

General Industry Trends

Introduction

The healthcare industry is rapidly changing due to technological advancements, competition between firms, and the ever evolving quest to deliver solutions to patient needs. This white paper explores key trends shaping the industry, with a focus on the growing demand for telehealth, the proliferation of artificial intelligence (AI), and the unique challenges faced by small to medium-sized healthcare providers.

Demand for Telehealth

The healthcare industry has experienced a rapid increase in demand for telehealth and telemedicine services in recent years, spurred by the pandemic in 2020. In response, healthcare providers have adapted their service models to accommodate more consumers and reduce costs. Known for its high barriers to entry, the healthcare industry requires not only significant capital investment but also access to data, which is a critical component for building a successful business in this sector.

Telehealth, in particular, demands high capital due to the infrastructure, technology, and regulatory compliance required to operate effectively. Developing and maintaining secure platforms necessitates significant investment in cybersecurity and engineering. Beyond technology and compliance, telehealth still requires investment in medical professionals, customer support, and marketing to acquire patients in the competitive industry.

Despite the challenges, the market holds significant growth potential, particularly as the United States confronts an aging population. However, resource constraints, such as staffing shortages and rising insurance premiums, are disproportionately affecting small and midsize companies. The nation's demand for healthcare workers will overtake the supply in the near future by an estimated 1.2 million RNs and 130,000 physicians by 2030. Small organizations often lack the capital necessary to address these issues promptly, placing them at a competitive disadvantage.

Furthermore, the healthcare industry is being disrupted by major players like Amazon and Walmart. In 2018, Amazon acquired Pillpack, an online pharmacy, for \$753 million, marking its entry into the pharmaceutical market. By 2020, Amazon launched its own online pharmacy, offering consumers unprecedented ease of access to prescriptions delivered directly to their doorsteps. Meanwhile, Walmart, leveraging its extensive retail knowledge, has also expanded into the pharmacy sector. Together, these companies are not only transforming the industry to prioritize convenience but also creating significant barriers for startups and smaller players to gain market share in an increasingly competitive environment.

Artificial Intelligence Proliferation

Rapid transformation is taking place both in terms of AI development and its integration into the healthcare industry. Nearly 700 AI-enabled devices have received FDA approval, reshaping the diagnostics, treatment planning, and administrative process.

Artificial Intelligence (AI) offers transformative opportunities for small clinics by enhancing their capabilities and allowing them to deliver high-quality care comparable to larger facilities. AI-powered diagnostic tools can analyze medical images with remarkable precision, enabling small clinics to detect complex conditions such as cancer or heart disease without requiring on-site specialists (Maleki). This technology allows clinics to provide accurate and timely diagnoses, improving patient outcomes while making the best use of available resources. AI also optimizes resource allocation, helping clinics manage their supplies and staff more efficiently, ensuring consistent care for patients.


AI-driven solutions like telemedicine platforms and virtual nursing assistants empower small clinics to expand their services and improve patient engagement. For example, AI technologies can remotely monitor patients with chronic conditions, providing real-time health data that supports proactive care and reduces the need for hospital visits. Communication tools such as Amelia's generative AI system help streamline patient interactions, overcoming language barriers and enhancing accessibility. These advancements enable small clinics to deliver personalized, patient-centered care while maintaining efficiency, ensuring that even underserved communities have access to high quality healthcare services. However, it is crucial to understand the potential challenges that we may face including regulatory compliance, physician training, and ethical concerns. This evolving landscape would follow a strict guidance that prioritizes transparency, accuracy, and data privacy.

However, despite AI's potential, AI in healthcare is facing significant roadblocks. Initially touted as a revolutionary force in diagnostics and treatment planning, IBM's Watson faced major setbacks due to high implementation costs, data privacy concerns, and regulatory hurdles. Many healthcare providers hesitate to adopt the technology due to skepticism regarding its reliability and the complexity of integrating it into existing systems. Moreover, Watson struggles with accuracy and relevancy, a major setback due to the intricate and heavily regulated nature of medicine. These challenges emphasize the broader obstacles AI must overcome to gain widespread acceptance in healthcare. While AI continues to evolve, its success will depend on improving accuracy, addressing ethical concerns, and aligning with evidence-based medical practices.

(Cruickshank, Maleki, Price, Robeznieks)


Challenges

Small to medium sized clinics in the healthcare sector face unique challenges relative to larger practices. Resource insufficiencies underlie a lot of commonly cited challenges including staffing and talent acquisition, technology integration, risk management a liability concerns, and competition. As a result, small to medium sized clinics face financial pressures for horizontal and vertical integration into larger organizations.



<p>Staffing and talent acquisition</p>	<p>Small hospitals, typically in rural or remote areas, face significant challenges in staffing and talent acquisition due to geographic isolation, unattractive locales and training barriers. The hospitals are located far from urban centers, making them less accessible and increasing travel costs for employees. Additionally, they are often located in areas with homogenous cultures, and fewer educational and employment opportunities, thus making them unideal locations for relocation. However, advancements in telehealth are reducing the importance of a doctor's physical location, helping to bridge healthcare gaps and improve access for rural communities.</p> <p>This problem is compounded by training patterns, as healthcare professionals establish their lives near larger hospitals during their training, and thus are unwilling to move later in their careers. Small hospitals rely heavily on temporary or locum staff to fill gaps, driving up costs and creating instability, which discourages permanent hires and further perpetuates the staffing crisis.</p> <p>(Smith)</p>
<p>Technology Integration</p>	<p>Small and medium-sized clinics face significant obstacles in adopting technologies like Electronic Health Records (EHR), primarily due to financial limitations and insufficient IT resources. Unlike large hospitals with robust budgets, smaller clinics struggle to meet the substantial upfront and ongoing costs of EHR implementation. For over half of hospitals, the cost of maintaining and upgrading systems is the primary challenge. Beyond the financial aspect of EHR implementation, small clinics are also limited by a small IT staff, a lack of support from EHR vendors, and their struggles to meet "meaningful use" criteria quickly.</p> <p>These disparities became particularly evident during the COVID-19 pandemic, when telemedicine emerged as a critical tool for delivering care during lockdowns. Hospitals with EHR systems were more than three times as likely to offer telemedicine services, underscoring the importance of digital infrastructure. Smaller clinics, lacking the necessary technology and resources, struggled to adapt and provide adequate care, further emphasizing the technological divide.</p> <p>(John)</p>
<p>Risk management</p>	<p>Risk management is the process of assessing a facility's health, safety and privacy risks for patients, physicians, staff and data</p>

and liability	<p>(Advanced Medical Reviews). It is costly for smaller clinics to maintain insurance coverage and risk management protocols, in addition to the exorbitant costs associated with navigating malpractice claims, regulatory compliance, and medical errors. When risks are not controlled, clinics are more likely to face civil malpractice suits, which hikes insurance costs. It is estimated that nearly \$100 billion is spent on malpractice cases and defensive medicine, according to CNN.</p> <p>Medicare reimbursements can also be withheld due to preventable readmissions for patients with common conditions like heart attacks, heart failure, hip and knee replacements, pneumonia, chronic lung disease and coronary artery bypass graft surgery. For the 2017 fiscal year, Medicare withheld \$528 million for 2,597 hospitals across the country.</p> <p>(McGowan)</p>
Competition	<p>The healthcare industry is experiencing a seismic shift in competition, driven by the disruptive influence of major players and rapid technological advancements. Tech giant Amazon has aggressively entered the market with billions in investment, offering unparalleled convenience. At the same time, retail expert Walmart is leveraging its vast network of physical stores and growing digital capabilities to capture market share.</p> <p>Adding to this pressure, large insurance companies like UnitedHealthcare are heavily invested in telehealth and telemedicine platforms. The decline in traditional brick-and-mortar patient visits, accelerated by the pandemic, has highlighted the demand for virtual services which solves most common illnesses.</p>
Private Equity	<p>Private equity has become an increasingly influential force in the healthcare industry, shaping the way services are delivered, financed and structured. While the addition of capital by private equity firms may improve efficiencies and enhance technological integration, concerns persist about rising healthcare costs and potential decline in patient care quality. Recent research suggests that private equity ownership of practices in healthcare leads to increased market consolidation, limiting competition and consequently increasing prices.</p> <p>Additionally, studies suggest that private equity ownership has led to changes in quality of patient care, with effects ranging from mixed to adverse outcomes. The private equity focus of maximizing short-term value heightens the risk of over-utilization</p>



of healthcare services, which may lead to low-value patient care. Studies have shown that private equity acquisitions in certain healthcare sectors, such as dermatology, increase patient volume, which may not always correlate with improvements in patient care.

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