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Unlocking the Future of Health

Healthcare Report 2022

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Digitalisation: A new frontier in healthcare

The Covid-19 pandemic introduced millions of people to digital healthcare, from remote consultations to smartphone apps and national test and trace initiatives. But these novelties are just a taste of the innovations yet still to come.

The U.A.E. government quickly took precautionary health measures after its first recorded case of COVID-19 on the 29th of January 2020, setting the stage for the U.A.E. to be recognised as a global leader in its COVID-19 response; despite this, the country's digital transformation of the healthcare sector has only just begun. Even before COVID-19 turned our world upside down, traditional healthcare was already being challenged by digital-first approaches. The widespread acceptance of remote healthcare services since 2019 has only accelerated the trend.

The trend towards digitalisation in healthcare will only continue to gather momentum, which means private providers - who are typically more exposed to disruption than statutory - not only face an increased challenge, but also an opportunity. In general, healthcare has a low maturity base compared to other industries - it is typically on a par with construction and agriculture.

There are many lessons that can be learned from industries with higher maturity bases, such as banking and retail, which have more streamlined processes and are now making significant progress towards a customer-first approach. Indeed, much of the banking industry adopted



digital synchronous customer communication more than five years ago.

At present, the private healthcare sector is only in the first stages of its digitalisation journey - beginning to digitise initial customer contact and facilitate common transactions, such as routine prescriptions. In our view, the future will be about more than simply providing telehealth consultations and smartphone apps. Newcomers and incumbents that base their digital strategy on a patchwork of glossy user interfaces are missing the bigger picture.

A truly digitalised healthcare service should aim to improve both the patient and clinical experience, deliver better long-term outcomes for patients, reduce costs and improve health inequalities. In this report, we examine four pillars of transformation that we believe will be key for private healthcare providers to deliver efficient, effective and patient-centered services:



1. Learning from the retail and banking sectors by putting the patient experience at the heart of healthcare.



2. Making healthcare as personal as possible, tailored to people's needs, and gaining a full perspective of their lifestyle and health.



3. Building efficient ecosystems that increase staff productivity, automate clerical tasks, boost morale and reduce burnout.



4. Taking advantage of cutting-edge innovations to implement mobile services, leveraging robotics and AI, and other smart technologies.

Embracing new trends as they emerge and adopting new approaches to care delivery are vital not just to improve outcomes, but also to be competitive in a sector where digital disruption is only in its infancy.

1. Make it Seamless: Putting the patient experience at the heart of healthcare



From symptom diagnosis through to chronic condition care, services that are tailored to the patient will become the norm. Providers who grasp the opportunity of digital transformation will have a significant advantage over those who do not.

People are ready for digitalisation in healthcare. From primary care delivery to hospital visits to accessing care virtually, there are myriad ways in which emerging technologies can transform how people receive healthcare and improve the patient experience. Indeed, a good customer experience in healthcare is more than just something that is a “nice to have” in today’s world.

For private providers, a positive patient experience is a core part of the added value that clients expect. But it goes further than that. Better patient experiences and quality improvement is not simply about achieving higher satisfaction scores – it also plays a role in creating better patient outcomes and positively correlates to processes of care for prevention and disease management.²

We have already seen the benefits that focusing on customer experiences can bring. The explosion of digital services in the consumer markets – from Amazon to Facebook and to financial services – has introduced people to the benefits that personalisation brings to customer service. There is no excuse for healthcare, which is a vastly more important factor in people’s lives, to lag behind these consumer expectations.



This demand is set to increase as expectations for a good patient experience rise, and health services are facing unprecedented pressure.

A positive patient-first experience at each step of the journey is crucial for patient satisfaction. Excellent quality of care is essential; However, other factors such as serving their patients from their homes through digital channels, wait times, integrated systems, and cost transparency all play a profound role in determining whether a patient will continue with a healthcare provider or if they will look elsewhere.

² Ahrq.gov. 2017. Section 2: Why Improve Patient Experience?

³ Stoye, G., Warner, M. and Zaranko, B., 2021, Could NHS Waiting Lists Really Reach 13 Million?, Institute for Fiscal Studies.

1. Make it Seamless: Putting the patient experience at the heart of healthcare

Digital solutions that create ease of access and allow administrative activities to be carried out in advance mean the patient's clinical experience is all about health and not about form-filling. At the same time, remote administration reduces physical interactions, something that is highly valued by patients in a post-COVID world.

This goes beyond simply creating slick apps and frictionless interfaces – it must also encompass the way healthcare providers interact with patients.

The healthcare sector is just as guilty as financial companies for bombarding consumers with complex terminology and confusing jargon. Making a greater effort to simplify language and better inform users will go to great lengths to improve experiences.

A positive customer experience improves satisfaction and retention, reduces the costs of customer acquisition and creates loyal customers. Long-term relationships between patients and healthcare services are a win-win for both clients and providers, creating efficiencies in every sphere from administration to clinical practice and improved patient outcomes.

Like other industries and services, digital healthcare needs to be integrated and seamless, as opposed to fragmented and bureaucratic. Providers that grasp the opportunity of digital transformation will have a significant advantage over those who do not.

Therefore, engagement with the patient must continue to be omni-channel and in a compelling manner that results in value creation.

Industry Spotlight: How WeChat creates better healthcare experiences

One of the most popular messaging apps in China, WeChat, began as a way for people to send text messages to each other, much in the same way as WhatsApp. But since its creation in 2011, it has evolved into an “everything app”.

Along with messaging, payments, and games, it allows users to book medical appointments, purchase medicine, pay for hospital bills and have conversations with medical consultants. This mirrors the seamlessness and improved experience found in the any booking and commerce app, which allows people to effortlessly order products, meals and on-demand transportation.



Future growth will likely be exponential, with WeChat increasingly acting as an enabling platform for hyper-tailored experiences; 2% of all WeChat mini programs –DtC apps within WeChat that do not have to be downloaded separately - currently relate to healthcare provision.

2. Make it Personal: Digital solutions can help to develop a deeper understanding of the patient



A patient's health is a complex cross-section of multimorbidities and lifestyles. Harnessing big data to understand and impact upon the patient's entire health and lifestyle picture, and delivering personalised treatment and service, will be a key point of differentiation for private healthcare providers.

The best clinical practice treats the patient, not just the disease, as the old saying goes. We know that engaging patients in a way that better understands the individual, diagnoses diseases earlier and offers personalised treatment plans not only improves quality of life, but also service delivery. Along with creating a more positive experience, it is associated with providing a higher quality of care and a reduction in costs.⁶

A digitalised healthcare system can make this aspiration more of a reality than ever before, and the key enabler for this is big data. Digital data has long been valuable in healthcare at a macro level – assessing demand and resources and statistical outcomes. As providers move to fully digital systems, the volume of healthcare data available to them will grow exponentially.

Today, approximately 30% of the world's data volume is being generated by the healthcare industry, according to RBC Capital Markets.⁷ By 2025, the compound annual growth rate of data for healthcare will reach 36%. That's 6% faster than manufacturing, 10% faster than financial services and 11% faster than media & entertainment.

Until recently, healthcare providers have struggled to provide care that not only improves experiences but is also focused on better outcomes for the patient. Increased analysis of large healthcare datasets will deliver insights that will enable providers to develop approaches that can anticipate and prevent acute conditions.

In much the same way that other industries have used technology to understand customers' behaviours and predict what they want next, the healthcare sector can use similar tools to analyse the patient as a whole, their health records and demographics to create a focused engagement strategy.

These approaches will allow providers to develop a 360-degree understanding of their patients' health and wellbeing, enabling clinicians to see their clients not as one or more medical conditions, but as rounded human individuals. Seeing the patient in this way will help in removing the inequalities in background and circumstances that can be carried over, or even exacerbated, by impersonal approaches to healthcare.

⁶ Bestsennyy,O. and Cordina, J., 2021, The Role Of Personalization In The Care Journey: An Example Of Patient Engagement To Reduce Readmissions, McKinsey & Co.

⁷ RBC Capital Markets, n.d.,The Healthcare Data Explosion.

Breaking the barriers within healthcare



Traditional healthcare services have not been designed around the patient, but around illness and administration, and historically services have operated in silos. These silos can be structural: general practice, local outpatient clinics, and in-patient surgical hospitals. They can also be clinical: oncology, maternity, gynecology, radiology, and mental health services.

Silos often operate remotely, and their digital systems are often not fully integrated with each other. The silo effect is seen most starkly in women's health and in mental health. The emergence of FemTech as a concept reflects a realisation that women's health has been disconnected and neglected. Digital transformation can help integrate the technological advances in women's health and wellbeing into a holistic service. These are issues of health and wellbeing that concern half of all clients.⁸

Mental health also often sits apart from the rest of the healthcare system, yet mental health is often present alongside physical illness.

During the pandemic, a 2020 study during the pandemic found that over half (57%) of people in the UAE were suffering from at least one mental health disorder⁹. In fact, mental health is of increasing concern across the developed world.

Through effective digital data and solutions, old systems can be replaced and silos dismantled. This will make it possible for providers to create personalised treatments for a wide range of illnesses, including long-term or lifetime conditions such as obesity, diabetes and heart or gastro-intestinal conditions. Rather than being reactive to conditions, digital transformation can create a proactive system that leads to better patient outcomes and reduced costs. Digital transformation will be a win-win for patients and providers on the route to what we like to call 'wellth' creation.

⁸ World Bank, 2020

⁹ ResearchGate, 2020, Prevalence of Mental Disorders and the Use of Mental Health Services among the Adult Population in United Arab Emirates

¹⁰ Office for National Statistics, 2021, Coronavirus And Depression In Adults, Great Britain

Industry Spotlight: Digital assistants, built on big data

When Apple introduced Siri for iOS users in 2011, the reception was mixed. Its voice recognition was good for its time, but it only recognised specific commands and had only limited responses to questions.

More than a decade later and much has changed in the world of virtual and digital assistants. While Siri has transformed by leaps and bounds within the iOS universe and the Apple HomePod, it also has stiff competition from Google Assistant and Amazon Alexa. While consumers were somewhat skeptical at first, there are now hundreds of millions of people using virtual assistants on phones and smart speakers.

Technology research firm Canalys estimated that more than 163 million smart speakers were installed in homes globally in 2021, led by China and the US.¹¹

Virtual assistants and smart speakers have grown in popularity because they use artificial intelligence and big data to blend multiple services and conveniences into a single unit.

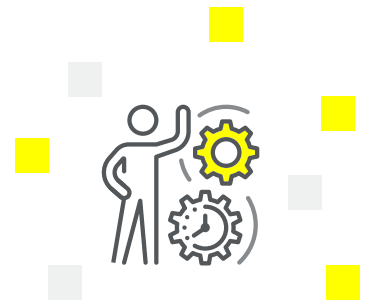


Music streaming and digital radio are among the most popular uses for smart speakers, but they have other functions that make them convenient: with a simple voice command, they can pull up recipes, provide weather reports, set timers and reminders and do online searches.

More importantly, they can form part of a connected home that ties together security, heating, and entertainment systems, as well as help with online shopping – particularly in the case of Amazon's system.

¹¹ Canalys, 2020, Global Smart Speaker Market 2021 Forecast

3. Make it Efficient: Building systems for professionals



Professionals in healthcare face constant pressure, compounded by a significant proportion of time spent on administration tasks (~20%¹²). This wasted effort needs to be streamlined or stripped away entirely, leaving healthcare professionals to focus on the patient.

It is widely acknowledged that professionals working in healthcare face almost constant pressure. Poor staff morale is a widespread problem and staff burn-out rates – already high before the global pandemic – are a significant challenge for healthcare providers.¹³ Making working life as easy and efficient as possible for clinical staff is vital to reviving that morale.

Providing medical professionals with efficient, fully digitalised and integrated systems that help rather than hinder their clinical work will be an essential part of the solution. Clinicians themselves want their work to be patient-focused and so a system that is patient-centred is also user-centred.

Central hubs that allow clinicians to access data in a patient-centred way, not only improve the experience and outcomes for patients, but it can also dramatically improve the experience for medical professionals.

In addition to helping deliver more personalised and integrated experiences for patients, creating cutting-edge ecosystems can improve provider productivity, improve outcomes and reduce costs.¹⁴ Ecosystems are sets of capabilities and services that form around specific healthcare objectives to create an improved outcome or experience. Different ecosystems will emerge to serve different types of patients, all focused on delivering efficient solutions for their specific needs.

Healthcare ecosystems can be macro or micro in nature, with the aim of addressing the needs of populations and patients. One such ecosystem may exist for those who are healthy and only need virtual healthcare appointments, and another ecosystem may be designed around those with chronic conditions. Each segment will require a different level of service with its own touchpoints, and the ecosystems will be designed to maximise productivity and positive outcomes.

Some of the solutions for improving the healthcare delivery ecosystem are straightforward: single logins to replace multiple logins across separate systems; a range of channels for treatment and consultation from virtual to face-to-face consultations that can all be managed from a single platform; and ensuring all relevant patient data are accessible at a single point. Other aspects will be more complex and require investment in innovative technologies and infrastructure.

Delivering all of these solutions will involve a combination of investing in new systems, but also an understanding of legacy systems and the tools that are needed to transform and integrate them into efficient and seamless ecosystems. For healthcare providers, this will lead to clear benefits. They will create efficiencies that will reduce the administrative burden on clinicians, improve service levels and create better outcomes. Along with this, it will create more resilient healthcare services that are flexible and scalable as demand levels rise.

Industry Spotlight: Digital solutions that improve clinical outcomes

The healthcare sector involves significant amounts of paperwork, administration and record-keeping. Clinicians must take notes, file documents and ensure patient records are always up-to-date.

These obligations eat into time that could be spent with patients. Along with this, many clinicians could benefit from digital solutions that increase productivity along the three key touch points. Firstly enhancing triage through both synchronous and asynchronous, then streamline patient consultations and finally support clinical decision-making and diagnoses. Three new digital platforms and apps such as eConsult, Dragon Medical One and Wolters Kluwer UpToDate are designed to do exactly that.

For triage, eConsult is a service that allows GPs to offer online consultations to their patients. The patient submits their symptoms to the GP through an online portal. After reviewing the request, the GP can then determine the right level of care for the patient depending on how critical their needs may be. The GP follow-up can be by secure message or over the phone, via video or in a face-to-face consultation.



Meanwhile, to streamline patient consultations, Dragon Medical One is a cloud-based tool that uses artificial intelligence and speech recognition to help clinicians capture patient notes quickly and effectively. Rather than taking time to type notes following patient consultations, clinicians use UpToDate to enter them directly into the system, rather than in two steps.

Finally, with high demands placed on medical professionals, they are under significant pressure to make the right decisions. UpToDate provides clinical decisions support that helps professionals improve patient outcomes. The platform offers insights and recommendations that are actionable and help clinicians make the right diagnoses. It also offers drug decision support to ensure doctors prescribe the right medicines.

¹² Royal College of Nursing Survey, 2019, Nursing Staff Stretched To Breaking Point Over Workloads

¹³ De Hert, S., 2020, Burnout in Healthcare Workers: Prevalence, Impact and Preventative Strategies. Local and Regional Anesthesia, 13: pp 171–183

¹⁴ McKinsey & Co, 2020, The Next Wave Of Healthcare Innovation: The Evolution Of Ecosystems

4. Make it Cutting Edge: The technologies that will transform the future of healthcare



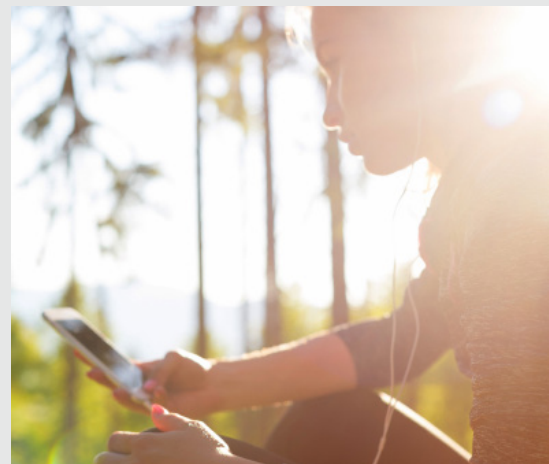
Emerging technologies are opening up new possibilities in the healthcare sector. We believe there are four key enablers that will underpin this: wearables, robotic process automation (RPA), mobile and accessibility. Crucially, these are proven technologies that have been scaled, de-risking the application of innovation.

Wearable healthcare technology

Wearable devices that monitor a persons' health are already available and there is a willingness and appetite among the public for these products.

There were around 266 million units of smart wearables shipped globally in 2020 and it is projected to reach 776 million units by 2026,¹⁵ registering a 19.6% annual growth rate between 2021 and 2026. These connected and cognitive devices are potential game-changers in private healthcare settings, where wearables can be integrated with a full patient-centred healthcare system.

A partnership between Apple and Johnson & Johnson to investigate how the Apple watch can be used to reduce the risk of stroke is just one example of the potential of wearable technology.¹⁶ What is key is how unfiltered device data – often activity sensor readouts - can be easily transferred, stored, and translated into pithy healthcare insight for clinicians.



More broadly, wearables will play a significant role in extending healthcare beyond the clinical setting, helping clients to foster their everyday wellbeing, but also monitoring, assessing and anticipating potential health conditions before they become expensive or difficult to treat. Better understanding the early-warning risk-factors has long been a goal of primary care providers, with commercial wearables likely to be the key enabler of this.

¹⁵ Mordor Intelligence, n.d., Smart Wearable Market - Growth, Trends, COVID-19 Impact, and Forecasts (2022 - 2027)

¹⁶ Johnson & Johnson, n.d., Johnson & Johnson Announces Research Study with Apple Watch to Help Improve AFib Outcomes Including Stroke Prevention

Robotic Process Automation (RPA)

These technologies promise to transform the workloads and practices of medical professionals. Currently, clinicians spend significant amounts of time on high-volume low-impact tasks either pure administration or large volume clinical work such as specimen and material sorting and transport. Robotic Process Automation (RPA) can relieve clinicians of these tasks and are already being used to assist in routine procedures.¹⁷

Clearly, certain clinical assessments are unsuitable for RPA and even AI applications – for assessing radiography images in which completely clear scans can be sorted by leaving clinical experts to focus on those that require professional human assessment.

Freeing clinicians from high-volume low-impact tasks will allow them to focus their skills on the low-volume high-impact tasks. In other words, the tasks that make the most difference to patient outcomes.



Mobility

The use of video consultations during the pandemic lockdowns has already demonstrated the public's willingness to use this channel where appropriate. The benefits for clinicians are so far less obvious and professionals will often feel that face-to-face consultation is preferable or even essential in some cases. Video consultations provide a convenient 'asynchronous' channel to address the 70-80% of complex conditions that cannot be met through synchronous methods.

But as part of an integrated digital healthcare system, the video consultation points the way towards a multi-channel system of care delivery, in which the best channel can be used in each case. Where appropriate, virtual consultation will be a valuable tool in reducing the backlogs that have arisen in healthcare over the last two years.

For many patients, the ease of access offered by remote care is a boon in itself. Accompanying the video consultation are additional supporting functionalities, such as providing photographs to the clinician, accessing healthcare records and making payments – all enabled by smartphone.

Future applications are countless, including the possibility of 'virtual wards' in which clinical teams, working remotely will be able to act as teams, combining the best of traditional in-patient healthcare with the flexibility of remote and mobile technology.

¹⁷ Intuitive Website, n.d., Innovating For Minimally Invasive Care.

System thinking and accessible design: Tackling exclusion



Advances in technology and the digital transformation of healthcare offer dramatic improvements in patient care, the work experience of clinicians and the cost-effectiveness of healthcare provision. But there are, and will always be, those who are digitally excluded, lacking the access or familiarity needed to take advantage of technology, or excluded by the very nature of their condition or by a disability. In some cases, their needs cannot be met through wearables or automating assessments.

The excluded are not an insignificant number. In many countries, over-65s already make up well over 20 percent of the population. Other vulnerable users who might face similar problems with an entirely digital interface, or poorer people unable even to afford the necessary technology may double this figure.

However, by applying the principles of good service design (a human-centred approach that focuses on customer experience), as well as supporting processes such as UX user-research, the benefits from improved provision can be accessed, without a line of code being written.

Furthermore, with greater efficiency across all healthcare providers in a system, the reduction of administrative burdens and the ability of clinicians to free themselves of low-impact high volume tasks will free-up time resources.

Industry Spotlight: How biometric and mobile technologies foster financial inclusion

One of the biggest challenges in the financial services sector is the concept of financial inclusion. In the UAE alone, it is estimated that 32% of the working population (or about 1.7 million individuals) are unbanked.¹⁸ At a global level, the number is significantly higher – the World Bank suggests that 2.5 billion transact in cash because they lack access to financial services.¹⁹

People who are unbanked struggle to access bank accounts, debit and credit cards, and other financial tools such as payments services, loans, and other financial products. Different countries are using different solutions to improve financial inclusion and reduce the number of people who are unbanked. In all cases, digital solutions are a major part of the strategy.

Transformative technology and mobile devices play a major role in creating more financial inclusion. One approach to this is providing free bank accounts and enabling technology that facilitates low-cost payments to anyone with a mobile phone. But there are still barriers: not everyone can own a mobile phone, while others cannot open bank accounts because they do not have identification documents, like



birth certificates.

In India, the potential answer to this problem is the Aadhaar system. Launched in 2009, the system uses biometric technology to provide proof of identity for citizens. It originally began as a system to provide people with welfare benefits, but more recently has emerged as a tool for financial inclusion.

By providing people with proof of address, an Aadhaar card allows people to open bank accounts with no other identification required.²⁰ While this does not solve the issue of digital inclusion for those who cannot afford mobile phones or computers, it is a piece in the puzzle in a country where around 190 million people are unbanked.²¹

¹⁸ Journal of Risk and Financial Management, 2020, Digital Payments, the Cashless Economy, and Financial Inclusion in the United Arab Emirates:

¹⁹ The World Bank, n.d., Digital Financial Inclusion

²⁰ Jain, A. 2020, How Can An Aadhaar Card Help You?, Forbes Advisor

²¹ Demircug-Kunt, A., Klapper, L., Singer, D., Ansar, S. and Hess, J., 2018, The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution, International Bank for Reconstruction and Development / The World Bank, The Unbanked Chapter, pp. 35-41.

The New Frontier for Healthcare

More so than other sectors, digitalisation in healthcare is only in its early stages. While the pandemic created an immediate need for mobile solutions and other new approaches to care delivery, it is clear that we have only seen the beginning of what is possible. The proliferation of innovative technologies gives everyone in the sector a chance to reconsider what good healthcare looks like, and how it can be delivered.



It is already clear that focusing on a better experience for patients and how they receive care is a critical element. Lessons from the retail and financial sectors show just how important it is to deliver what the customer wants in a way that is convenient to them. This, along with developing solutions that take into account the patient's full lifecycle and health picture, can help healthcare professionals treat more conditions and prevent others.

To make all of this work requires a new approach to the systems and processes that healthcare professionals use every day. New digital ecosystems, more automation, greater insights from artificial intelligence, and more, can all help to create a more efficient working environment that also yields better results.

Add to this the possibilities that wearable technologies can create, and it is clear that the healthcare sector is at the start of a digital revolution. There is a burning platform to transform an antiquated healthcare system; this will require an equal measure of conviction and courage on the part of health leaders.

Empathic, people-focused digital transformation will be key to building a new health and care ecosystem that is better for staff, patients and citizens.

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About Monstarlab

Monstarlab is a digital experience partner focused on accelerating growth for ambitious clients. We achieve this through our human-centred design and engineering expertise, our open partnership approach and our extensive network of global talent.

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