

The Future of Healthcare Payments: Innovation, Inclusion and Interconnected Healthcare



Table of contents

- 3 Introduction
- 4 Increasing consumer centricity
- 8 Inclusion and equality in healthcare
- 14 The interconnected healthcare ecosystem
- 17 Innovation speed
- 22 Where do we go from here?



Introduction

The healthcare industry is going through a major period of transformation as it leverages new technology and innovative business models to solve a fundamental challenge - how to provide better care at lower cost for more people. Healthcare companies across the care continuum are shifting focus from reactive symptomatic treatment to holistic care, preventative treatment and health maintenance.

Payments are shifting from a back-office function to a strategic lever.

A key component of this new approach is payments technology, which is shifting from a back-office function to a strategic lever that is integral to change. This is because payments have an impact at every part of the healthcare ecosystem from patient care to complete business-to-business (B2B) relationships. Whether it is a patient trying to pay a medical bill, a pharmaceutical company paying a regulatory body, a clinical research organization paying trial participants, or a manufacturer working with distributors to deliver shipments on time, making payments faster, simpler and more transparent can help the system work better for everyone involved.

Payments innovation is an important driver of this vision. Consumers are accustomed to the ease of purchasing goods and services online and expect similar simplicity in healthcare. They should be able to seamlessly pay a medical bill, use subscription models for medical devices or choose how to get paid for participating in a clinical trial. Likewise, shifting to fast and seamless digital pay-in and pay-out systems can help healthcare businesses across business-to-consumer (B2C) and B2B business models improve efficiency, smooth revenue cycles and focus resources on their core mission.

In this white paper, you'll find insights into how businesses can leverage payments to deliver better care while scaling sustainably through improved payments processes.

Key considerations for healthcare businesses include:



Improvements to patient experiences through consumer centricity



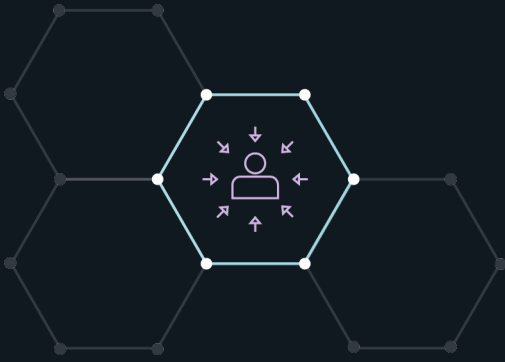
The interconnected healthcare ecosystem



Inclusion and equality in healthcare



Innovation speed and digital health



SECTION ONE

Increasing consumer centricity

Digitalization is continuing to transform all industries; in fact,

investment in direct digital transformation will reach \$6.3 trillion between 2022-2024.¹

These improvements in digital experiences have a major impact on consumer expectations. Used to the type of smooth, seamless and convenient experience that they might get with an e-commerce retailer or a ride-hailing app, people expect the same service from every organization they interact with. B2B companies are already adapting, building vast online marketplaces and adopting fast and secure digital methods for pay-in and pay-out. Meanwhile, service providers, like accountancy platforms or insurance providers, are creating innovative digital models with a range of payments options, such as subscription, split payments or pay-as-you-use. Even high-value assets, such as real estate or cars, are increasingly being bought and traded online.

¹IDC, October 2021. 'IDC FutureScape: Worldwide Digital Transformation 2022 Predictions.' Available at: <https://www.idc.com/getdoc.jsp?containerId=US47115521>. Accessed February 2023.

However, healthcare has been slower than many other industries to advance with the times. It remains notoriously complex and fragmented, with consumers struggling to manage different providers and healthcare operators. This is a huge area of opportunity for healthcare companies, as 70% of consumers are open to using a unified digital platform to manage their healthcare needs.²

The digital front door

For both providers and health plans, one strategy to create consumer-grade experiences is to build a “digital front door.” This could be an app or online platform where people can access and manage all of their healthcare requirements, such as booking doctor’s appointments, making payments, arranging follow-up care, ordering additional supplies, managing pharmacy prescriptions and even booking transport to a health facility.

It is unlikely that there will ever be one provider that can “own” this portal, so it is important that any approach is interoperable and facilitates the easy sharing of data. For inspiration, think of a digital wallet: users can store all types of information, from payment cards to tickets to identification documents, across a range of 3rd party providers. Similarly, a healthcare portal could include health data, insurance policies and pharmacy discount cards. It could also sync with primary or speciality caregivers to facilitate communication and manage the patient’s ongoing care.

An important aspect of the digital front door is making the financial side of healthcare more transparent and easier to manage. In the US, healthcare payments remain largely paper-based, with providers and patients alike having to contend with reams of physical bills. As a result, there is often a lack of clarity around a patient’s financial responsibility, which may lead to an unexpected expense. Healthcare pay-outs are also frequently done by check,³ which incurs inherent risk that the check can get lost, arrive late or go to the wrong address.

The more patients are empowered and given a choice, the better their experience will be.

Just increasing transparency, which is expected for many consumer-facing companies, could make a difference. A recent survey from McKinsey showed that 60% of patients wanted more information when choosing where to get care.⁴ To achieve this transparency, healthcare providers should make key consideration factors widely available, including cost estimates and patient reviews of facilities and services. The more patients are empowered and given a choice, the better their experience will be.

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60%

of patients wanted more information when choosing where to get care.



² PYMNTS, February 2023. 'Nearly 30 Percent of Consumers Paid a Healthcare Bill Via Online Portal in the Past Year.' Available at: <https://www.pymnts.com/healthcare/2023/nearly-30-percent-of-consumers-paid-a-healthcare-bill-via-online-portal-in-the-past-year/>. Accessed February 2023.

³ PYMNTS, February 2023. 'Consumers Scramble to Cover Expenses as Savings Dwindle.' Available at: <https://www.pymnts.com/consumer-finance/2023/consumers-scramble-to-cover-expenses-as-savings-dwindle/>. Accessed February 2023.

⁴ McKinsey, July 2022. 'Consumer decision making in healthcare: The role of information transparency.' Available at: <https://www.mckinsey.com/industries/healthcare/our-insights/consumer-decision-making-in-healthcare-the-role-of-information-transparency>. Accessed February 2023.

Provider spotlight: Payments across 5 points of care

Healthcare providers can use digital tools and payments to create better experiences across five main patient touch points.



1. Pre-service

Pre-service research is often the first digital interaction a patient has with a healthcare provider. This may include researching a location or a route to a care provider, looking at reviews from previous patients, or using a search engine to filter facilities based on cost, patient experience or other indicators.



2. Intake

This is the opportunity to simplify intake for a new patient and have clear, collaborative conversations about the type of care needed, preferred payment methods and potential costs. Having a consolidated view of a patient's health records and information via a digital portal can be useful at this stage both for onboarding and to guide the conversation. Providers can also collect a payment method at this stage for payment assurance post-care.



3. Point-of-care

The core touchpoint is the point of care. Providers need to shift from transactional care to a focus on the patient experience. It could also mean using appropriate technologies, such as telehealth, to improve access, increase speed and lower costs.



4. Post-care

How can health providers end a care interaction and prepare a patient for follow-up care? Can they use digital technologies to help with follow-up care or ensure medical adherence? Can they use digital payment methods like e-billing to make payments better? Are financial options like payment plans available?



5. Follow-up

Healthcare providers can use the digital portal to stay in touch with patients in the future, schedule follow-up meetings or even automate subscription refills. There could be reminders for payment dates, or educational videos on healthy living.



Employee experience is just as important

As healthcare looks to enhance the patient experience, it is important not to overlook healthcare workers. After all, care will only be as good as the people providing it. As Nick Webb, a Healthcare Futurist and the CEO of healthcare management consulting firm LeaderLogic, LLC, explains: “The only way to improve member experience, which is now mission critical, is to also concurrently significantly improve employee experience. The best organizations are implementing new best practices around human experience design. Human experience design concurrently addresses the issues of both employee and patient experiences.”

Yet, in a time of rising costs and squeezed budgets, employee morale is suffering and there is a growing staffing shortage, especially among nurses. 29% of resident nurses said they’re likely to leave their current role in patient care.⁵ Frequent complaints include burnout and insufficient pay.

Although payments cannot solve wider systemic issues, improved payment practices can benefit employees. For example, earned wage access (EWA) solutions can allow health workers to draw down portions of their salary before pay day, easing any financial burden. Similarly, as healthcare businesses work with gig workers to fill staffing gaps,⁶ they’ll need to adjust payment frequency outside of the standard two week payroll disbursement, as 91% of gig workers want more frequent pay-outs.⁷

Digitizing patient payments can also decrease manual effort for overwhelmed staff. By introducing digital payments earlier in the care journey, patients can access self-service options sooner rather than engaging with a healthcare employee - allowing staff to focus on higher-value activity and delivering better care.

“The only way to improve member experience, which is now mission critical, is to also concurrently significantly improve employee experience.”

- Nick Webb



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of resident nurses said they’re likely to leave their current role in patient care.

Key takeaways

- Consider how creating a ‘digital front door’ for consumers can improve their experience at every touch point.
- Providing digital payments options for pay-in and pay-out can help patients organize and manage their healthcare finances, while making earned wages more accessible can improve the experience for healthcare employees.
- Use technology to increase transparency and choice, whether it is through remote healthcare, digital apps or payment solutions.
- In order to shift to member centricity it is fundamental to also improve employee experience.

⁵ McKinsey, May 2022. ‘Assessing the lingering impact of COVID-19 on the nursing workforce.’ Available at: <https://www.mckinsey.com/industries/healthcare/our-insights/assessing-the-lingering-impact-of-covid-19-on-the-nursing-workforce>. Accessed February 2023.

⁶ HealthLeaders, November 2022. ‘How the gig economy has shifted the future of healthcare work.’ Available at: <https://www.healthleadersmedia.com/nursing/how-gig-economy-has-shifted-future-healthcare-work>. Accessed February 2023.

⁷ J.P. Morgan, ‘Hiring Gig workers? If yes, you need to pay them differently.’ Available at: <https://www.jpmorgan.com/solutions/treasury-payments/insights/gig-economy-workers-future-of-shopping>. Accessed February 2023.



SECTION TWO

Inclusion and equality in healthcare

One of the most important priorities for healthcare organizations is to advance health equity,⁸ improving access to healthcare of the highest quality, specifically for underserved populations and communities. But the challenges to inclusivity and equality are countless. For example, clinical trials used to develop new drugs may have historically studied narrow cohorts of the population, and may not reflect underserved communities. This can impact the efficacy of these drugs in certain patient populations. To overcome bias within healthcare, members of the ecosystem must use critical analysis to identify its root cause, regardless of where they fit on the care continuum.

⁸ MedCity News, January 2023. 'While Nearly All Healthcare Companies Have a Health Equity Strategy, Most Are New.' Available at: <https://medcitynews.com/2023/01/ev-while-nearly-all-healthcare-companies-have-a-health-equity-strategy-most-are-new/>. Accessed February 2023.

Beyond data limitations within clinical trials, other challenges to inclusion and equality include:

High cost of care

Cost remains a consistent barrier to healthcare access, with 38% of U.S. adults reporting they had skipped some form of healthcare, be it a test or a doctor's appointment, due to the financial burden.⁹ High out of pocket costs are a major challenge. Although health insurance coverage is growing, half of those recently surveyed claimed they would not be able to pay an unexpected \$1,000 medical bill within 30 days.¹⁰



1/2 of those recently surveyed claimed they would not be able to pay an unexpected **\$1,000** medical bill within **30** days.

Accessibility and availability

It is estimated that 30 million Americans do not live within a 60 minute drive of a trauma center, while 80% of rural Americans are medically underserved.¹¹ Medical deserts also exist within urban areas, due to the location of health facilities and issues with transportation, which can make accessing care difficult for various communities.

Implicit or unconscious bias in healthcare

Implicit biases can impact healthcare across numerous touchpoints, including patient care, medical school admissions, hiring, promotion and growth opportunities.¹² This can also extend to payments, as healthcare providers in rural or underserved areas are less likely to offer payment options like advanced alternative payment models (APMs), which give incentives for providing high-quality and cost-efficient care.

⁹ USC Price, 'How to Improve Access to Health Care: Current Issues and Potential Solutions.' Available at: <https://healthadministrationdegree.usc.edu/blog/how-to-improve-access-to-health-care/>. Accessed February 2023.

¹⁰ The Commonwealth Fund, September 2022. 'The State of U.S. Health Insurance in 2022.' Available at: <https://www.commonwealthfund.org/publications/issue-briefs/2022/sep/state-us-health-insurance-2022-biennial-survey>. Accessed February 2023.

¹¹ Fierce Healthcare, August 2021. 'Nationwide out-of-pocket spending jumped 10% in 2021. Expect that growth to continue through 2026.' Available at: <https://www.fiercehealthcare.com/payer/nationwide-out-pocket-spending-grew-10-to-1-650-per-person-2021-expect-to-continue-through>. Accessed February 2023.

¹² American College of Cardiology, January 2020. 'Cover Story | Implicit Bias: Recognizing the Unconscious Barriers to Quality Care and Diversity in Medicine.' Available at: <https://www.acc.org/latest-in-cardiology/articles/2020/01/01/24/42/cover-story-implicit-bias-recognizing-the-unconscious-barriers-to-quality-care-and-diversity-in-medicine>. Accessed February 2023.

Removing barriers to inclusive care

- **Telehealth and remote medicine**

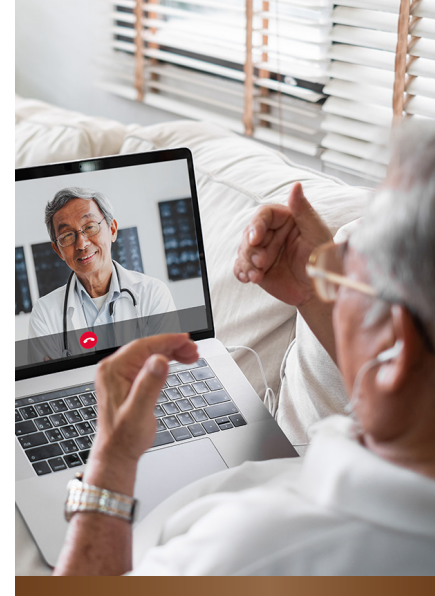
One of the most important strategies for improving access is leveraging digital tools to enable remote care. Telehealth could be particularly impactful for patients that face distance barriers or live in areas with long waiting lists for care appointments. Research has also suggested that remote medicine can reduce healthcare costs by quickly resolving many health issues and therefore preventing unnecessary usage of more expensive care settings such as hospitals.¹³ Telehealth is also helping support the shift from fee-for-service to value-based care, as in some cases it can be as effective as in-person care but at lower costs. This shift is impacting business models, which are often based around quantity of services provided, rather than quality of care. It is also helping healthcare organizations think more strategically about efficiency and waste, and how they deliver new value for patients.

- **Payments strategies**

Payments also present an opportunity to improve health equity and accessibility.

For healthcare delivery, offering patients options such as payment plans can help ease their financial burden. This is mutually beneficial as providers can anticipate scheduled payments, which helps with managing cashflow. As is common in other industries, providers may offer upfront cost estimates or discounts to patients for settling before terms. Research shows that giving patients cost estimates in advance increased upfront collections by 27%.¹⁴ This can have a major impact for providers in terms of collections and revenue cycles; if they could receive funds earlier, it also gives them more leeway to offer innovative payment options themselves.

Additionally, patient support programs (PSPs) offered by pharmaceutical companies can remove the barrier of cost and increase access to life saving drugs. The most impactful PSPs understand patient behavior and work to solve affordability issues for treatment continuity, with 90% increase in treatment plan adherence after 12 months.¹⁵



¹³ The American Journal of Emergency Medicine, August 2018. 'On-demand synchronous audio video telemedicine visits are cost effective.' Available at: [https://ajemjournal-test.com.marlin-prod.literatumonline.com/article/S0735-6757\(18\)30653-3/fulltext](https://ajemjournal-test.com.marlin-prod.literatumonline.com/article/S0735-6757(18)30653-3/fulltext). Accessed February 2023.

¹⁴ MD Clarity, November 2022. 'Upfront Cost Estimates and Patient Payments: A Beneficial Pairing for Healthcare Practices.' Available at: <https://www.mdclarity.com/blog/upfront-cost-estimates-patient-payments>. Accessed February 2023.

¹⁵ Iqvia. 'Design and Refine: Make Patient Support Programs Work for Your Patients.' Available at: <https://www.iqvia.com/-/media/iqvia/pdfs/asia-pacific/white-papers/design-and-refine.pdf>. Accessed March 2023.

Artificial intelligence

Artificial intelligence (AI) can be leveraged to support the more timely and accurate triage of medical conditions, driving down costs. It is estimated that 2/3 of visits to the emergency department are avoidable, costing \$32 billion annually.¹⁶ While AI can't prevent all avoidable emergency room visits, it can be used as a tool to address some of those care needs. For example, when AI is coupled with continuous remote monitoring, it could be possible to evaluate more accurately if patients need care on an ongoing basis.

However, AI is a supplemental tool, and not a replacement for a person. It should improve overall care outcomes rather than being a channel in itself, and it is important that the human element is not lost when dealing with patients. If used well, AI could be beneficial for patient interactions. AI should be able to undertake a lot of back-end functions, giving providers more time to focus on high-value care and spend more time with patients. However, data models and AI-based systems must also be carefully scrutinized to ensure they are inclusive and expansive, and there is no implicit bias.

- **Data sharing and preventative medicine**

As more elements of the healthcare system are digitalized there is a great opportunity to consolidate and analyze data to improve outcomes and promote inclusive practices, whether it is for patients, providers or pharmaceutical companies. For example, remote monitoring tools, such as wearable devices, can collect huge amounts of data from people, which can be used for anticipatory or preventative medicine, health alerts, or for research of larger population samples. These approaches can help to encourage preventative medicine in underserved populations. They can also provide access to accurate health data from these populations, giving providers a more detailed insight into their needs and helping to identify any disparities.

In general, collecting more data on underserved populations, whether defined by race, sexual orientation, income or other characteristics, can help to counteract implicit bias and provide more nuanced and effective care. It can also lead to personalized medicine, both on the care side, by providing treatment programs that are tailored for the needs of specific patient populations, but also in terms of drug development, by supporting the creation of precision medicines that use mRNA to deliver personalized therapies and outcomes curated to a patient.

- **Transparency and consent**

When it comes to using data, transparency, consent and ethical guidelines are paramount. The focus should always be on improving medical outcomes, or making care more affordable and accessible. In order to protect the privacy and integrity of patients, it is vital that actors in the health sector have very high security standards to prevent data misuse and comply with HIPAA laws. Presently, one in six people refuse to share health data because they are concerned about confidentiality.¹⁷ To address these concerns, technology leveraged in this sector must include built-in cybersecurity controls to protect this highly sensitive information.

¹⁶ Cureus, Aug 2021. 'Artificial Intelligence-Based Application Provides Accurate Medical Triage Advice When Compared to Consensus Decisions of Healthcare Providers.' Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8352839/>. Accessed February 2023.

¹⁷ MedCity News, July 2021. 'Data sharing in healthcare: ethical considerations for a remote era of research.' Available at: <https://medcitynews.com/2021/07/data-sharing-in-healthcare-ethical-considerations-for-a-remote-era-of-research/>. Accessed February 2023.

Hospital inclusion success criteria

When working to increase inclusion in the hospital setting, there are four main evaluating criteria, as set out by the American Hospital Association.¹⁸

1. Data collection, stratification and use

Collecting voluntary data on sexual orientation, race, gender identity, veteran status, disability status and more can help health systems identify disparities in patient populations.

2. Cultural competency training

Training can help increase awareness of unconscious or implicit biases and improve understanding of factors that contribute to patients' care decisions. This process can be strengthened with data from underserved populations.

3. Diversity and inclusion in leadership and governance

By increasing the diversity of health system leadership it is possible to improve employee engagement, attract talent, reflect communities served and reduce health care disparities.

4. Strengthen community partnerships

Implementing or improving community partnerships is key to ensuring that all patient populations are having their needs met via effective community health strategies.



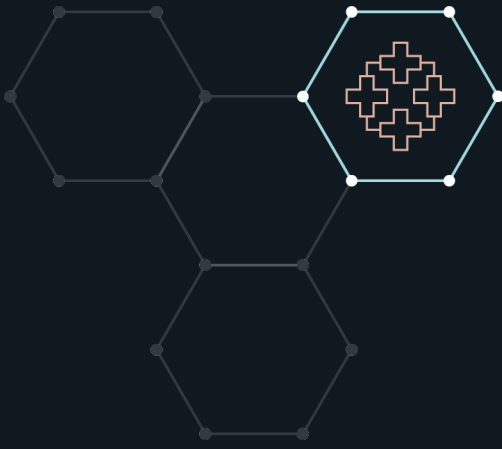
¹⁸ IFDHE, 'Health Equity, Diversity & Inclusion Measures for Hospitals and Health System Dashboards.' Available at: https://ifdhe.aha.org/system/files/media/file/2020/12/ifdhe_inclusion_dashboard.pdf. Accessed February 2023.

Designing for access

Another important element when it comes to increasing equity and inclusion is designing healthcare experiences that are accessible for all. One example is ensuring medical facilities are accessible to people with disabilities, whether it is through providing sufficient wheelchair ramps or handrails, or making sure that there are systems of support for patients with vision or hearing loss. For digital experiences, such as web or mobile app experiences, design should accommodate for vision and hearing differences. For both physical and digital spaces, design should also factor in cultural and faith differences, and make sure the spaces are welcoming and effective for people from different backgrounds or with different beliefs.

Key takeaways

- Inclusion and equity are complex and cross many different areas. Those in the healthcare ecosystem must take a holistic approach when addressing underserved communities.
- Innovation in care delivery, such as the shift to telehealth and wearable medtech, are showing that more can be done with less. This is helping to foster a move from fee-for-care to value-based care models.
- The financial burden of healthcare remains one of the most pressing issues and impacts all areas of health provision. Tools or payments technologies that can help make healthcare more affordable or manageable must be a key focus point.
- Healthcare organizations will need to implement future-ready strategies that reduce enterprise waste, while concurrently identifying new value and economic delivery models.



SECTION THREE

The interconnected healthcare ecosystem

As data volumes grow, so will its potential uses. As Webb explains,

“Today, the biggest innovations are what we now call enterprise innovations. This is the discipline of using innovation methodologies to significantly reduce cost and improve efficiencies.”

While it's important to maintain data anonymization for patient privacy, there are other sources of information that could be leveraged. For example, payments data from frontline healthcare systems can inform business strategy for multiple different members of the healthcare ecosystem.



Manufacturers

Pharma and medical device manufacturers can use SKU movement data and payments information to identify insights on potential new innovations, as well as opportunities for quality and cost improvements. In addition, they can use demand signals to better manage supply chains and ensure they have secured sufficient supplies of active ingredients.



Pharmacies

Drug stores can track product sales and use predictive analytics to automatically re-stock ahead of time and prevent medicine outages. Low-cost generics, such as antibiotics, are often made to order, so can be prone to shortages. Better demand forecasting could help to mitigate this.¹⁹



Research-based pharma companies

By analyzing consumer activity and purchasing data, biopharma companies can unearth new targets for innovation or identify areas of unmet need. For example, if sales of one pharmaceutical are skyrocketing because it is being used off-label, that could be an opportunity for new product development.



Healthcare providers

By looking at medicine sales, it's possible for providers to identify disparities in different communities. In addition, by understanding payment trends, they could offer alternative options, such as payment plans or subscriptions for medical devices or equipment, rather than up-front-costs. This provides recurring revenue for the device manufacturer, while allowing healthcare providers to outsource maintenance costs.

“In the next 3 to 5 years almost everyone in healthcare will need to participate in the development of some form of subscription models.”

Nick Webb

¹⁹ CNNhealth, December 2022. 'Empty pharmacy shelves shine a light on vulnerabilities in US drug supplies.' Available at: <https://edition.cnn.com/2022/12/12/health/drug-shortages-explainer/index.html>. Accessed February 2023.



Medical devices

Medical equipment is increasingly being targeted direct-to-consumer, with new subscription payment models for devices like glucose monitors. Analyzing these payments patterns can help the overall health ecosystem to explore new payment approaches, such as bundled services in exchange for regular payments.



New business models

Healthcare organizations are increasingly exploring the shift from the traditional fee-for-service models to alternative business models, enabled by new technologies and payments technologies. For example, consider a common blood test; typically this is charged based on a flat fee. In the future, providers could offer subscription-based packages based on tests you can take at home, with the results then updated via an app. This has the potential to reduce costs while resulting in more regular and pro-active testing for patients. Another example is called ‘concierge care,’ where patients pay a regular fee (monthly, quarterly or annual) and in turn receive unlimited access to a primary care doctor.²⁰ This is tied closely to the concept of value-based care as it has the potential to provide bundles of services at more attractive costs.



Consumer goods

Over-the-counter (OTC) drug sales can provide an array of signals into the overall health and care needs of a patient population. Where other data is not available, for example, payments information could show patterns where patients are relying on generic medicines rather than more expensive RX treatments.



Key takeaways

- As with other industries the collection and analysis of data can help transform the healthcare sector. However, there are restrictions with collection, interoperability and consent that have to be managed.
- Payments data can provide a trove of information that can help improve outcomes across the health ecosystem, if used strategically.

²⁰ PYMTS, August 2022. ‘Healthcare-as-a-Subscription Breaks Down Payer-Provider Pain Points.’ Available at: <https://www.pymnts.com/healthcare/2022/healthcare-as-a-subscription-breaks-down-payer-provider-pain-points/>. Accessed February 2023.



SECTION FOUR

Innovation speed

A number of trends are converging that are increasing the speed of innovation across the healthcare sector. The continual development of AI is already revolutionizing research, drug discovery, image screening and predictive modelling. Meanwhile, the huge advances in information technology are giving rise to telehealth and remote care, a situation that accelerated during the COVID-19 pandemic, with sustained demand of usage significantly higher than pre-pandemic levels.²¹ However, lack of real-time data and difficulties with interoperability between systems are hindering innovation at speed.

From conducting assessments with primary care physicians via live-stream video, to scheduling regular therapy sessions,

McKinsey estimates that up to \$250 billion in US healthcare spending could be virtualized in the coming years.²²

This is mainly because telemedicine has proved so popular. According to the COVID-19 Healthcare Coalition, over 70% of people reported high satisfaction with telehealth and indicated they'll continue to use virtual care in the future.²³

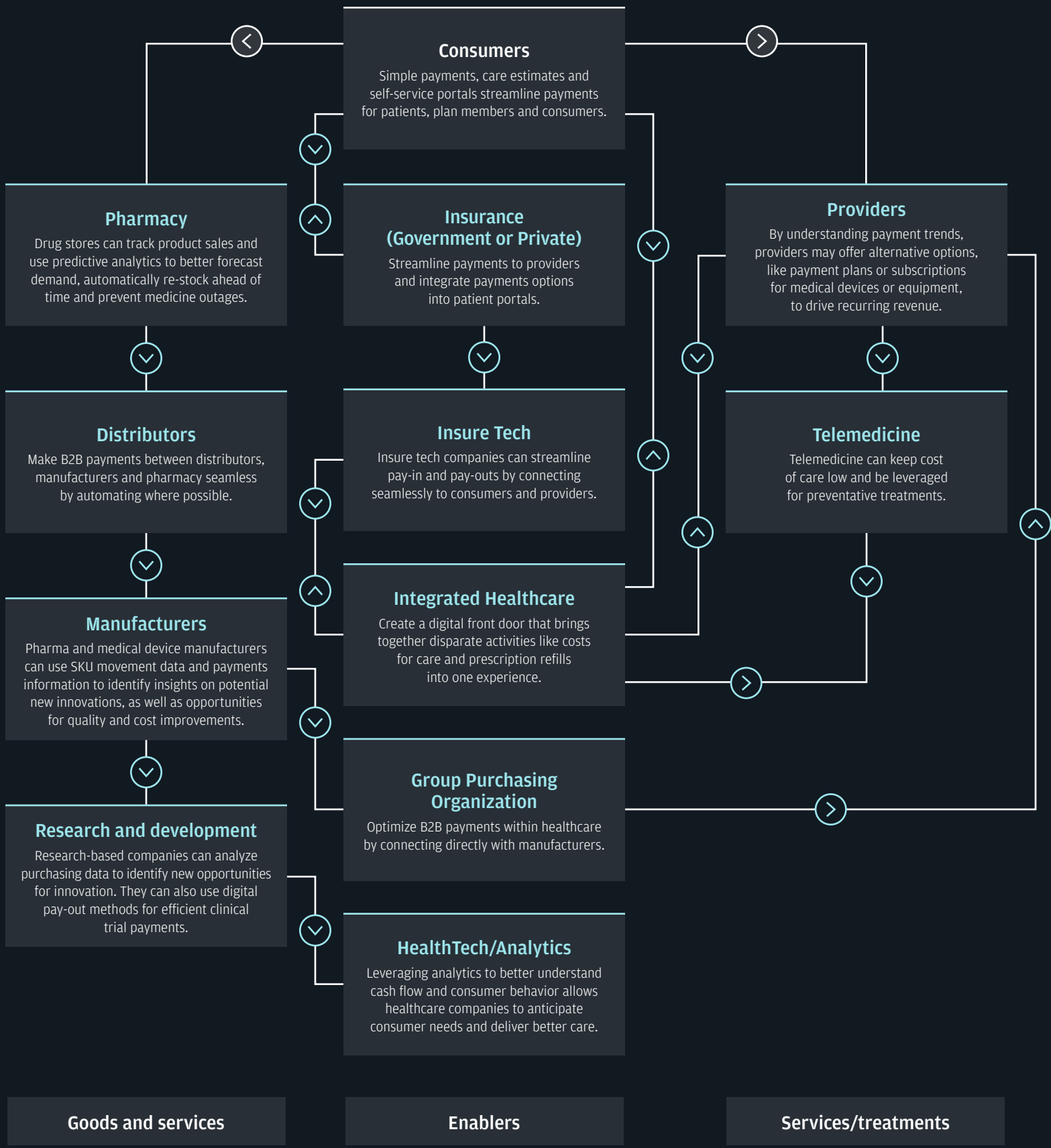
²¹ Doximity, 'State of Telemedicine Report.' Available at: <https://c8y.doxcdn.com/image/upload/Press%20Blog/Research%20Reports/Doximity-Telemedicine-Report-2022.pdf>. Accessed March 2023.

²² McKinsey, July 2021. 'Telehealth: A quarter-trillion-dollar post-COVID-19 reality?' Available at: <https://www.mckinsey.com/industries/healthcare/our-insights/telehealth-a-quarter-trillion-dollar-post-covid-19-reality>. Accessed February 2023.

²³ mHealth Intelligence, April 2021, 'COVID-19 Telehealth Delivery Reaps High Patient Satisfaction.' Available at: <https://mhealthintelligence.com/news/covid-19-telehealth-delivery-reaps-high-patient-satisfaction>. Accessed February 2023.

Interconnected Healthcare Ecosystem

Payments connect businesses across consumer-facing and business-to-business companies.



While telehealth is becoming increasingly popular, it is important not to see telehealth as a replacement for in-person care. It is a channel of care in its own right, one that is lower cost and which patients can access from their own homes. Presently, telemedicine has three main modalities:



Real-time video

Patients can have appointments with care providers over live-stream video for face-to-face analysis or diagnosis, or to receive services such as talk therapy.



Store-and-forward

This is a form of evidence-based care, in which healthcare providers can gather data from patient records or medical devices, and then forward it on via secure communication channels to the cloud where it is stored. The data can then be analyzed to make more accurate diagnoses or to devise more effective treatment plans.

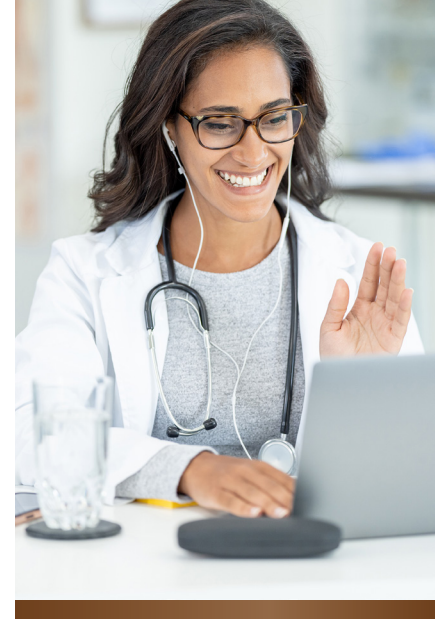


Remote monitoring²⁴

Remote patient management involves using connected monitoring devices to continually track key health indicators for a patient, such as blood pressure, diabetes, heart conditions or activity. This can be particularly effective for patients with chronic conditions.

Telehealth works best when the different modalities are combined, such as syncing the data gathered from remote monitoring with store-and-forward for further analyses. If a doctor is then concerned about a patient's indicators or adherence to a treatment plan, they could follow-up with a video call, creating a fast, responsive and scalable approach to care.

“The move towards asynchronous telemedicine will provide a far better workflow for both the patients and the caregiver, while significantly increasing the amount of patient access per provider,” says Webb.



²⁴ TELEHEALTH.HHS.GOV. 'Telehealth and remote patient monitoring.' Available at: <https://telehealth.hhs.gov/providers/preparing-patients-for-telehealth/telehealth-and-remote-patient-monitoring/>. Accessed February 2023.



The direct-to-consumer opportunity

As healthcare combines with consumer technology, business models will also change. Manufacturers are increasingly designing connected wearable devices and smartphone apps for remote monitoring to help patients manage chronic health conditions or ensure medicine adherence. This new generation of high-grade medical devices have slick designs and the same ease-of-use that is common with consumer tech products. Manufacturers are also increasingly selling the devices direct-to-consumer, with multiple payment options including upfront payments or subscription plans, rather than distributing through healthcare facilities.

As a result, device manufacturers will have to change their treasury systems from being based around B2B payments, so they can accept consumer payment methods.

Insurance models may also change in the era of connected health. Providers have historically relied on data sources like self-provided information and pre-existing health conditions, but with the growing usage of wearable devices, data quality could improve dramatically and give a more detailed picture of a patient's state of health. In turn, there could be the potential to provide more personalized insurance premiums. This could be coupled with incentives to encourage better management of conditions - such as adhering to a low-sugar diet to manage diabetes - or simply living a more active and healthy lifestyle. For example, United Healthcare is offering up to \$1,000 for members using Apple watches or iPhone's Health app to complete various daily health goals like meeting a minimum number of steps, completing 15 or more minutes of activity every day, and tracking their sleep.²⁵ The patient might even be able to sell their data for pharmaceutical research or clinical trials, lowering costs further. There are already organizations that are looking at ways that health data from digital devices can be purchased from individuals, in exchange for crypto tokens.²⁶

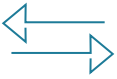
But the change needed is cultural as well as technological. "The biggest innovation opportunity in healthcare, without a doubt, is that ultimately we need to make the big shift from diagnostics and intervention, to anticipation and prevention," says Webb. "Some suggest that as much as 80% of healthcare costs are preventable through lifestyle change, yet virtually all of our healthcare spend is centered around intervention."

"The biggest innovation opportunity in healthcare is the big shift from diagnostics and intervention to anticipation and prevention."

- Nick Webb

²⁵ Axios, February 2023. 'UnitedHealthcare incentivizes healthy patient behavior.' Available at: <https://www.axios.com/2023/02/10/unitedhealthcare-rewards-insurance-wearables>. Accessed February 2023.

²⁶ DeHealth: <https://www.dehealth.world/>. Accessed February 2023.



Interoperable networks

As payments technology evolves it will continue to help transform the healthcare sector, creating connections across different networks and facilities to communicate more efficiently. Integrated payables, for example, may help healthcare businesses simplify payables processes and optimize cash flow visibility. While interoperability will take time within the industry, the secure exchange of information between networks remains a priority for innovation within healthcare.

Blockchain may become a key component of interoperability in the future. As the information stored on a blockchain cannot be altered, it is a highly secure way of transferring data. This can be used to share medical information in a way that is both transparent and HIPAA compliant, and can also enable instantaneous payments and settlements. By integrating smart contracts - software algorithms that encode set rules and thresholds for transactions on the blockchain - it is possible to automate payments. Imagine a pharmacy that can instantly order new stock based on demand forecasts without manual involvement, or manufacturers that can pay vendors in the supply chain automatically without invoices or long payments terms. Uniting security, automation and personalization is key for improving payments within the industry.

Key takeaways

- Technologies are converging to make healthcare one of the most innovative sectors in the world.
- Telehealth has massive potential to lower costs and improve outcomes, and is also fostering in new business models.
- Direct-to-consumer could become an important channel for medical equipment makers, as they follow the models pioneered by consumer tech companies. This will require new payment structures to handle a direct to consumer environment.
- The shift to preventative medicine is structural and ideological, not just technological. This remains the biggest opportunity in healthcare.

Where do we go from here? Better payments for better care

By streamlining payments processes and removing common friction points, businesses across the care continuum can focus on what matters most: delivering better care. Whether businesses are providing care directly, supporting the creation of new and innovative treatments, responding to changing business models and direct to consumer opportunities, or conducting clinical research trials, the future of healthcare requires innovation from all members of the ecosystem to deliver superior care experiences. Payments are a strategic lever to achieve these goals across inclusion, digital care, and wider connections between consumer-facing and B2B businesses, as better payments are integral to business growth and patient & employee experience.

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