future health index 2023

Germany

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, 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.

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

Across **14** countries, including 200 in Germany

Countries included in the research

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

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).

Foreword

In recent years, few topics have moved us more – both individually and as a society – than our healthcare system. In Germany, we have seen many developments in health technology in a short space of time. For example, in response to the pandemic, parliament passed legislation that permits new types of virtual treatment to ensure patient care beyond the hospital walls.

It would be wrong, however, to assume that the drive towards increased digitization has waned with the number of Covid-19 infections. After all, politicians, as well as many medical professionals and patients, want to continue experiencing the benefits of connected, mobile care.

It seems that these changes led to a shift in attitudes. Hospital leaders have faced the same problem for years: maintaining the quality of care, while also dealing with staff shortages and increased cost pressures. However, more of these leaders recognize that partnerships in the right places can improve both their own operations and the quality of care.

The 2023 Future Health Index report confirms this trend. Both healthcare leaders and younger healthcare professionals identify three main priorities: technology, patient care, and partnerships. They want new models of care that meet patients where they are, and they want to invest in artificial intelligence and streamline processes to address staff shortages and cost pressures. It is interesting to note that in addition to all the challenges, having strong sustainability policies is an increasingly important factor for younger healthcare professionals when choosing where to work.

As you read the results of the largest global survey of its kind, and compare your experiences to those of your peers around the world, I hope you find inspiration for your organization.

“Leaders increasingly recognize that partnerships in the right places can improve both their own operations and the quality of care’.

Christine Storm
Sales Leader, Health Systems, DACH, 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 financial pressures and workforce shortages with innovation

Facing severe workforce shortages and worsening financial pressures, German healthcare leaders are focused on improving efficiencies and considering several measures. Innovation is a top priority, particularly AI, a move that is welcomed by younger healthcare professionals, who are enthusiastic about digital technology and consider it a key factor in choosing where to work.

Chapter 2

Bringing healthcare closer to the patient

Healthcare reforms across Germany are set to transform digitization efforts across the ecosystem. Such developments will be welcomed by healthcare leaders and their younger colleagues, who are positive about virtual care. Both groups acknowledge the vital role that virtual care can play in improving environmental sustainability within healthcare..

Chapter 3

Partnering across the healthcare ecosystem

United in a vision of innovating care delivery to respond to increasing needs of patients, regardless of location, healthcare leaders and younger healthcare professionals are actively looking to work with a range of strategic partners, including medical technology companies.

1

Tackling financial pressures and workforce shortages with innovation

Healthcare leaders in Germany continue to face unprecedented workforce shortages, along with worsening financial challenges[1]. Consequently, they are focusing on improving efficiencies and considering or implementing a range of measures: streamlining patient and internal processes, initiating cost-cutting actions, and leveraging digital healthcare tools, such as virtual care, AI and automation.

As they reflect on their challenges, they are embracing innovation. AI ranks highly, with virtually all German healthcare leaders investing and planning to continue to do so three years from now. Younger healthcare professionals are equally enthused by AI and digital technologies, with many citing it as a key factor in choosing where to work.

Financial and workload pressures persist for healthcare leaders

German healthcare leaders face critical financial pressures. Contributing factors in Germany include rising inflation, an end to pandemic-related compensation from the federal government, declining inpatient case numbers and continuous staff shortages[2]. In Germany, almost all healthcare leaders surveyed (92%) are taking actions to reduce the financial burdens on their hospital or facility.

Exploring new opportunities while cutting costs

Their primary strategy to reduce the impact of financial pressures is building new revenue streams. This was selected by almost half (47%) of healthcare leaders (see Figure 1). At the same time, 34% of German healthcare leaders are conducting cost-cutting measures, among the highest percentage of all countries surveyed and considerably higher than the US and the Netherlands (both 14%) and the global average of 18%.

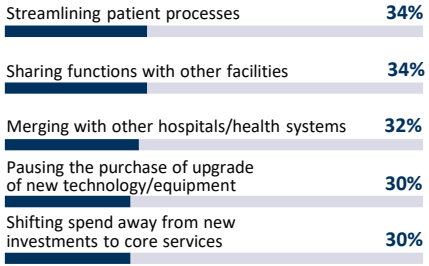
Figure 1: Actions taken by healthcare leaders to reduce impact of financial pressures on their hospital/facility

Streamlining processes

Among German healthcare leaders taking action to mitigate the financial pressures on their hospital, several solutions are cited. These include using advanced technology, such as streamlining patient processes (34%) through automated appointment-bookings. Identifying function-sharing options (34%) and merging with other hospitals/health systems (32%) were also top choices (see Figure 2).

Resuming 'business as usual' in a post-pandemic era is no longer an option. Healthcare leaders must reimagine their role in the broader ecosystem, a theme we will return to in Chapter 3.

Figure 2: Most common solutions used by German healthcare leaders who are taking action to mitigate financial pressures



Decisive action to tackle workforce constraints

German healthcare leaders face a workforce crisis

Around 35,000 healthcare sector jobs in Germany were vacant in 2021 – 40% more than a decade ago. Further, it is predicted that by 2035 more than one-third of all healthcare jobs in Germany could go unfilled[3]. Contributing factors include retiring and departing staff, an aging population and an increase in chronic disease requiring additional healthcare and staff. The anticipated shortage of nursing staff in the coming years will add further strain on the country's healthcare system[4].

Leveraging technology to address healthcare staffing

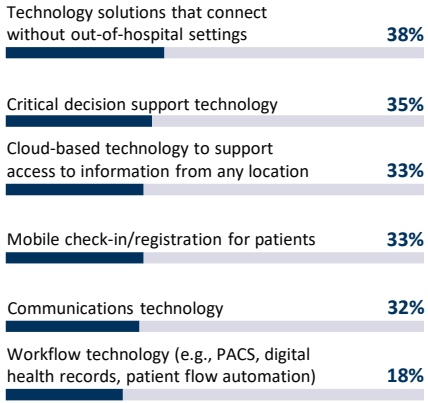
Today, two-thirds (66%) of healthcare leaders are using or planning to use digital health technology solutions to ease the staffing crisis. This percentage is higher than the global average (56%) and far outpaces the Netherlands (14%) (see Figure 3).

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

For German healthcare leaders turning to digital health technology, at the top of their list are technology solutions that connect with out-of-hospital settings (selected by 38%). This is closely followed by critical decision support technology (35%), such as predictive analytics and artificial intelligence (AI) in clinical settings (see Figure 4).

To reduce the impact of workforce shortages, healthcare leaders are also using or planning to use cloud-based technology to support access to information from any location (33%), as well as mobile check-in or registration for patients (33%) and workflow technology (18%). All these solutions point to an opportunity for digital innovation to alleviate pressure on staff while improving the patient experience.

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



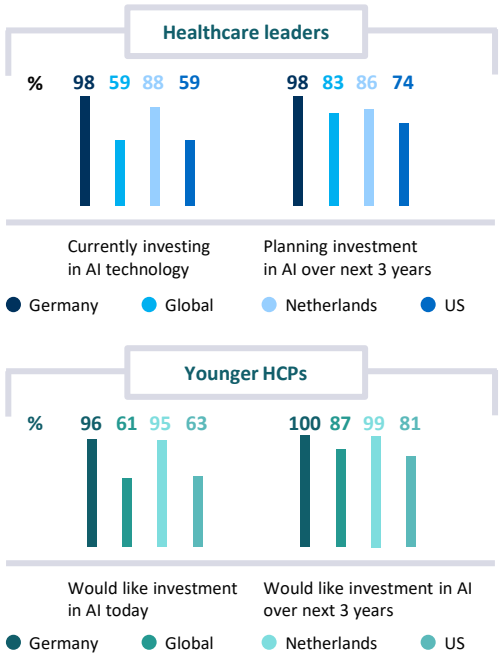
Investing in AI – today and tomorrow

Betting big on AI

Nearly all German healthcare leaders (98%) are currently investing in AI technologies – the highest result of any country. Similarly, 98% plan to maintain investment in the technology three years from now, indicating a definitive long-term commitment to AI (see Figure 5).

The provision of this technology is also important to younger healthcare professionals, with 96% indicating they would like their hospital/facility to invest in AI technologies today. This is far higher than the global average (61%) and the US (63%) but aligned with the Netherlands (95%) (see Figure 5).

Figure 5: Current and future investments in AI



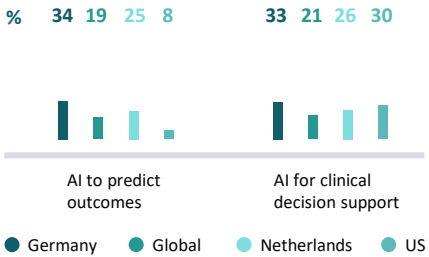
AI to enhance clinical decision support and operational efficiencies

More than most other countries, healthcare leaders in Germany are currently prioritizing AI investments to optimize operational efficiency (32%) and to predict outcomes (32%).

Examples of AI for operational efficiency range from automation of required documentation to scheduling of patients, staff and tasks. These applications play a vital role in enabling more efficient use of resources to mitigate the impact of workforce shortages.

Younger healthcare professionals in Germany are also more likely than their global counterparts (34% versus 19%) to want current investment in AI to predict outcomes. Additionally, about one-third (33%) of younger healthcare professionals would like current investments in AI for clinical decision support, compared to 21% of their global counterparts (see Figure 6).

Figure 6: Younger healthcare professionals' preferred areas of AI to invest in now



Investing in AI to attract and retain talent

AI is a key driver for younger healthcare professionals

Beyond the established desire for investment in AI at their current hospital/facility, younger healthcare professionals consider adoption of such technology a key factor when deciding on a hospital or practice in which to work.

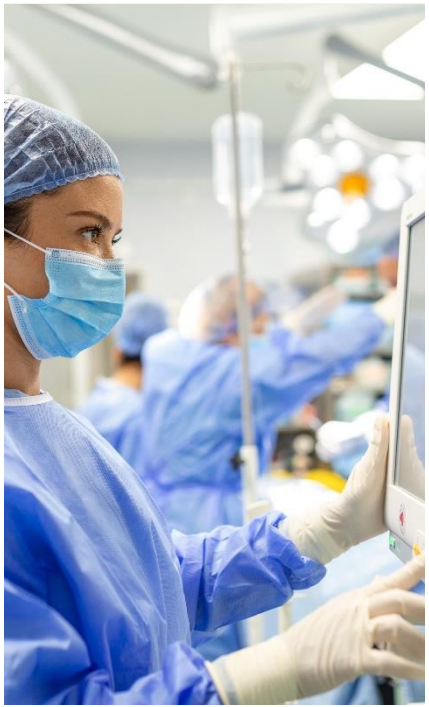
When asked what is important to them when choosing a hospital or medical practice to work in, being at the forefront of AI in healthcare emerges as the top choice for younger healthcare professionals in Germany (34%). Being at the forefront of connected care delivery was the second most selected answer (28%), followed by professional autonomy (25%).

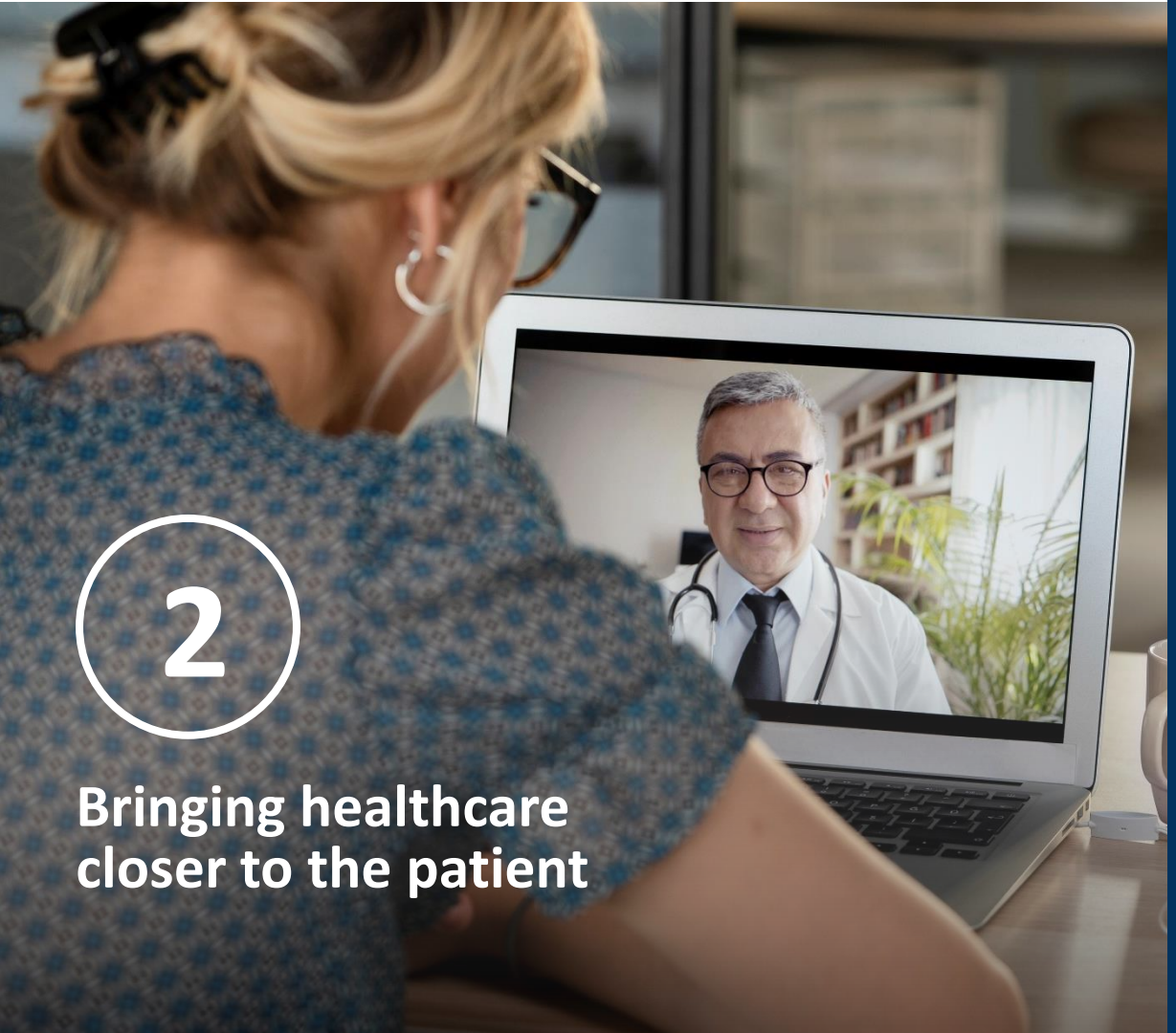
Broader digital innovation is also essential

Better training on new technologies was the top choice (35%) of younger healthcare professionals when asked what would make them feel empowered to improve patient care (see Figure 7). This aligns with the global results (38%). The second most selected answer was access to more advanced technologies to aid diagnostics (27%), followed by more opportunities to have their voice heard (25%) and reduced administrative responsibilities (25%).

These findings paint a picture of a generation that is eager to embrace smart and connected technologies to help deliver better patient care. This suggests that digital innovation can be a powerful tool in attracting and retaining young talent as healthcare leaders compete with other sectors for scarce talent, and thereby accelerate digital transformation.

Figure 7: Top selected factors that would make younger healthcare professionals feel more empowered to improve patient care





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Bringing healthcare closer to the patient

While the German healthcare system remains less digitized than many others in developed countries, reforms, including a new digital healthcare strategy, will improve digitization efforts across the ecosystem[5]. These reforms are most likely to impact virtual care, particularly in rural areas where healthcare workforce shortages are at crisis levels[6]. This is good news for both younger healthcare professionals and their leaders, who all demonstrate a significant appetite for virtual care, through outpatient and digital care delivery models that facilitate care beyond the hospital walls. Both groups recognize the role of virtual care in improving environmental sustainability within healthcare.

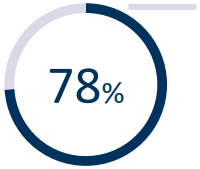
Investing in virtual care to support staff and hard-to-reach patients

The role of virtual care in improving patient care

Virtual care has the potential to significantly improve patient outcomes, particularly in rural areas where there is a more significant shortage of healthcare professionals[7].

There is considerable appetite among healthcare leaders and younger healthcare professionals to improve patient care by making it easier to connect professionals with patients outside a traditional clinical setting. Three quarters (78%) of German healthcare leaders and younger healthcare professionals combined state that virtual care is among the technologies that has had or will have the biggest impact on improving patient care (see Figure 8).

Figure 8



of respondents in Germany agree virtual care is a technology that has had or will have the biggest impact on improving care

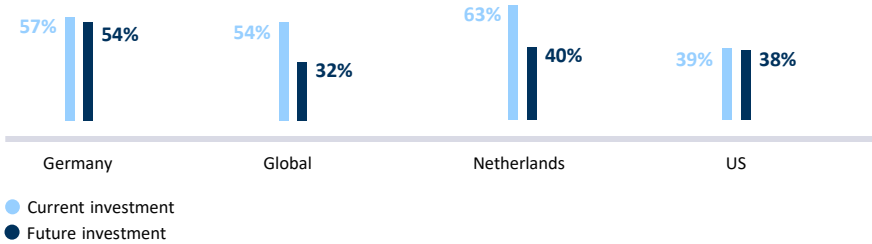
Virtual care a top priority in current investments

Possibly mindful of its potential to improve patient care, German healthcare leaders consider virtual care a priority investment area, both today and in the future (see Figure 9). Over half (57%) are currently investing in virtual care. This result aligns with the global average of 54% and the Netherlands response (63%) but is higher than the US (39%).

In terms of individual technologies being invested in, 36% of healthcare leaders in Germany say they are investing in healthcare professional-to-healthcare professional virtual care. This was the most selected current technology investment – higher than the choices that tied for second: AI to integrate diagnostics, and remote patient monitoring solutions (both 33%).

Likewise, younger healthcare professionals also see value in healthcare professional-to-healthcare professional virtual care, with 34% saying they would like their hospital or healthcare facility to invest in it now. Meanwhile, 54% would like to see future investments in virtual care overall.

Figure 9: Healthcare leaders' current and future investments in virtual care



Outpatient and digital care models integral to new care delivery

Delivering care beyond the hospital walls

Younger healthcare professionals in Germany would like their facilities to provide more care outside the main hospital, mirroring current reforms in the country that focus on increasing ambulatory care[8].

Younger healthcare professionals see long-term care as one such opportunity. Currently, 59% say their facility provides long-term care. Among those whose facility doesn't provide it, the majority (83%) would like their hospital or healthcare facility to provide long-term care in the future.

Similar results are seen for emergency care outside main/core hospitals: 51% of younger healthcare professionals say their facility currently provides this. Where it isn't available, most (79%) would like it provided in the future. Similarly, German healthcare leaders want to extend where care is delivered. More than half of them (56%) say their hospitals or healthcare facilities plan to provide surgery centers three years from now, reflecting their desire to increase outpatient care.

Additionally, half (50%) of German healthcare leaders say they plan to provide physical rehabilitation, and 43% anticipate providing emergency care outside of the main hospital for patients.

Unlocking the value of new ways to deliver care

German healthcare leaders have a vision of care offered through various access points, which they believe will provide several patient benefits. Almost half of German healthcare leaders (48%) think new ways to deliver care will improve patient education, awareness, and understanding of their healthcare. This is higher than the global average (37%).

Younger healthcare professionals also agree that new ways to deliver care offer benefits. More than two fifths (43%) said that new ways to deliver care will increase patient compliance/adherence, while 37% said they will provide more cost-effective healthcare (see Figure 10).

Figure 10: Younger healthcare professionals recognize the benefits of new ways to deliver care

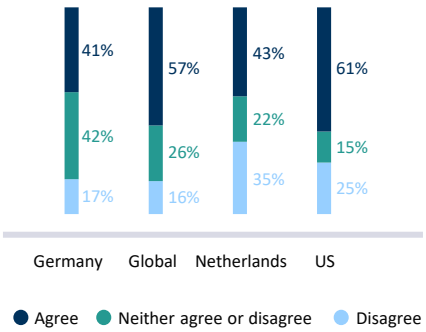
New ways to deliver care while striving for a healthier planet

Improving patient care in an environmentally friendly way

In addition to focusing on patient outcomes and experiences, healthcare professionals are also considering what is good for the planet.

German healthcare leaders and younger healthcare professionals think that the evolution towards more distributed and virtual care is also greener. Only 17% do not agree that new ways to deliver care are more environmentally sustainable (see Figure 11). Their perspective aligns with their peers globally (16%), while in the Netherlands (35%) and across Europe generally (25%) more respondents disagree with the environmental benefits of new ways to deliver care.

Figure 11: Healthcare leaders and younger healthcare professionals who agree that new ways to deliver care are more environmentally friendly or sustainable*



Environmental responsibility may be top of mind for some providers in Germany because the government is leading initiatives for a more environmentally friendly healthcare delivery system. According to a report from the nonprofit Health Care Without Harm, Germany's healthcare sector accounts for 5.2% of national greenhouse gas emissions[9].

How virtual care can support environmental sustainability

The reduced need for travel and physical paperwork could help reduce the healthcare sector's carbon footprint. A 2022 study published in Science Report demonstrated the link between distributed care models, particularly those involving telehealth, and reduced environmental impact. Examining European data from 2020 and 2021, it found an average of 3.057 kg of net CO_2 emissions avoided for every digital appointment and 1.5 kg avoided for every medical report downloaded instead of patients collecting physical copies in the clinic[10].

* Rounding means results visualized here may not add up to 100%

3

Partnering across the healthcare ecosystem

Healthcare leaders and younger healthcare professionals in Germany are aligned in their vision of innovating into new delivery care models to help meet the growing needs of patients – wherever they are.

But they also know they can’t do this alone and are looking to collaborate across the healthcare ecosystem, including with medical technology companies, to answer this challenge and enhance patient care.

Providers seek partners across the healthcare ecosystem

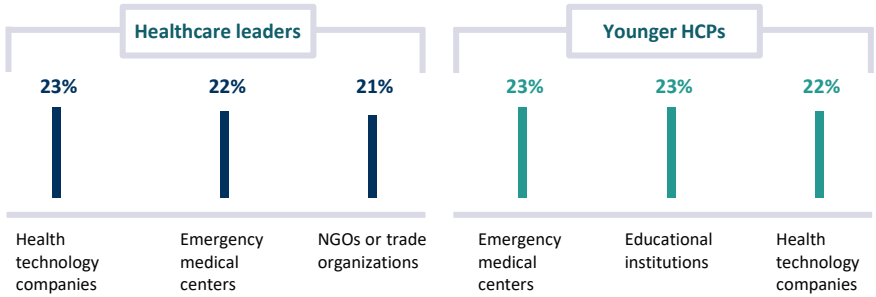
Taking a collaborative approach

German healthcare leaders know that new ways of care delivery cannot be done alone and are working toward building relationships across the healthcare ecosystem. Three years from now, almost one-quarter (23%) of healthcare leaders plan to partner with health technology companies. Emergency medical centers were the second-most selected choice (22%), followed by NGOs or trade organizations (21%) (see Figure 12).

Younger healthcare professionals want new partnerships

Younger healthcare professionals in Germany share the same desire to partner with external organizations and have a broad range of potential partners in mind, including emergency medical centers (23%), educational institutions (23%), health technology companies (22%) and community centers (21%).

Figure 12: External organizations German healthcare leaders and younger healthcare professionals plan/desire to partner with three years from now



Overcoming challenges of technology adoption

A desire for proof points

As they forge relationships to help secure new ways to deliver care, German healthcare leaders are also seeking ways to smooth the adoption path for new technology. When asked which factors will influence the success of the healthcare ecosystem, both healthcare leaders and younger healthcare professionals were aligned on the challenges that need to be resolved.

Both groups (21% of healthcare leaders; 24% of younger healthcare professionals) cite a lack of evidence or measurement of the benefits of technology as one of the top technology challenges to address for new ways of care to be successful. Adoption of technology is another key obstacle. One-quarter of healthcare leaders (24%) and 14% of younger healthcare professionals cite staff adoption as their top challenge, with 15% of healthcare leaders and 22% of younger healthcare professionals calling out patient adoption (see Figure 13).

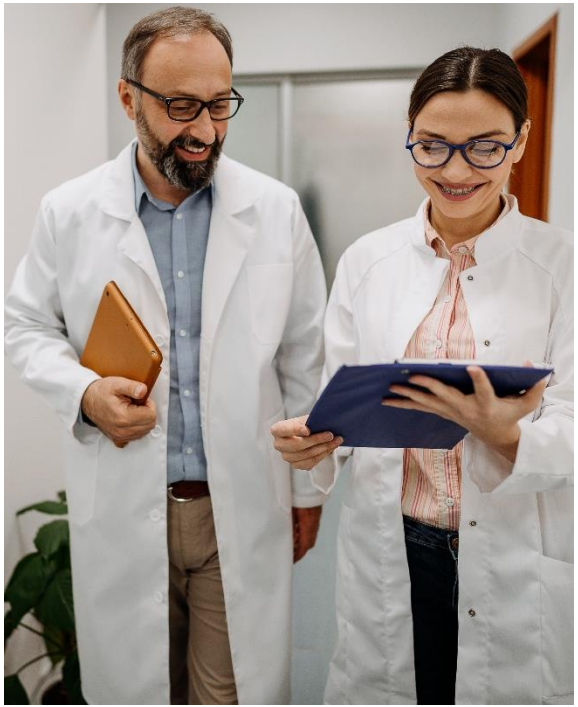
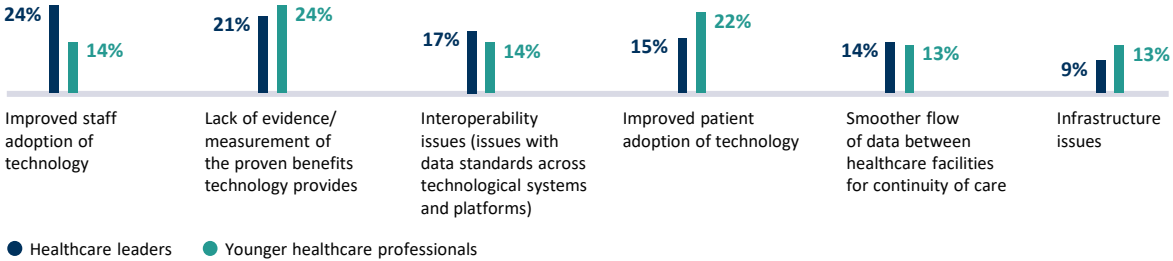


Figure 13: Top technology challenge that needs to be solved for the healthcare ecosystem to work successfully



The power of partnerships in greening healthcare

Barriers in implementing green initiatives

The 2021 and 2022 editions of the Future Health Index saw a sharp increase in the prioritization of environmental sustainability by healthcare leaders surveyed. This year's findings indicate that while all German healthcare leaders (100%) surveyed are taking some form of initiative to address environmental sustainability, they are also facing multiple challenges.

When asked about the challenges they face in implementing environmental sustainability initiatives, healthcare leaders' most selected response was the inability to measure improvements or success (39%).

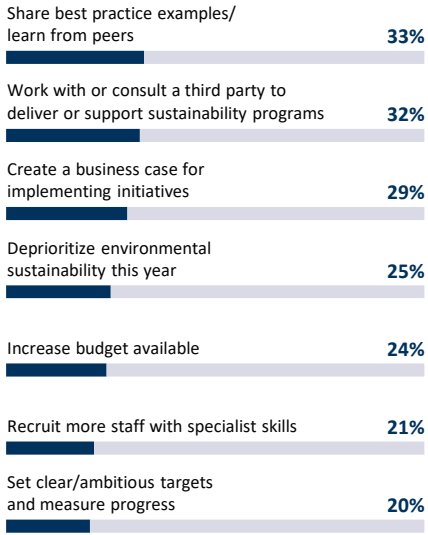
Other internal factors that are holding leaders back in implementing environmental sustainability initiatives include a lack of internal expertise, cited by 31% of healthcare leaders, and a lack of interest from staff, cited by 29%.

Partnering to overcome barriers

To overcome barriers in implementing environmental sustainability initiatives, German healthcare leaders believe in partnering with their peers, as well as working with third parties. About one-third (33%) say they see value in sharing best practice with peers (see Figure 14).

Other popular solutions include working with a third party to support or deliver sustainability programs, cited by 32%, and creating a business case for implementing initiatives, cited by 29%.

Figure 14: How healthcare leaders are planning on overcoming challenges implementing environmental sustainability initiatives



Responsibility for environmental standards in healthcare

When asked which organization should be most responsible for creating sustainability standards in healthcare, 23% of German respondents ranked medical technology companies first, in line with the global average (20%), and along with industry associations (23%). This points to an opportunity for wider ecosystem collaboration in protecting the health of our planet.

German healthcare leaders are most likely to rank medical technology companies first for currently being responsible for sustainability standards (30%). This is markedly different to the global average for healthcare leaders, who feel it is primarily the role of government (26%).

Conclusion

Building a collaborative healthcare ecosystem

German 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 and 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 – whether it is to increase interoperability and facilitate the secure flow of data across care settings, or to support sustainable innovations and accelerate 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

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.

Between November 2022 – February 2023, 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. 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.

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
non-profit 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.) 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.

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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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