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The Future of Health in
Latin America
Hospitals of the Future

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Executive Summary

Over the last few years, technological forces have driven a general change in the role of the consumer, giving them greater decision-making power and access to information as well as increased influence and channels of communication. This is a reality across several different industries, such as the travel and banking industries. So a statement in which the healthcare sector is exempt from these consumer-centric changes is all but likely to be inaccurate. Just as with other industries, the future of healthcare lies in its evolution towards a model where the consumer is at the center.

This holds true for healthcare in Latin America. As such, there is a clear need to understand the forces driving the

healthcare ecosystem in Latin America in order to gauge the region's readiness for the Future of Health—that is, an empowered and connected consumer. Acknowledging that the starting point towards the Future of Health may differ across countries and regions, this study assesses the current state of healthcare markets in Latin America and evaluates

their maturity. Within the region, there are still adverse realities due to social class disparity that limit the reach of Future of Health, including the high cost of internet access.

In addition, socioeconomic factors such as steadily rising inflation, currency devaluation, and changes in government mean that healthcare resources are almost entirely devoted to primary healthcare activities, with few resources allocated to Future of Health initiatives such as improving operating models through leading-edge technology and investing in interoperable patient data management systems.

And while telemedicine has been adopted as a key tool in programs to provide universal access to health and bridge the gap between urban and rural areas, funding remains the region's main barrier. To fully unleash telemedicine's potential large investments are needed, ranging from personnel to advanced telecommunications infrastructure (e.g., 5G). Moreover, telemedicine service models hastily developed during the COVID-19 emergency need to be reconsidered in order to ensure better adoption of these new operational models by various consumer groups. But it is of the utmost importance to remember that telemedicine does not equal virtual



health nor does it equal the Future of Health—rather, it is just one component of these efforts.

One of the most difficult challenges Latin America faces as it moves towards the Future of Health is interoperability. Exacerbated by fragmented healthcare systems, most of the region is focused on treating illnesses and diseases first, leaving digital interoperability and consumer health second. While some countries are addressing interoperability, as is the case in Chile, Costa Rica, and Colombia, to emulate these efforts additional fundamental changes and investments need to be made by governments, care providers, and educational institutions, among others.

All of these changes, although radical, may be gradually executed. By mapping consumer needs and understanding where and how to transform, actors in the healthcare industry in Latin America will be better equipped to remain relevant and competitive. But it is critical to note that the transformation to a consumer-centric model does not lie with digitizing old ways of working but rather in redesigning operational models around the consumer to enhance their experience.



Introduction to the Future of Health

In 2017, Deloitte circulated a 20-year view on the Future of Health and its driving forces. The core principle was that by 2040 the convergence of exponential technologies and consumer demands would drive seismic shifts in the twin foundations of militant consumerism and radical data interoperability. But COVID has acted as a powerful catalyzer towards adopting and investing in the digitization of health services, especially the growth of teleconsultations that enable consumer-health service providers to interact outside

of hospital walls and encourage them to adapt to the needs of consumers. As a result, the timeline of the Future of Health 2040 has now accelerated to 2030. As such, a fundamental shift from “healthcare” to “health” is on the horizon. Consumers, empowered through science, data, and technology, will be able to conduct early health assessments, intervene proactively, and better understand illness progressions to help themselves more effectively and actively sustain their well-being. The future will

be focused on wellness and preventive care. Companies that are able to design new models around the needs of health consumers and assume new roles will continue to thrive and drive value in the transformed health ecosystem.

Fundamental shift from “healthcare” to “health” is on the horizon.

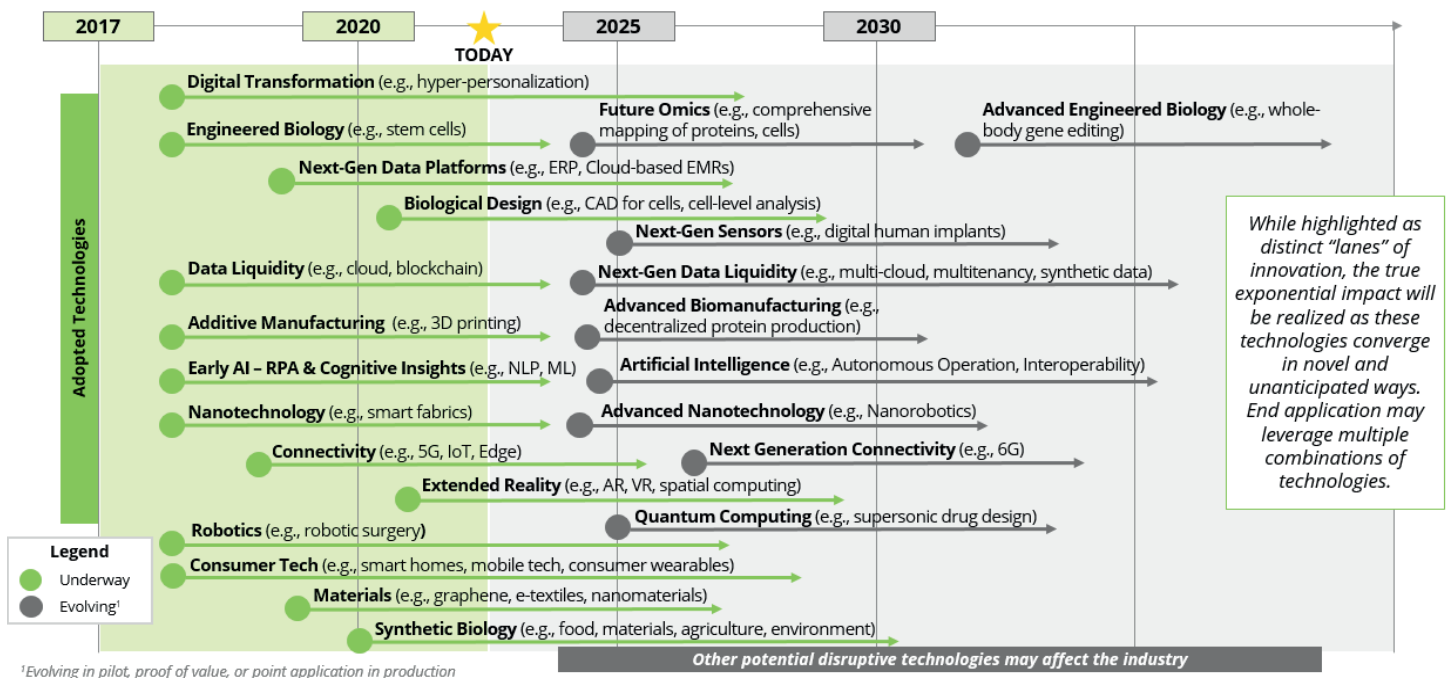


Figure 1. Technological advancements in the future according to Deloitte’s Research.

This transformation will be driven by greater data connectivity; interoperable, open, and secure platforms; and increased consumer engagement. To realize this shift, ten archetypes are likely to emerge and will replace and redefine today's traditional life sciences and healthcare roles to power the Future of Health. The 10 archetypes will fall into three distinct, but interconnected, categories:

Data and platforms: These archetypes will be the foundational infrastructure that form the backbone of tomorrow's health ecosystem. They will generate the insights for decision making. Everything else will build off of the data and platforms that underpin consumer-driven health.

Well-being and care delivery: These archetypes will be the most health-focused of the three groupings, made up of care facilities and health communities—both virtual and physical—and will provide consumer-centric delivery of products, care, wellness and well-being.

Care enablement: These archetypes will be connectors, financers, and regulators that help make the industry's "engine" run.

While not all the three categories and its ten archetypes are meant to be integrated fully at once by one single player in the ecosystem, they are all vital for a fully functioning and integrated concept of the Future of Health. Multiple archetypes could fit together into a cohesive strategy and new business models designed for success in the future.

Thus, organizations in the life science and healthcare industry are encouraged to identify archetypes that fall within their scope of control. They should commence designing the roles that they will want to play in the Future of Health where the consumer is first and center while

understanding that consumers' needs and expectations are constantly evolving as technology unlocks more empowering data and capabilities for them. As a result, it is expected that consumers will become connected, empowered, and eventually confident.

Going forward, health systems will need to evolve around this new consumer and can use the Three-Horizon Models that is designed to help summarize the shift that will occur. This includes:





Figure 2. The Three-Horizon Model

The Three-Horizon model was developed by Deloitte Australia together with other parties. Australia's Health Reimagined (2022). Deloitte, Digital Health Cooperative Research Centre, Consumers Health Forum of Australia and Curtin University.

Horizon 1 – Connected consumer:

People experience fragmented one-size-fits-all care. The system is focused on treating illness and there is minimal digital interoperability and record keeping, resulting in a large administrative burden for health workers and poor experience for consumers.

Horizon 2 – Empowered consumer:

People are empowered to access care and services are easier to navigate and access. Moderate data sharing and workflows ease workers' administrative workload and reduce risky behaviors.

Horizon 3 – Confident consumer:

People take an active role in their health and well-being and have strong relationships with healthcare providers. The system benefits from robust data interoperability digital tools and ecosystems connections to deliver personalized care.

This same model also serves as a proxy to determine the stage of readiness of any given market to serve the needs of the health consumers of the future. In order to determine market readiness, it is imperative to assess and gauge key determinants that enable the Future of Health. Therefore, this research delves into some of Latin America's markets using secondary data focused on three broad subjects: 1) Markets and Regulations, 2) New Ecosystem and Operational Model, and 3) the Role of Technology. These three broad subjects expand into other topics that are anchored around key concepts of the Future of Health (e.g., interoperability, virtual health, etc.). The research findings were then evaluated against a pre-determined set of criteria

that will serve as the scoring basis to gauge the maturity of the markets overall and by determinant, ranging from initial base to ideal.

These determinants or topics are aligned with Bodenheimer and Sinsky's (2014) Quadruple Aim¹ and are relevant in determining how much further Latin America must go to be prepared to meet the demands of the Future of Health 2030. The Quadruple Aim builds upon the Triple Aim of health by including such factors as work life of healthcare providers, the existing aims of enhancing the consumer experience, improving population health and health equity, and reducing costs and providing better value care. It is used to understand

how well a health system delivers services that affect consumers from different perspectives.

Additionally, this study is supported with primary data in the form of insights retrieved from a consumer survey launched by Deloitte Spanish Latin America specifically for the purposes of this paper.

The markets included in this study are Argentina, Brazil, Chile, Colombia, Costa Rica, and Mexico.

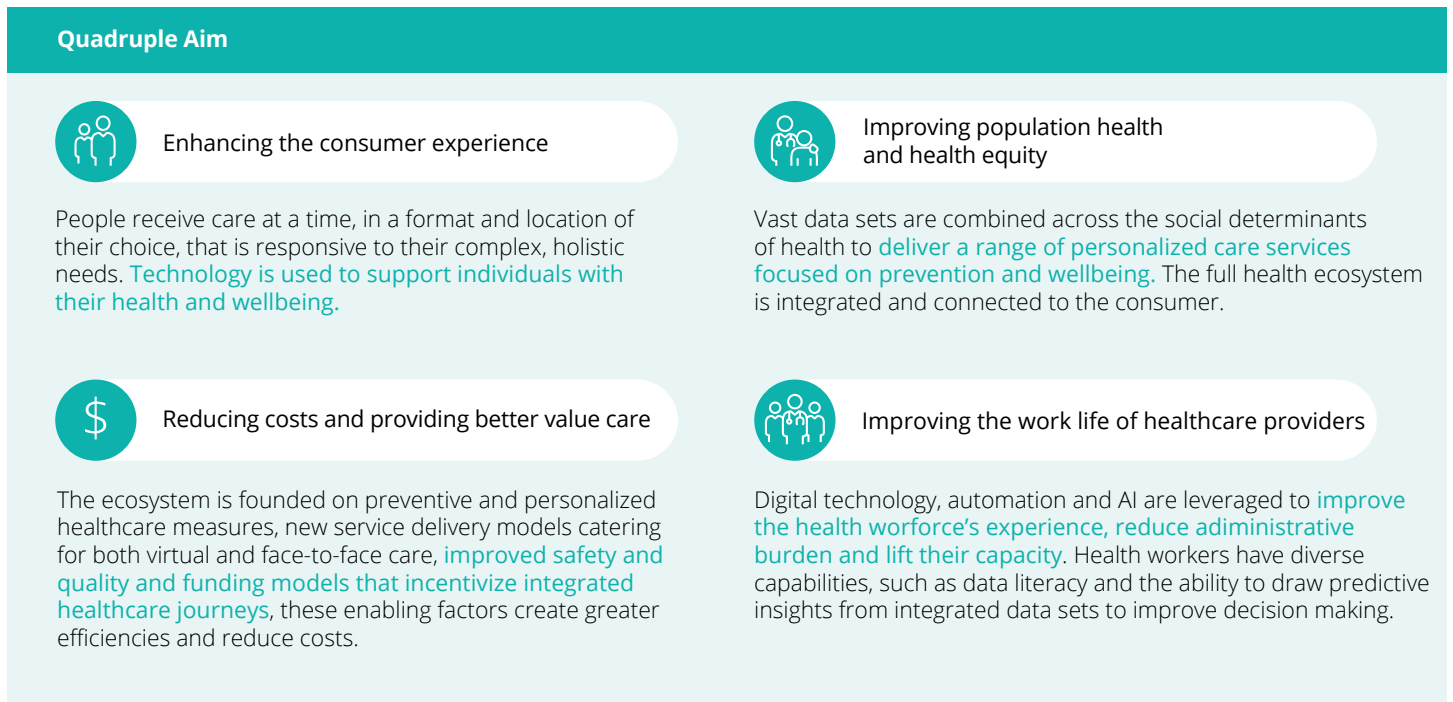


Figure 3. The Quadruple Aim developed by Bodenheimer and Sinsky (2014).

Future of Health in Latin America

Markets and Regulations

Latin America comprises over 30 countries, and, although many similarities rooted in a common past are found throughout the region, each country has followed distinct models of development. This has led them to have differences in terms of competencies and capabilities, political views and association, and fundamental institutional structure.

These structures, naturally, play a significant role on how healthcare is delivered today, but in essence, Latin America is known for delivering healthcare through social security, public, and private models. However, changes in government—as in Colombia, Chile, and the presidential election in Brazil in the last quarter of 2022—may affect current health plans. For example, Chile drafted Article 14 – Right to Health – which was included in a new constitution that was rejected in a referendum in September 2022.² Nonetheless, Chile's government is still determined to undertake healthcare reform. In the meantime, private healthcare payors (ISAPRES, in Spanish) are facing times of financial constraint, in part due to judicial involvement in the setting of prices. This can threaten payors own sustainability,

which in turn has an impact on the country's healthcare ecosystem, mainly private healthcare providers, physicians, and patients.³

Although the new constitution was rejected, and with it Article 14, the health ministry will continue to pursue its health reform agenda, aiming to establish a single public institution responsible for the administration of all health funds. This goes against the practice now in place where Chileans can choose their healthcare payor and medical provider from either the public or private sector. Had the new constitution had been approved, new actors in Chile's health ecosystem may have emerged, as may be the case with companies in the complementary health insurance business, usually called first layer health plans. While the law was short-lived, it may set a precedent for other countries in the region to rethink the funding structure of their health systems.

The region's spend on health is an average 7.2%⁴ of GDP, ranging from 5.4% to 9.6%. Nevertheless, the health systems in the studied markets are all facing constraints in resources due to rising costs that are difficult to meet via general taxation due

to large informal economies that obstruct adequate taxation for healthcare financing.⁵

These rising costs are the outcome of resource inefficiencies, income growth, and the unequal rise of labor costs compared to productivity growth, among others.⁵ As a result, markets are focused on using their current resources—both personnel and funding—to deliver healthcare primarily where it's needed, namely in hospitals. This translates to having little-to-none margin to focus on other initiatives, such as preventive healthcare and the much-needed digital transformations,⁶ and justifies the statement of non-communicable diseases (NCDs) being the main burden to health systems in the region.⁵

Regardless of the aforementioned scenario, governments have not kept dormant, but, instead, have actively pursued the design of digital health plans. These plans are often anchored around telehealth, leveraging it as a key tool to further the progress on universal healthcare access.

As such, telehealth has been used to shorten the distance between remote and urban areas of a country, as high-quality

and specialized medical services are often concentrated in the latter. Mexico's Contact Unit for Distance Healthcare (UCADS, in Spanish) is one example of a government program that aims at making specialized medical services available to remote areas. Nonetheless, poor infrastructure and the country's topography have acted as barriers in the attempt to expand this service nationwide.⁷

Meanwhile, Brazil's Ministry of Health invested over \$24 million dollars across 22 Brazilian states in projects related to Telessaude.⁸ Similarly, in 2018 Argentina introduced their National Digital Health Strategy 2018-2024 plan aiming to reduce care gaps, integrate consumer information, and strengthen the autonomy of each jurisdiction in the adoption of new technologies.⁹

To many, this plan could as well have served as the axiom of health digitization for the Latin American region, but the southern nation's economic vicissitudes have hindered much of the program's progress. Despite the slow advancement, in 2021 Argentina reported more than two million patients across 16 provinces with electronic health records linked to a national interoperable platform.¹⁰ Governments in the region that leverage telehealth to reach remote areas often times leave a gap with the urban consumer, providing them with slim telehealth services and failing to meet their needs. This is where the private sector steps in to fill the void.

For example, in Colombia, only 4% of the country's health service providers offer telemedicine services. And of that 4%, 90% are private health providers and just 10% are public.¹¹ However, COVID-19 pushed the health sector to redefine and redesign their operational models to continue servicing the health and medical needs of, not just the rural, but also the urban consumers through information and communication technologies. Correspondingly, consumers were required to adopt and adapt themselves to these new operational models and, by extension, to technology itself. One may debate whether such a change in models created new consumer needs or if these needs always existed and have just now been uncovered. What is certain, however, is that these models and needs are part of the health ecosystem of today.

One of the cornerstones of these digital health plans is interoperability, the ability of different systems to exchange health data and present it as information once received. Countries across the region have been conducting efforts, at varying levels, in the implementation of interoperable systems.

Chile is the regional flagship in the adoption of interoperable health technologies to the HL7 standard,¹² with its Healthcare Network Information System (SIDRA, in Spanish). SIDRA's mission is to improve the quality and efficiency of the public health system by providing software solutions that automate the local delivery of care and exchange of clinical information. As of 2019, the implementation of the Electronic

Clinical Record (RCE, in Spanish) reached 81.3% of primary care centers and 75.2% of hospitals.¹³

Similarly, Argentina created the National Health Network (RNS, in Spanish), which uses technology to integrate electronic health records from across different health institutions in different jurisdictions.¹⁰ The RNS continues to actively add more health institutions to its network and has provided training sessions to over 2,000 health practitioners nationwide.¹⁰

Other countries in the region have also moved towards the implementation of interoperable health systems in the public sector. In 2017, Costa Rica rolled out the Unique Digital Health File (EDUS, in Spanish) to primary care centers and hospitals allowing them to view and store consumers' clinical records and lab test results as well as allowing consumers to book appointments.¹⁴ EDUS is available as a system to the health institutions and as an app to consumers.

Similarly, Colombia has recently reached a milestone in digital health by launching Conectación, which enables the interoperability of medical records. The first phase of the implementation allows basic health data to be shared across systems, whereas the second phase will allow for more complex data to be exchanged (e.g., diagnostic images).¹⁵

Brazil has also recognized the need to develop interoperable systems and is

currently piloting a program called the National Health Data Network (RNDS, in Portuguese). The program aims to promote the exchange of information within the healthcare network.¹⁶ RNDS is part of a wider program of the Brazilian Federal Ministry of Health, DataSus, which aims at collecting, processing and disseminating

Regulations



Figure 4. Regional Score. Graphic designed based on Deloitte's research for the purpose of this study.

health information in the country. The World Health Organization and the Pan-American Health Organization consider it one of the most complete systems in the world.¹⁷ However, given the size and reach of the program, its implementation is still ongoing.

Although progress has been made in the region in terms of interoperability and virtual health through the aforementioned digital plans, there are challenges that persist¹⁸ in the region that are hindering the potential of maximizing current efforts and the move towards the vision of the Future of Health. Some of these challenges may be technical, such as language compatibility across different platforms.

Other challenges are inherent in the health system's design, where – unlike countries like Costa Rica where the health policy for the entire nation is concentrated at a country level ministry - countries like Brazil have ministries of health in each of its states pursuing health policies unique to their own state's needs and funded with diverse mechanisms.

Health systems that are highly fragmented may encounter larger complexity in the implementation of interoperable systems as very diverse data, information, and requirements need to be standardized and integrated. Moreover, it is well-known that health systems across the region, from Mexico to Argentina, tend to be

fragmented; however, efforts are being made to reverse such fragmentation.

An additional challenge is related to consumer data privacy and regulations. This concern may arise from consumers themselves who do not want their personal information and medical records left unprotected. Costa Rica's Social Security Fund (CCSS), along with other of its public institutions, were recently the target of hackers.¹⁹ As a response, Costa Rica issued a directive mandating all public institutions to report immediately any irregularities in their IT systems along with a list of IT security requirements.¹⁹

Similarly, Brazil suffered a cyberattack which affected access to the COVID-19 vaccine certificate data system.²⁰ Although no breach of confidential information or patients' records were reported, it underscores the importance of data privacy and the vulnerability of a fully digitized system. In Deloitte's Future of Health Consumer Survey, a common concern reported by the respondents was data privacy in a heavily digitized and technological health ecosystem.

Likewise, consumers are concerned about the validity of virtual healthcare models and whether regulatory frameworks are robust enough with guidelines clearly stipulated to protect them. When it comes to personal data protection, the findings from the region suggest that Latin-America

does have a robust legal framework in this regard.²¹ However, the region still has work to do around building comprehensive regulations for telemedicine governance, the technological aspects of telemedicine, and the role of consumers and institutions, among others.²¹ Even when there have been laws and other initiatives that date to more than a decade ago,²¹ some of these were only just recently implemented given the global COVID-19 emergency.

For example, Brazil passed and signed Law 13.989 as a temporary authorization for the use of telemedicine for medical technological assistance, research, illness and injuries prevention, and preventive health promotion purposes²². Given the proven favorable results from the implementation of telemedicine—a method that, especially during the pandemic, demonstrated its great capacity to bring assistance to both small cities and large centers by reducing bottlenecks caused by the demand and the migration of patients in search of treatment—the Federal Council of Medicine (CFM, in Portuguese) regulated by Resolution nº 2.314/2022 the practice of Telemedicine in Brazil in May 2022.²³

Although the region continues to make progress in regulating aspects of virtual health, the lack of wide-ranging regulation

may sometimes act as a barrier to digital health programs itself. An example is the lack of validity that digital prescriptions have in some markets, and, as a result, are not being filled. Instead, physical prescriptions are still required in lieu of digital ones even when these prescriptions are a byproduct of a digital consultation. As such, it can be inferred that the needs and expectations of some consumers are not being met.

For players in the health ecosystem, the above may present itself as an opportunity. A regulatory framework that still needs to be refined should not be an impediment to moving forward, but an opportunity to innovate and become an early adopter of technologies in a nascent setting in which solutions are needed to meet the demands of consumers. Under this premise, one may argue that incumbents are ever more in need of innovative transformation to keep their competitive advantage.

In recent years, healthtechs have sprung up across the region as a result of unmet consumer needs. This is not to say that incumbents should adopt technology simply to digitize old ways of working, but instead should look towards leveraging technology as a tool to enhance the consumer experience and tap onto unmet and yet-to-be-uncovered consumer needs.

Telehealth, a key tool to further the progress on universal healthcare access. COVID-19 pushed the health sector to redefine and redesign their operational models through information and communication technologies. Correspondingly, consumers were required to adopt these new operational models.

Implementation



Figure 5. Regional Score. Graphic designed based on Deloitte's research for the purpose of this study.

Moreover, technology solutions may be leveraged to promote connections between different players in the ecosystem (e.g., partnerships with healthtechs) to meet consumers' individual needs and give way to transformed operational models in an ultimately renewed healthcare ecosystem.

Interoperability



Figure 6. Regional Score. Graphic designed based on Deloitte's research for the purpose of this study.

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New Ecosystem and Operational Models

In early 2020, Deloitte conducted an online crowdsourcing exercise²⁴ that included leading thinkers and futurists from across the world in healthcare, policy, operations, technology, and customer experience. These experts created a vision of hospitals of the future that are anchored to three main themes:

1. Hospitals will have transformed business models

According to these experts, hospitals will evolve to have three unique operating models:

- A. One where hospitals are specialty care operators or focused factories for special procedures with significantly fewer beds dedicated to emergencies, transplant services, ICU, infectious diseases, cardiac surgery, orthopedics, and others.
- B. Hospital buildings will adopt the concept of shifting from healthcare to health and will become health hubs. They will be part of a larger system that offers diagnostic services, ambulatory surgery, services that improve food security, housing, utility access, and other needs that help improve health overall. Under this model, hospitals will develop a focus on holistic care and treatments that focus on the mental, social, emotional, spiritual, and financial health of the community.
- C. Hospitals will embrace technology

and become virtual hospitals. Virtual hospitals will provide care and monitoring outside of the traditional hospital building and adopt the concept of hospitals without walls.

2. Care delivery models will be disrupted by ubiquitous data and technology

With the premise that existing technology will be more mature in the future, hospitals are expected to become "high-tech and high-touch," with interoperable systems for the purposes of data liquidity, streamlining operations, and making care delivery more efficient.

It is expected that technology will be used in a range of ways:

- A. Digitally replicating physical assets, processes, people, places, systems, devices, and others. This is known as digital twins and may help streamline admission processes, update clinicians on patient status, as well as other uses.
- B. Digital command centers will provide future hospitals with the ability to predict and determine hospital needs. For example, using big data, hospitals will be able to scan community health data and forecast business needs, such as staff, supply chain, and others needs to better allocate resources and, in turn, deliver a better consumer experience.
- C. The use of robotics in hospitals could

change to help with some nurse and clinician work, such as administering medication and documenting vital signs.

3. Smart spaces and digitally enabled hospitality

Physical spaces within the hospital will transform into smart and flexible spaces, integrating technology in all aspects. Hospitals will be designed to include modular spaces that can be scaled up or down to match the demand. Furthermore, up-to-date data will be available and will help clinicians deliver the best possible care to the patient – whether in the hospital or in their homes. This care will be aided by small and portable equipment to help with such tasks as monitoring, and diagnostics.

Technology will allow hospitals to play a more active role in the consumer journey not only in the hospital, but before and after. Before consumers arrive at the hospital, they will receive push notifications with parking recommendations, forms that can be

filled out ahead of time, and a system to help them navigate the facilities.

The above description of Hospitals of the Future is consistent with findings from the surveys Deloitte has conducted. Deloitte Chile conducted a market study²⁵ published in early 2022 detailing findings from both the consumer and clinician perspectives. It was found that about 70% of the survey population believe that technology will play a key role in the next 5 to 10 years in predicting, diagnosing, and preventing critical illnesses. Likewise, over 76% of clinicians believe that employing technology to automate or virtualize health services will have a high impact on efficiency. Similarly, Deloitte's Future of Health Consumer survey respondents stated the need for hospitals to diversify their operating models to meet diverse consumer needs and move away from the current one-size-fits-all model.



These changes in the operational models of incumbents are needed at a time when new players in the health ecosystem are emerging. These new players may not come in the traditional form but may be part of a different industry altogether. In *The End of Competitive Advantage*,²⁶ the author argues that within-industry competition analysis is a threat itself. Focusing only on what other competitors within the same industry are doing leads to poor strategy design and puts in peril the company's long-term sustainability.

Today, industries are directly competing with other industries and creating new markets to compete. This is notorious in markets that have adopted technology as part of the digital revolution. As a clear example, wearables that were designed and developed by technology firms provide users with information about their health, such as blood pressure, that not so long ago required a visit to the local pharmacy or clinic. According to Statista, Latin America is still considered an emerging region for wearables, even when the number of connected wearable medical devices soared from only 1.83 million in 2015 to over 49 million in 2022.²⁷ Hence, there is an opportunity for health incumbents to utilize the health information that is produced by these wearables and that, most importantly, is unique to the consumer.

Change in the operational models of health systems may also be the result of macroeconomics. According to Deloitte research and inputs from experts on the Argentinian health market, Argentina's prepaid health model is dollarized.

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However, the charges to the consumers are made in its local currency. Given the devaluation of the Argentine peso against the dollar, prepaid services are limited in order to obtain financial returns. To some Deloitte specialists, this opens the door to an additional model of purely private and bulk consumption where charges are entirely and immediately paid out of pocket as one would with any other product or service that is purchased.

One last driver of change are the international commitments pursued by governments. During the Convention of Parties 26 (COP26), 11 countries of the Americas joined the COP26 Health Program. This program seeks to develop climate-resilient and low-carbon health systems.²⁸ In the first phase of the program, countries are expected to develop national plans to adapt their health systems to global warming. During the second phase, countries are expected to develop roadmaps and target dates for reduction of carbon emission. Of the countries in this study, Mexico and Brazil did not join the initiative whereas Chile committed to developing low-carbon health systems.²⁹

Meanwhile, Colombia announced a project to estimate the climate footprint of the national health system. When completed, Colombia will become the first country in the region to have carried out a comprehensive exercise to estimate their national health system climate footprint, including both public and private establishment.³⁰ Costa Rica is studying waste in hospitals and the climate impact of its health system with the purpose of

developing action initiatives that would help alleviate that impact.³¹

Under the premise that hospitals operational models will shift to remote care delivery enabled by technology, hospitals will merge and the total number of hospitals will shrink. Facilities will be repurposed, and hospitals will no longer host a large number of patients or clinicians within its walls. As such, hospitals looking to reduce their climate footprint will benefit from adopting models aligned with the vision of Future of Health, especially Hospitals Without Walls.

Some countries in the region have effectively implemented teleconsultations, either due to COVID or as part of a national health digital plan. Brazil's Telessaude program leveraged teleconsultation as a mean to obtain a second professional opinion in healthcare and has been gradually expanding throughout the country.³² During 2020, Mexico carried out nearly 6 million teleconsultations in 20 institutions.³³ Costa Rica acknowledged that prior to COVID-19 its CCSS handled over 13 thousand teleconsultations, but due to the pandemic that number soared by over 75%.³⁴

For these changes to successfully scale, it is imperative to not only design around the consumer but also train the workforce in the adoption of new models and tools for successful care delivery. Latin America has recognized the need of providing its workforce with the necessary training. Chile's Andrés Bello University has invested

in the region's first simulation hospital that reproduces, in a controlled environment, hospital and primary care scenarios and uses technology, such as VR in radiology.³⁵

New Ecosystems and Operational Models

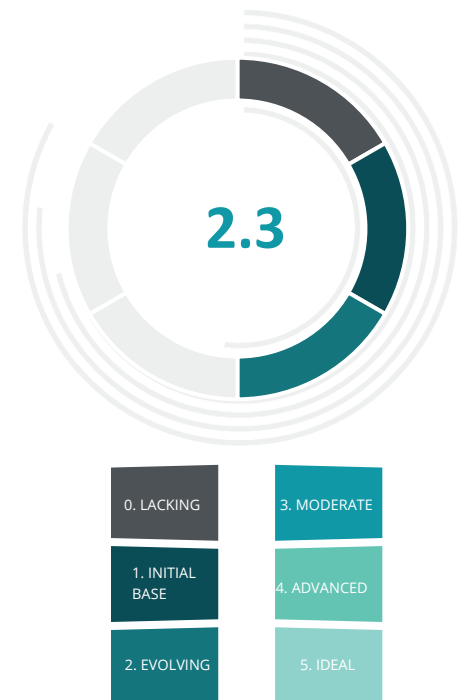


Figure 7. Regional Score. Graphic designed based on Deloitte's research for the purpose of this study.

In Chile, its National Center for Health Information Systems (CENS, in Spanish) developed a method of detecting what skills are needed to advance health information technology. The goal is to

achieve at least 2,000 new professionals capable of implementing technology in the health sector.³⁶ These actions are in line with the 83% of surveyed health professionals in Chile who consider training in virtual health technologies essential.²⁵

Colombia is committed to strengthening the competencies of health workforce through focus groups that help identify the skills needed for the use of information systems and technology in health. This will serve as an input for universities to adjust their current education programs and training.³⁷ Meanwhile, Argentina has trained over 2,000 health practitioners across the country on interoperability and digitization as it works to expand its National Health Network program.⁹

Whereas digitization brings many benefits to the consumer experience, it is also important to state that massive digitization is not what is being recommended. Digitization should enhance the consumer

A regulatory framework that still needs to be refined should not be an impediment to moving forward, but an opportunity to innovate and become an early adopter of technologies in a nascent setting.

experience but should not replace the human touch in areas of care where it is essential and characteristic of the industry, and especially necessary to a segment of the population that may be digitally illiterate.

Therefore, the need to design around the consumer and the consumer needs is once again reinforced. For example, respondents from Deloitte's Future of Health Consumer survey stated the need for an integrated healthcare delivery model where the patient is cared for in a holistic manner rather than in silos by specialists. This represents a need for the current operational model to be redesigned around the actual needs of the consumer and to set in motion programs for the healthcare workforce to be empowered to deliver more comprehensive care in different settings.

To meet this necessity, digital platforms powered by cloud technology that allow for the transfer of up-to-date information will be essential to ensure smooth communication between departments and clinicians. Thus, the consumer experience would be enhanced by digitization but not lose face-to-face interactions.

These changes in the ecosystem are too complex to be solved by any one organization – either by adapting to or driving change. Therefore, traditional players in the health ecosystem may find themselves creating partnerships that will allow them to better compete in the market and meet the needs of consumers.

Respondents also expressed a need for hospital processes to integrate to allow for a more seamless consumer experience where, after their medical consultation, prescriptions are fulfilled by the pharmacy and delivered by a courier (or a drone!) to their home address without the need for them initiate either one of these processes separately. It's a vision similar to what Costa Rica's Social Security Fund (CCSS) implemented as a result of COVID-19.³⁸ This example emphasizes the need to develop cross-industry alliances and the role of technology will play as a key enabler to the Future of Health. And it is further underscored by such initiatives as Academia Digital Einstein by Sociedade Beneficente Israelita Brasileira Albert Einstein that aim to bridge the gap between academia and health institutions by sharing research and technological advances in health.³⁹

The Role of Technology

By now, it's clear that technology is woven into every detail of the Future of Health. It is a key enabler in empowering users and redesigning operational models that bring health services to the consumer and not the other way around—that is, the current model in which consumers

make their way to healthcare facilities. The rise of consumerism powered by advanced technology is driving the use of technology in healthcare. Therefore, a convergence of digital transformation and delivery models is how healthcare will be delivered in the future. Technology, such as 5G, will be leveraged to mobilize and

enable nontraditional points of care.⁴⁰ It will allow advanced wireless technologies to continuously monitor consumer well-being and deliver real-time personalized health insights.

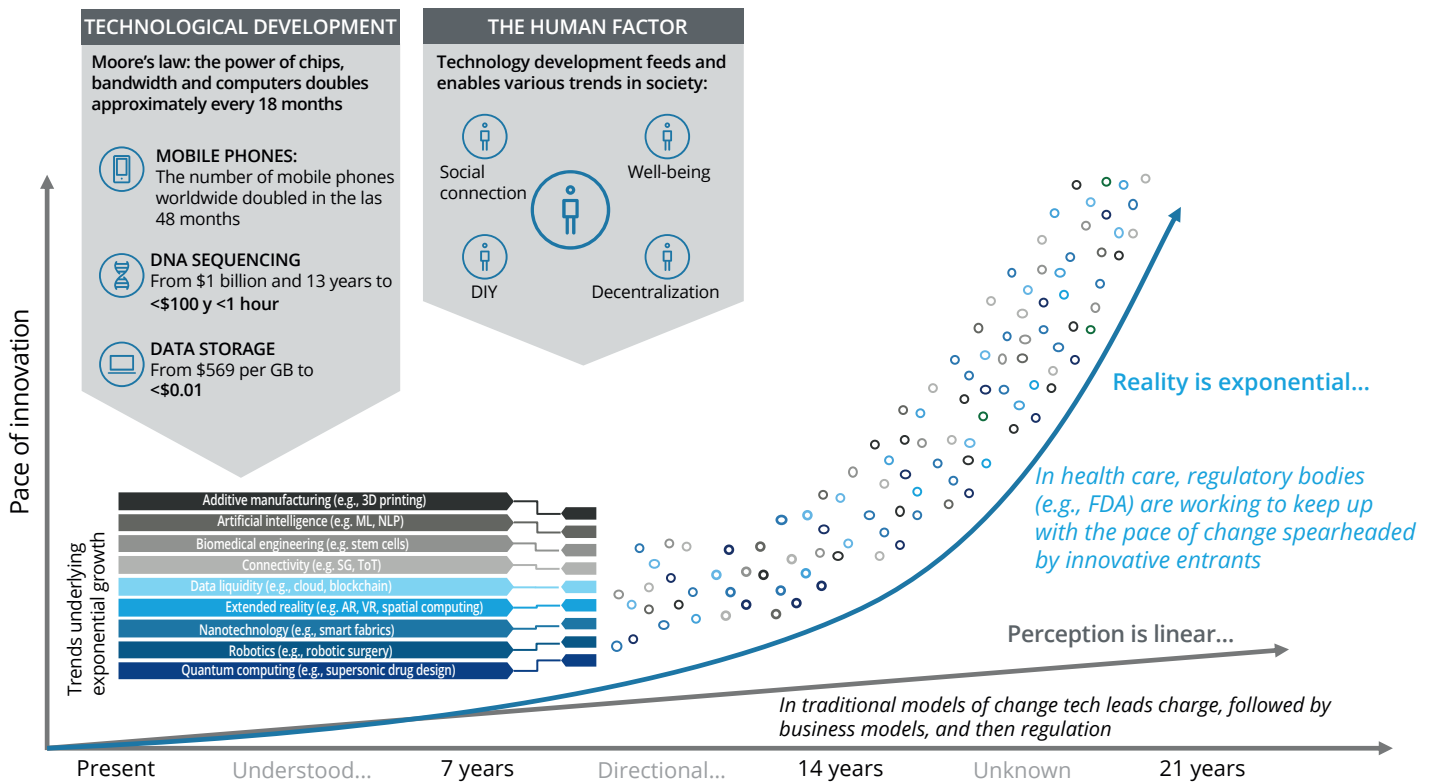


Figure 8. Various types of technology as catalysts in industry transformation and consumer changes

The use of these technologies may vary from one provider to the other, with the adoption and application most distinct between the public (including social security) and private sectors, which serve two different populations. The Mexican Hospital Consortium, the largest group of private hospitals in Mexico, has established an alliance with Amazon Web Services with the goal of developing new healthcare delivery models. By leveraging digital solutions, these models will transform patient care post-hospitalization as well as primary care services and services delivered to patients with chronic illnesses. These efforts are tied to interoperability systems for the Consortium's 51 hospitals across the country.⁴¹

Meanwhile in 2021, the government of Chile partnered with a local telecommunications company and a health technology company to carry out the first remote mammography in the Latin American region with the use of 5G technology.⁴² These two examples underscore the importance of cross-industry partnerships. Furthermore, Chile's National Center of Health Information Systems (CENS, in Spanish) has joined the International Digital Health and AI Research Collaborative (I-DAIR),⁴³ a global platform that improves access to research on digital health and artificial intelligence. Among the main projects is antimicrobial resistance (AMR), which uses AI to decide which antibiotics should be administered to patients. The goals of this alliance align with a key insight from the Deloitte Chile survey; that is, around 70% of both patients and professionals expect the use of AI to be a standard practice in healthcare within the next 5 to 10 years.²⁵

Across Brazil, a percentage of health facilities have also adopted advanced technologies, ranging from blockchain (4%) to AI (15%) and robotics (12%).⁴⁴ Partnerships between public and private sectors are also leveraging the digital maturity of Brazilian health ecosystem. For example, Deloitte Brazil is supporting Open Care 5G, a project that pairs InovaHC, a private organization, and the Nucleus of Technological Innovation of the Hospital das Clínicas of the Faculty of Medicine of the University of Sao Paulo, a public institution. The effort will promote the construction of a private network in the open RAN concept (open radio access networks).

It is an open and disaggregated technology that is intended to accelerate the deployment of 5G at lower costs than the traditional model used in the telecommunications industry.⁴⁵ Meanwhile, Argentina has been leveraging big data as an essential tool in their public health policies. With the use of data acquired through different healthcare centers, patterns of illness or symptoms are uncovered allowing health officials to zero in on a specific region and implement a response plan.⁴⁶

Costa Rica and Colombia have also acknowledged the need to integrate technology into their health systems. Both countries expect to make a transition towards smart hospitals, using high-precision technologies such as robotics and AI as well as biomedical devices, sensors, and information systems that are equipped with high connectivity to easily share data.^{14,47}

It is evident from these examples that the region is making strides towards a future where technology and partnerships are key enablers in the delivery of healthcare services. However, consumers of today are already demanding the services of the future. Their experience in other industries, such as travel and tourism and food retail, is driving their need for a similar seamless and agile experience through digital platforms in other industries, including healthcare. These unmet needs, coupled with aspects unique to the region, have driven the emergence of healthtechs.

According to Deloitte Econosignal's research, about 50% of the total health expenditure is private—and is recognized as an opportunity to innovate. In 2020, the region's healthtechs received a six-fold increase in venture capital investment compared to the previous year, rising from \$16 million to \$99 million.⁴⁸ Brazil has seen the number of healthtechs soared by 16% between 2019 and 2022.⁴⁹

Although healthtechs are new players in the ecosystem, they are key to its transformation in the Future of Health. These new players serve the needs of a segment of the consumer population predominantly within the private sector. And even when the public sector is making progress in their digital plans, some of its users are still underserved. As stated previously, one of the key expectations of various digital health programs is to deliver health services to remote areas through telehealth and other means in an

Digitization should enhance the consumer experience but should not replace the human touch.

effort to increase health equity. This goal is supported by the degree of widespread connectivity infrastructure in the country, internet users, and digital literacy.

Most of the Latin American population lives within proximity of a 4G signal. However, usage and penetration are still considerably low at 37%.⁵⁰ Less than half of the population has fixed broadband connectivity, the majority of which is low quality.⁵⁰ The main reason behind these numbers is the high cost of acquiring a device with access to the internet and maintaining an internet plan.

A plan of 1GB costs nearly 3% of household income in Latin America, whereas the international standard is 2%.⁵⁰ The cost of the cheapest internet-enabled device has increased from 9.4% of monthly GDP per capita in 2019 to 12.7% in 2020.⁵¹ Digital literacy is also a limiting factor, with nearly 40% of internet non-users surveyed stating that their gap in knowledge and skills prevents them from using the internet.⁵²

The above indicates a clear barrier not only to the Future of Health, but also to the efforts currently underway by various actors within the healthcare systems across the region. Too large a task for any one organization, addressing this barrier will require actors from different industries

The Role of Technology

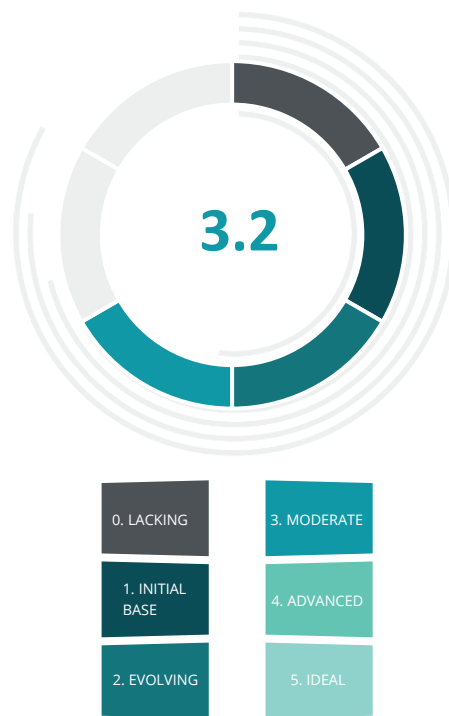


Figure 9. Regional Score. Graphic designed based on Deloitte's research for the purpose of this study.

to develop joint efforts, such as the mammography example in Chile. Others will look to invest in research and pressure-test innovative approaches to solving the digital gap.

Regardless of the path taken, if technology is being leveraged to increase health access and bridge the urban-rural gap, it is only natural that the digital transformation of healthcare services and processes be designed for a variety of consumers—and move away from a one-size-fits-all approach.

Consumers of today are already demanding the services of the future. Their experience in other industries is driving their need for a similar seamless and agile experience through digital platforms in healthcare.



The Path Forward

The regional findings from this study suggest that most health consumers in Latin America are experiencing a fragmented, one-size-fits-all care delivery model where the focus is centered around treating illnesses within healthcare facilities. Based on this observation and the Three-Horizon Model, it can be determined that today's health consumer in Latin America is in the first horizon.

And though the challenges being faced vary from market to market, it is clear that the entirety of the ecosystem must act in order to achieve the Future of Health. There are fundamental reforms and investments needed to be undertaken by governments, care providers, education institutions, and others. Each of these will add a piece to the puzzle and develop into a new ecosystem based on Future of Health concepts. Therefore, the ecosystem actors must establish actionable programs that are under their control and that can slowly help shift their operational models to meet the demands of consumers.

To this end, incumbents that have already acknowledged the need for transformation have started mobilizing resources to develop programs aligned with Future of Health concepts, such as digitization. But it is of the utmost importance to

distinguish between the benefits of a digital transformation of the consumer experience and simply digitizing current ways of working. Therefore, incumbents looking to advance in the direction of Future of Health must also have present that the needed transformations, although radical, may be gradually executed. These transformations cannot be standalone actions, but, instead, a part of strategy designed around the consumer which starts by mapping and understanding the consumers pains, needs, and wants and ideate on how to elevate the consumer experience.

Incumbents have also recognized the need to establish partnerships with emergent players, such as healthtechs or incumbents in other industries that can help them achieve their goals. Partnerships tend to be more cost-effective and allow incumbents to make their way into new segments or strengthen current capabilities and competitive advantages.

Regardless of the approach, transformation at this scale are often times daunting. However, health providers that acknowledge health consumer empowerment through digitization will be better prepared to compete in the

future consumer-centric ecosystem. Organizations are encouraged to recognize different groups of consumers and design programs and processes that will lead them to meet individual needs. Moreover, it is important to stress how essential access to connectivity and improved digital literacy is to driving health equity forward in Latin America especially in the face of a new technologically driven health ecosystem.

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