Future-ready healthcare

Why embedding innovation into your operating model is critical in a post-covid world

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Covid has accelerated the **need for innovative healthcare**

It's often in the most challenging of times that true innovation is born. The impact of Covid-19 on the healthcare industry is a prime example. From the global effort to develop life-saving vaccines to the emergence of highly specialized AI-enabled tools and telehealth solutions that fundamentally changed the way people access care; innovation has been critical to survival.

With the global telehealth and telemedicine market expected to grow at a CAGR of 37.7% and reach $191.7 billion by 2025, it's clear these innovations have left a lasting impact. For healthcare organizations to accelerate growth in this new landscape, they must embrace the full potential of technology to transform the patient experience[1]. Those that don't will quickly be outpaced.

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1 https://www.marketsandmarkets.com/Market-Reports/telehealth-market-201868927.html

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Disruption has been felt more acutely in healthcare

While all industries have felt the impact of the pandemic, the healthcare industry has felt the disruption more acutely. 63% of healthcare providers have faced severe disruptions from organizational changes, cost pressures, regulation and compliance, funding issues or shifting consumer demands.

63% of healthcare providers are facing 'severe' disruption

Hospitals have struggled to handle the huge influx of patients suffering with the virus. Alongside staff shortages, this has put a strain on all areas of the hospital and impacted overall patient care across many other types of critical treatment. In pharma, organizations have grappled with disrupted supply chains, a reduced workforce and systems that weren't built to handle a move to remote work.

Key drivers of disruption

1 Data discovery and interoperability
The availability of new sources of data and the need to ensure data interoperability throughout the healthcare ecosystem.

2 Shift in patient experience
Increasingly digital savvy patients are coming to expect advanced digital healthcare experiences organized around their needs.

3 Better clinical and operational decisions
All healthcare professionals require the information they need to ensure they can make better decisions for their patients, team and stakeholders.

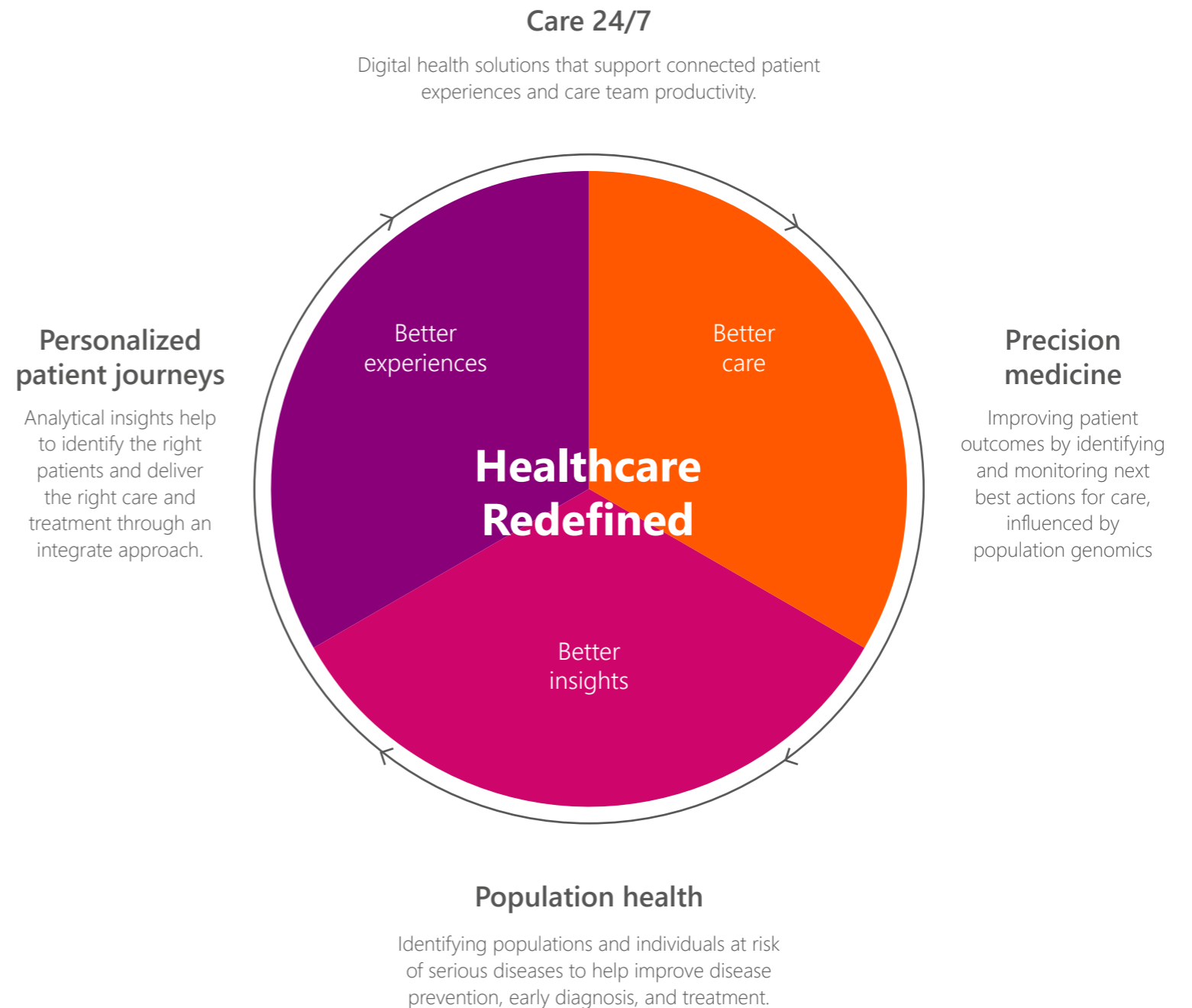**4 Increasing market competition**
Established players and new entrants are taking advantage of advanced healthcare technologies—forcing everyone else to keep up.

5 Security and data privacy considerations
Data privacy remains an especially sensitive subject. Adoption of new technologies and process must ensure security and compliance.

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Target operating model for future ready healthcare

To future-proof their business, healthcare organizations need to focus on how they interact with customers and their employees and find ways to utilize technology to improve them, not hinder them. By doing so they can enhance productivity, better connect with customers and gain greater insight to enable them to adapt to an uncertain future. In essence, it's time to redefine the target operating model.

Care 24/7

Digital health solutions that support connected patient experiences and care team productivity.

Personalized patient journeys

Analytical insights help to identify the right patients and deliver the right care and treatment through an integrate approach.

Better experiences

Better care

Healthcare Redefined

Better insights

Precision medicine

Improving patient outcomes by identifying and monitoring next best actions for care, influenced by population genomics

Population health

Identifying populations and individuals at risk of serious diseases to help improve disease prevention, early diagnosis, and treatment.

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Laying the right foundations to **deliver healthcare in new ways**

While a digital-first strategy is now a requirement, it's important for healthcare leaders to recognize that to survive in a post-pandemic world they must view things more holistically, addressing the root cause and underlying issues. To do this successfully, they need to consider the whole tech stack, so they can more readily evolve and deal with issues as they arise. Modern cloud platforms, like Healthcare on Azure, provide the robust foundation needed to gain this holistic view.

Connected devices
Accessed through multiple connected delivery devices that send and receive data through the Internet of Medical "things" to enhance care.

Healthcare application
Applications tailored to specific requirements that facilitates communication, collaboration and co-ordination using Microsoft and third- party apps.

Data management and analytics
Data from existing sources and connected devices to discover, interpret and communicate deeper insights for better decision making and personalized care.

Secure cloud infrastructure
Azure-enabled scalability, interoperability, security and access to a suite of innovative industry-aligned applications including AI and ML.

"Covid-19 has forced healthcare delivery organizations (HDOs) to leap five to 10 years into the digital future."
Gartner

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Using data throughout the healthcare ecosystem

Data is at the very heart of clinical operations and healthcare business operations. A modern data platform brings all of this data together in a way that provides valuable and actionable insights that can improve the outcomes of patients, clinicians and employees.

Personalized patient journeys

Analytical insights help to identify the right patients and deliver the right care and treatment through an integrate approach.
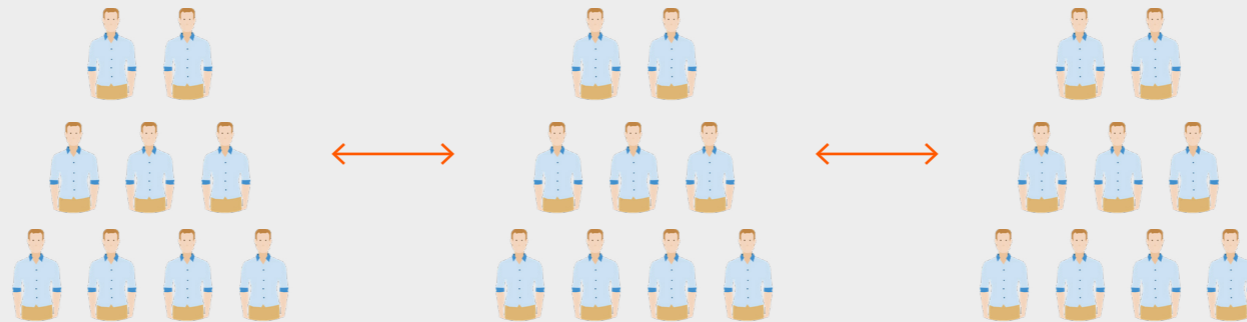
Data flows both ways in real-time

Data generated by individuals can be used for future clinical analysis.

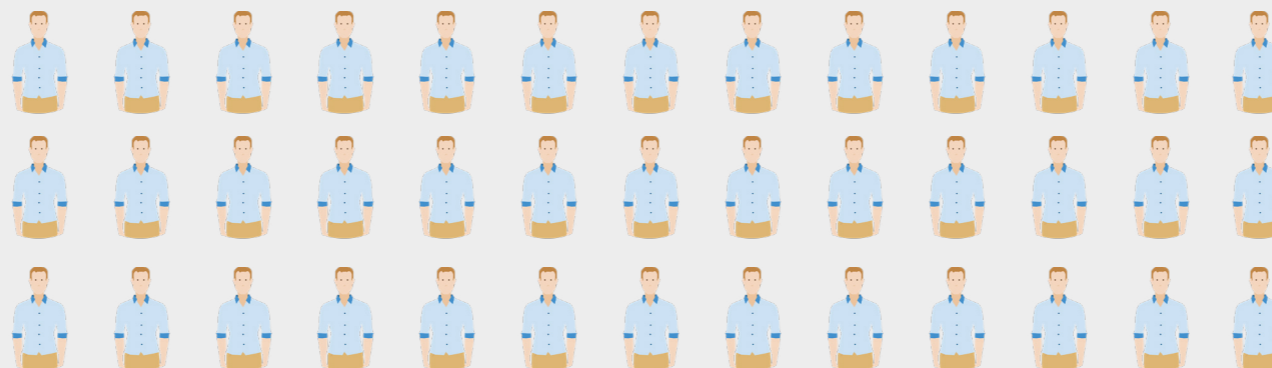Insights derived from populations informs patient treatments.

Analytics

Predictive analytics and algorithms, identify trends and rare insights around certain conditions, and even unrelated ones.

Data management

Large patient data sets from disparate sources can be brought together for current and future analysis on to a single secure platform.

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Building **personalized** patient journeys

Even before the pandemic, the customer experience was changing. As more of our lives have become more digitally focused, customers have more choice around how they choose to interact with services and healthcare is no exception. Organizations that focus on the individual needs of their customers and develop a more personalised approach will be able to encourage loyalty and referrals, uncover and close gaps in service, and drive better healthcare as patients take a more proactive approach to treatment.

Cloud data platforms bring to life every step of the patient journey, allowing organizations to narrow in on each touch point.

Program manager uses the population data to make patient aware of a preventative healthcare program with marketing via digital channels.

Patient decides to join and is directed to patient portal where an initial assessment is made using a chat health-bot.

Patient is encouraged to make a face-to-face appointment and does so using an AI-enabled scheduling assistant.

Patients

Patient goes in for a face-to-face consultation for diagnosis and their information is then sent to a specialist who receives lab orders and referrals.

Patient has a virtual consultation with the physician to discuss results.

Based on this, a personalized care plan is created and data from consultation is shared with the patient's pharmacy for prescriptions and refills.

Program managers

Care providers

Provider program managers, physicians and payers can access to this historical information to uncover new treatments and inform future care for patient populations.

Program manager refers the cohort to the research team who access data and do analysis to uncover improved therapies.

Program manager monitoring an assigned group notices a pattern and adds the patient to a cohort.

Patient check in regularly with concerns and has virtual consultations with a physician. Similarly the physician and care team meet virtually on a regular basis to discuss patient's condition and decide to make care adjustments.

Patient sets up a self-service mobile app for the program which is paired across devices which manages the condition with wearable IoMT device to measure health indicators like blood, pressure, steps and weight through the app.

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Seizing the opportunity

A reinvented operating model – powered by cloud data platform – can help governments, providers, payors and clinicians across two main domains.

Improving population health
Identify individuals and cohorts at risk of serious diseases, which helps to improve disease prevention, early diagnosis, and treatment.

- Segment at-risk populations to better understand risk profiles.
- Improve quality scores.
- Predict financial and health outcomes.

Delivering precision medicine
Improve health outcomes via personalized medicine and allow researchers to develop novel diagnostic and therapeutic solutions for patients.

- Use historical data to predict which diseases are more likely to occur.
- Predict factors which can be used to prioritize and personalize the care plan.
- Understand the types of individuals who engage in and benefit from virtual care.

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Where to start: **How to transform your operating model**

Reinventing your operating model doesn't need to be complex. Using the key elements from a combination of technology building blocks, we help you along your cloud journey through three distinct horizons.

Horizon 1:
Core enablement

Technology modernization
Modernize your core tech stack by shedding legacy costs, improving scalability and ensuring business compliance.

- Reduce TCO
- Improve scalability
- Focus on transforming
- Security and compliance
- Pay for what you use

Horizon 2:
Organization innovation

Cloud transformation
Start transforming with the cloud so you can do more, with less by making processes efficient and people productive.

- Make better decisions
- Improve business agility
- Enable AI automation
- Streamline applications
- Increase transparency

Horizon 3:
Market disruption

Business reinvention
Reinvent business model and disrupt the market by delivering new experiences to patients, clinicians and providers.

- New business models
- Build ecosystems
- Integrate new systems
- Drive IoT innovation

Cost reduction   Increase value   Growth

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Harnessing cloud as an **innovation enabler**

The future of healthcare hinges on better health insights on an empowered workforce, improved clinical informatics and operational insights and enhanced patient engagement.

The strongest organizations will recognize this and harness cloud technology as the enabler.

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Healthcare on Azure:
A comprehensive
health data platform

Healthcare on Azure is a modular platform that harnesses the power of data across the entire healthcare ecosystem to deliver better insights for population health and precision medicine.

Insights-driven

Based on comprehensive medical records – many with a longitudinal span of up to 12 years – of over 54 million patients

Deploys at speed

Available to deploy immediately to meet your digital health objectives

Propose build

Industry-specific mix of commercial and proprietary technologies

Available as-a-service

Lower capital costs with support from a single vendor

Powerfully integrated

Leverages the Microsoft Health Cloud and integrates with new and existing systems, inside and outside of Azure

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Together, let's reimagine what's possible

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