



India

Taking healthcare everywhere

Addressing staff shortages and patient needs
with new care delivery models

The Future Health Index is commissioned by Philips

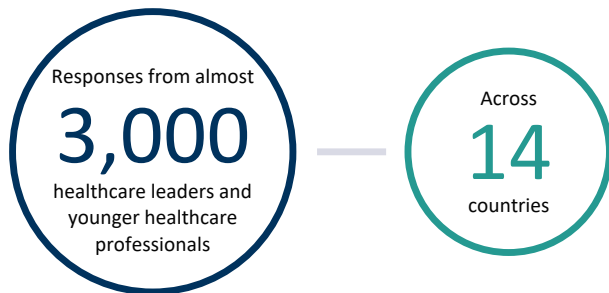


Research premise

This is the largest global survey of its kind, analyzing 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.



Countries included in the research

India

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





Contents

Research premise	2
Foreword	4
Key findings at a glance	5
Chapter 1	6
Tackling staff shortages through digital innovation	
Chapter 2	10
Bringing healthcare closer to the patient	
Chapter 3	15
Partnering across the healthcare ecosystem	
Conclusion	19
Appendices	
Methodology	22
Sources	24
Glossary of terms	25

Foreword

Fast-tracked by the pandemic, the past three years have given us a glimpse of the future of healthcare delivery: one that extends beyond hospital walls into the home and the community, with digital technology connecting care across settings. There is no going back now. This year's Future Health Index shows how healthcare leaders and younger healthcare professionals are aligned in their vision to innovate new care delivery models that meet patients where they are.

Healthcare leaders around the world are challenged with maintaining quality care through staff shortages, while financial pressures add to the strain. Meanwhile, patient expectations are also different from what they were pre-pandemic. As digital transformation has continued to accelerate in every aspect of our lives, from how we buy to how we work and learn, our best and most convenient experience anywhere is now what we expect everywhere – including in healthcare.

Healthcare leaders recognize that optimizing current ways of working will only get them so far. A new paradigm of care delivery is needed. The 2023 Future Health Index report offers clues to what that will look like. Investments in AI and virtual care continue to be on the rise, showing commitment from healthcare leaders to lean into the potential of digital technology to improve efficiencies, experiences, and outcomes. At the same time, they are looking to expand care delivery into lower-cost settings outside the hospital. Or, as I like to say, we are moving to a future of “your care, your way”, where patients will benefit from a wider range of virtual and in-person access points.

Younger healthcare professionals welcome this shift. In fact, as this year's survey findings show, they are asking for it. Younger healthcare professionals are keen to be at the forefront of digital innovation. Just like healthcare leaders, they envision a more personalized and connected approach to healthcare, orchestrated around the patient's needs, and with digital technologies such as AI supporting them in their day-to-day work.

But both groups also realize they cannot get there alone. Even more so than in previous Future Health Index reports, 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 patient care across settings. They also see a key role for data/IT providers and health technology companies, to help liberate data and turn it into meaningful insights when and where they are needed. And finally, they are turning to partners for help in improving environmental sustainability – an area where healthcare has much to gain.

I invite you to explore the survey findings in more detail in this report and reflect on what they mean for your organization. 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.



When I think of the future of healthcare delivery, I think of ‘your care, your way’.

Shez Partovi
Chief Innovation & Strategy Officer and
Business Leader Enterprise Informatics, Philips

Key findings at a glance



Three main themes emerge from the 2023 Future Health Index, 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

Tackling staff shortages and financial pressures

Faced with acute workforce shortages and growing financial pressures, healthcare leaders are seeking to streamline processes for improved efficiencies. They are ramping up their investments in automation and AI to alleviate pressure on staff and to ultimately empower them with more predictive insights for clinical decision support. This is welcomed by younger healthcare professionals, who are also eager to embrace new digital technology and consider it a key factor in choosing where to work.



Chapter 2

Bringing care closer to the patient

Healthcare leaders and younger healthcare professionals share a common vision for a more distributed healthcare system that meets patients where they are. Virtual care continues to be on the rise, expanding the reach of intensive and critical care beyond hospital walls. At the same time, both surveyed groups also desire the further growth of ambulatory and community-based care services to help improve patient access, convenience and health outcomes.



Chapter 3

Building partnerships to overcome barriers

As payers are expecting more cost-effective care that delivers better outcomes, 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 see a role for partnerships in furthering environmental sustainability in healthcare – a topic that is also top of mind for an eco-conscious generation of younger healthcare professionals.

A photograph of two female surgeons in an operating room. They are wearing blue scrubs, blue bouffant hairnets, and white surgical masks. They are focused on a task, with their hands visible at the bottom of the frame. In the background, there is a computer monitor displaying a grid of data. The lighting is dim, with a blue tint.

1

Tackling staff shortages and financial pressures

Faced with acute workforce shortages and growing financial pressures, India's healthcare leaders are feeling the strain. Most are taking action, with many looking to streamline processes for improved efficiencies and merging with other hospitals in a bid to ease the pressure. They're also turning to technology to help reduce the impact of staff shortages, along with a mix of external partnerships.

Taking action to address financial pressures

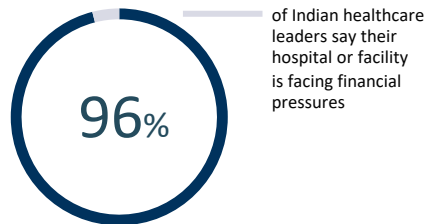
A stark financial reality

In 2023, India's central and state government budgeted expenditure on healthcare was just 2.1% of its gross domestic product (GDP), a rise of only 0.1% on the previous year¹.

Against this backdrop it is understandable that India's healthcare leaders are feeling the strain of small budgets (see Figure 1).

Nearly all (96%) say their hospital or facility is facing financial pressures, in line with the global average (96%), Indonesia (97%), and Brazil and China (both 100%).

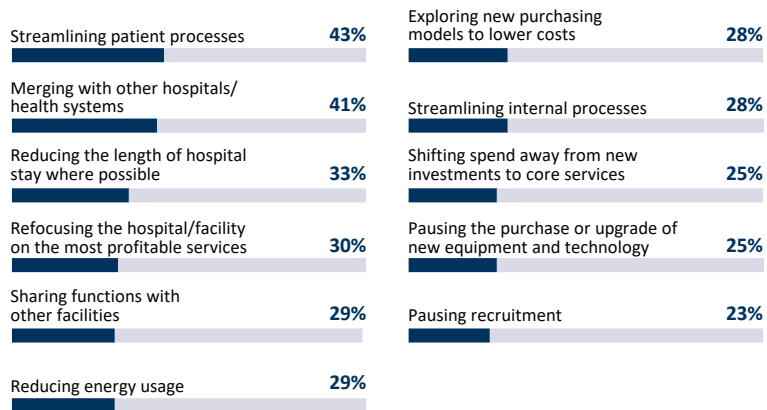
Figure 1



Seeking efficiencies for financial savings

In the face of these challenges, 79% of Indian healthcare leaders say their hospital or facility is taking action. Streamlining patient processes, such as automated appointment booking (43%), and merging with other hospitals or health systems (41%) are their most selected choices, indicating a desire for greater efficiency (see Figure 2).

Figure 2: Solutions Indian healthcare leaders are taking to mitigate financial pressures



Meeting staffing needs with technology

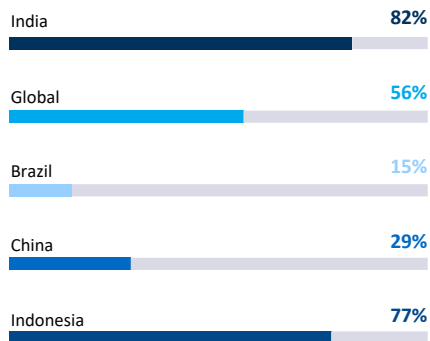
Leveraging technology to ease workload

Like many other countries, the COVID-19 pandemic exposed significant challenges in India's healthcare system², including inadequate infrastructure and a health workforce shortage³.

The World Health Organization estimates countries should have 44.5 healthcare professionals per 10,000 people, and India has 21. To meet that workforce level and provide equitable healthcare, India needs at least 1.8 million more doctors, nurses and midwives⁴.

For now, more than three quarters of healthcare leaders (82%) say they are currently using or planning to use digital health technology to reduce the impact of workforce shortages (see Figure 3). This figure is higher than the global average (56%) and most other countries surveyed.

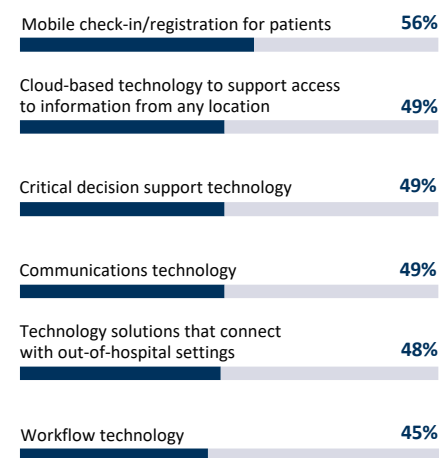
Figure 3: Healthcare leaders using or planning to use digital health technology to help reduce the impact of workforce shortages



Of those who are using or planning to use digital health technology, more than half (56%) say mobile check-in or registration for patients is a specific solution that could help reduce the impact of workforce shortages (see Figure 4). This preference is significantly higher than the majority of other countries, as well as the global average (38%).

Healthcare leaders in India are also opting for a variety of other technology solutions to ease the pressures of workforce shortages. Almost half are using or planning to use cloud-based technology (49%), critical decision support technology (49%), communications technology (49%) and tech solutions that connect with out-of-hospital settings (48%). In fact, while workflow technology is the least selected option, it is still seen as useful to 45% of leaders turning to digital solutions for workforce shortages.

Figure 4: Technologies Indian healthcare leaders are using or planning to use to reduce the impact of workforce shortages



Collaboration to ease workforce shortages

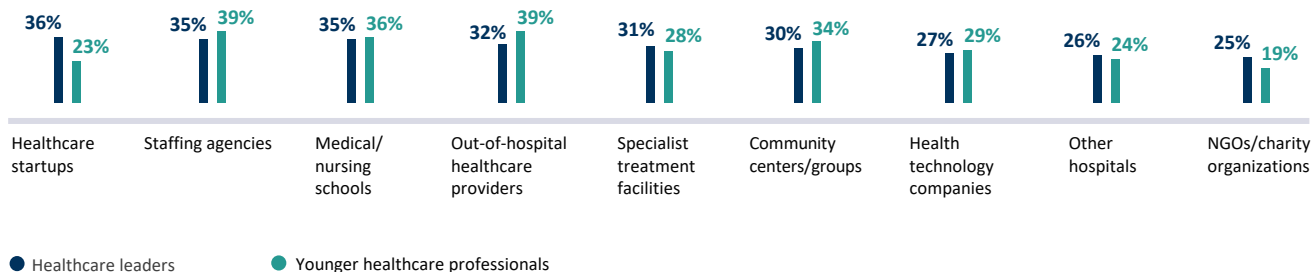
A short list of top preferred partners

Alongside technology solutions, both healthcare leaders and younger healthcare professionals see a role for external partnerships to ease workforce shortages. However, there are slight differences in opinion between the two groups regarding which organizations these should be.

Currently, just over one third of healthcare leaders (36%) in India are collaborating with healthcare startups to ease workforce shortages. At 35% each, staffing agencies and medical or nursing schools are also preferred partners for healthcare leaders (see Figure 5).

For younger healthcare professionals, their top preferences are staffing agencies and out-of-hospital healthcare providers, selected by 39% each.

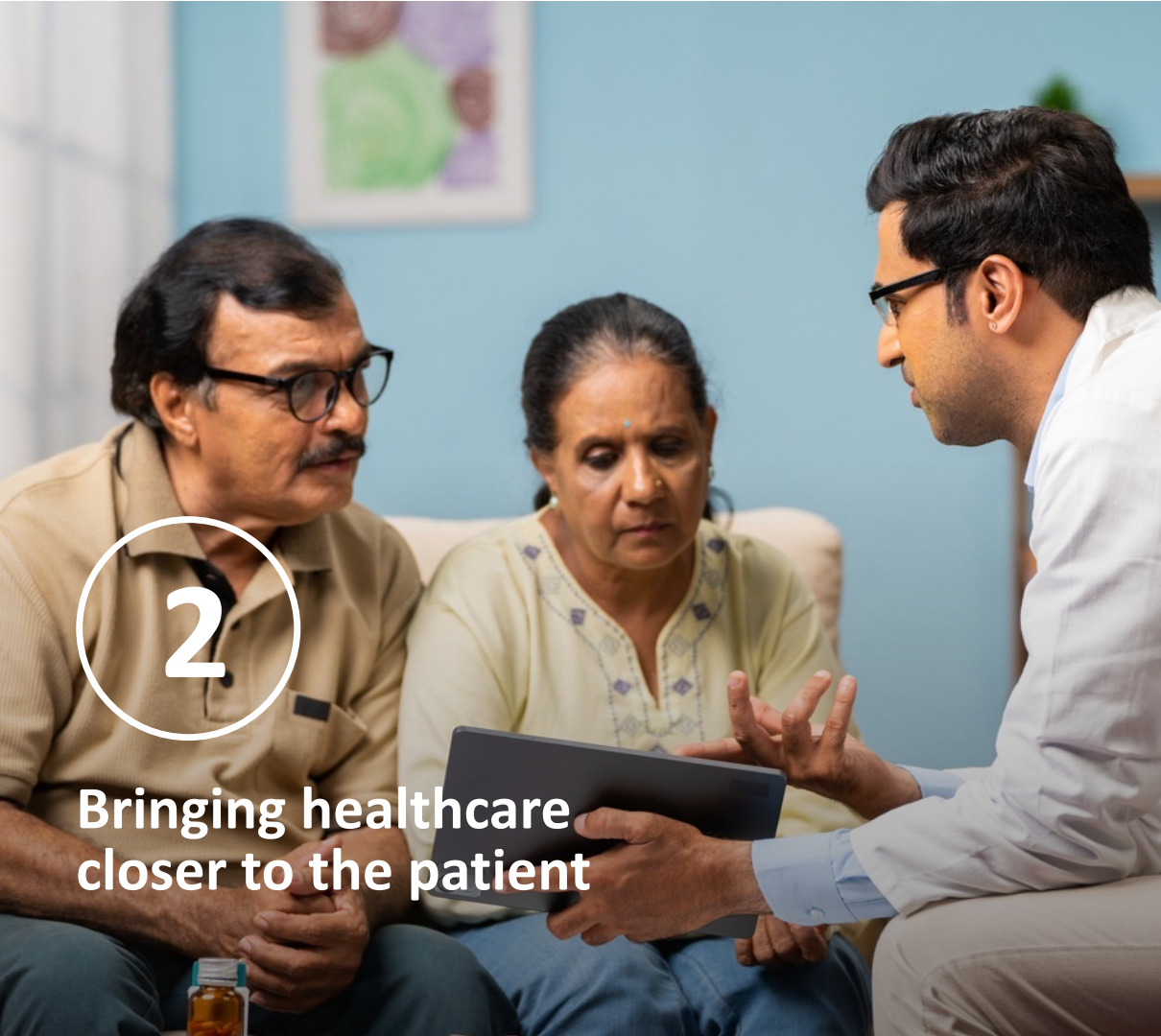
Figure 5: Most selected organizations Indian healthcare leaders say their facility is collaborating with to reduce the impact of workforce shortages – and the organizations that Indian younger healthcare professionals would like them to partner with



Government partnerships to develop workers' skills

India's government has launched several initiatives in partnership with the private sector and NGOs to address surging skills shortages in healthcare⁵.

One example is the Utkarsh Bangla initiative in West Bengal⁶, a collaboration between the local Paschim Banga Society for Skill Development (PBSSD) and the national Pradhan Mantri Kaushal Vikas Yojana (PMKVY). In the scheme, healthcare skill development takes center stage, through a wide range of courses from basic patient care to specialized medical services. At the conclusion of the courses, Utkarsh Bangla offers job opportunities in a less economically developed area, while at the same time creating a skilled workforce to meet the area's healthcare needs.



2

Bringing healthcare closer to the patient

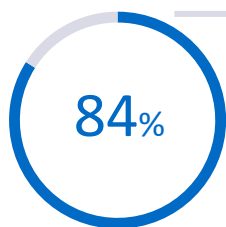
Having seen its impact on patients, India's healthcare leaders and younger healthcare professionals are firmly committed to virtual care. For healthcare leaders, virtual care is an investment priority and, as they look to the future, AI is also set to be a key investment area. It's a move that's welcomed by younger healthcare professionals, who prioritize technology when considering where to work. Both surveyed groups recognize the financial benefits of new care delivery models while being mindful of the barriers, particularly around data.

Improving patient care, virtually

A shared vision of the impact of virtual care on patients

Over four fifths (84%) of Indian healthcare leaders and younger healthcare professionals believe virtual care has already had or will have the biggest impact on improving patient care (see Figure 6). This result is the second highest result of any country surveyed, behind only Japan (86%).

Figure 6



of Indian healthcare leaders and younger healthcare professionals say that virtual care is a technology that has had or will have the biggest impact on improving care

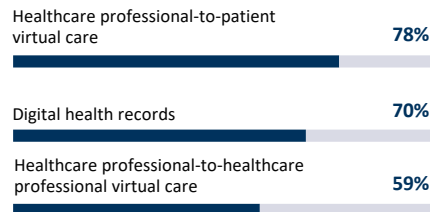
Prioritizing investments in virtual care

Reflecting this, Indian healthcare leaders consider virtual care an investment priority. Most (88%) are currently investing in at least one virtual care technology.

More than three quarters of healthcare leaders (78%) are currently investing in healthcare-professional-to-patient virtual care, such as consultation via video calls and patient portals (see Figure 7).

Younger healthcare professionals also see value in healthcare-professional-to-patient virtual care. Like their colleagues in leadership, 81% of younger healthcare professionals in India would like their hospital or facility to invest in at least one virtual care technology now.

Figure 7: Top three digital health technologies healthcare leaders are currently investing in



India's telehealth experience could be a model around the globe

The pandemic led to telehealth consultations growing in India from less than 1% of primary care visits in April 2020 – during the pandemic – to 43.5%. This trajectory of virtual care has led to a new model of medical care post-COVID-19⁷.

The telemedicine division of the Ministry of Health and Family Welfare launched the eSanjeevaniOPD portal in 2019, which has served over 180 million patients and currently has 200,000 providers and more than 14,000 hubs⁸, making it one of the most comprehensive implementations of a public telemedicine system⁹. Today, India hopes its telemedicine experience will help promote the country's medical facilities and infrastructure globally¹⁰.

The benefits of new care delivery models for patients

Unlocking benefits for patients

Leaders see three top benefits of new ways to deliver care: patient compliance, patient education and cost savings for the provider (see Figure 9). Younger healthcare professionals agree on the education, but are less aligned when it comes to compliance and cost savings. This could be simply because they are not in leadership positions and don't have to contend with the financial and logistical realities of providing care. Either way, patient education is a gap in India and has the potential to make a great difference to people's health, according to providers.

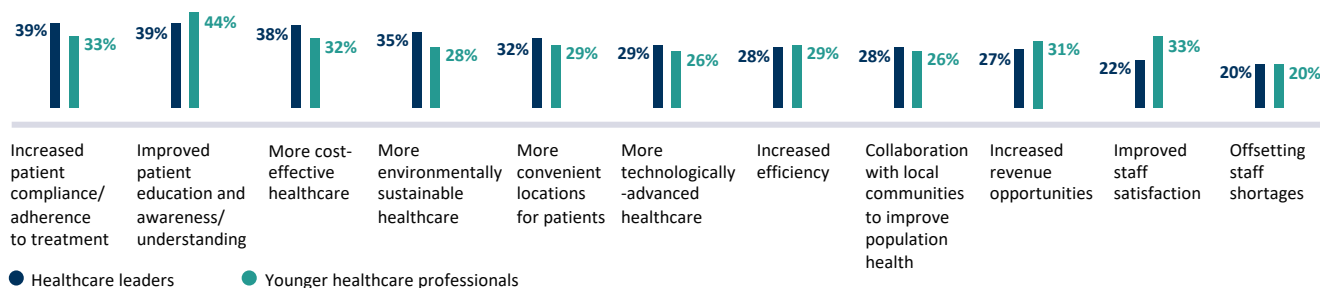
The focus on patient education is significant because India faces high rates of cardiovascular disease, cancer, chronic respiratory disease, and diabetes. Building awareness and encouraging people to lead healthy lives could save millions from illness while decelerating premature death¹².

Both groups believe there are financial benefits to virtual care, with 38% of healthcare leaders seeing more cost-effective care and 31% of younger healthcare professionals eyeing increased revenue opportunities.

Addressing barriers to new ways to deliver care

Several issues act as barriers to effectively provide new ways to deliver care. For both healthcare leaders and younger healthcare professionals, perennial concerns around data linger, along with a lack of examples of success. Data privacy and protection was the top selected choice of healthcare leaders (33%), while 33% of younger healthcare professionals named a lack of sufficient evidence of improved outcomes or cost-effectiveness – the most selected barrier by the respondent group.

Figure 9: Indian healthcare leaders and younger healthcare professionals on the benefits – in addition to patient care – of new ways to deliver care



A growing appetite for AI

Investing in AI to support clinical decision-making

Artificial intelligence (AI) is rapidly transforming healthcare in India, bringing unprecedented tools for diagnosis, treatment and patient care¹¹.

While 11% of healthcare leaders are investing in at least one AI technology today, future investments are set to increase. Nearly all healthcare leaders (96%) and younger healthcare professionals (94%) would like their hospital or healthcare facility to be investing in at least one AI technology three years from now. The healthcare leaders' result is higher than the global average (83%), Brazil (78%), Indonesia (76%) and China (46%).

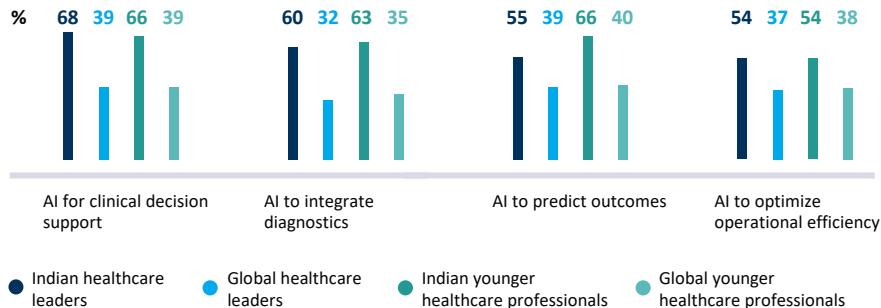
Three years from now, Indian healthcare leaders would most like their facility to be investing in AI for clinical decision support, including diagnosis or treatment recommendations, early warning scores, automatic disease detection and clinical decision guidelines (see Figure 8). Younger healthcare professionals also prioritize this technology, alongside AI to predict outcomes.

Digital innovation a priority for younger healthcare professionals

Nearly all younger healthcare professionals (96%) see AI as having the most significant impact on improving patient care over the next three years. In terms of specific technologies, AI to integrate diagnostics was most likely to be selected as impactful in the future. A majority (83%) of younger healthcare professionals in India chose it – a result far higher than non-AI solutions, including remote patient monitoring.

Beyond their desire to invest in AI at their current hospital or facility, younger healthcare professionals consider adopting such technology a key factor when deciding on a hospital or practice in which to work. Nearly three quarters (73%) said, when deciding where to work, being at the forefront of artificial intelligence in healthcare and/or connected care delivery is necessary.

Figure 8: AI technologies healthcare leaders and younger healthcare professionals would like their hospital/facility to be investing in three years from now



Extending care beyond hospital walls

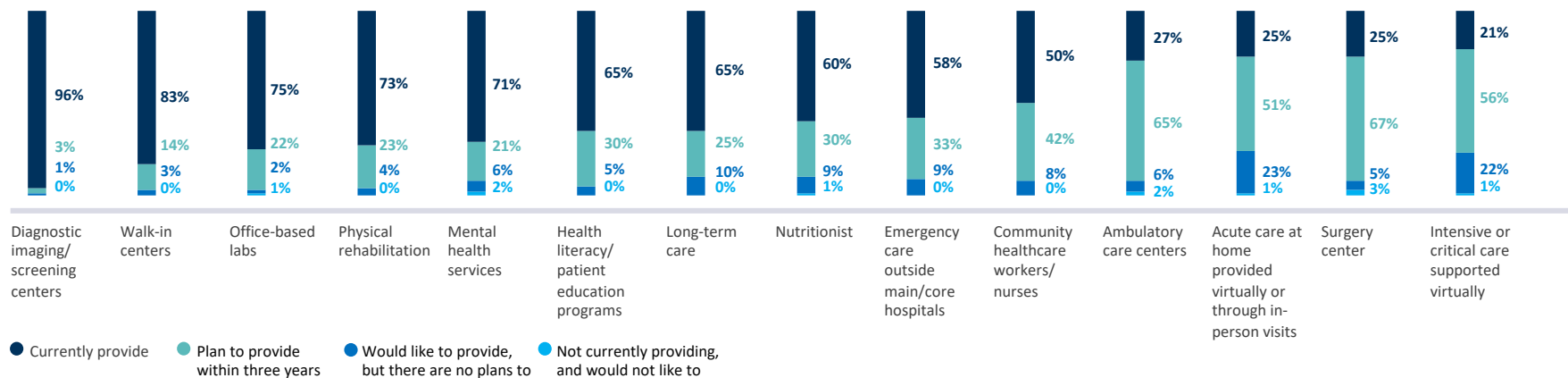
Expanding access to care

Alongside their investment in virtual care, India's healthcare leaders are also keen to make care available to patients across a range of in-person access points. Although Indian healthcare leaders' facilities are less likely than the global average to

currently provide surgery centers and ambulatory care centers, the other services that leaders plan to provide, such as community healthcare workers (42%) and nutritionists (30%), demonstrate an appetite for not only increasing access points but offering patients more holistic care (see Figure 10).

A similar sentiment is seen among younger healthcare professionals. Among those without surgery centers and ambulatory care centers, 95% and 94% respectively would like to see their hospital or facility provide them in the future. The findings indicate a desire across India's healthcare system to bring care closer to the patient.

Figure 10: Availability of patient care services at Indian healthcare leaders' facilities





3

Partnering across the healthcare ecosystem

India's healthcare leaders are partnering with diagnostic screening centers to overcome technology barriers, break down data silos and deliver more integrated care that improves patient outcomes. As they look ahead, they are considering expanding into new types of partnerships. They also see the value of partnerships in advancing environmental sustainability initiatives in healthcare, even as they face myriad challenges in implementing their own plans.

Partnering across care settings

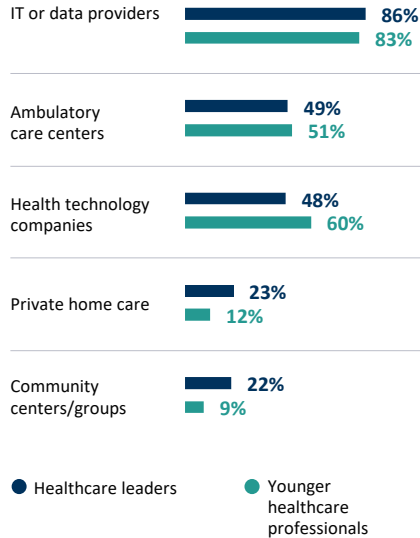
Diagnostic imaging centers top the list

Both healthcare leaders and younger healthcare professionals realize implementing new delivery care models cannot be done alone and requires partnership across the healthcare ecosystem.

When asked who their hospital or healthcare facility currently partners with, diagnostic imaging/screening centers were the most selected (63%) by healthcare leaders. This result is the highest among markets surveyed, far above the global average (28%), and much higher than Brazil (7%), China (22%) or Indonesia (11%). Healthcare leaders' next most selected partners were retailers/pharmacies and mental health services (both 37%).

When asked what external organizations they would like their hospital or healthcare facility to partner with in the next three years, IT or data providers were selected most by both healthcare leaders and younger healthcare professionals (see Figure 11).

Figure 11: Partnerships desired by Indian healthcare leaders and younger healthcare professionals, in the next three years

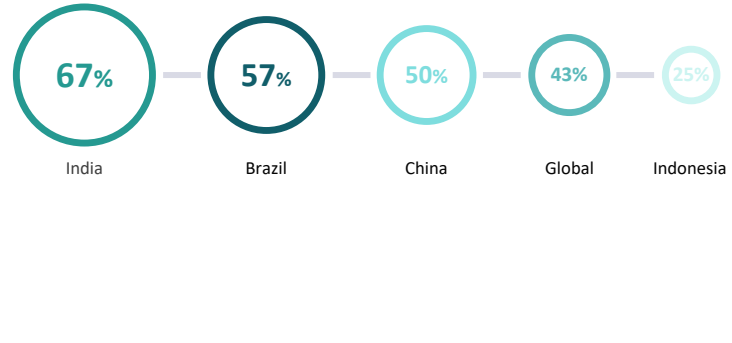


Improving patient care through partnership

Indian younger healthcare professionals recognize the importance of collaboration in healthcare. When asked what would make them feel more empowered to improve patient care, 67% of younger healthcare professionals

in India selected closer collaboration with other organizations involved in care delivery. This result is higher than the global average of 43%, 50% in China and 25% in Indonesia (see Figure 12).

Figure 12: Younger healthcare professionals who say closer collaboration with other organizations would empower them to improve patient care



Challenges hinder leaders' efforts to improve environmental sustainability

A desire for greener healthcare

The 2021 and 2022 editions of the Future Health Index saw a sharp increase in the prioritization of environmental sustainability by healthcare leaders in India¹³. This year's findings indicate that almost all healthcare leaders (99%) are taking some form of initiative to address environmental sustainability.

Additionally, more than two thirds (78%) agree that new ways to deliver care are more environmentally friendly.

Barriers to initiatives

However, Indian healthcare leaders also face challenges in implementing their environmental sustainability initiatives. The most frequently cited challenge is the lack of specific regulation, selected by 40% (see Figure 13). A lack of time (30%), implementation strategies (29%), appropriate technology (29%) and staff interest (29%) are also significant barriers.

Figure 13: Barriers faced implementing environmental sustainability initiatives, as selected by Indian healthcare leaders



Taking responsibility for environmental initiatives and standards

Taking action to overcome sustainability challenges

Healthcare leaders in India plan to use multiple methods to help address the challenges they face in implementing greener initiatives. Almost half (46%) believe the best way to overcome barriers is to create a business case for driving sustainability initiatives (see Figure 14). Setting clear targets and measuring progress (45%) and increasing the available budget (44%) are also popular actions.

Figure 14: Solutions Indian healthcare leaders plan to use to overcome barriers implementing sustainability initiatives



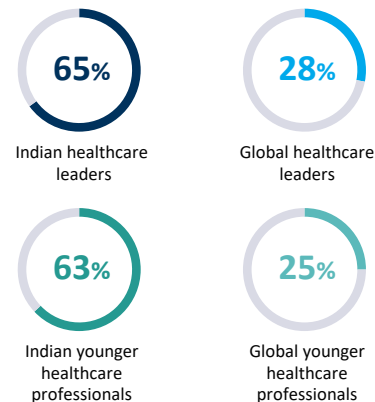
Responsibility for environmental standards and initiatives

When asked who is most responsible for creating environmental sustainability standards in healthcare, 37% of Indian healthcare leaders and 32% of younger healthcare professionals rank the government first.

When asked which organization should be most responsible for creating environmental sustainability standards, both healthcare leaders and younger healthcare professionals in India are aligned. Two thirds (65%) of Indian healthcare leaders rank the government first, a result higher than the global average of 28% (see Figure 15). Similarly, 63% of younger healthcare professionals ranked government first, higher than the global average (25%).

It is not surprising, in such a large and geographically diverse country as India, that national government regulations and standards play such a key role in advancing environmental sustainability.

Figure 15: Those who think the government should be most responsible for creating environmental sustainability standards in healthcare



A photograph of a doctor in a white lab coat with a stethoscope around his neck, shaking hands with an elderly patient. They are both smiling and looking at each other. The setting is a medical office with a desk, a potted plant, and a model of a human spine in the background.

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 realize this vision, both groups recognize that greater collaboration is essential, both within and beyond their organization.

As this year's Future Health Index shows, collaboration is taking many different forms. Healthcare providers are partnering with other organizations across the healthcare value chain to offer more personalized and integrated care. They are turning to health technology companies and data/IT providers to alleviate pressure on staff with automation, AI, and data-driven insights at the point of care. And they are also looking to share best practices with other providers and specialized partners to make healthcare more environmentally sustainable.


Other stakeholders, such as industry associations, NGOs and payers, have an equally crucial role to play in advancing new care delivery models. In partnership with all involved, they can help develop and implement the common standards and incentives that are needed to reduce variation and promote harmonization across the healthcare ecosystem. This includes increasing interoperability and facilitating the secure flow of data across care settings, or supporting sustainable innovations and accelerating the decarbonization of healthcare.

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.

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



Appendices

A photograph showing a male doctor with grey hair and glasses, wearing a white lab coat and a stethoscope, leaning over to hold the hands of an elderly male patient sitting in a wheelchair. The patient is wearing a light green polo shirt and glasses, and is smiling. A female nurse in a white lab coat and stethoscope stands behind the patient, looking down at him with a caring expression. The background is a brightly lit hospital hallway with recessed ceiling lights and a door.

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 center/office-based lab, ambulatory center 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 specializations, except psychiatry and 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 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.

* 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.

Sources

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Glossary of terms

Ambulatory care center

Outpatient care centers (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 behaviors, resulting in a machine or program 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, programs, 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 decentralized 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 organizations

A nonprofit organization 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 optimize experiences.

Health technology companies

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

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.

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

Payer

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

Predictive analytics

A branch of advanced analytics that makes predictions about future events, behaviors, 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 organizations 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 organizations – and can occur sequentially or simultaneously.

Younger healthcare professional

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



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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