers for Medicare and Medicaid Innovation (CMMI) have publicly stated their goal of achieving near-universal adoption of value-based care models by 2030. With the expansion of alternative payment models (APMs), condition-based bundles, and virtual-first plan pilots, the pressure on health systems to modernize is no longer optional—it is economically and strategically imperative [CMMI Strategy Refresh, 2021].

Together, these financial forces demand a rethinking of care delivery. A Medical Model of the Future must align incentives, leverage technology to extend access and capacity, reduce duplication and waste, and enable a proactive, personalized, and hybrid approach to health—delivering better outcomes at a lower cost to both individuals and the system as a whole. As we strive for solutions from all perspectives, it is imperative to remain focused on the critical fact that the U.S. is in a healthcare cost crisis that the economy cannot sustain regardless of fluctuations in administrative policy.



Labor Shortage

Demographic realities compound financial stress. By 2030, over one in five Americans will be over the age of 65 [U.S. Census Bureau, 2023], while the healthcare workforce continues to shrink. The Association of American Medical Colleges (AAMC) projects a shortfall of over 124,000 physicians by 2034, and health systems across the country report nurse vacancy rates exceeding 20% [AAMC, 2021; NSI, 2023].

Hybrid models of care—such as virtual nursing, asynchronous consultations, and digitally-supported home care—are increasingly seen as financial necessities to optimize staffing and extend reach.

Reimbursement

Current payment structures also create friction. The prevailing fee-for-service (FFS) model does not reward prevention nor the use of digital tools, asynchronous care, or team-based coordination. Moreover, reimbursement parity for telehealth is under pressure, and many payers are scaling back coverage for virtual services unless their value is explicitly demonstrated [Manatt, 2024; ATA, 2024]. For consumers, affordability remains a significant challenge—55% of adults report delaying or deferring care due to cost [KFF, 2022].

PREPARING HEALTHCARE ORGANIZATIONS

Modernizing Infrastructure for a Digital-First Environment

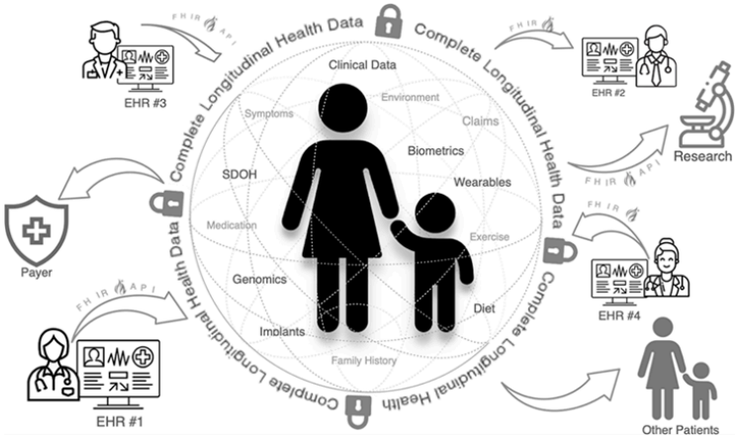
The healthcare industry will need to learn how to do more with less while delivering better health outcomes at an efficient cost. Digital transformation is a key strategy in achieving these goals (Thacharodi, et al., 2024). Healthcare organizations must prioritize infrastructure investments that enable digital-first care delivery. The shift toward virtual care, real-time analytics, and patient-centered services requires more than adoption of electronic health records (EHR)—it demands true interoperability and system integration. Despite widespread use of certified EHRs, many hospitals and clinics still operate with fragmented data and limited analytic capacity (ONC, 2023). To prepare for the next decade, organizations must build digital foundations that support longitudinal patient records, secure information exchange, and AI-enabled insights. A new paradigm of a singular, unified longitudinal health record (LHR) is driven by evolving consumer behavior, innovations in data exchange, and Fast Healthcare Interoperability Resource (FHIR) standards. “Access to complete LHRs allows providers to use their expertise to achieve more positive outcomes” (Cummins, J., 2025 | https://jopm.jmir.org/2025/1/e68261).

This includes evaluating cloud-based solutions, platform interoperability, and cybersecurity readiness to meet growing consumer expectations and policy shifts toward value-based care.

Redesigning Workforce Models for AI Integration

Digital transformation is redefining clinical and administrative roles across healthcare organizations. AI-driven tools—such as ambient documentation, clinical decision support, and automated scheduling—are changing workflows and requiring new skill sets.

Organizations must take a proactive approach to workforce redesign by investing in digital literacy training, change management programs, and cross-functional collaboration between IT and clinical teams. Importantly, integrating AI should not replace human expertise but enhance it.



Source: Pawelek, J., et al

Building adaptive, tech-enabled care teams will be essential to reduce burnout, increase efficiency, and maintain high-quality outcomes in a hybrid care environment (Jiang et al., 2022).

Aligning Care Delivery Models with the Aging Population

An aging population requires that healthcare organizations fundamentally alter how they deliver services. By 2034, adults over 65 will outnumber children, increasing the demand for chronic disease management, geriatric care, and long-term services (U.S. Census Bureau, 2020). Healthcare organizations must prepare by shifting care away from acute settings toward preventive, home-based, and community-integrated models. This includes scaling remote patient monitoring, building partnerships with post-acute providers, and using predictive analytics to identify high-risk patients prior to hospitalization. Organizations that embed these capabilities into their population health strategies will be better positioned to manage both clinical quality and financial sustainability under value-based reimbursement models.

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ADDRESSING BARRIERS

According to Regina Herzlinger (Harvard Business Review, May 2006, "Why Innovation is So Hard in Healthcare"), obstacles can be overcome by addressing six forces that affect innovation: the industry players, funding, public policy, technology, customers, and accountability. With digital health, these forces overlap significantly.

Industry Players: Health Systems and Providers

Health systems may have to secure internal resources to optimize their telehealth solution in existing electronic health records and maintain reliable technical infrastructure across multiple locations and settings. As an example, using a telehealth vendor that operates on a different technical platform from the health system requires internal resources to do the work of integration to enable care coordination and optimize patient safety. Burnout and insufficient clinical staffing may limit the ability to distribute providers across brick and mortar and telehealth modalities. Initial setup costs, ongoing technical support needs, and time required to establish new telehealth workflows can strain already busy practices and health systems.

Provider uncertainty about standard of care in virtual settings or the inability to perform physical examinations, diagnostic tests, or procedures can also limit the scope of conditions that can be effectively managed through telehealth.

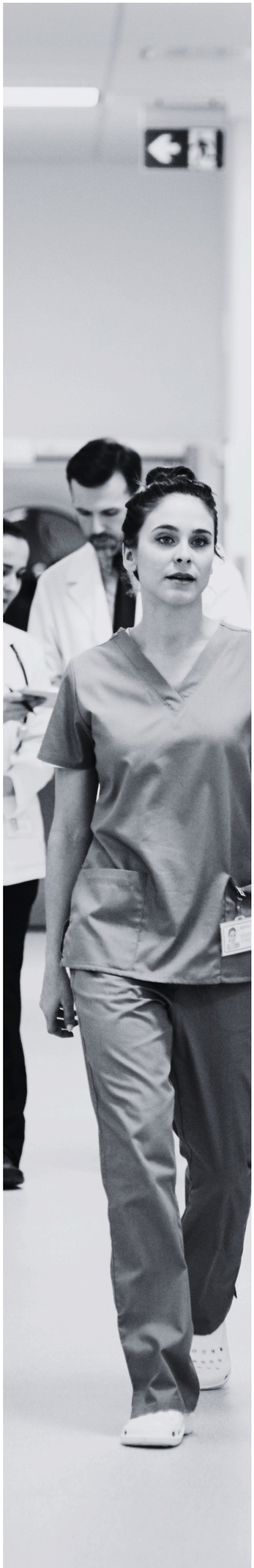
Funding: Insurance and Government Payment Policies

During the COVID-19 global pandemic, reimbursement for video visits was quickly adopted. However, the uncertainty of on-going reimbursement persists, since federal legislation has not been solidified for long-term coverage of virtual care services. Beyond video visits, reimbursement for additional digital tools such as remote monitoring and asynchronous care has seen slower adoption by payers.

Inconsistent payment policies across insurers, lower reimbursement rates compared to in-person visits, and uncertainty about long-term coverage policies affect financial viability. Uncertainty about insurance coverage for telehealth services, potential out-of-pocket costs, and varying reimbursement policies across different insurers collectively serve as financial risks for health systems moving toward digital transformation.

Public Policy and Technology

Limited broadband access disproportionately affects rural and underserved populations, even in urban areas. Some patients have restrictive data plans, lack reliable devices, or may share devices with family members, making consistent telehealth appointments challenging.



Complex state licensing requirements for cross-state practice, varying telehealth regulations, and compliance with federal and state privacy laws create administrative burdens. In caring for patients across multiple states, multi-licensed telehealth providers are faced with financial burdens, extensive tracking of DEA expirations and CME as well as nuanced state laws.

Customers and Consumers

Many patients, particularly older adults, may lack full digital literacy or may struggle with video calling platforms, apps, and online portals. Poor internet connectivity or inadequate devices (smartphones, computers, cameras) create additional hurdles, especially in rural or low-income communities across urban and rural environments. Some patients feel more comfortable with traditional face-to-face interactions and worry that virtual visits will not provide the same quality of care, thoroughness of examination or confidentiality.

Accountability

As healthcare leaders, our role in successfully creating a more evolved digitally enabled care model is pivotal. This is mandatory if we are to achieve a truly compelling medical model of the future. This model must achieve universal access at an efficient cost, with an engaged staff that enables better health outcomes in a respectful, consumer-centric way. The way we configure our governance structures to support this model is an essential prerequisite for such success. *Please also see the Digital Governance Toolkit, ATA 2026.*

CONCLUSION

Digital transformation is imperative for organizations to thrive in today's environment and digital health considerations must be integrated into how organizations make strategic decisions and overcome challenging problems. As outlined in this paper, in order to truly create a medical model of the future, strategic decisions must evolve to bridge the gap from the potential of digital tools to actual transformation.

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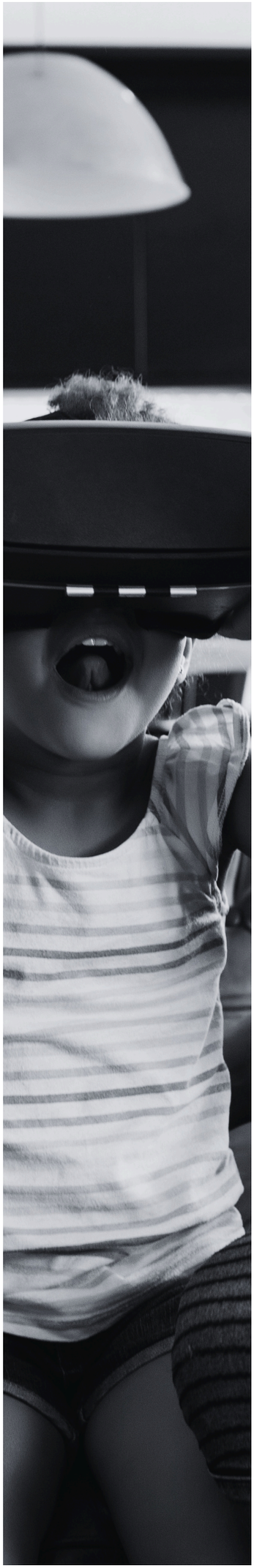

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National Spending Growth: U.S. healthcare spending exceeded $4.5 trillion in 2022, projected to reach **nearly 20% of GDP by 2030.** [Centers for Medicare & Medicaid Services, NHE Fact Sheet, 2023]

Hospital Cost Pressures: Rising labor, supply chain, and capital expenses are squeezing health system margins—**median operating margins were negative for many systems in 2022–2023.** [Kaufman Hall Hospital Flash Reports, 2023]

Chronic Disease Burden: Over **90% of U.S. healthcare spending** is on people with chronic and mental health conditions—yet care remains fragmented and reactive. [CDC National Center for Chronic Disease Prevention, 2022]

Employer Health Plan Costs: Employers experienced **6–8% premium increases in 202**3, with 2024 projected even higher. Many are now demanding **value-based, virtual-first, or integrated solutions** to control costs. [Mercer National Survey of Employer-Sponsored Health Plans, 2023]

Productivity Losses: Indirect costs of poor health (absenteeism, presenteeism) are now **rivaling direct medical spend** for large employers. [Integrated Benefits Institute, 2022]

S**hift to Self-Funded Models:** Employers want more transparency and flexibility—traditional carrier models no longer meet expectations around innovation, navigation, and care management. [Business Group on Health, Large Employer Healthcare Strategy Survey, 2023]

Volume-Based Revenue Volatility: Traditional FFS reimbursement doesn't reward prevention, coordination, or efficiency—and is incompatible with digital-first and asynchronous care.

Payer Pushback: Telehealth parity is under pressure with some payers reducing reimbursement, limiting scope, and demanding evidence of cost-effectiveness. [Manatt Health, Telehealth Policy Tracker; ATA Policy Updates, 2024]

Consumer Cost Sensitivity: 55% of adults report deferring care due to cost. High-deductible plans have made patients more price-sensitive, yet most systems lack **consumer-grade digital tools** to compare or manage costs effectively. [KFF Health Care Debt Survey, 2022]

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CapEx Squeeze: Many systems are cutting back on capital projects—including hospital bed expansion plans—due to economic uncertainty and high interest rates. [Fitch Ratings, 2023 Not-for-Profit Hospitals Outlook]

Need for Smart Investments: Organizations are being forced to prioritize scalable, tech-enabled models that yield short- and long-term ROI—like remote monitoring, AI, virtual-first triage, and care navigation tools.

Utilization Spike Looming: The U.S. population over 65 will double by 2060, placing unsustainable strain on Medicare and health system capacity. [U.S. Census Bureau, 2023]

Workforce Shortages: Shortfall of 124,000 physicians by 2034 expected; nurse vacancy rates as high as 20–25% in some regions [AAMC Physician Workforce Report, 2021; NSI National Health Care Retention Report, 2023]

Hybrid models (e.g., virtual nursing, asynchronous care) are increasingly seen as financial imperatives, not just operational innovations, to help optimize clinical resources and reduce burnout.

CMS and CMMI Priorities: Increasing pressure on systems to adopt value-based models and demonstrate population-level outcomes. CMS is shifting toward universal participation in value-based care by 2030. [CMMI Strategy Refresh, 2021]

Payment Model Reform: Expansion of Alternative Payment Models (APMs), bundled payments, shared risk, condition-based capitation, and virtual-first plans increase accountability and incentivize tech-enabled, efficient, proactive care. [CMS Innovation Center; LAN Framework 2024].