

The transformation of healthcare will continue to rely on disruptive innovation alongside shared data, insights, applications, operations, and expertise. To drive more intelligence, autonomy, and consumer centricity in healthcare requires data excellence.

# From Data Rich to Data Driven: Shifting the Paradigm of Healthcare

July 2021

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## Introduction

### Digital Transformation Unleashed

Healthcare digital transformation (DX) continues to accelerate as the industry adjusts to the impact of the COVID-19 pandemic. The impetus for healthcare DX started before the pandemic in response to a number of pressures, including razor-thin profit margins, post-M&A scenarios, aging populations, more chronic conditions, the shift to value-based care, the rise of consumerism, and cyberthreats. The pandemic, in essence, catalyzed the inevitable pivot of healthcare to a more virtual, data-driven, consumer-centric paradigm.

IDC survey data collected during the initial pandemic wave showed:

- » 93.6% of healthcare organizations were still investing in DX initiatives.
- » 83.9% of individuals had a virtual care visit for the first time.
- » 72.5% of individuals interacted with a front-end conversational AI chatbot or symptom checker.

The future of healthcare is now and will build on many lessons learned from the pandemic. At the forefront of health IT innovation are next-generational use cases utilizing technologies such as AI to embed intelligence and insight, cloud computing to scale health IT capabilities, automation to eliminate repetitive manual tasks, IoT to power the edge, 5G to accelerate data and service delivery, interoperability to unify disparate systems, and cybersecurity to drive the resiliency needed to thwart vast ecosystem threats. At the same time, underlying all change to reverse technology gaps and disruptive new innovations is the expectation that healthcare will be no different from other industries in its levels of convenience, personalization, and services being one click away.

## AT A GLANCE

### WHAT'S IMPORTANT

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### KEY TAKEAWAYS

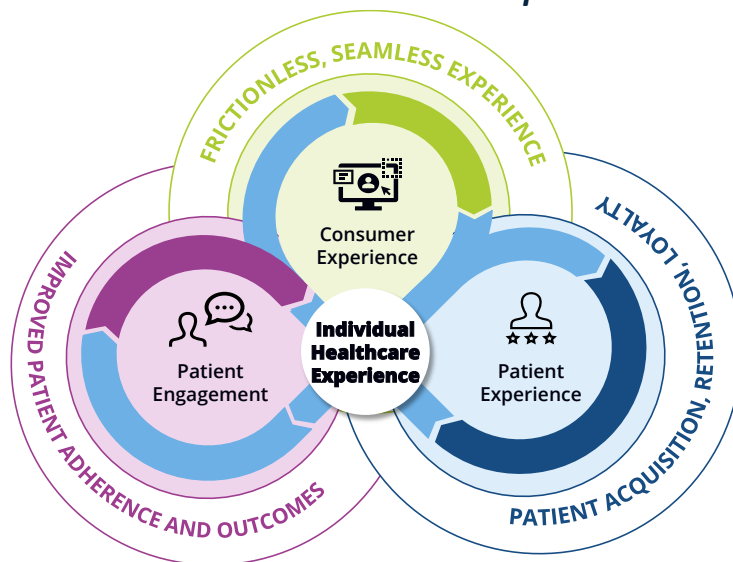
The challenge with health IT initiatives that seek to enable intelligent, automated systems across all facets of care is making the shift from data rich to data driven and the change management that such a shift entails.

Change is a team sport, and in healthcare, it must combine the views of multiple stakeholder groups— clinical, IT, business, and consumer — into one view.

### ***The Individual Healthcare Experience and the Emergence of the Digital Front Door***

According to IDC, the individual healthcare experience comprises three dimensions: consumer experience, patient experience, and patient engagement. Healthcare experiences are not linear; rather, they are journeys that flow among each of the three dimensions (see Figure 1). An individual could be active in more than one dimension at any given time and have multiple health journeys happening simultaneously. Technologies and capabilities deployed by providers and payers to support the different dimensions must reflect an ongoing and meticulous effort to understand patients or members and empathize with them to humanize their experience. Humanized experiences necessitate that integrated health IT strategies elevate individuals to meet their clinical, social, economic, and behavioral health needs.

FIGURE 1: ***The Individual Healthcare Experience***

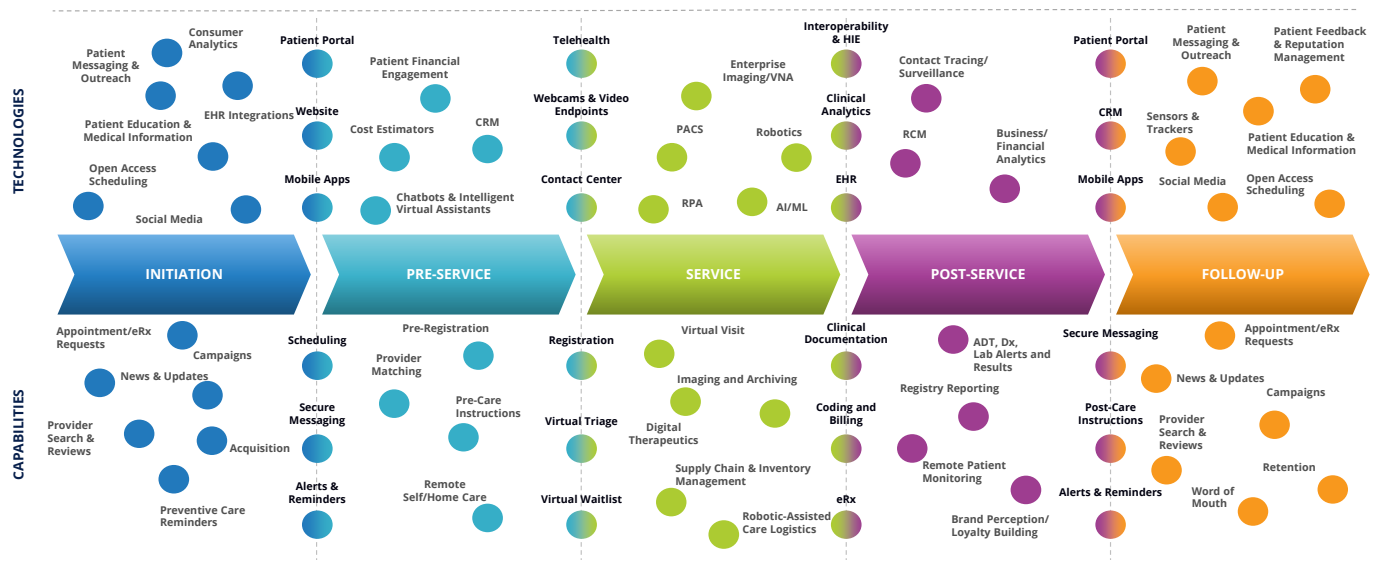


Source: IDC, 2021

Healthcare organizations cannot physically meet and interact with all patients or members. Instead, they must rely on effective, digital touch points that can serve as an enabler for interactive care journeys. These journeys should seek not only to interact with individuals but also to impact them — resulting in business and clinical outcomes (e.g., patient acquisition, retention, and loyalty).

Enter the digital front door, which IDC defines as "all the touch points where providers and payers can digitally interact with patients or members to drive better access, engagement, and experiences across the service continuum." A digital front door entails a strategic mix of technologies with capabilities positioned across the service that meets patients and workers where they are through a holistic approach combining front-end service optimization, the scaling of virtual and digital care, and an end-to-end platform (see Figure 2).

FIGURE 2: *The Digital Front Door*



Source: IDC, 2021

**From Digital Front Doors to Autonomous Digital Enterprises in Healthcare**

According to IDC, by 2023, 65% of patients will have accessed care through a digital front door as providers and payers look for better ways to improve access, engagements, and experiences across all services. The challenge with such cross-cutting platform initiatives that seek to enable intelligent, automated, and consumer-centric systems across all facets of care is the necessary shift from data rich to data driven and the change management that such a shift entails. Change is a team sport, and in healthcare, it must combine the needs and views of multiple stakeholder groups (i.e., clinical, IT, business, and consumer) into one view. It is about not only the data but also being able to aggregate, normalize, orchestrate, and secure "the right data" while coupling it with value-added automation and intelligence to introduce new efficiencies and economies of scale through workflows that translate into improved outcomes (i.e., cost, quality, access, safety, and experience).

To facilitate change, technology must work without compromise. In addition, user adoption needs to be met by minimal to no resistance, especially considering such prevalent issues as physician burnout. Furthermore, patient trust should also be instilled from the community level to the point of care. Effective partnerships and communication will prove vital to the growth, sustainability, and differentiation of such health IT initiatives. An emphasis must also be placed on the role that DX technologies such as cloud computing, 5G, and emerging technologies (e.g., AI, RPA, IoT) can play and the levels of human-machine collaboration and ecosystem expansion realized as a result throughout the enterprise.

As data proliferates from diverse sources (e.g., clinical, claims, consumer, and research), the resulting end state will help drive autonomy and intelligence across the healthcare verticals. An inherent need for "data excellence" propels data-driven organizations to harmonize and treat data as an asset with particular attention given to data governance and quality to enable inimitable service differentiation levels. An organized push for data excellence is still a new concept and a challenging endeavor in healthcare. Still, data excellence will support future human-machine collaboration and ecosystem expansion. Organizations destined to thrive rather than survive will acknowledge early on that it is vital to actively seek data excellence to mitigate preexisting and emerging challenges, such as the rise of consumerism, to realize greater levels of differentiation, competitiveness, and future readiness.

## Industry Definitions and Core Attributes

- » **Healthcare digital transformation:** The application of 3rd Platform–related technologies (i.e., cloud, big data, social, and mobile) to fundamentally improve all aspects of healthcare
- » **The future of customers and consumers:** An empathetic relationship between customers, consumers, and brands built on what customers or consumers want and how they want to be treated through the technology lens of awareness, engaging, learning, and measuring
- » **Consumer experience:** Shopping, selecting, and paying for care through providers and insurance via enrolling and paying for insurance; managing a claim; provision of services; and payment (by the patient and/or health plan)
- » **Patient experience:** Arranging for and receiving care with set expectations and observations made about direct patient care events, encounters, interactions, processes, and outcomes
- » **Patient engagement:** Actively involving patients in their care by campaign outreach, establishing shared goals, and personalizing wellness/care plans to improve specific health conditions and monitoring outcomes

## Key Business Priorities

1. Formulation of a vision where services and experiences are data driven via a tightly knit enterprisewide level of collaboration between business, IT, clinical, and operational teams receptive to the voice of consumers
2. Facilitation of technology adoption driven by a health outcomes–based approach to meet desired KPIs that help realize added value, performance improvements, and outcome-focused goals in service offerings
3. Introduction of data governance that vets data; maintains high quality, security, and privacy of data for use in clinical and operational workflows; and provides safeguards and incentives for compliance and continual improvement

## Trends

- » **Accelerated disruption — crisis, resilience, and opportunity.** The pandemic has redefined disruption. Survival of the fittest is linked not to size or strength but to resilience and the ability to change — to move quickly, adapt, seize opportunities, and be ready for the next disruption. Distressed healthcare organizations are having to make rapid pivots toward new care models or quickly adjust existing models. The immediate imperative is to manage costs and quality, balanced with strategic investment into collaboration and security across the ecosystem. Now is not the time for healthcare organizations to sit back and wait; instead, they should make bold strategic bets that increase their resilience and enable them to keep pace with change by increasing clinical and operational performance and innovation. Past challenges and crises have proven to be inflection points for healthcare organizations that later thrive during the next positive cycle.
- » **The next normal — resilient business and operating models.** In the post-COVID-19 economy, expected changes in consumer behavior, consumption, and supply will force healthcare organizations to adopt digital-first clinical and operating models that can survive lockdowns, restrictions, social distancing, supply disruptions, and more. New realities and expectations will redefine service expectations and the need for disruptors to close technology gaps. Economies of scale will be challenged by the need for automation while relationships, to varying extents, shift from face to face to virtual. Hybrid work models, scalability, security, throughput, and redefining internal processes for remote collaboration and communications require immediate attention but will have lasting effects.

- » **Engagement redefined — safe, secure, and sustainable digital experiences.** The pandemic has focused on what people care about and shifted how consumers, patients, and healthcare organizations engage and interact. Organizations need to provide a safe, secure, and seamless experience. Individuals care about the privacy and safety of their data as well as how their data is collected and used. As a result, healthcare organizations need to understand the different contextual and personal expectations of the person at the heart of the relationship — whether a new patient, an existing patient, a care-seeking consumer, a family member, or an employee — and shift how they engage and support the individual in this emerging reality to create experiences that are empathetic, personal, convenient, compelling, and relevant today.

## Considerations

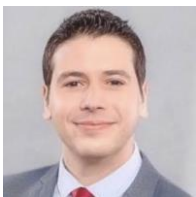
- » According to IDC's Data Readiness Condition (DATCON) index, the healthcare data explosion will approach 4ZB in 2021 and exceed 10ZB by 2025.
- » Although healthcare organizations manage an average of 21PB of data (i.e., 25% less than the industry average), at the same time, they retain data almost 20% longer due to regulatory mandates that differ around the world.
- » Healthcare organizations tend to retain patient and financial data the longest while typically retaining operational data for shorter periods.
- » Regulations require some data to be retained for decades (e.g., patient health records). In contrast, other data types are retained for as little as 30 days (e.g., video surveillance data).
- » Most organizations use less than 10% of nonclinical data in clinical decisions.

## Conclusion

The growing plethora of data alongside multiple preexisting and emerging challenges presents unique opportunities for digitally determined healthcare organizations. Health IT leaders should direct their attention to doubling down on DX use cases that can help shape more intelligent, autonomous, and consumer-centric enterprises. While COVID-19 redefined disruption in that survival of the fittest links not to size or strength but to resilience, its lessons and best practices are here to stay (e.g., digital front door). The future will be shaped by healthcare organizations that embrace new ways of doing things and champion the shift to more data-driven and humanized care experiences.

Health IT leaders should direct their attention to doubling down on DX use cases that can help shape more intelligent, autonomous, and consumer-centric enterprises.

## About the Analyst



### **Mutaz Shegawi, Research Director, IDC Health Insights**

Mutaz Shegawi leads the provider research practice at IDC Health Insights, covering topics of most relevance to healthcare provider organizations looking to digitally transform and become more digitally native than their competition. Mutaz advises the executive, clinical, and technical leadership of the world's foremost technology supplier and buyer organizations by producing data-driven research and thought leadership insights that help navigate strategic challenges in health IT.

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