

A resilient future

Healthcare leaders look
beyond the crisis

Saudi Arabia



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Foreword



Jan Kimpen

Philips Chief Medical Officer



Amid the crisis, what stands out is just how skillfully the sector has risen to the challenge.

As we reflect on the past twelve months, it would be easy to feel dispirited. The global pandemic has taken a significant toll on patients and healthcare staff, obliging them to swiftly respond and adapt. Global healthcare systems have experienced unprecedented strain. Frontline healthcare workers have faced greater pressures than ever before leaving many suffering from burnout, while senior leaders have been charged with leading their institutions in the most trying of times.

But amid the crisis what stands out is just how skillfully the sector has risen to the challenge. The Future Health Index 2021 report reminds us that although the world continues to battle the pandemic, there are pockets of positivity. This year's report explores how healthcare leaders are meeting the demands of today as they prepare for an uncertain future. It uncovers their experiences, priorities, and aspirations. And while acknowledging the difficulties presented by the pandemic, the findings reveal a sense of optimism, resilience, and hope for a brighter future.

Over the past year, it's clear and understandable that most healthcare leaders have been focused squarely on patient care. But even as they navigate these challenges, many express an appreciation for, and anticipated adoption of, value-based care.

Healthcare leaders have seen firsthand the part that digital health technology has played in recent months, helping to ensure the continued delivery of care in incredibly difficult circumstances. As a result, many are reassessing their facility's technological capabilities as they consider what's next. Smart collaborations and meaningful partnerships will be critical to achieve digital transformation.

Encouragingly we can expect greener healthcare systems over the next three years, with most healthcare leaders pledging to prioritize sustainable practices within their facility.

None of us can be certain of what the future holds. But what shines forth from this report is that healthcare leaders are committed to building a future that is sustainable, adaptable and – above all – resilient.

Foreword



Eng. Mohamed Sindi

CEO of Philips Healthcare Saudi Arabia

The past year has posed many challenges for the healthcare sector - patients and healthcare providers alike. However, these challenges have given rise to an innovative, resilient and optimistic group of healthcare leaders in Saudi Arabia. This gives me an immense amount of hope as we continue to move forward, together, into the future.

The findings of the Future Health Index (FHI) 2021 report demonstrates the resilience and commitment of Saudi Arabia's healthcare leaders in building sustainable, patient-centered healthcare systems beyond hospital walls. I am delighted by the pace at which Digi-health solutions have been so well adopted and implemented locally and this excites me about the future and the further evolution of artificial intelligence (AI) AI solutions in healthcare.

This year's report explores how Saudi Arabia's healthcare leaders want to collaborate with other private hospitals/healthcare facilities to drive digital transformation within their hospital/healthcare facility. In addition, a shift towards remote or virtual care and data privacy security remain high on the priority list.

It is inspiring to see how confident healthcare leaders in Saudi Arabia are in the capabilities of the country's healthcare system and our healthcare facilities to deliver on quality care.

By aligning ourselves to the Kingdom's Vision 2030 , within which is the Health Sector Transformative Program, based on the principles of value-based care, we believe we are well positioned to continue improving people's lives.

Research premise

In its sixth year, the Future Health Index 2021 report is based on proprietary research across 14 countries.

The research considers how healthcare leaders* are meeting the demands of today and what the new reality of healthcare post-pandemic might look like. Specifically, the report explores the challenges they have faced, their investment in digital health technology, and a new emphasis on partnerships, sustainability and new models of care delivery, both inside and outside the hospital.

This is the largest global survey analyzing healthcare leaders.



Responses from almost

3,000
healthcare leaders



Across

14
countries

Countries included in the research

Australia	India	Saudi Arabia
Brazil	Italy	Singapore
China	Netherlands	South Africa
France	Poland	United States
Germany	Russia	

*Healthcare leader is defined as a C-suite or senior executive working in a hospital, medical practice, imaging center/office-based lab, or urgent care facility who is a final decision maker or has influence in making decisions.

Theme 1

Learning from the past, optimistic about the future

As COVID-19 became a global pandemic, Saudi Arabia was among the first countries to implement strict measures to combat the spread of the virus.¹ Saudi Arabia's previous experience with the Middle East respiratory syndrome coronavirus (MERS-CoV) epidemic in 2012 left the nation's leaders with best practices they were able to apply to the current crisis, allowing them to respond quickly and contain the virus more effectively than many other countries.¹

While the pandemic has impacted their ability to plan for the coming years, Saudi healthcare leaders are largely optimistic about the future. They believe the healthcare system has shown resilience during the crisis and agree that current healthcare plans and policies are making a positive contribution.

Saudi healthcare leaders are also confident in their ability to deliver quality care to citizens as they look ahead. This may be due in part to government initiatives including the country's Vision 2030 plan, which aims to strengthen the Saudi healthcare system by optimizing the capacity of its hospitals and healthcare facilities.²

Within the Vision 2030 plan is the Health Sector Transformation Program, which is based on the principles of value-based care and aims to enhance public health as well as prevent diseases.³ Because of initiatives like this, Saudi healthcare leaders are among the most likely of those surveyed across the 14 countries to say they plan to pursue a shift to value-based care in the future.



Responding to the pandemic

Saudi healthcare leaders more likely than the average of those surveyed to be prioritizing a shift to remote or virtual care

As COVID-19 continues to impact healthcare systems around the world, Saudi healthcare leaders are shifting their priorities.

Currently, preparing to respond to crises is among their top priorities, alongside facilitating a shift to remote or virtual care, which has become essential to maintain healthcare access during the pandemic. In fact, Saudi healthcare leaders are more likely than those across many of the other countries surveyed to be prioritizing this shift to remote or virtual care today.

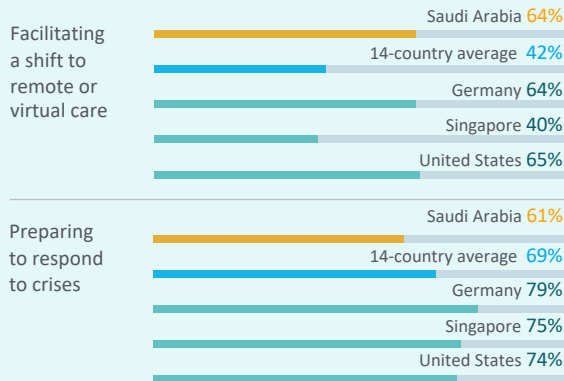
As they look toward the future, Saudi healthcare leaders expect to shift their focus elsewhere. Facilitating a shift to remote or virtual care is expected to become much less of a priority in the years to come, especially when compared with healthcare leaders across many of the other countries surveyed. This may be because those in Saudi Arabia expect much of this work to have already been completed during the pandemic.

However, Saudi healthcare leaders expect that implementing sustainability practices (71%) and ensuring data privacy and security (32%) will be among their top priorities in the future.

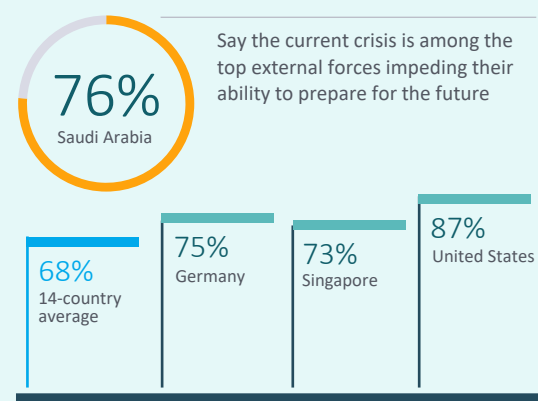
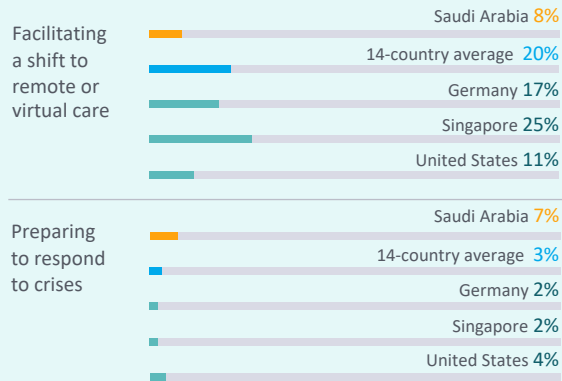
Healthcare leaders in Saudi Arabia are also more likely than the average of those surveyed across the 14 countries to feel that the pandemic is hindering future planning, with roughly three-fourths saying the current crisis is among the top external forces impeding their ability to prepare for the future.

However, despite the barriers posed by the pandemic, they continue to plan ahead. Saudi healthcare leaders typically plan around three years ahead, on average, when preparing their hospital or healthcare facility for the future.

Top current priorities of Saudi healthcare leaders:



Top future priorities of Saudi healthcare leaders:



Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800; Germany n=200; Singapore n=200; United States n=200)



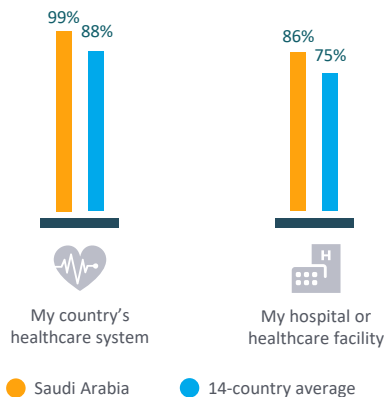
Theme 1 Learning from the past, optimistic about the future

A strong sense of optimism for the future

Overwhelming confidence in Saudi Arabia's healthcare system

Healthcare leaders in Saudi Arabia are confident in the ability of both their country's healthcare system, as well as their own hospital or healthcare facility, to deliver quality care as they look toward the future – at rates higher than those across many of the other countries surveyed.

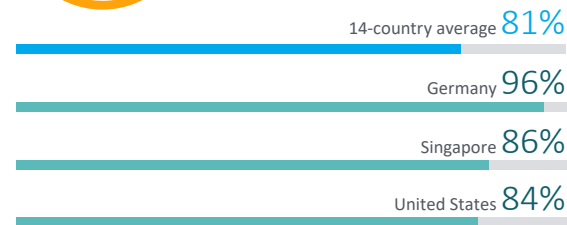
Healthcare leaders who are confident in the ability of the following to deliver quality care as they look toward the future



Additionally, nearly all healthcare leaders surveyed in Saudi Arabia agree that current healthcare policies and plans are having a positive impact on the resilience of the Saudi healthcare system. This high level of confidence may be a result of the country's Vision 2030 plan, which includes goals around enhancing the capacity of hospitals and healthcare facilities as well as improving the quality of preventative care services.²



Agree that current healthcare policies and plans in their country are contributing to building a resilient healthcare system



Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800; Germany n=200; Singapore n=200; United States n=200)

Embracing value-based care even during COVID-19

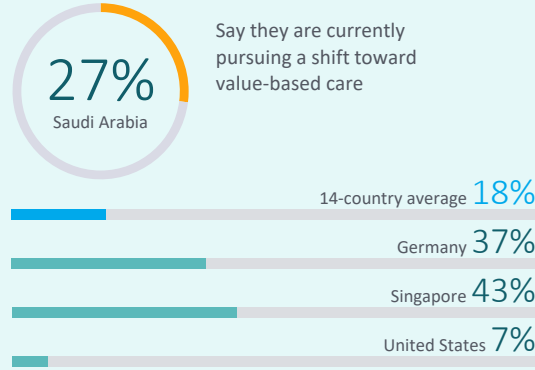
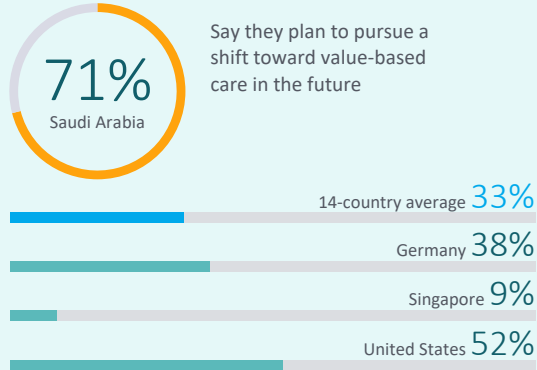
Volume-based performance metrics are being phased out in Saudi Arabia's hospitals and healthcare facilities

Saudi healthcare leaders are among the most likely of those surveyed to indicate their hospital or healthcare facility plans to pursue a shift toward value-based care in the future. They are also more likely than healthcare leaders across many of

the other countries surveyed to be currently pursuing a shift toward an outcome-based model.

This shift is likely driven by initiatives including the Health Sector Transformation Program, which aims to facilitate the adoption of value-based care through the support of public health and improvements in disease prevention measures.³

Adoption of value-based care



Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800; Germany n=200; Singapore n=200; United States n=200)



Theme 2

Taking a three-step approach to digital transformation

As healthcare leaders in Saudi Arabia adapt to the immense changes of the past year and prepare for the future of healthcare, they appear to be taking a three-step approach to digital transformation.



Current investment in **telehealth** to enable care delivery during the pandemic. Strategic plans laid out by the government have facilitated the adoption of this technology.⁴



Investment in **artificial intelligence (AI)** to increase in the near future, as leaders look to technology to predict care outcomes and integrate diagnostics in the longer term.



Partnership and collaboration with other hospitals and healthcare facilities to drive forward digital transformation.

However, as they pursue this three-step approach, Saudi healthcare leaders face barriers that must be overcome to successfully prepare for the future and fully leverage digital health technologies, including staff inexperience and difficulties with data management.



Step one: build a lasting digital health legacy

Healthcare leaders invest in telehealth during COVID-19

Saudi healthcare leaders are currently investing in telehealth in higher numbers than those across many of the other countries surveyed, suggesting large-scale recognition of the value of virtual care delivery.

This has been helped by Saudi government policy. In response to the pandemic, the Saudi Ministry of Health leveraged telehealth applications to track COVID-19 patients and provide care from a distance to contain the virus effectively.⁵ The Ministry of Health's National E-Health Strategy also aims to create a safe and efficient health system centered around digital patient care.⁴

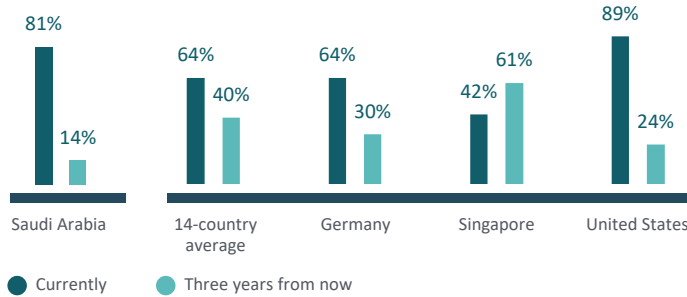
Investment priorities shift as leaders look to years ahead

While telehealth has been crucial for both healthcare providers and patients during the pandemic, Saudi healthcare leaders expect that investment in the technology will drop significantly in the future. One possible reason could be that innovations put in place today will build a foundation for further digital transformation throughout the Saudi healthcare sector.

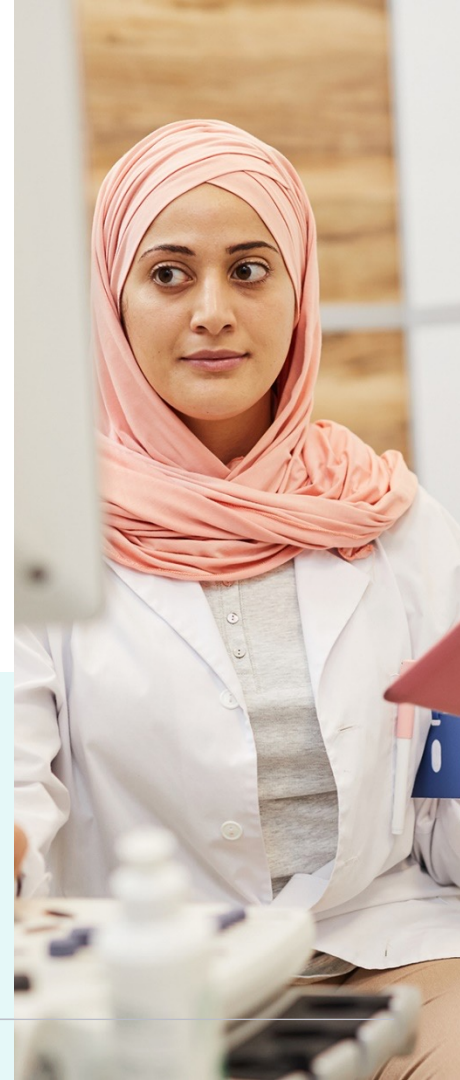
Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800; Germany n=200; Singapore n=200; United States n=200)

*Telehealth as stated here is representative of both healthcare professional-to-patient telehealth as well as healthcare professional-to-healthcare professional telehealth

Healthcare leaders who say telehealth* is one of the digital health technologies they are most heavily investing in now and in the future



Types of telehealth Saudi healthcare leaders are most heavily investing in now and in the future





Step two: invest in artificial intelligence (AI)

Investment in predictive technology and AI to increase dramatically

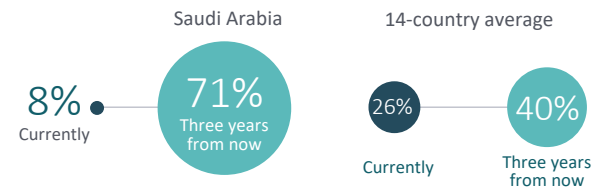
While Saudi healthcare leaders are focused on getting foundational telehealth infrastructures in place today, as they look beyond the immediate needs of the pandemic, they see AI emerging as a key investment priority to help them prepare for the future of care.

Saudi healthcare leaders expect to seek a range of benefits from the implementation of AI. They cite predicting care outcomes and integrating diagnostics among their key areas for AI investment three years from now.

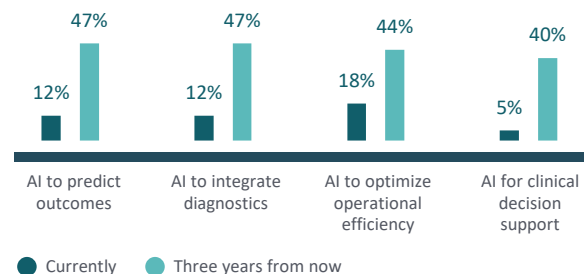
Saudi institutions are also at the forefront of promoting the use of AI in healthcare. In late 2020, The University of Oxford and King Abdulaziz University (KAU) in Saudi Arabia announced a partnership to create a Centre for Artificial Intelligence and Precision Medicine. This partnership will allow experts in medicine, drug discovery and AI to collaborate in developing new treatments for common diseases and rare genetic conditions.⁶

In February 2021, the Saudi Data and Artificial Intelligence Authority (SDAIA) announced a partnership to further support the country's goal of becoming an AI leader in healthcare. This initiative aims to provide data scientists and healthcare professionals in Saudi Arabia with the latest health technologies, which will enable them to pass on the benefits of AI in healthcare to Saudi citizens.⁷

Healthcare leaders who say their hospital or healthcare facility most needs to invest in implementing predictive healthcare technologies to be prepared for the future



Digital health technologies Saudi healthcare leaders are most heavily investing in now and in the future: AI technologies

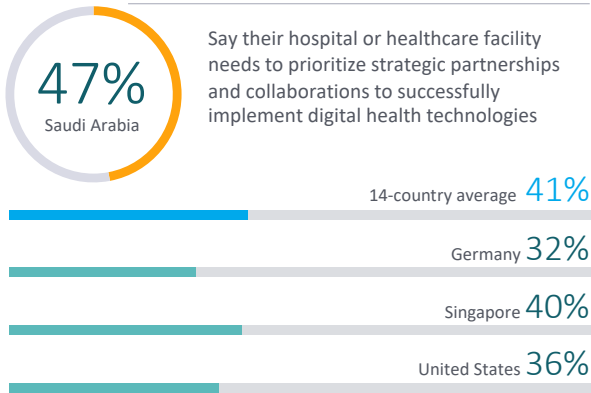


Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800)

Step three: Drive change with strategic partnerships

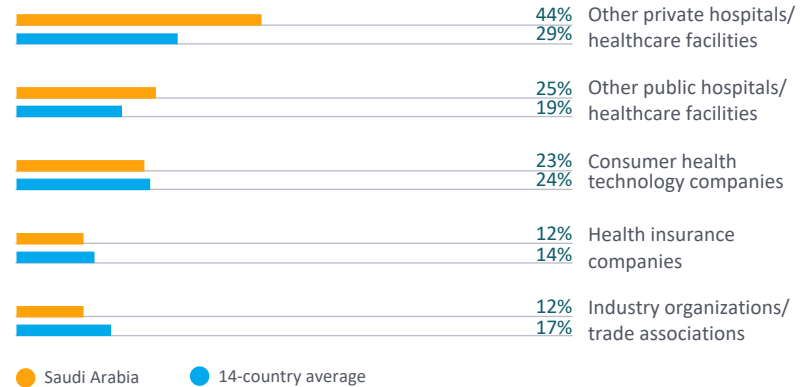
Saudi healthcare leaders more likely than the average of those surveyed to want to collaborate with other private hospitals or healthcare facilities

In higher numbers than those across many of the other countries surveyed, roughly half of healthcare leaders in Saudi Arabia believe that prioritizing strategic partnerships and collaborations is necessary to successfully implement digital health technologies within their hospital or healthcare facility. These partnerships will play an important role in helping Saudi healthcare leaders continue their country's rapid rate of technology adoption in the future.



While Saudi healthcare leaders show an openness to collaborating with a range of different partners to drive digital transformation, they are more likely than those across many of the other countries surveyed to want to work alongside other private hospitals or healthcare facilities. Collaborations with other public hospitals or healthcare facilities as well as consumer health technology companies are also seen as valuable for roughly one-quarter of Saudi healthcare leaders. As Saudi Arabia continues to drive change in healthcare, public-private partnerships (PPPs) can offer a way to a higher functioning health system at lower cost.⁸

Top organizations healthcare leaders want to collaborate with to drive digital transformation within their hospital or healthcare facility



Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800; Germany n=200; Singapore n=200; United States n=200)

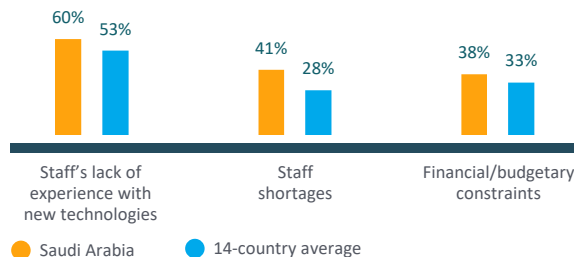
Three-step approach slowed by internal barriers

Staff inexperience and staff shortages are key areas of concern

As they pursue this three-step strategy for digital transformation, focused on telehealth, AI and strategic partnerships, Saudi healthcare leaders see several internal barriers that must be overcome to successfully prepare for the future and further implement digital health technologies. Their staff's lack of experience with new technologies and shortages of healthcare workers are among the biggest barriers for Saudi healthcare leaders, with over half saying staff inexperience is a factor that most impedes their ability to prepare for the future.

However, findings from the Future Health Index 2020 [report](#) suggest that work is being done to tackle staff inexperience within the healthcare sector. Saudi Arabia's younger healthcare professionals were among the most likely of those surveyed to say that their hospital or practice provides continuous education in data analysis and interpretation (60% vs. 42% 15-country average).⁹

Top internal barriers impeding ability to prepare for the future

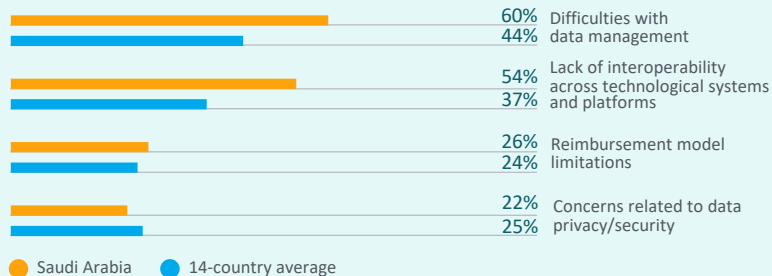


Data management and interoperability are also obstacles

More than those across many of the other countries surveyed, Saudi healthcare leaders cite difficulties with data management and interoperability issues among the top obstacles hindering the adoption of digital health technologies within their hospital or healthcare facility.

The use of digital patient data has become increasingly important for healthcare systems around the world. The Saudi Health Information Exchange initiative aims to use health information, including patient data, to support digitalization and technology adoption throughout the healthcare system. This initiative will allow for secure and streamlined patient care using digital health records as well as de-identified patient data that can be leveraged for medical research.¹⁰

Top barriers to the adoption of digital health technologies within the hospital or healthcare facility



Theme 3

Building sustainable systems to deliver future-proof care

As healthcare leaders in Saudi Arabia transition to a new reality post-pandemic, they are expecting changes in where and how care is being delivered. On average, Saudi healthcare leaders believe that more routine care delivery will take place outside the walls of their hospital or healthcare facility in the future, with the use of ambulatory primary care centers expected to increase significantly. This shift in the location of routine care delivery is likely a result of the increased use of virtual or remote care solutions during the pandemic.

As we move beyond the current crisis, healthcare leaders across the 14 countries surveyed expect to prioritize sustainability more in the years to come. Healthcare leaders in Saudi Arabia are even more likely than those across many of the other countries surveyed to expect an increased commitment to improving sustainability in the future. These attitudes are reinforced by government policies. Initiatives like the National E-Health Strategy include sustainability goals aimed at environmental preservation and reducing the consumption of natural resources in the healthcare system.⁴





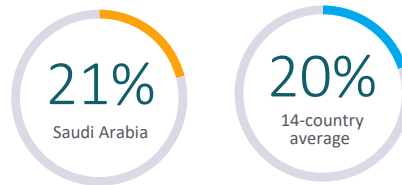
Care delivered beyond hospital walls

Beyond hospitals to communities

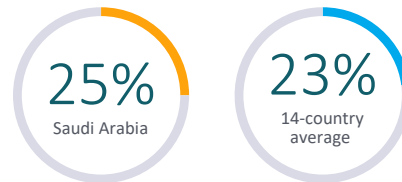
According to healthcare leaders, about one-fifth of routine care delivery, on average, is currently happening outside the walls of hospitals or healthcare facilities in Saudi Arabia. In three years' time, Saudi healthcare leaders expect about one-fourth of routine care to be delivered in a non-traditional health setting, such as an ambulatory primary care center.

Average proportion of routine care delivery healthcare leaders believe is performed outside the walls of their hospital or healthcare facility

Currently

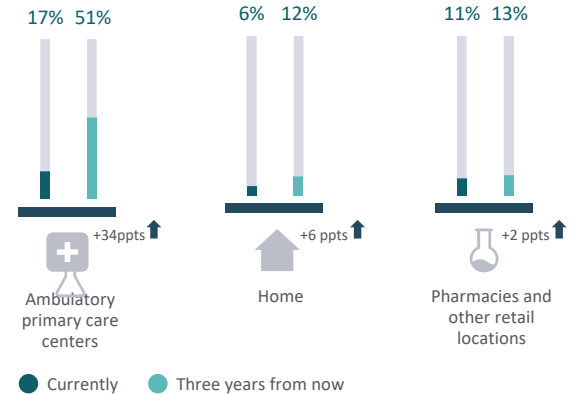


Three years from now



Only a few Saudi healthcare leaders say that ambulatory primary care centers or homes are being used heavily to deliver routine care outside of hospital walls today. However, as they look ahead to the future, ambulatory primary care centers are expected to account for a much greater share of out-of-hospital routine care delivery. The home as well as pharmacies and other retail locations are also expected to grow slightly in their use as care delivery locations in the future, likely facilitated by the increased adoption of digital health solutions.

Top locations expected to grow in their use for routine care delivery outside of the hospital or primary care facilities



Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800)

A significant shift toward sustainability

Sustainability to become a key priority for Saudi healthcare leaders in the future, more so than the average of those surveyed

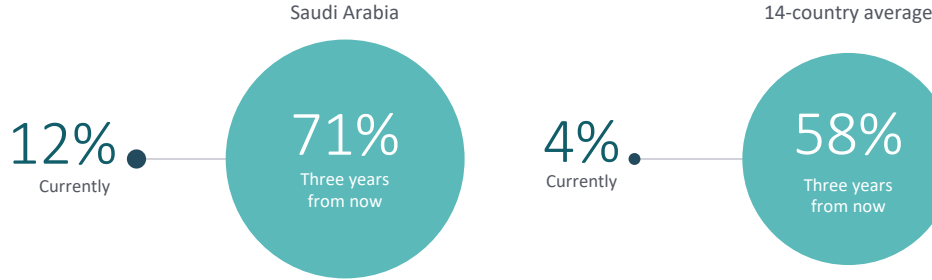
As we move beyond the height of the pandemic, the healthcare sector around the world faces the task of building a more sustainable healthcare ecosystem.

Saudi healthcare leaders anticipate that implementing sustainability practices in their hospital or healthcare facility will be a top priority in the future, to a greater degree than the average of those surveyed across the 14 countries.

Integrating environmentally-conscious standards and practices into new hospitals and healthcare facilities from the outset will be critical to putting the industry on a more sustainable footing.

The government is also playing a role in driving sustainable healthcare. In 2020, Saudi Arabia hosted the Sustainable Production in the Health Sector Global Forum, which explored sustainable practices in the healthcare industry and new innovations for the sustainable production and consumption of health supplies.¹¹

Healthcare leaders who say implementing sustainability practices at their hospital or healthcare facility is a top priority



Base (unweighted): Total healthcare leaders (Saudi Arabia n=200; 14-country avg. n=2800)



Report conclusion



A vision of sustainable and patient-centered healthcare, enabled by smart technology

Exploring the findings of the Future Health Index 2021 report, several notable themes emerge as healthcare leaders consider what lies ahead:



Strong optimism
among healthcare leaders



A roadmap for benefiting
from smart technologies that
considers the tools that are
currently available to them



Growing interest
in sustainability and
environmental sourcing



An emphasis on strategic
partnerships to foster
innovation and deliver
much-needed technology
infrastructure



Increased anticipation
of care delivery outside
the hospital, driven by
patient demand

Appendix

Glossary of terms

Ambulatory primary care center

Outpatient care centers (e.g., urgent care, walk-in clinics, etc.)

Analog hospitals or practice

Most or all patient data is handled in a paper-based format or using traditional communications, e.g., phone, fax, etc.

Artificial intelligence (AI)

AI refers to the use of machine learning and other methods that may mimic intelligent human behaviors, resulting in a machine or program that can sense, reason, act and adapt to assist with different tasks.

Augmented reality (AR)

A technology that superimposes a computer-generated image on a user's view of the real world, providing a composite view. In healthcare, this can allow a surgeon, for example, to see live data or 3D medical imagery in their field of vision when performing procedures.

B2B health technology companies

Companies that sell products, equipment, or solutions to hospitals and healthcare facilities.

Consumer health technology companies

Companies that sell or provide wearables, health apps and other technology to the general public.

C-Suite -1

A hospital or healthcare executive who is a level below the role of C-Suite. Job titles can include head of department, senior partner, or director.

Data privacy

The culture expectations, organizational regulations and legislation that protect personal information from unauthorized use and dissemination.

Data security

Protecting data against unauthorized access.

Digital health records

Technology that can store a variety of health information, including medical history, test results, health indicators, etc. Digital health records can be used within a certain healthcare facility, across different healthcare facilities, by only the patients themselves, by one healthcare professional or across all healthcare professionals involved in a patient's care. Electronic medical records (EMRs) and electronic health records (EHRs) fall within the term 'digital health records'.

Digital health technology

A variety of technology that transmits or shares health data. The technology can take a variety of forms, including but not limited to home health monitors, digital health records, equipment in hospitals and health or fitness tracker devices.

Digital hospitals or practices

Simple/basic technologies are used, with most or all patient data and communications being handled electronically.

Digital transformation

The integration of digital technology into all aspects of how a healthcare business interacts with patients, healthcare providers and regulators.

Global non-governmental organizations

Organizations such as WHO, World Bank, etc.

Healthcare professional

All medical staff (including doctors, nurses, surgeons, specialists, etc.), and excludes administrative staff.

Healthcare professional-to-healthcare professional telehealth

Virtual communication between healthcare professionals through sharing images, recommending treatment plans, etc.

Healthcare professional-to-patient telehealth

Communication between healthcare professionals and their patients via video calls, patient portals, etc.

Healthcare leader

A C-suite or senior executive working in a hospital, medical practice, imaging center/office-based lab, or urgent care facility who is a final decision maker or has influence in making decisions.

Health IT/informatics companies

Companies that build communications protocols within healthcare systems (e.g., Cerner, Epic, etc.)

Interoperability

The ability of health information systems to work together within and across organizational boundaries, regardless of brand, operating system or hardware.

Machine learning

A process of AI that provides systems with the ability to automatically learn and improve from experience without being explicitly (re)programmed.

Out-of-hospital procedural environments

Care centers such as ambulatory surgical centers, office-based labs, etc.

Predictive technologies

A body of tools capable of discovering and analyzing patterns in data so that past behavior can be used to forecast likely future behavior.

Reimbursement model limitations

Barriers to healthcare payments and benefits.

Remote patient monitoring

Technology that provides care teams with the tools they need to remotely track the health of their patients outside of conventional clinical settings (e.g., at home), collaborate with the patients' other healthcare professional(s) and help detect problems before they lead to readmissions. Examples of this include cardiac implant surveillance, vital-sign sensors at home, etc.

Resilience

The capacity of hospitals or healthcare systems to quickly recover from challenges.

Smart hospitals or practices

Advanced connected care technologies are used, in addition to patient data and communications being handled electronically.

Staff

This refers to all staff, including physicians, nurses, administrative employees, etc.

Sustainability

Meeting the environmental needs of the present without compromising the ability of future generations to meet their own needs.

Telehealth/Virtual care

The distribution of health-related services and information via electronic information and telecommunication technologies.

Value-based care

The concept of healthcare professionals receiving reimbursement based on patient health outcomes rather than on the volume of tests or procedures completed.

Virtual reality (VR)

The computer-generated simulation of a three-dimensional image or environment that, using electronic equipment, can be interacted with by an individual in a seemingly real or physical way.

Voice recognition tools/software

A tool used to convert spoken language into text by using speech recognition algorithms.

Research methodology

Research overview and objectives

Since 2016, Royal Philips has conducted original research to help determine the readiness of countries to address global health challenges and build efficient and effective health systems. In the context of ever-growing pressure on resources and costs, the Future Health Index focuses on the crucial role digital tools and connected care technology can play in delivering more affordable, integrated and sustainable healthcare.

In 2016, the Future Health Index measured perceptions of healthcare providers and patients to produce a snapshot of how healthcare is experienced on both sides of the patient-professional divide. In 2017, it compared these perceptions to the reality of health systems in each country researched. In 2018, the Future Health Index identified key challenges to the large-scale adoption of value-based healthcare and overall improved access. It assessed where connected care technology can help

speed up the healthcare transformation process. In 2019, the Future Health Index explored technology's impact on two aspects of the Quadruple Aim: the healthcare experience for both patients and healthcare professionals and how technology is moving us to a new era of continuous transformation. In 2020, the Future Health Index examined the expectations and experiences of younger healthcare professionals aged under 40 and how they can be empowered to meet the demands of tomorrow's healthcare.

The Future Health Index 2021 report considers how healthcare leaders* are meeting the demands of today and what the reality of health post-pandemic might look like. Specifically, the report explores the challenges they have faced, their investment in digital health technology, and a new emphasis on partnerships, sustainability and new models of care delivery, both inside and outside the hospital.

The research for the 2021 Future Health Index was conducted in 14 countries (Australia, Brazil, China**, France, Germany, India, Italy, the Netherlands, Poland, Russia, Saudi Arabia, Singapore, South Africa and the United States).

To provide a holistic understanding of the current healthcare systems around the world, the 2021 study combines a quantitative survey and qualitative interviews conducted from December 2020 - March 2021.

*Healthcare leader is defined as a C-suite or senior executive working in a hospital, medical practice, imaging center/office-based lab, or urgent care facility who is a final decision maker or has influence in making decisions.

**Survey data is representative of Mainland China only and does not include Taiwan or Hong Kong.

Research methodology

2021 quantitative survey methodology

In partnership with iResearch Services, a global business and consumer research services organization, a survey was fielded from December 8, 2020 – February 16, 2021 in 14 countries (Australia, Brazil, China, France, Germany, India, Italy, the Netherlands, Poland, Russia, Saudi Arabia, Singapore, South Africa and the United States) in their native languages. The survey used a mixed methodology of online and telephone across all of the countries (as relevant to the needs of each country) with a sample size of 200 per country. The survey length was approximately 20 minutes.

The total sample from the survey includes:

- 2,800 healthcare leaders (Defined as a C-suite or senior executive working in a hospital, medical practice, imaging center/office-based lab, or urgent care facility who is a final decision maker or has influence in making decisions).

Below is the specific sample size, estimated margin of error at the 95% confidence level, and interviewing methodology used for each country.

	Unweighted sample size (N=)	Estimated margin of error (percentage points)	Interview methodology
Australia	200	+/- 7.5	Online and telephone
Brazil	200	+/- 6.5	Online and telephone
China	200	+/- 7.5	Online and telephone
France	200	+/- 6.5	Online and telephone
Germany	200	+/- 7.0	Online and telephone
India	200	+/- 5.5	Online and telephone
Italy	200	+/- 7.0	Online and telephone
Netherlands	200	+/- 6.0	Online and telephone
Poland	200	+/- 6.5	Online and telephone
Russia	200	+/- 7.5	Online and telephone
Saudi Arabia	200	+/- 6.5	Online and telephone
Singapore	200	+/- 8.5	Online and telephone
South Africa	200	+/- 6.5	Online and telephone
United States	200	+/- 7.0	Online and telephone

Question localizations

In some instances, certain questions needed to be adjusted slightly for relevance within specific countries. Care was taken to ensure the meaning of the question remained as close to the original, English version, as possible.

2021 qualitative interviews methodology

To provide context and key quotes to the quantitative data, the research was supplemented with 30-minute interviews among healthcare leaders in their native languages, which was conducted from February 25, 2021 – March 12, 2021 and had 20 participants, four from each of the following markets: China, Germany, India, the Netherlands and the United States. These interviews were conducted in participation with Heart and Mind Strategies.

*Estimated margin of error is the margin of error that would be associated with a sample of this size for the full healthcare leader population in each country. However, this is estimated since robust data is not available on the number of healthcare leaders in each country surveyed

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The Future Health Index 2021 report examines the experiences of almost 3,000 healthcare leaders and their expectations for the future. The research for the Future Health Index 2021 report was conducted in 14 countries (Australia, Brazil, China, France, Germany, India, Italy, the Netherlands, Poland, Russia, Saudi Arabia, Singapore, South Africa and the United States). The study combines a quantitative survey and qualitative interviews conducted from December 2020 – March 2021.

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