future health index 2023

South Africa

Taking healthcare everywhere

Addressing staff shortages and patient needs with new care delivery models

The Future Health Index is commissioned by Philips

Contents

Research premise

This is the largest global survey of its kind, analysing the priorities and perspectives of healthcare leaders and younger healthcare professionals.

The Future Health Index – now in its eighth year – is based on proprietary research conducted in 14 countries.

In 2023, the Future Health Index explores how healthcare leaders and younger healthcare professionals view the role of new care delivery models, which integrate physical and virtual care within and beyond hospital walls.

Responses from almost **3,000** healthcare leaders and younger healthcare professionals

Across **14** countries

Countries included in the research

South Africa
Australia
Brazil
China
Germany
India
Indonesia
Italy
Japan
Netherlands
Poland
Saudi Arabia
Singapore
United States

Healthcare leaders are C-suite or senior executive decision makers/influencers working in a hospital, medical practice, imaging centre/office-based lab, ambulatory centre or urgent care facility. Younger healthcare professionals are defined as those aged between 18 and 40 who have completed their first medical/nursing degree and are working as a healthcare professional in a clinician role (all specialisations, except psychiatry/dental care).

Foreword

Offering insight into the future of healthcare in South Africa, through the lens of healthcare leaders and younger healthcare professionals, this year's report captures a unified sector – aligned on balancing immediate needs and realising future healthcare expectations.

The 2023 Future Health Index shows that in the face of increasingly strained resources and growing pressures, local healthcare professionals are seeking to streamline processes for improved efficiencies, while strengthening infrastructure to ultimately leapfrog beyond foundational technology to realise affordable, effective care and greater patient choice for tomorrow.

By examining these priorities in relation to global healthcare trends, we aim to shed light on the path that lies ahead.

A stand-out priority for South African healthcare leaders and younger healthcare professionals is addressing infrastructure issues that are impeding progress to an effective healthcare ecosystem.

Both healthcare leaders and younger healthcare professionals cite infrastructure issues as the number one technology challenge in South Africa that needs to be solved to make the healthcare ecosystem work successfully. This is in stark contrast to their global counterparts, who rate infrastructure issues as the least prominent challenge.

Reflecting their eagerness to increase efficiency, South African healthcare leaders say their organisations are focusing on automation and updating their technology infrastructure to ensure new care models deliver better patient outcomes.

As part of this drive, healthcare leaders and younger healthcare professionals put priority focus on virtual care and remote patient monitoring technologies to enable more distributed access to expertise.

While the current focus is on strengthening its foundation – South African healthcare leaders are less likely to say their healthcare facility is investing in new, more innovative technology (17%, compared to 32% globally) – healthcare leaders and younger healthcare professionals recognise that a new paradigm of care delivery is needed, because optimising current ways of working will only get them so far.

In fact, younger healthcare professionals, aware of the benefits of digital technology, see it as essential in the workplace. When it comes to choosing a hospital or healthcare facility in which to work, the vast majority cite being at the forefront of AI in healthcare as an important factor.

It's encouraging that future technology investments seem to reflect the importance placed on AI in terms of improving patient care.

Most healthcare leaders in South Africa (95%) would like their healthcare facility to heavily invest in AI technologies in the next three years, which is also evident among younger healthcare professionals, with 99% desiring future investments in AI technologies – both, notably higher than their global peers.

But they know they cannot do it alone. Even more so than in previous Future Health Index reports, and at a higher rate than the global average, partnerships emerged as a key theme this year. Both healthcare leaders and younger healthcare professionals say that closer collaboration between providers is needed to deliver integrated and sustainable patient care across settings.

I invite you to explore the findings in more detail in this report and reflect on what they mean for your organisation. Where will you take healthcare next? I hope that, as you set out on that journey, you find inspiration from both current and future healthcare leaders, as they harness the power of technology to drive the industry and patient care forward.

"We're creating healthcare ecosystems to realise affordable, effective care and greater patient choice for tomorrow'.

Romulen Pillay
Managing Director, Philips Southern Africa

Key findings at a glance

Three main themes emerge from the 2023 Future Health Index for South Africa, showing how healthcare systems are innovating care delivery to meet evolving patient needs with increasingly strained resources. Each of these themes is explored in more detail in the following chapters.

Chapter 1

Processes

Faced with acute workforce shortages and growing financial pressures, healthcare leaders are seeking to streamline processes for improved efficiencies. In many cases they are tapping into foundational technology to do so. Meanwhile younger healthcare professionals, want to see more advanced technologies like AI in their workplaces.

Chapter 2

Advanced technologies

Healthcare leaders and younger healthcare professionals share a common vision for a more distributed healthcare system that meets patients where they are. Virtual care is a core focus for them, as is remote patient monitoring. They believe new care delivery models will increase the affordability of care for patients while offering more effective care and greater patient choice.

Chapter 3

Infrastructure

As they focus on improving infrastructure, healthcare leaders are partnering across the healthcare ecosystem to overcome technology barriers, break down data silos, and deliver more integrated care that improves patient outcomes. In addition, they remain committed to furthering environmental sustainability initiatives, despite encountering multiple challenges.

1

Closing the technology gap to meet workforce needs and expectations

With South Africa’s public health system under strain, healthcare leaders are facing severe financial and workforce pressures. As some refocus their services and explore ways to streamline patient processes, many are tapping into technology to help ease the impact of staff shortages. They are focusing on foundational technology like access to information, communication and workflow applications, while younger healthcare professionals expect more advanced technologies like Artificial Intelligence (AI).

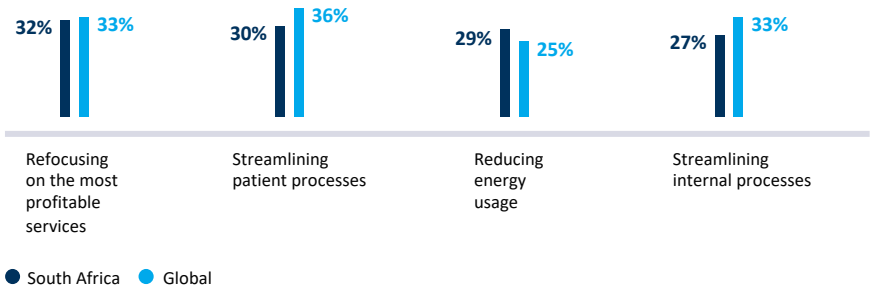
Delivering care more efficiently

Taking action to manage stark financial pressures

Rising poverty, unemployment and inequality, coupled with the impact of the COVID-19 pandemic, is contributing to the strain on South Africa's public health system. The country is now struggling to accommodate meeting the growing demand of communicable and non-communicable diseases[1]. With 84% of the South African population relying on public healthcare for their care, the situation is concerning[2].

Like their peers globally, most South African healthcare leaders surveyed (89%) say their hospital or healthcare facility currently faces financial pressures. Around three quarters (73%) say that their hospital or facility is taking action to combat these pressures; however, they are less likely to be doing so than the global average (86%).

Figure 1: Top cited solutions healthcare leaders are taking to mitigate financial pressures

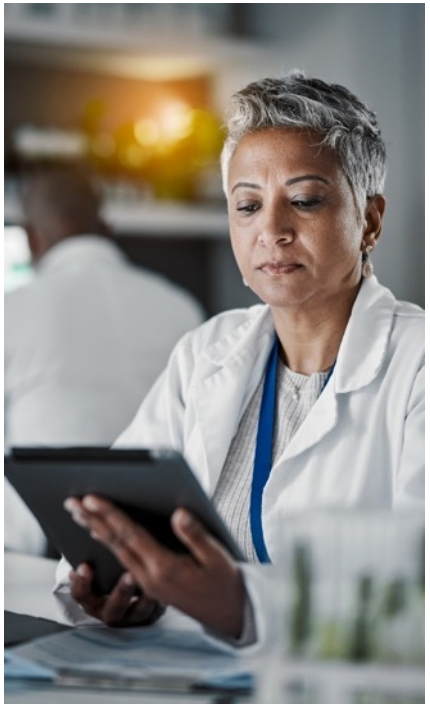


A focus on process and efficiencies

Healthcare leaders taking action to reduce the impact of these financial pressures on their facility are opting for several strategies. One in three (32%) is refocusing on their hospital or healthcare facility's most profitable services, and a similar number (30%) are finding ways to streamline patient processes, for example through automated appointment bookings (see Figure 1).

Other steps taken include reducing energy usage (29%) and streamlining internal processes, for example by automating administrative tasks (27%).

Facing such difficulties, healthcare leaders in South Africa cannot resume pre-pandemic ways of working and now must reconsider their role within the healthcare ecosystem.



Answering workforce shortages with digital technology

Leveraging technology to address healthcare staffing issues

As well as being severely underfunded, South Africa's healthcare system faces chronic staff challenges due to hiring freezes and medical professionals leaving for employment opportunities overseas. The country's healthcare system is expected to require an additional 88,000 primary care workers by 2025[3].

To help reduce the impact of workforce shortages, some South African healthcare leaders are tapping into digital health technology. Nearly one in two (44%) say that their hospital or healthcare facility is using, or plans to use, digital health technology solutions to help reduce the impact of workforce shortages. This is similar to the response in Australia (49%) but is less than the global average (56%) and far less than the response in India (82%).

Of those who are using or planning to use digital health solutions to reduce the impact of workforce shortages, the top preferences, each selected by 36%, are mobile check-in/registration for patients and cloud-based technology to help support access to information from any location. Communications technology and workflow technology were selected by 32% (see Figure 2).

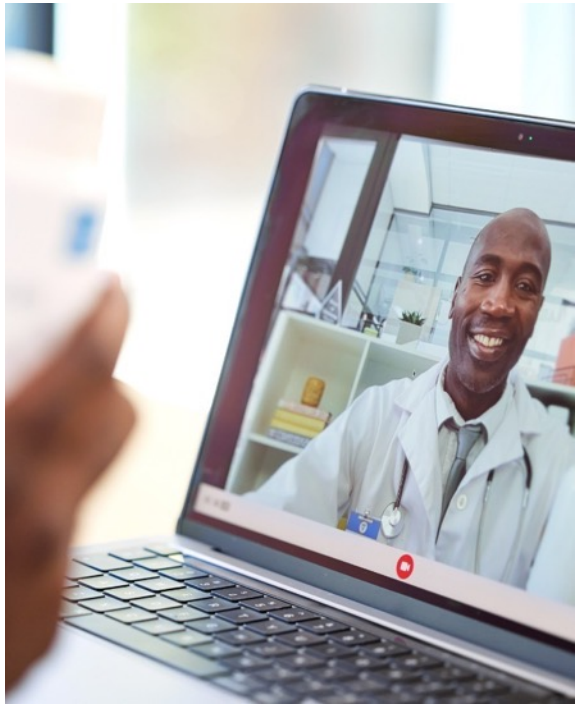
Figure 2: Top selected technologies healthcare leaders are using or plan to use to reduce the impact of workforce shortages*

Cloud-based technology to support access to information from any location

Mobile check-in/ registration for patients

Communications technology

Workflow technology



*Base for Figure 2 n=44

Digital innovation key for younger healthcare professionals

It takes technology to attract younger healthcare professionals

Younger healthcare professionals, aware of the benefits of digital technology, see it as essential in the workplace. In fact, when it comes to choosing a hospital or healthcare facility in which to work, 59% cite being at the forefront of AI in healthcare as an important factor (see Figure 3). Similarly, more than half (54%) say the availability of technology for everyday tasks is an important factor, alongside a strong record of patient outcomes (54%). In comparison, availability of technology is considered important among fewer younger healthcare professionals globally (41%) and in Australia (37%). This is likely because healthcare professionals in these countries tend to have more access to technology in their jobs.

Technology also features highly for younger healthcare professionals when it comes to patient care, with 39% citing better training on new technologies and 38% citing access to more advanced technologies as factors that would empower them to improve patient care (see Figure 4).

Figure 3: Factors younger healthcare professionals are most likely to see as important when choosing a future workplace

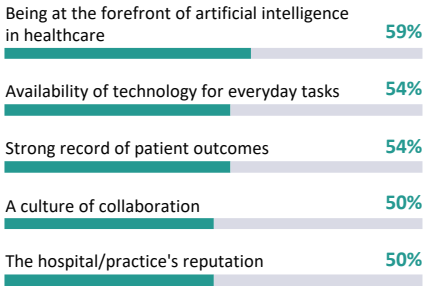
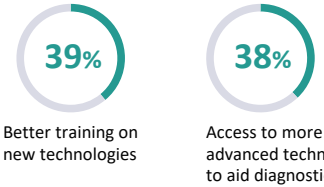


Figure 4: Technology-related factors younger healthcare professionals say would empower them to improve patient care

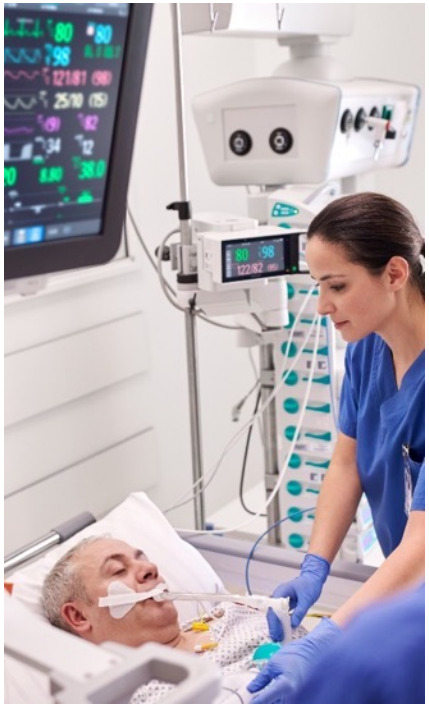


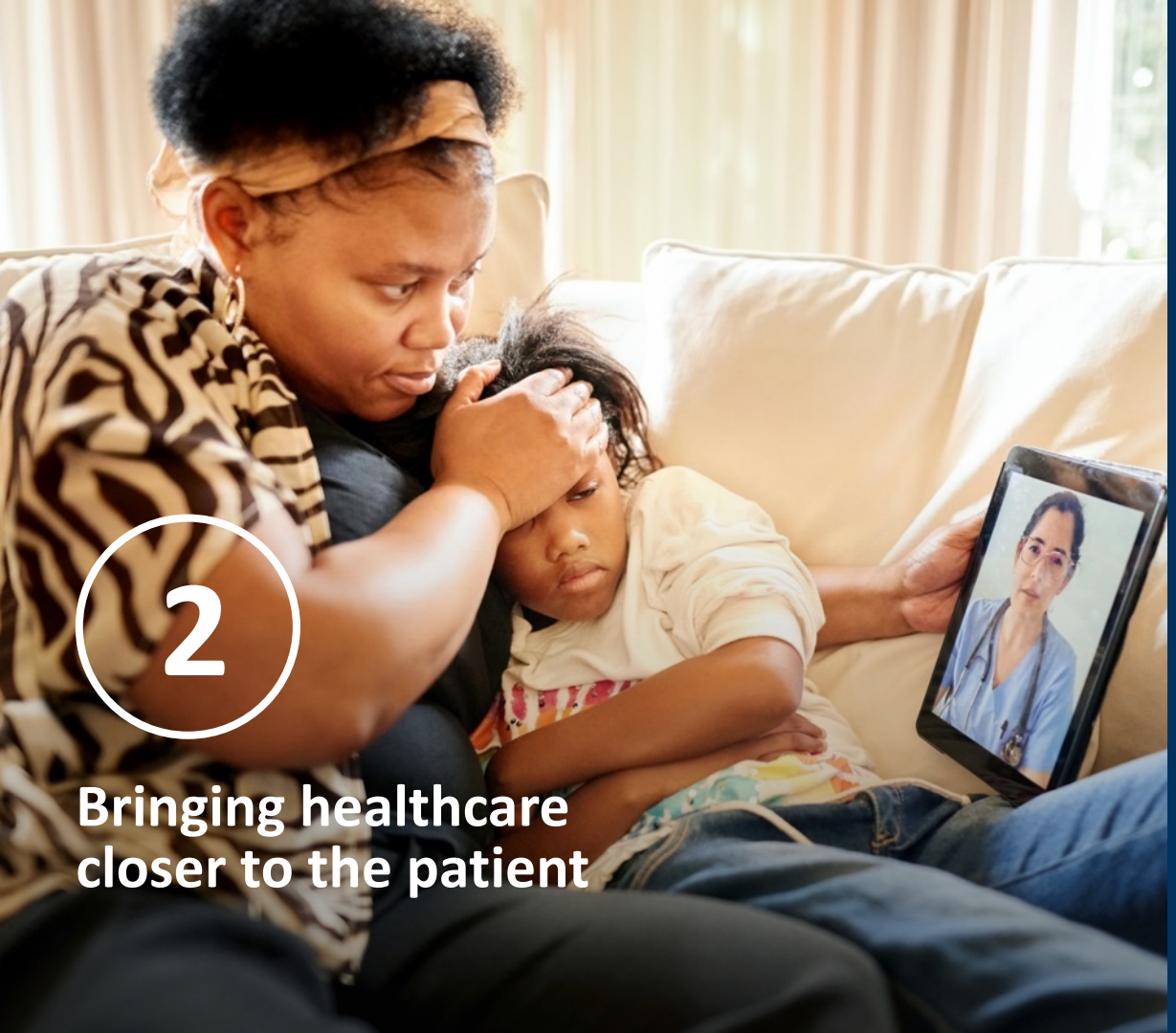
A gap between expectation and reality

While younger healthcare professionals want more technology, they say the availability of technology advancements has yet to meet their expectations.

One-quarter (25%) say that the availability of technology advancements at their healthcare facility has been worse than expected. They are more likely to say so than younger healthcare professionals in Australia (8%) and India (0%); the global average is also lower (15%).

South African younger healthcare professionals are also more likely than their global peers to say that the quality of all types of training (not technology specific) provided has been worse than expected (30%, compared with 18% globally, 10% in Australia, and 0% in India). Additionally, less than half of South Africa's younger healthcare professionals agree that the training available to them provides the necessary skills to offer new ways to deliver care (42%) and that they are well-equipped to work effectively (42%). This is below the global average, where 53% agree training provides the necessary skills and 59% agree they are well equipped to work effectively.





2

Bringing healthcare closer to the patient

Virtual care is already well established in South Africa and remains a top area of focus for healthcare leaders. Both healthcare leaders and younger healthcare professionals see remote patient monitoring as a key future priority, helping to improve convenience and outcomes. This is in contrast to peers around the world who, beyond virtual care are prioritising ambulatory and community-based services. With a firm focus on patients and the bottom line, they believe new care delivery models will increase the affordability of care for patients while offering more effective care and greater patient choice.

Unwavering commitment to virtual care

An innovation that's here to stay

Following an uptick during the COVID-19 pandemic, virtual care is becoming a mainstay of healthcare in South Africa, especially as it relates to telehealth or telemedicine[4].

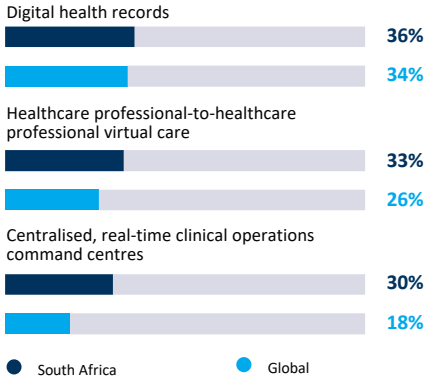
For example, almost three in five South African healthcare leaders say that their facility currently provides intensive or critical care supported virtually (59%), higher than the global average (41%).

Key to improving patient care

Virtual technologies are already making an impact on patient care. Just behind digital health records, selected by 36% of healthcare leaders, one-third (33%) of South African healthcare leaders say healthcare professional-to-professional virtual care is the technology that has had the biggest impact in improving patient care (see Figure 5). It is likely that the use of telehealth during the pandemic is influencing these responses.

Also recognising the value of virtual care, younger healthcare professionals cite the top two technologies with the biggest impact as healthcare professional-to-healthcare professional virtual care (33%) and healthcare professional-to-patient virtual care (29%).

Figure 5: Top selected technologies that have had the biggest impact in improving patient care, according to healthcare leaders



Investing within and beyond hospital walls

Given the interest in embedding virtual care in South Africa, it's not surprising it ranks as a top area of focus for investment. Almost half of healthcare leaders (43%) say they are currently investing in remote patient monitoring solutions (higher than the global average of 28%), with a similar number investing in healthcare professional-to-patient virtual care (42%, in line with the global average of 34%).

Younger healthcare professionals also want to see investment in virtual care. Half (50%) say they want their facility to currently invest in remote patient monitoring, making this their most selected investment area. Slightly fewer (47%) would like investment in healthcare professional-to-healthcare professional virtual care, which enables more distributed access to expertise across locations.

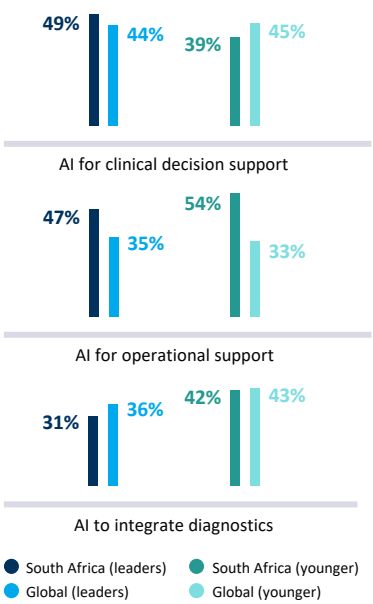
Improving patient care with AI

AI is viewed as the most impactful technology that could improve patient care

Healthcare leaders in South Africa are firmly focused on AI as they consider new ways to deliver care (see Figure 6). Three years from now, they believe that the top three technologies that will have the most significant impact in improving patient care are AI-related: AI for clinical decision support (49%), for operational support (47%), and to integrate diagnostics (31%). AI for decision support and to integrate diagnostics align with the global findings. However, AI for operational support was significantly higher in South Africa (47%, compared to 35% globally).

Younger healthcare professionals in South Africa also see the impact of AI on patient care three years from now, though their preferences for AI applications vary. Over half (54%) selected AI for operational support as having the biggest potential impact, more so than their global peers (33%). This is followed by AI to integrate diagnostics (42%), and AI for clinical decision support (39%).

Figure 6: Most impactful technologies for improving patient care in the next three years



Investing in AI for operations and for clinical support

Future technology investments seem to reflect the importance placed on AI in terms of improving patient care. Most healthcare leaders in South Africa (95%) would like their hospital/facility to heavily invest in AI technologies in the next three years, a result higher than the global average (83%). This also evident among younger healthcare professionals, with 99% desiring future investments in AI technologies, notably higher than their global peers (87%).

In terms of specific investment areas, almost half of healthcare leaders (47%) want to see future investment in AI to predict outcomes, including being able to better predict how patients will respond to care plans. Similarly, younger healthcare professionals also selected AI to predict outcomes as a future investment choice (40%). However, their top choice was AI to optimise operational efficiency (46%), closely followed by AI to integrate diagnostics (44%).

Future of augmented reality in healthcare looks bright

Augmented/virtual reality (AR/VR) is not currently a top investment area for South African hospitals or healthcare facilities. Only 10% of healthcare leaders state that their organisation is currently investing in AR/VR, behind leaders in Australia (24%) and India (23%). However, healthcare leaders and younger healthcare professionals would like these technologies to become larger priority areas in the future, often at higher rates than the global average.

These technologies offer opportunities to help enhance patient access to care, thus improving outcomes and experiences.

Among South African healthcare leaders, 41% say they will likely invest heavily in AR or VR technologies three years from now. It was the third most-selected technology in the market, behind AI to predict outcomes and AI to optimise operational efficiency. This result is higher than the global average (23%), Australia (26%), and India (16%).

Similarly, around one-third (30%) of South African younger healthcare professionals select AR or VR technologies as a technology they would most like their facilities to invest in three years from now, compared to 20% globally. This result is also higher than in India (9%) but in line with Australia (27%).

Exploring the benefits of new delivery care models

Contributing to improved patient outcomes

Healthcare leaders and younger healthcare professionals see diverse benefits for new ways to deliver care. South African healthcare leaders were most likely to select more technologically advanced healthcare (40%), more cost-effective healthcare (35%) and collaboration with local communities to improve population health (31%) as benefits of new ways to deliver care.

Perhaps in contradiction to placing a firm focus on patients, fiscal advantages come to the fore for healthcare leaders when asked to select their one top-ranked benefit, with 17% citing increased revenue opportunities. They were more likely than the global average (9%), as well as leaders in Australia (7%) and India (7%), to select this option as their top benefit.

South African younger healthcare professionals were most likely to select more cost-effective healthcare (37%), improved patient education and awareness (35%) and increased patient compliance/adherence to treatment (32%) as benefits of new ways to deliver care. Their results were in line with global averages for all three.

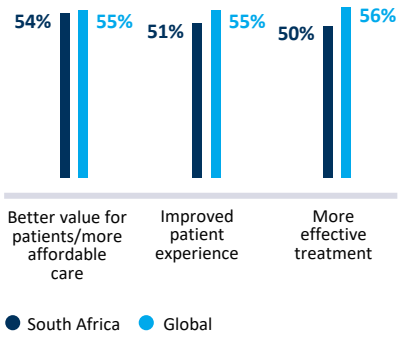
Improving affordability and value

Healthcare leaders and younger healthcare professionals also see the patient benefiting financially from new care delivery models. South African healthcare professionals think new ways to deliver care will increase the affordability of care for patients.

More than half (54%) of healthcare leaders think new ways to deliver care will likely achieve better value for money for patients/more affordable care (see Figure 7). It was the most selected option in the market, followed by improved patient experience (51%) and more effective treatment (50%).

Almost half of younger healthcare professionals (46%) see new ways to deliver care as likely to provide better value for money for patients through more affordable care. They also see new care models as likely to provide more choice for patients on where their healthcare is delivered (48%), offer faster access to diagnosis/care (47%), and improved patient safety (46%).

Figure 7: Likely patient outcomes of new ways to deliver care, according to healthcare leaders



3

Partnering across the healthcare ecosystem

Faced with multiple challenges to delivering an effective, sustainable healthcare ecosystem, South Africa's healthcare leaders are focusing on maximising technology efficiency. They are also partnering across the healthcare ecosystem to deliver more integrated care that results in better outcomes. Healthcare technology companies are a preferred partner and set to grow in importance. Environmental sustainability remains a priority for both leaders and younger healthcare professionals despite facing challenges implementing environmental initiatives.

Prioritising infrastructure and technology to work for patients

Imperative to improve the infrastructure

According to the government's National Infrastructure Plan 2050 (phase 2), released in October 2022, South Africa's healthcare infrastructure is characterised by poor public health facilities[5]. While the proposed National Health Insurance (NHI) programmeme includes plans to improve public healthcare infrastructure, experts are concerned that the cost to update the technology infrastructure alone is greater than the funds the NHI will have[6].

Against this backdrop, South African healthcare leaders and younger healthcare professionals see several challenges impeding progress to an effective healthcare ecosystem. Both healthcare leaders (23%) and younger healthcare professionals (20%) were most likely to select infrastructure issues as the number one technology challenge that needs to be solved to make the healthcare ecosystem work successfully (see Figure 8). This is higher than the global average: 11% of healthcare leaders and 12% of younger healthcare professionals select infrastructure issues as their top challenge. Another popular choice was smoother flow of data between healthcare facilities, selected by 22% of healthcare leaders and 20% of younger healthcare professionals.

Maximising technology for better efficiency

Reflecting their financial pressures and eagerness to increase efficiency, South African healthcare leaders say their organisation is focusing on automation and updating their technology infrastructure to ensure new care models deliver better patient outcomes.

More than one-third (36%) are automating more tasks to improve productivity, while 35% say they are updating existing technology solutions (see Figure 9). While those answers align with their global peers, South African healthcare leaders are less likely to say their hospital or healthcare facility is investing in new, more innovative technology (17%, compared to 32% globally). This result is lower than in Australia (43%) and India (35%).

Figure 8: Top technology challenge to be solved to ensure the healthcare ecosystem works effectively, among healthcare leaders and younger healthcare professionals combined

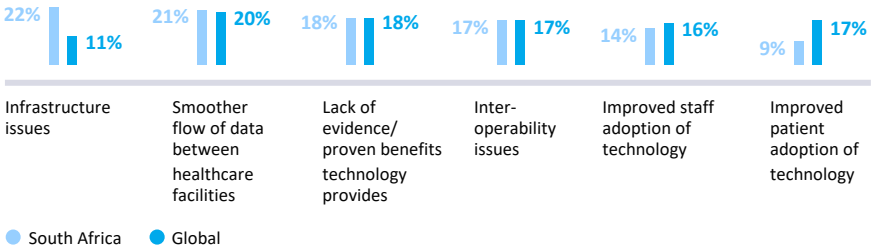
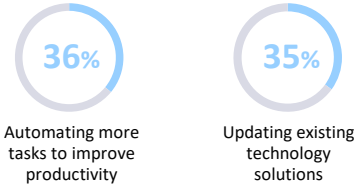


Figure 9: Ways South African healthcare leaders are ensuring new models deliver better patient outcomes



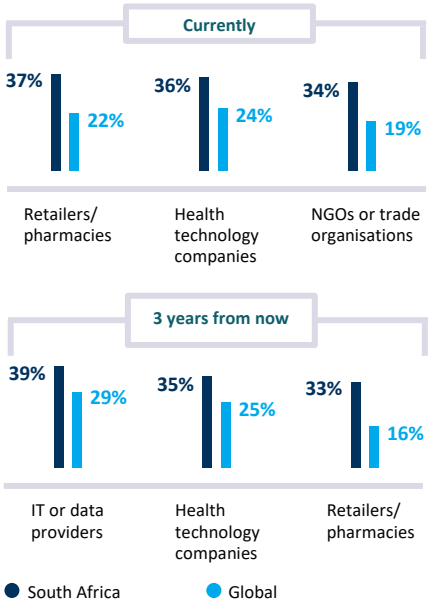
Collaboration is key

Partnering to overcome barriers

South African hospitals and healthcare facilities are currently partnering with a range of organisations across the healthcare ecosystem to deliver services to patients (see Figure 10). The most common partner today, selected by more than one-third of healthcare leaders (37%) is retailers and pharmacies.

Non-government organizations (NGOs) or trade organisations are also among the top partners for South African healthcare leaders (34%). Post-pandemic, NGOs continue to play an important role in providing healthcare support in rural areas where scarce resources often lead to poorer healthcare coverage[7].

Figure 10: Top selected organisations healthcare leaders' hospitals currently partner with, and plan to partner with three years from now

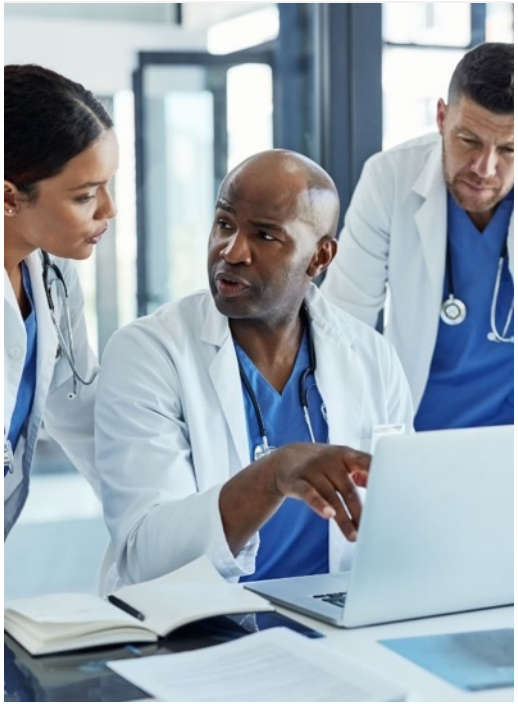


Growing interest in technology partners

Today, around one-third (36%) of South African healthcare leaders select health technology companies as their most common partners. A similar number (30%) cite IT or data providers.

These partners are expected to remain steady or grow in importance, particularly when compared to global peers. Three years from now, 35% of healthcare leaders in South Africa plan to partner with healthcare technology companies, higher than the global average of 25%, and 39% plan to partner with IT or data providers. It is also higher than their global counterparts (29%).

Their younger colleagues are even more enthusiastic about collaborating with health technology companies. Almost half of younger healthcare professionals (44%) say their hospital or healthcare facility should partner with a health technology company three years from now, significantly higher than the global average of 23%.



Interest in going green, but lacking resources

Competing priorities impact environmental initiatives

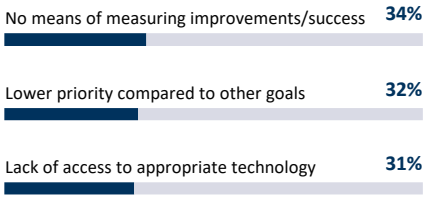
The 2022 Future Health Index saw a sharp increase in the prioritisation of environmental sustainability among healthcare leaders. However, this year's findings indicate that their efforts may be diluted.

While all (100%) South African healthcare leaders say their hospital/facility is enacting some form of initiative to improve environmental sustainability, they face challenges implementing these initiatives (see Figure 11). The top challenge for healthcare leaders (34%) is not having the means to measure improvements and successes.

Other factors that are holding healthcare leaders back are environmental sustainability being a lower priority compared to other goals (32%), and a lack of access to appropriate technology (31%).

Mirroring the financial pressures they face, healthcare leaders are more likely than the global average to cite lack of budget as their most significant challenge, when asked to choose one (12% for South Africa, compared to 6% globally).

Figure 11: The top selected barriers to implementing environmental sustainability initiatives, according to healthcare leaders

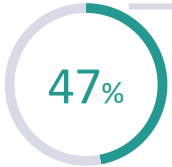


Green initiatives attract workers but test leaders

For many younger healthcare professionals in South Africa, however, promoting environmental sustainability is increasingly top of mind. In fact, it has become an important consideration in choice of workplace (see Figure 12). Nearly half (47%) of them say it's important future employers have strong sustainability policies in place, a result higher than the global average (35%). One-quarter (25%) even cited strong environmental sustainability policies among their top three most important considerations in choosing where to work.

For healthcare leaders seeking to attract and retain young talent, this means that making a concerted effort to reduce their environmental impact is not just the right thing to do. It is also key in appealing to the younger workforce.

Figure 12



of younger healthcare professionals say having strong environmental sustainability policies in place is important when considering a future workplace

The future of sustainability in healthcare

Ambitious targets and more resources needed

Healthcare leaders in South Africa plan on using multiple methods to address the obstacles they face in implementing environmental initiatives (see Figure 13). To overcome challenges, leaders believe it is important to set clear or ambitious targets that allow for measurable progress (32%). They see value in learning from peers (31%), as well as recruiting more staff with specialist skills (29%) and increasing the available budget (29%).

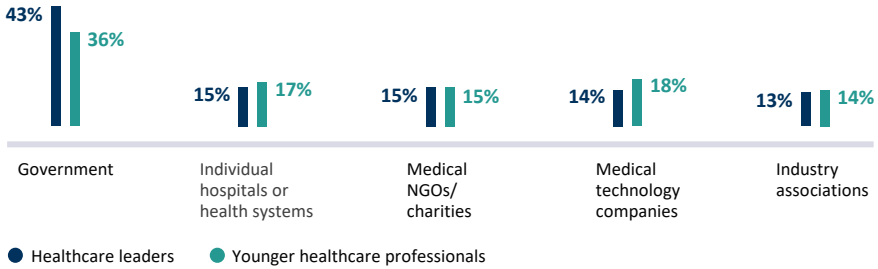
Figure 13: How healthcare leaders plan to overcome barriers to sustainability initiatives

Responsibility for environmental standards

Although healthcare professionals know they must answer the challenge when initiating green initiatives, they say government has a role to play, too.

Both healthcare leaders (43%) and younger healthcare professionals (36%) are most likely to say the government should be primarily responsible for creating environmental sustainability standards in healthcare (see Figure 14). However, some see a role to play for individual hospitals or health systems, medical technology companies, industry associations, and medical NGOs or charities – pointing to an opportunity for wider ecosystem collaboration in protecting the health of our planet.

Figure 14: Organisations ranked top for responsibility for creating environmental sustainability standards in healthcare, according to healthcare leaders and younger healthcare professionals



Conclusion

Building a collaborative healthcare ecosystem

Healthcare leaders and younger healthcare professionals share the same vision for the future: one in which healthcare is delivered in more connected, convenient, and sustainable ways across care settings, enabled by digital technology. Yet to fully realise this vision, both groups recognise that greater collaboration is essential, both within and beyond their organisation.

As this year's Future Health Index shows, collaboration is taking many different forms. Healthcare providers are partnering with other organisations across the healthcare value chain to offer more integrated and efficient care.

The most common partner today, selected by more than one-third of healthcare leaders (37%) is retailers and pharmacies, followed by health technology companies and NGOs or trade organisations, presumably to increase access to care by advancing new care delivery models.

But a tangible shift is looming. Pinning AI, and data-driven insights at the point of care as core priorities for the future, priority partnerships are expected to shift to IT or data providers and health technologies companies in the near future.

Going forward, clinical and economic evidence of the benefits of new care delivery models will be an essential driver for further adoption by providers and payers. Small-scale pilots conducted in partnership can help generate that evidence, showing how digital innovations can improve patient health outcomes, as well as the patient and staff experience. Similarly, being able to measure progress on environmental sustainability goals will help propel green initiatives in healthcare that are currently lagging behind.

Ultimately, that's how both patients and the planet will benefit from new care delivery models which serve everyone, everywhere.

Appendices

Research methodology

Research overview and objectives

Commencing in 2016, Royal Philips has conducted original research every year with the goal of understanding the ways various countries around the world are addressing global health challenges and how they are improving and expanding their ability to care for their communities. Building and expanding on previous years, the Future Health Index 2023 focuses on addressing staff shortages and meeting patient needs with new care delivery models, speaking to both healthcare leaders and younger healthcare professionals* globally.

The first Future Health Index, released in 2016, measured perceptions of how healthcare was experienced on both sides of the patient-professional divide. The following year, the research compared perceptions to the reality of health systems in each country that was studied. In 2018, the Future Health Index identified key challenges to the large-scale adoption of value-based healthcare and overall improved access, evaluating where connected care technology could speed up the transformation process. In 2019, the Future Health Index explored the healthcare experience for both patients and healthcare professionals and how technology was moving us to a new era of healthcare delivery transformation. In 2020, the Future Health Index examined the expectations and experiences of healthcare professionals aged under 40. In 2021, the Future Health Index report considered how healthcare leaders were meeting the continuing demands of the pandemic and what the new reality of healthcare post-crisis might look like. Last year's Future Health Index, the 2022 report, concentrated on the role of digital tools and connected care technology in meeting the complex needs of healthcare leaders.

In 2023, the Future Health Index looks to both healthcare leaders and younger healthcare professionals – those aged 40 and under – in 14 countries to quantify the experience and expectations of those in different roles and at various stages of their healthcare careers. It focuses on their perception of new care delivery models, which integrate physical and virtual care within and beyond hospital walls.

* Healthcare leaders are C-suite or senior executive decision makers/influencers working in a hospital, medical practice, imaging centre/office-based lab, ambulatory centre or urgent care facility. Younger healthcare professionals are defined as those aged between 18 and 40 who have completed their first medical/nursing degree and are working as a healthcare professional in a clinician role (all specialisations, except psychiatry/dental care).

2023 quantitative survey methodology

The quantitative study was executed by iResearch, a global business and consumer research services firm employing a mixed methodology of online and telephone surveying.

1,400 healthcare leaders and 1,400 younger healthcare professionals in 14 countries (Australia, Brazil, China*, Germany, India, Indonesia, Italy, Japan, the Netherlands, Poland, Saudi Arabia, Singapore, South Africa and the United States) participated in a 15-20-minute survey in their native language from November 2022 – February 2023. 100 healthcare leaders and 100 younger healthcare professionals in each of the 14 countries completed the survey.

Below shows 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) Healthcare leaders	Estimated margin of error (percentage points) Younger healthcare professionals	Interview methodology
Australia	200	+/- 6.0	+/- 6.0	Online and telephone
Brazil	200	+/- 5.5	+/- 6.5	Online and telephone
China	200	+/- 6.5	+/- 7.2	Online and telephone
Germany	200	+/- 6.0	+/- 6.8	Online and telephone
India	200	+/- 5.2	+/- 6.0	Online and telephone
Indonesia	200	+/- 6.5	+/- 6.5	Online and telephone
Italy	200	+/- 6.5	+/- 6.5	Online and telephone
Japan	200	+/- 5.5	+/- 6.0	Online and telephone
Netherlands	200	+/- 6.2	+/- 6.4	Online and telephone
Poland	200	+/- 5.5	+/- 6.0	Online and telephone
Saudi Arabia	200	+/- 6.0	+/- 6.5	Online and telephone
Singapore	200	+/- 5.5	+/- 7.0	Online and telephone
South Africa	200	+/- 6.5	+/- 6.8	Online and telephone
United States	200	+/- 6.0	+/- 7.0	Online and telephone
Total	**2,800**	**+/- 6.23**		

Question localisations

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.

* Survey data is representative of Mainland China only and does not include Taiwan or Hong Kong.
** Estimated margin of error is the margin of error that would be associated with a sample of this size for the full healthcare leader or younger healthcare professional population in each country. However, this is estimated since robust data is not available on the number of healthcare leaders or younger healthcare professionals in each country surveyed.

Glossary of terms

Ambulatory care centre
Outpatient care centres (e.g., urgent care, walk-in clinics, etc.).

Artificial intelligence (AI)
AI refers to the use of machine learning and other methods that may mimic intelligent human behaviours, resulting in a machine or programme that can sense, reason, act and adapt to assist with different tasks.

As-a-service models
Methods of delivering hardware, software and/or services on a subscription basis.

Automation
The application of technology, programmes, robotics or processes to support people in achieving outcomes more efficiently.

Data
Used here to refer to a variety of clinical and/or operational information amassed from numerous sources including but not limited to digital health records (DHRs), medical imaging, payer records, wearables, medical devices, staff schedule and workflow management tools, etc.

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/healthcare facilities, and health or fitness tracker devices.

Distributed care
Instead of having patients come into a central location, distributed care brings care to the patient. Increasingly, healthcare could be delivered through a decentralised network of ambulatory clinics, retail settings, and home-based monitoring, coaching, and treatment.

Early adopters of digital health technology
Early adopters are defined as those who indicated that, compared to other hospitals or facilities, they are among the first to adopt an innovation or they adopt innovations before most others.

Global non-governmental organisations
A nonprofit organisation that operates independently of any government.

Healthcare ecosystem
Describes people involved in care delivery (including patients, family members and caregivers), the locations of care and services provided, and how they work together to improve efficiencies and optimise experiences.

Health technology companies
Companies that sell or provide medical equipment, wearables, health apps and other technology to healthcare organisations, patients, and the general public.

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

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

Healthcare professional-to-healthcare professional virtual care
Virtual communication between healthcare professionals through sharing images, recommending treatment plans, etc.

Healthcare professional-to-patient virtual care
Communication between healthcare professionals and their patients via video calls, patient portals, etc.

Integrated care
Collaboration between the health and care services required by individuals to deliver care that meets patient needs in an efficient way.

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

Late adopters of digital health technology
Late adopters are defined as those who indicated that, compared to other hospitals or facilities, they adopt innovations later than most others.

New ways to deliver care
This defines the way in which health services are provided. New ways to deliver care combine the needs of patients, caregivers and providers, to achieve the best possible care through integrated services within and beyond hospital walls.

Out-of-hospital services/settings
Care centres such as ambulatory surgical centres, office-based labs, etc.

Payer
A payer is a person, organisation, or entity that pays for the care services administered by a healthcare provider. Payers are usually, but not always, commercial organisations like insurance companies; government or public sector bodies; or individuals.

Predictive analytics
A branch of advanced analytics that makes predictions about future events, behaviours, and outcomes.

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.

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.

Technology infrastructure
Foundational technology services, software, equipment, facilities and structures upon which the capabilities of nations, cities and organisations are built. This includes both IT infrastructure and traditional infrastructure that is sufficiently advanced such that it can be considered modern technology.

Telehealth/virtual care
The distribution of health-related services and information via electronic information and telecommunication technologies.

Workflows
A process involving a series of tasks performed by various people within and between work environments to deliver care. Accomplishing each task may require actions by one person, between people, or across organisations – and can occur sequentially or simultaneously.

Younger healthcare professional
A healthcare professional working in a clinician role (all specialisations, except psychiatry and dental care), under the age of 40.

Sources

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The Future Health Index is commissioned by Philips.

To see the full report, visit
www.philips.com/futurehealthindex-2023

The Future Health Index 2023 report examines the experiences of almost 3,000 healthcare leaders and younger healthcare professionals and their expectations for the future. The research for the Future Health Index 2023 report was conducted in 14 countries (Australia, Brazil, China, Germany, India, Indonesia, Italy, Japan, Netherlands, Poland, Saudi Arabia, Singapore, South Africa and the United States). The study comprises a quantitative survey conducted from November 2022 – February 2023.

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