future health index 2024

Better care for more people

Bridging the gaps in healthcare

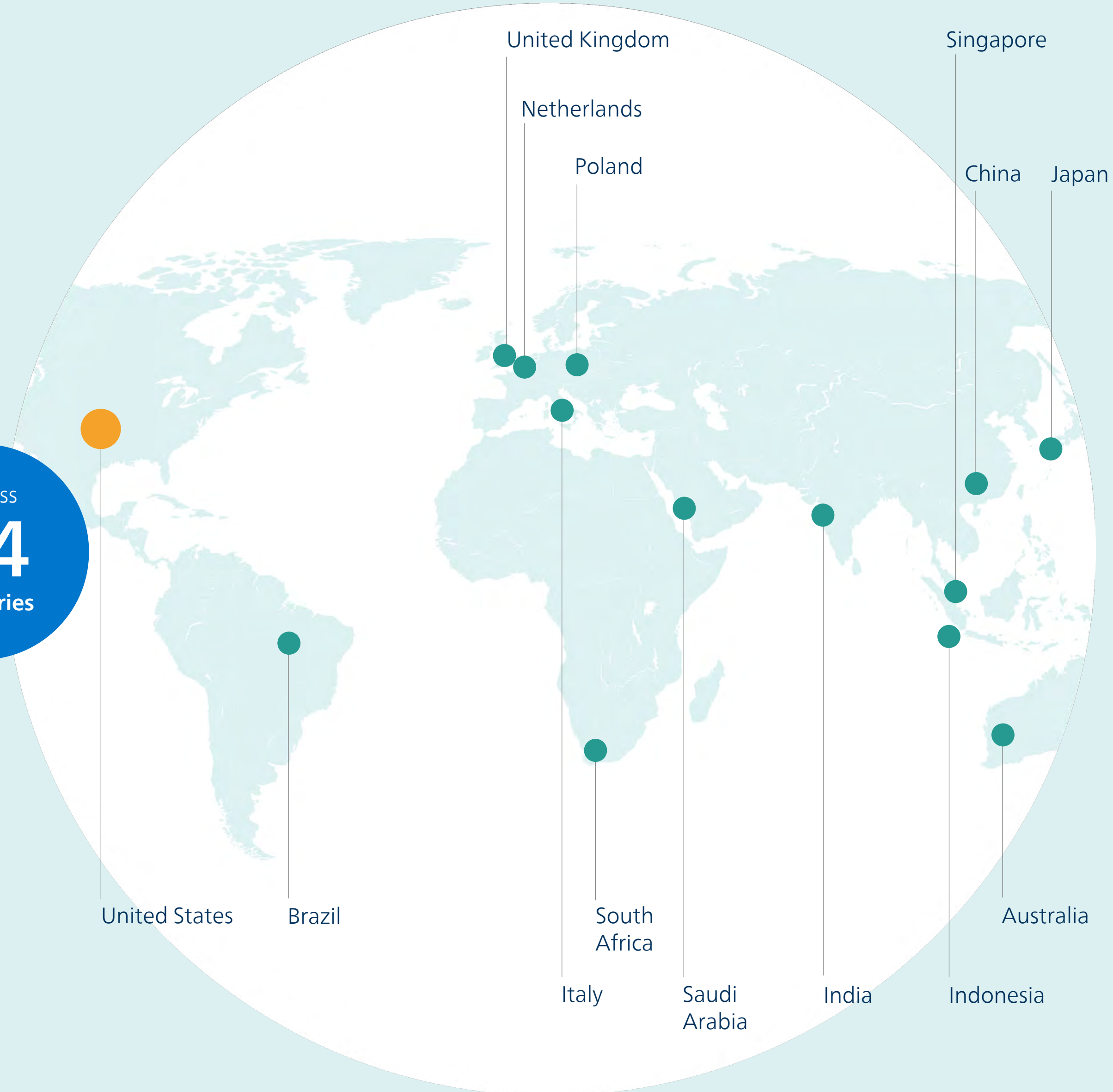US Report

Contents

Research premise

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

In 2024, the Future Health Index, now in its ninth edition, explores how healthcare leaders view their organization's ability to deliver timely, high-quality care to everyone. The report focuses on the gaps that stand in the way, as well as examining ways of overcoming them.

This year, the Future Health Index is based on proprietary quantitative research conducted in 14 countries and supported by qualitative interviews in four of these countries: Singapore, South Africa, the United Kingdom, and the United States.

Responses from almost
3,000
healthcare leaders

Across
14
countries

United Kingdom

Singapore

Netherlands

China

Japan

Poland

United States

Brazil

South Africa

Italy

Saudi Arabia

India

Indonesia

Australia

Delivering better care for more people

Timely access to care is a cornerstone of a well-functioning healthcare system. But increasingly, long wait times and staff shortages are making it difficult for people to get the care they need, when they need it. Not just in remote and rural regions, but even in metropolitan areas. And for those who already struggled to get timely and appropriate care, the barriers may only be getting bigger. The result: delays in treatment and reduced access to services, which are putting patients at risk and adding even further pressure to healthcare systems in the long run.

That's the stark reality painted by healthcare leaders in this year's Future Health Index. They recognize that to keep healthcare systems sustainable in the face of growing patient demand, we urgently need to rethink how and where care is delivered. The good news is that healthcare leaders are taking firm steps in this direction.

Through new care delivery models and AI-enabled innovation, healthcare leaders are addressing the critical gaps in today's healthcare systems. Increasingly, they are automating workflows to free up time for staff and reduce waiting lists. They are embracing virtual care and remote patient monitoring to extend the reach of care. And they are implementing AI to turn information overload into meaningful insights that elevate the expertise of healthcare professionals, helping them to consistently deliver high-quality care.

At Philips, we are committed to partnering with healthcare providers on this journey. We see the potential for a future where people everywhere, no matter who they are or where they live, can access the care they need, when they need it. What we hear from healthcare leaders is that they believe in the same future.

A future that can only be achieved in partnership, by bringing together stakeholders from across the healthcare ecosystem to collaborate and develop scalable solutions. That's how we can ultimately deliver better care to more people.

As we shape this future together, we must do so in a sustainable way. By now, it has been well demonstrated that environmental health and human health are inextricably linked. As you navigate these challenges with your organization, I hope you take inspiration from the path that other healthcare leaders set out in this report.

"

How can healthcare providers deliver high-quality care everywhere regardless of patient location, staff availability, and other resource constraints?
That's the question we must address through innovation and collaboration."

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

Executive summary

1

## A crisis of access, fueled by staff shortages

Burdens placed on clinicians and severe financial pressures are taking their toll on both healthcare workers and on patient care.

2

## Bridging the gap with AI and automation

As they navigate a challenging environment, healthcare leaders are looking to AI and automation to ease the burden on staff and improve productivity.

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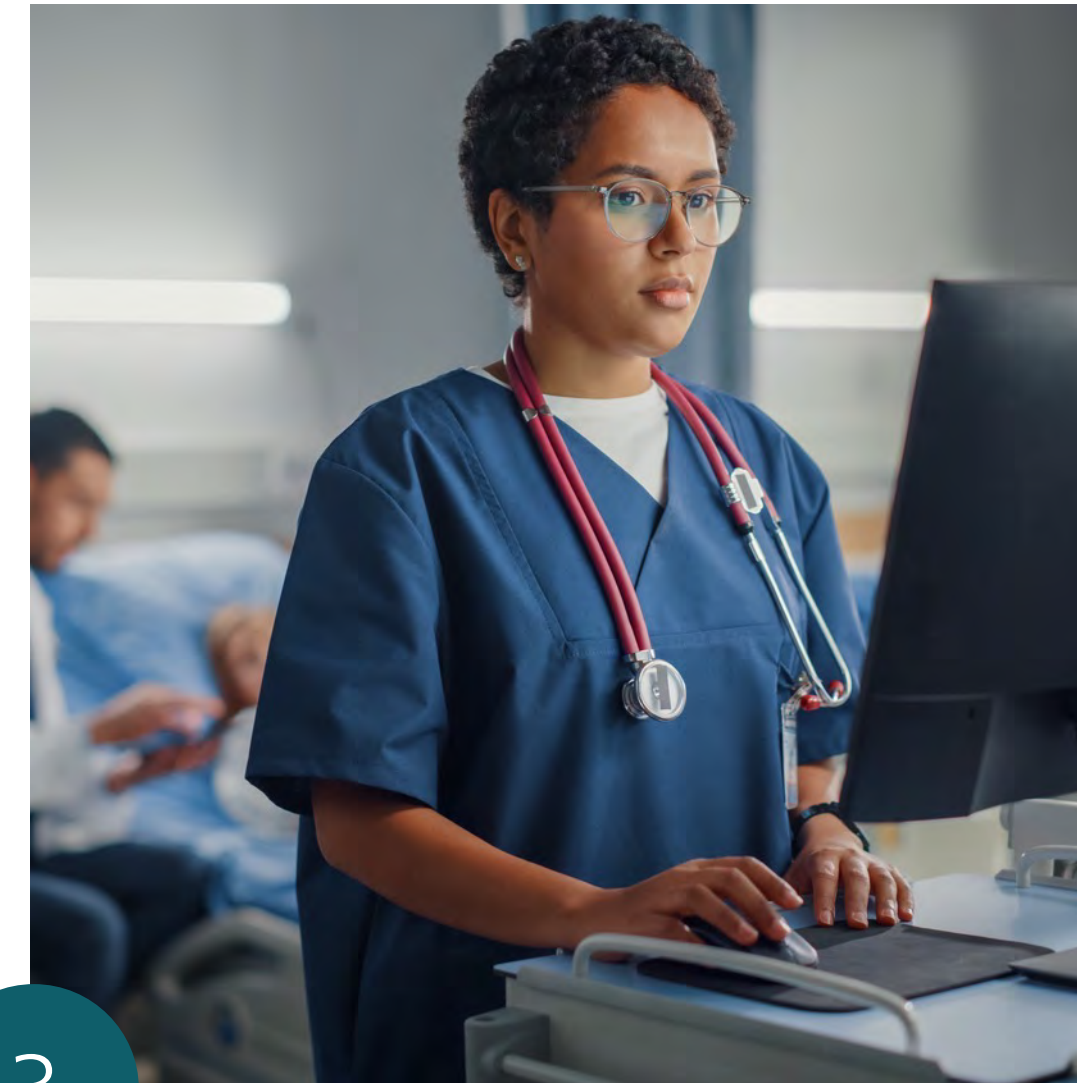
Connecting data and insights

While healthcare leaders are positive about the opportunities presented by data-driven insights, they continue to face challenges around data integration.

4
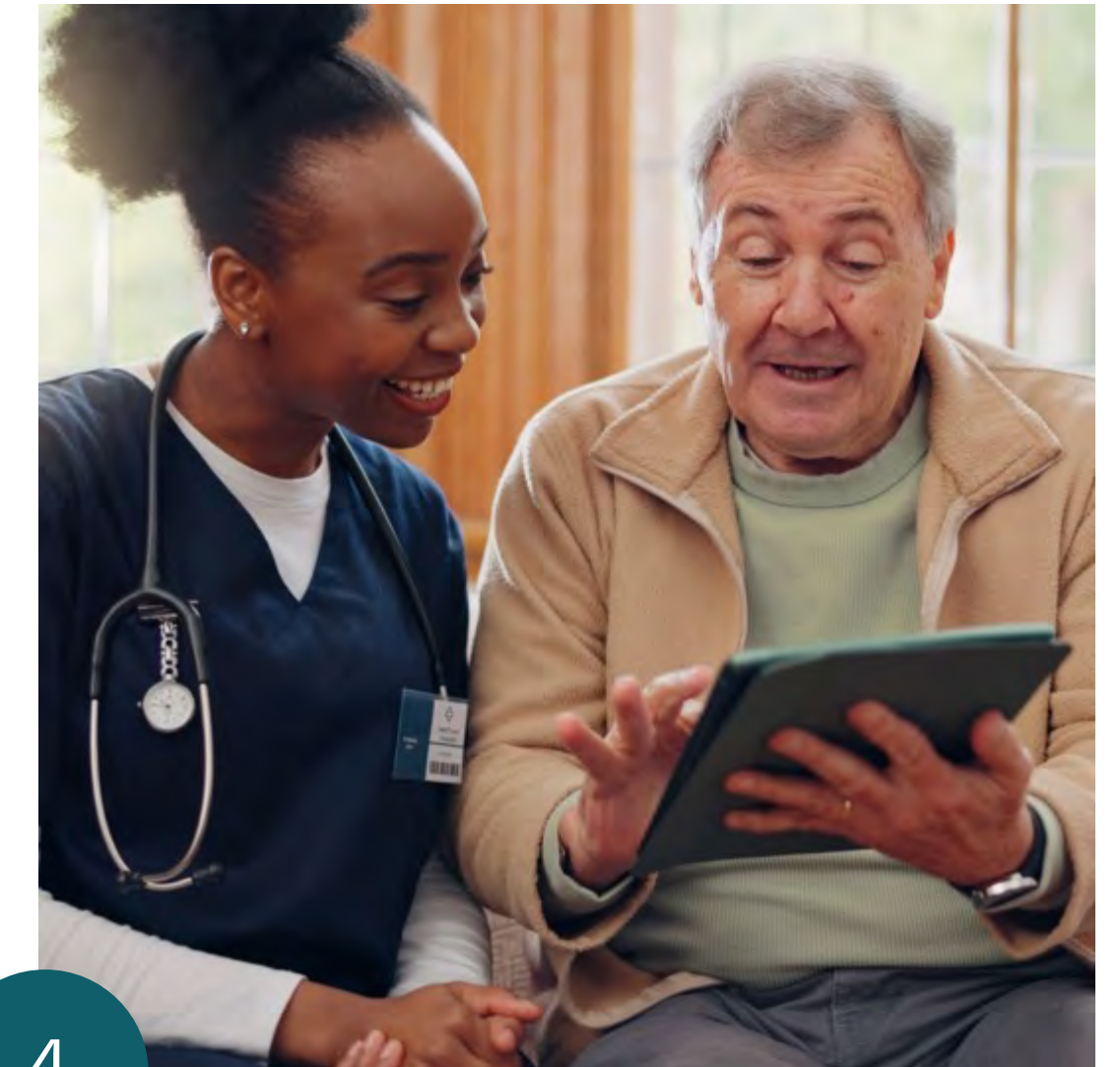
Broadening virtual care

Virtual care is playing a crucial role in alleviating healthcare burdens, particularly in underserved communities.

1

A crisis of access, fueled by staff shortages

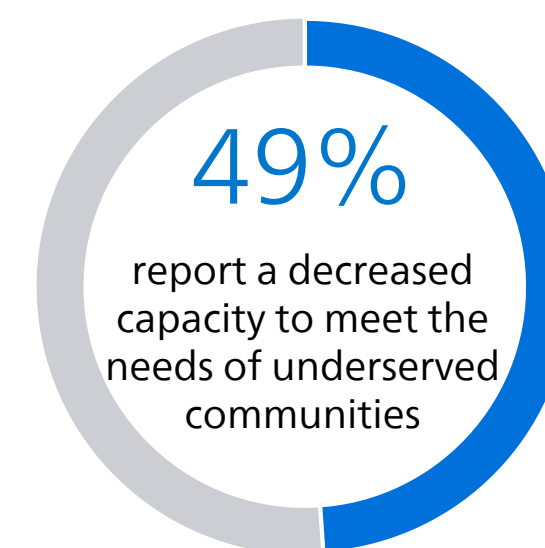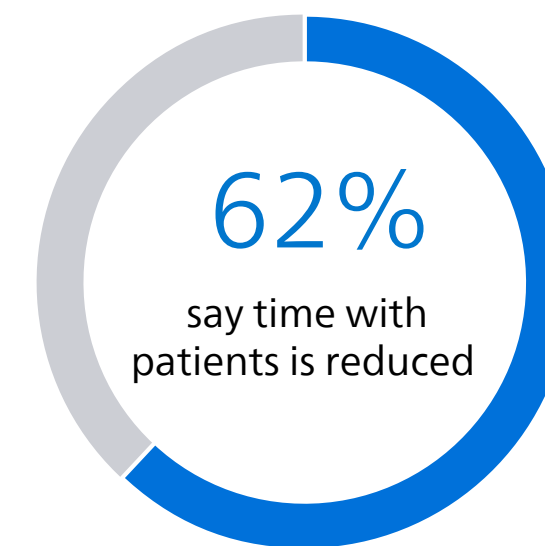# Patients impacted by widespread staff shortages

Spotlight

Staff shortages are impacting care delivery

Healthcare staffing continues to be an issue in the US, and patients are feeling the consequences. 81% of healthcare leaders say delays in care are an issue at their organization – whether due to longer waits for appointments and/or treatment, or reduced access to services such as screening diagnosis and preventive care.

The impact on patient care is particularly evident in underserved communities. Almost half (49%) of healthcare leaders are concerned about patients needing to travel further to receive appropriate care due to staff shortages at their organization – highlighting the importance of new care delivery models that improve access to care for patients in both rural and urban areas.

When interviewed as part of our qualitative study, US leaders described their investments in smaller and specialized community-based clinics, including mobile care vehicles equipped with imaging solutions, which allow tests and scans to be carried out closer to patient's homes. One such example is the Early Detection Driven to You (Eddy) program by the Roswell Park Comprehensive Cancer Center in Buffalo, New York where truck-based mobile CT lung cancer screening units visit communities with above average incidence of lung cancer[1].

Healthcare leaders' perspectives on the impact of staff shortages

69%
report increased waiting lists for appointments

81%
say delays in care are an issue at their organization due to staff shortages

62%
say time with patients is reduced

49%
report a decreased capacity to meet the needs of underserved communities

Taking action to alleviate the impact of healthcare deserts

A 2021 study found that over 80% of counties across the US lack some form of healthcare infrastructure, resulting in limited access to services needed to maintain and improve health[2]. An estimated 121 million people live in a so-called 'healthcare desert', with serious impacts on all facets of healthcare.

Health systems like Perinatal Associates of New Mexico are turning to virtual care to help mitigate the impacts of healthcare deserts, specifically for maternal care[3].

Using Collaboration Live for tele-ultrasound remote access, specialist physicians in central locations have complete control of ultrasound equipment in satellite sites around the site.

Michael S. Ruma, MD, MPH, a maternal-fetal medicine specialist at Perinatal Associates of New Mexico, conducted thousands of telemedicine visits. This allows him to reach more patients – many dealing with common fetal conditions and abnormalities – thus improving outcomes, remotely.

Healthcare workers feel the pressure of the staffing crisis

Caregivers are overloaded, overworked and overwhelmed

Most healthcare leaders see signs of overwork in their staff

This includes increased incidence of burnout, stress and mental health issues in their workforce due to staff shortages (81%). A similar number (80%) see an increased likelihood of staff leaving.

While most leaders (72%) say staff are leaving for other hospitals or facilities, around half (53%) see an increased likelihood of staff leaving the healthcare sector entirely. Reflecting the severity of the issues, 77% of healthcare leaders say improving staff satisfaction is one of their primary priorities over the next year (besides financial stability and patient outcomes).

Adopting long-term solutions

Several initiatives are underway at both local and national levels to increase the number of clinicians and nursing staff. These include the Department of Health and Human Services Health Workforce Initiative[4] and the Health Resources and Services Administration's[5] awards of more than $100 million to train more nurses and grow the nursing workforce. With such initiatives requiring several years to yield results, healthcare leaders are exploring other ways to mitigate the impacts of staff shortages – an area we explore in subsequent chapters.

92%
of healthcare leaders report deteriorating staff well-being, mental health and work-life balance as a result of workforce shortages

81%
burnout/increased incidence of stress and mental health issues

69%
deterioration in work-life balance

66%
low morale/ engagement

Healthcare leaders say workforce shortages are having a range of impacts on staff*

*Respondents were able to select multiple answers

Fiscal challenges and staff shortages take their toll

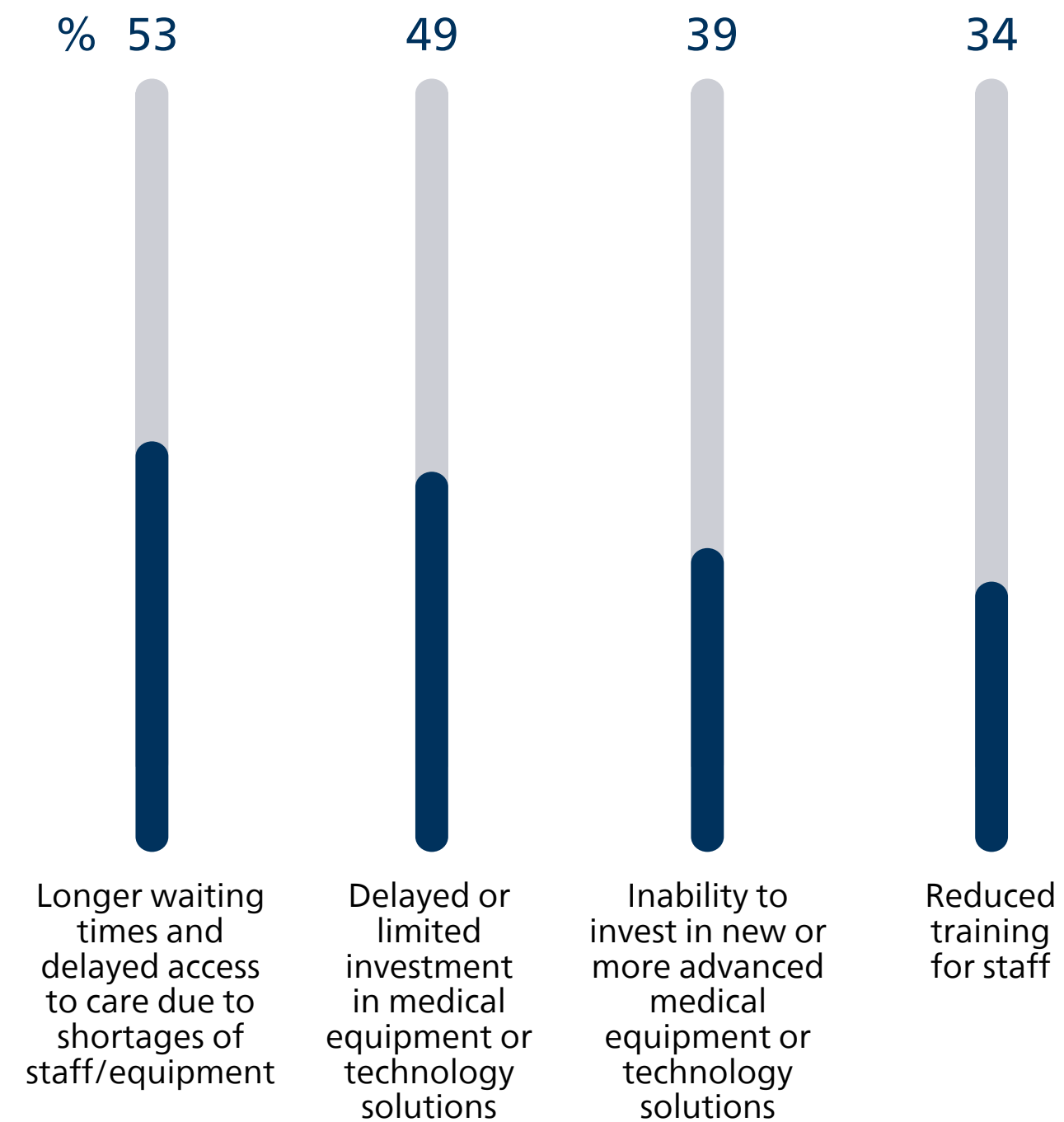## Repercussions are felt by both patients and frontline healthcare workers

The majority of healthcare leaders (90%) say financial challenges are impacting their organization's ability to provide timely, high-quality care to patients. They see the biggest impact in longer waiting times and delayed access to care due to shortages of staff/equipment.

Limited staff means healthcare leaders are turning to staffing agencies. Not only does this have a cost implication for health systems, it can also affect the continuity of patient care: 65% of healthcare leaders say this is an issue at their organization.

Around one in three (34%) leaders also report reduced training for staff as a result of financial challenges. Impacts such as these are impacting staff well-being and satisfaction.

Healthcare leaders see these top impacts of financial challenges

% 53	49	39	34
Longer waiting times and delayed access to care due to shortages of staff/equipment	Delayed or limited investment in medical equipment or technology solutions	Inability to invest in new or more advanced medical equipment or technology solutions	Reduced training for staff

2

Bridging the gap with AI and automation

Automation can help ease staff shortages

With staff chronically overstretched, healthcare leaders are turning to automation to alleviate the burden on healthcare professionals

Almost all healthcare leaders think the use of technology to automate repetitive tasks and processes is critical for addressing staff shortages in healthcare. They believe it will save healthcare professionals time by reducing their day-to-day administrative tasks and enabling them to perform at their highest skill level.

Healthcare leaders have implemented automation to improve productivity and ease staff shortages in several areas. Today, they are mainly using automation to reduce the administrative burden on healthcare professionals – for example, for patient check-in and appointment scheduling (both 53%).

Healthcare leaders express optimism about the future of automation in healthcare

88% Say the use of technology to automate repetitive tasks or processes is critical for addressing staff shortages in healthcare

84% Believe automation will save healthcare professionals time by reducing their day-to-day administrative tasks

76% Think the use of automation will allow healthcare professionals to perform at their highest skill level

"
Anytime where we have reduced the amount of manual work, reduced the opportunity for human error, created innovations that improve overall safety and quality…[this] just makes it easier for staff to be able to deliver quality care."
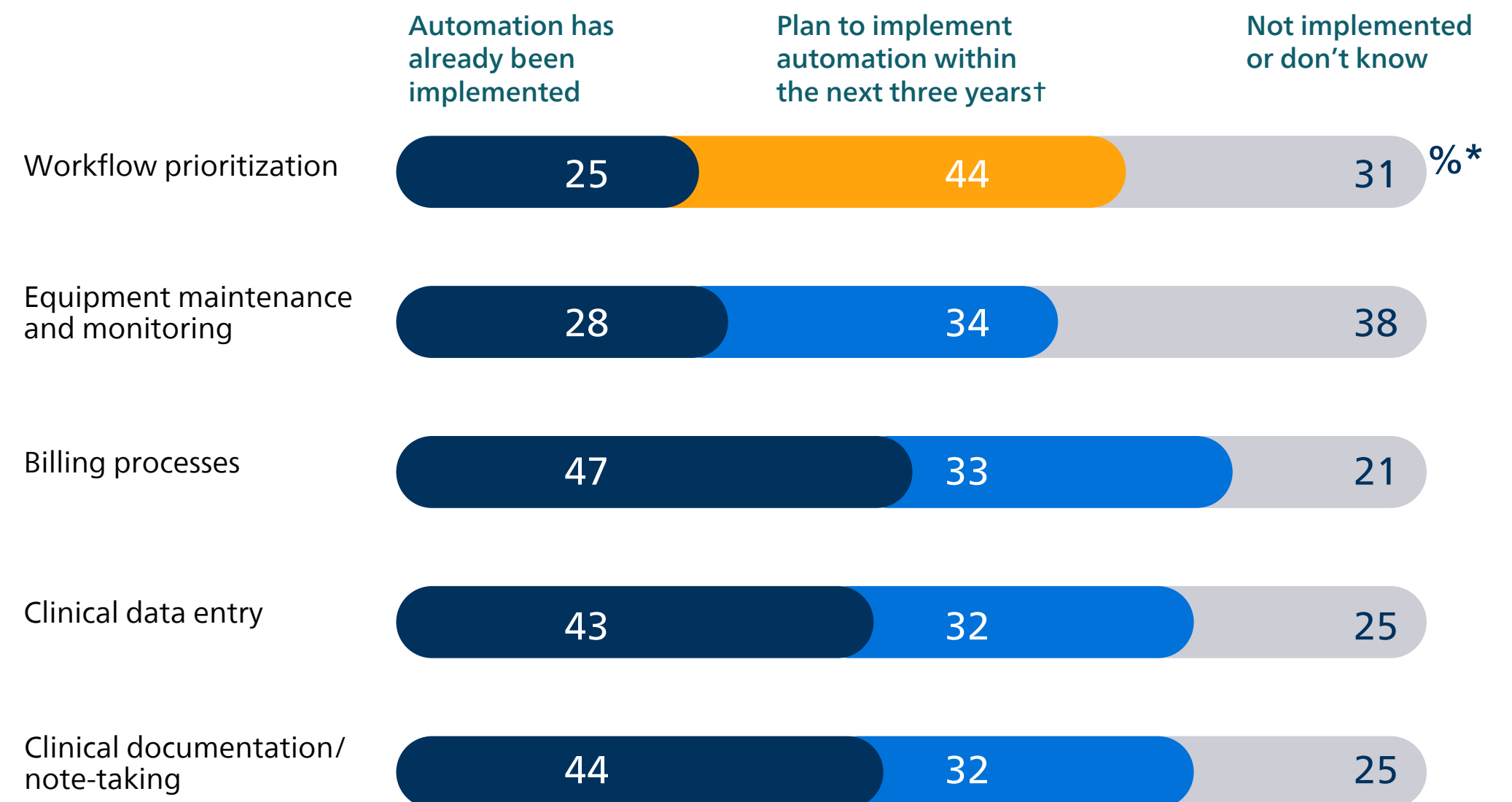
Chief Information Officer, hospital

Healthcare leaders look to implement more automation in the next three years

In the next three years, healthcare leaders see workflow prioritization as the biggest opportunity for automation. This can help healthcare professionals deal with high volumes of patients without compromising on quality.

One example is from Nicklaus Children's Health System where a cardiology workflow system automates ultrasound measurements and strain quantification[7].

Current and future implementation of automation to improve productivity and ease staff shortages*

	Automation has already been implemented	Plan to implement automation within the next three years†	Not implemented or don't know
Workflow prioritization	25	44	31 %*
Equipment maintenance and monitoring	28	34	38
Billing processes	47	33	21
Clinical data entry	43	32	25
Clinical documentation/ note-taking	44	32	25

*Due to rounding, totals may not add to 100%
†Chart shows top five answers for 'Plan to implement automation within the next three years', ranked high to low

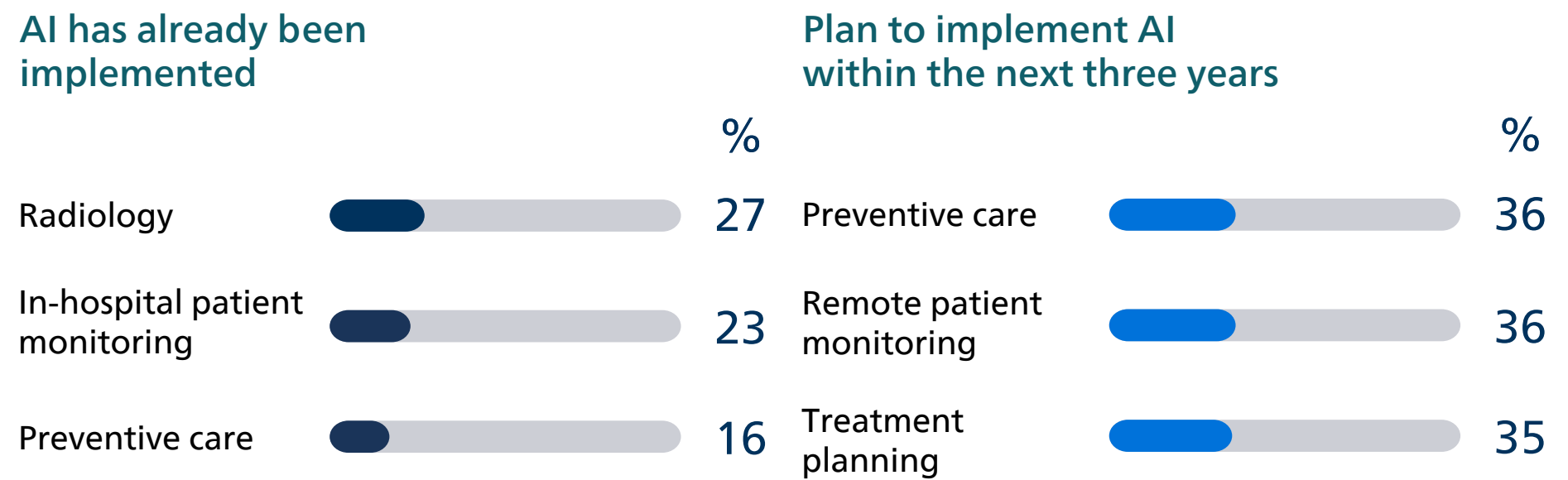# The AI evolution: from exploration to implementation

Healthcare leaders are implementing AI across the hospital

AI is increasingly finding its way into clinical practice. Healthcare leaders have already implemented AI for clinical decision support across different areas of the hospital, with radiology leading the pack.

As healthcare leaders increasingly drive access to care beyond hospital walls, implementing AI in remote patient monitoring is also an area of focus for the next three years.

Current and future implementation of AI for clinical decision support

AI has already been implemented	%	Plan to implement AI within the next three years	%
Radiology	27	Preventive care	36
In-hospital patient monitoring	23	Remote patient monitoring	36
Preventive care	16	Treatment planning	35

Addressing concerns around AI-driven automation

While healthcare leaders are enthusiastic about the benefits of automation, staff remain cautious

Nearly two-thirds of healthcare leaders (65%) report skepticism among healthcare professionals about the use of automation in healthcare.

When it comes to AI, many healthcare leaders themselves (79%) are concerned about the possibility of data bias in AI applications exacerbating disparities in health outcomes.

To help mitigate these risks, healthcare leaders believe it is important to make AI more transparent and interpretable (54%) and to provide ongoing training and education in AI (53%).

"

We have a lot of work to do to really verify and understand how AI is used, the benefits but also the safeguards needed, especially when it involves delivery of patient care."

Chief Information Officer, hospital

79%

of healthcare leaders are concerned about the possibility of data bias in AI applications widening disparities in health outcomes
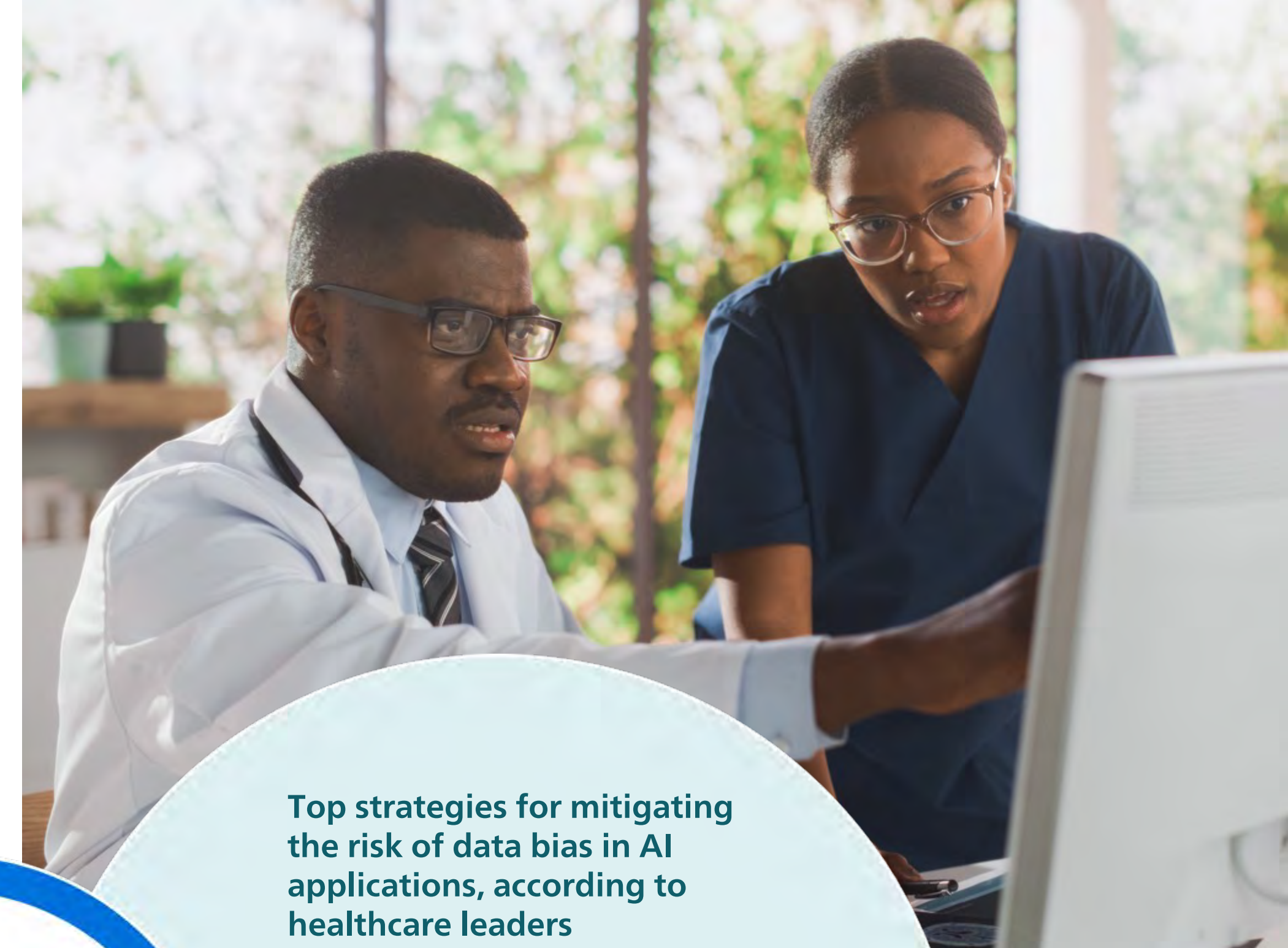
Top strategies for mitigating the risk of data bias in AI applications, according to healthcare leaders

54% Making AI more transparent and interpretable

53% Continuous training and education in AI

52% Policies for the ethical use of data and AI

52% Bias detection and monitoring

46% Diverse and representative data collection
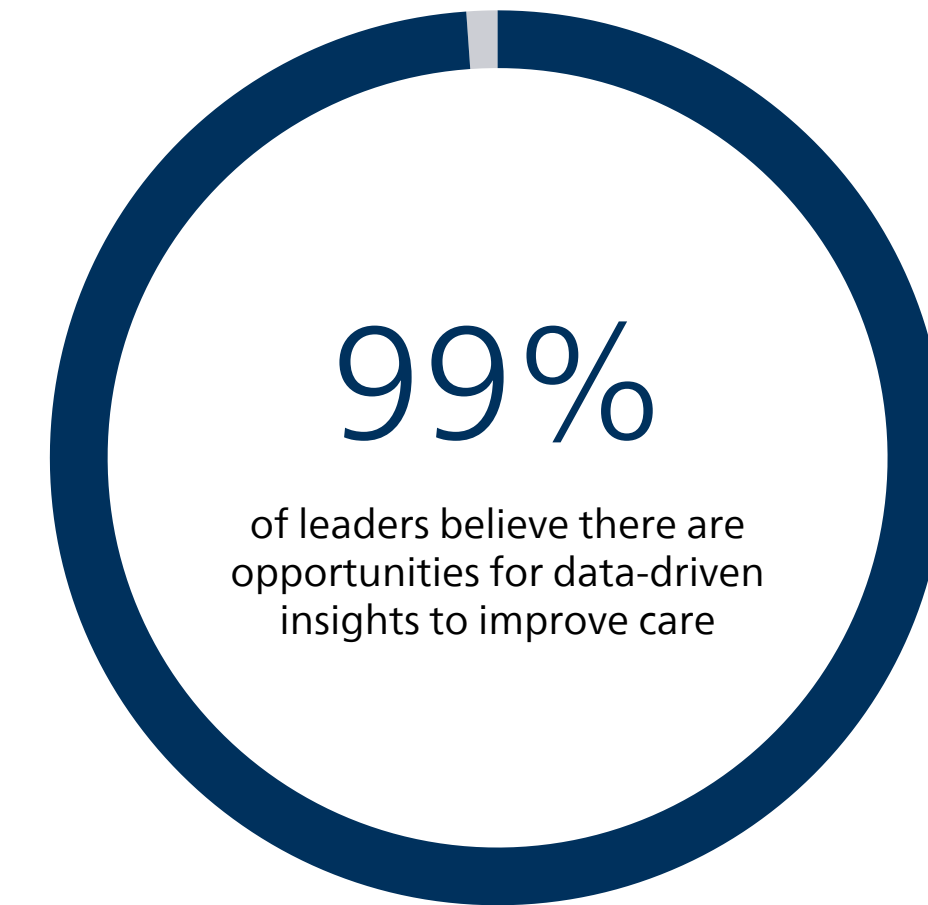
3

Connecting data and insights

Aiming for better data integration

Data holds potential to improve care

Healthcare leaders can see the opportunity for faster diagnoses and better care by bringing data from disparate sources together to deliver smart insights. Nearly all healthcare leaders (99%) believe that data-driven insights will improve care at their organization.

For example, they believe such insights have the potential to optimize treatment plans and care pathways, predict and reduce adverse patient events, and identify evidence-based practices.

99%
of leaders believe there are opportunities for data-driven insights to improve care

What healthcare leaders see as the biggest opportunities for data-driven insights to improve care*

48%
optimizing treatment plans or care pathways

45%
predicting and reducing adverse patient events

44%
identifying evidence-based practices
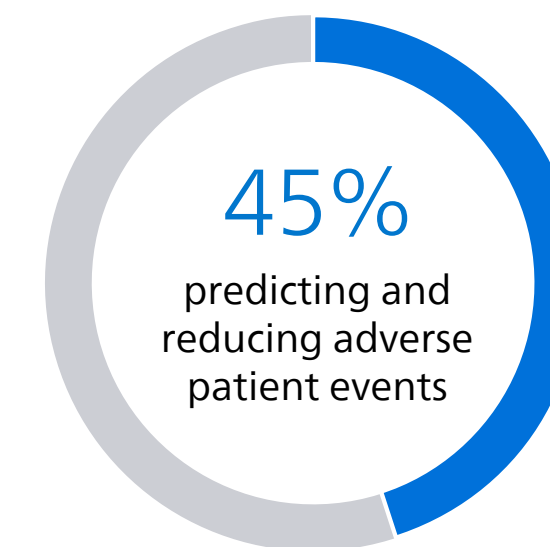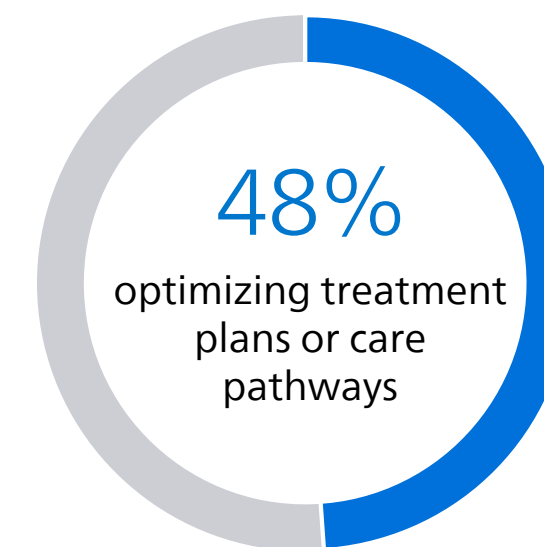
*Respondents were able to select multiple answers

Data integration challenges persist

Healthcare leaders are grappling with a lack of integration of data across different systems and devices

The majority of healthcare leaders say their organization experiences data integration challenges that remain a roadblock to providing timely, high-quality care.
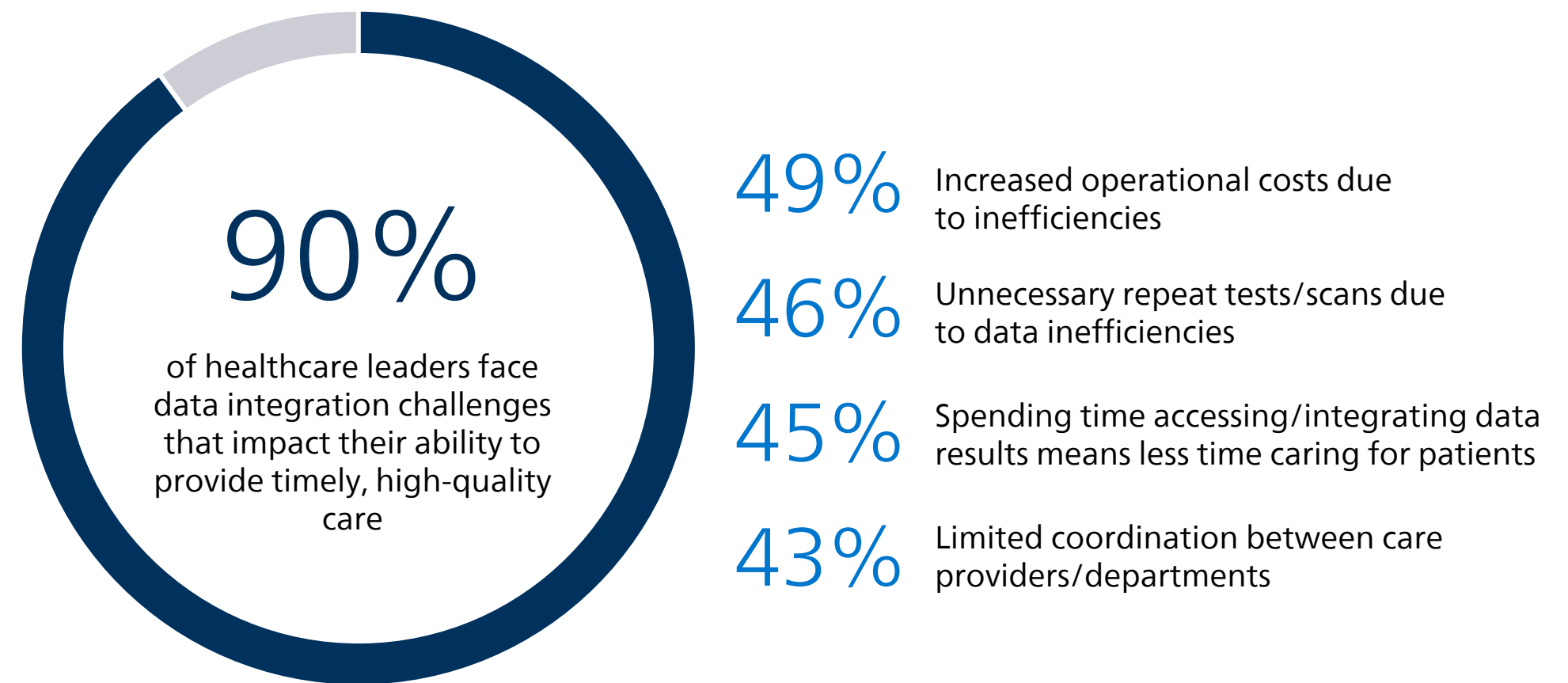
The impact includes increased operational costs, unnecessary repeat tests due to data inefficiencies, and poor coordination between care providers. They also see an increased risk of errors. Consequently, precious resources are diverted away from improving access.

Improved integration required
Improved interoperability between different platforms or healthcare settings is the most desired change (61%). The quality of data and its protection are also cited by those looking for greater accuracy of data and better data security and privacy (both 47%).

Top ways healthcare leaders see data integration challenges impacting the ability to provide timely, high-quality care*

90%

of healthcare leaders face data integration challenges that impact their ability to provide timely, high-quality care

49% Increased operational costs due to inefficiencies

46% Unnecessary repeat tests/scans due to data inefficiencies

45% Spending time accessing/integrating data results means less time caring for patients

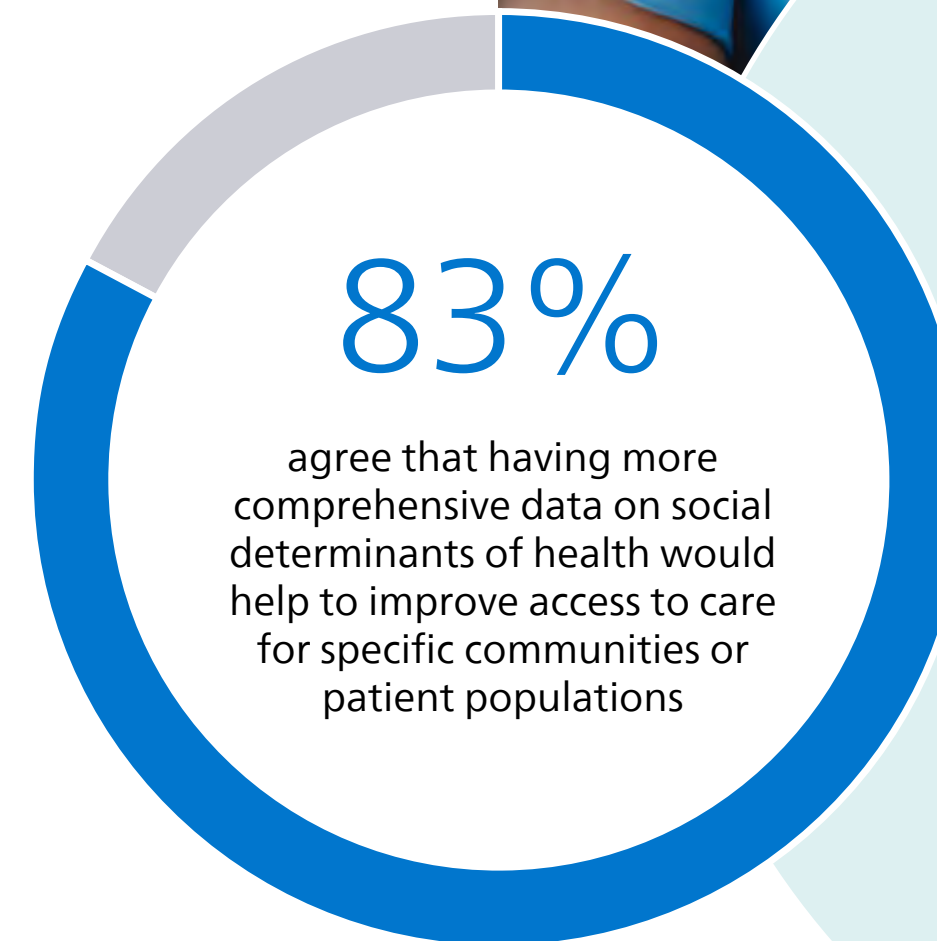**43%** Limited coordination between care providers/departments

*Respondents were able to select multiple answers

Recognizing the role of data in narrowing the health equity gap

Improving access to care with data insights

Healthcare leaders acknowledge the urgent need for integration and the importance of data-driven insights to help close care equity gaps – but more comprehensive data is needed. Almost all (96%) say that data-driven insights could help reduce disparities in health outcomes between communities.

For example, by analyzing data on patient demographics, medical histories, and social determinants of health, providers can identify patient populations who may be at high risk for chronic conditions and take proactive steps to provide preventive care.

83%

agree that having more comprehensive data on social determinants of health would help to improve access to care for specific communities or patient populations

How healthcare leaders believe data-driven insights can reduce disparities in health outcomes between communities

51% Finding and addressing delays in care delivery

50% Supporting evidence-based policy decisions to address health disparities

49% Facilitating targeted outreach and tailored interventions for specific populations

4

Broadening virtual care

Extending care: optimizing the clinician and patient experience

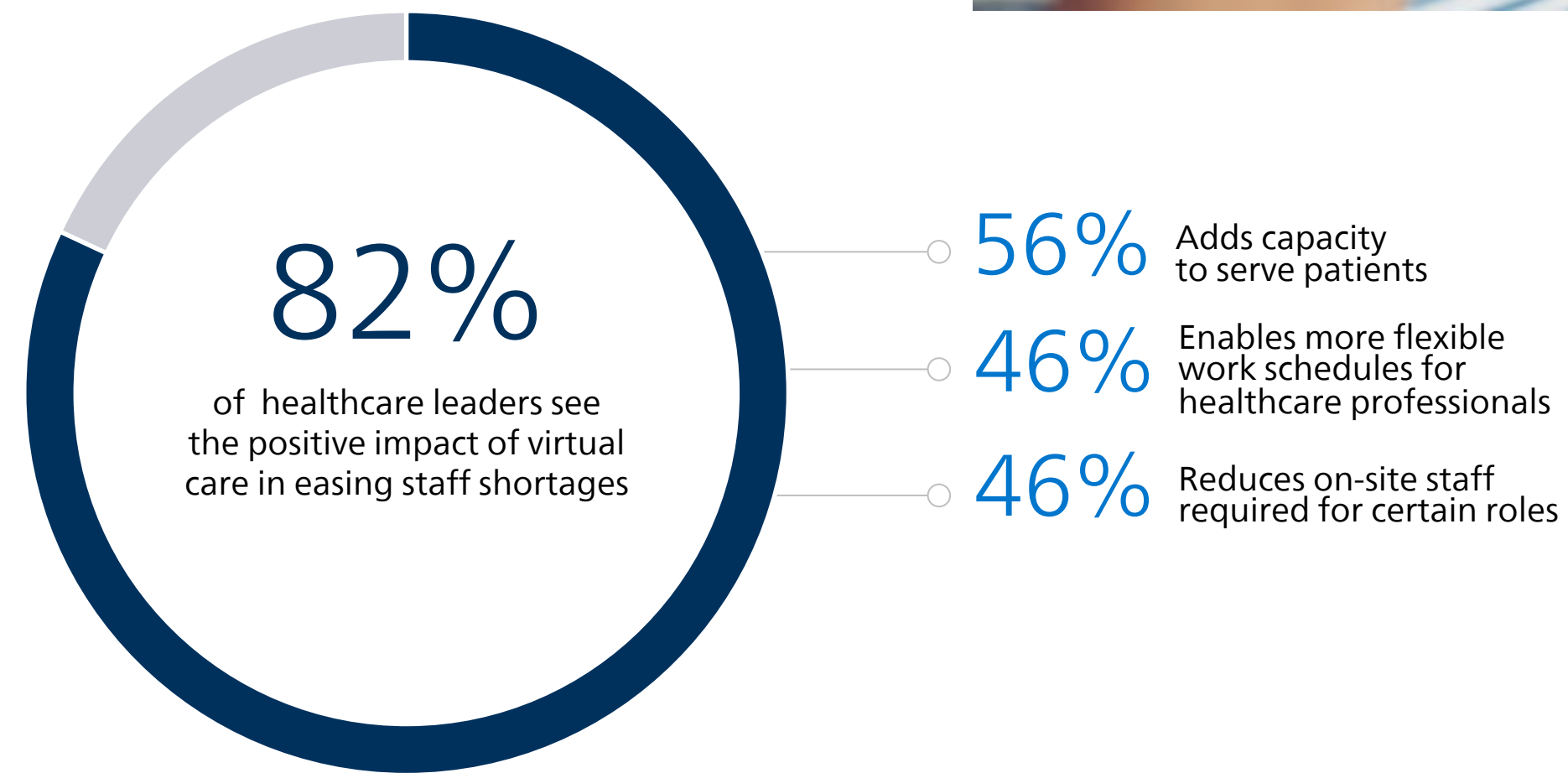## Relieving healthcare burdens while addressing urgent access issues

Most healthcare leaders (82%) see the positive impact of virtual care in easing staff shortages. Two-thirds of leaders believe that virtual care supports resourcing by increasing capacity to serve patients and enabling decreased clinical response time. When interviewed as part of our qualitative study, US leaders mentioned that, while certain procedures may be unavailable due to staff shortages, virtual care supports and improves the quality and timeliness of care.

59% also see advantages in terms of support for healthcare professionals. This includes increased support for complex patient management, the ability to collaborate with other healthcare professionals in different locations, and the expansion of specialist care to underserved communities.

Extending care through remote patient monitoring
The high implementation of remote patient monitoring reflects how healthcare leaders believe in the benefits of virtual care. Chronic disease management is among their areas of focus, with nearly half of healthcare leaders (45%) having already implemented remote patient monitoring in this area. Many also plan to implement this technology in elderly care (26%), pre-operative care and post-operative monitoring (both 25%).

View of how virtual care integration eases staff shortages*

82%
of healthcare leaders see the positive impact of virtual care in easing staff shortages

56% Adds capacity to serve patients

46% Enables more flexible work schedules for healthcare professionals

46% Reduces on-site staff required for certain roles

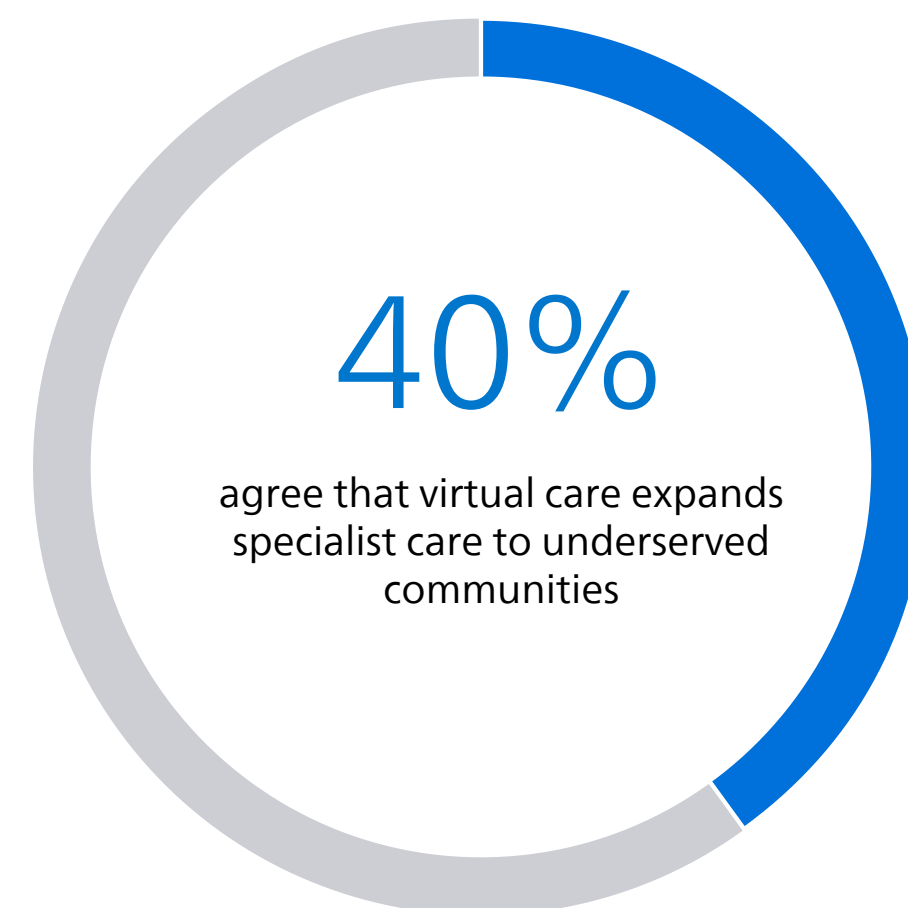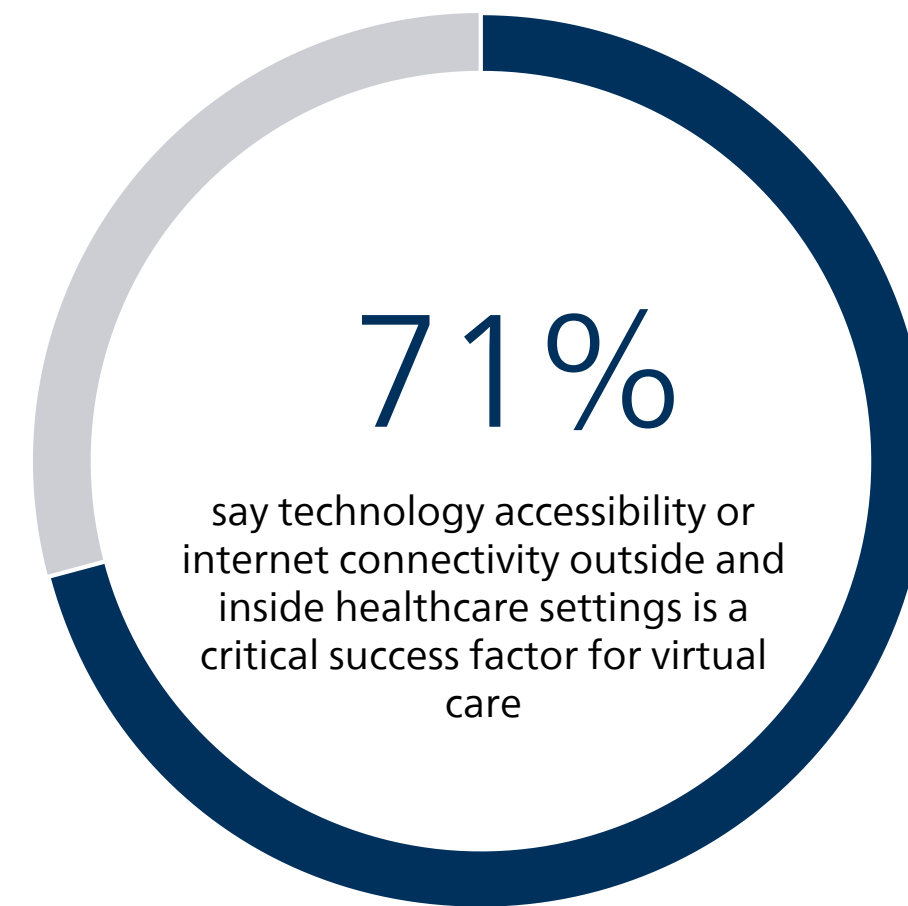*Respondents were able to select multiple answers

Virtual care and the digital divide

Facilitating access to telehealth

Healthcare leaders acknowledge that virtual care technologies can contribute to a growing digital divide. This can limit access to care for those who lack the necessary technology or skills. Among the critical factors cited by healthcare leaders for the delivery of virtual care are the provision of a seamless patient experience between virtual and in-person care (58%), technology accessibility and internet connectivity outside of healthcare settings (57%), and the digital literacy of patients (56%).

Broadening access with virtual care
Two-fifths of healthcare leaders (40%) say virtual care is enabling them to expand specialist services to underserved communities in the face of staff shortages. Over one-third (37%) also report decreased clinical response time. This gives patients a better chance of early screening, diagnosis and treatment, which in turn can lead to improved health outcomes.

71%
say technology accessibility or internet connectivity outside and inside healthcare settings is a critical success factor for virtual care

40%
agree that virtual care expands specialist care to underserved communities

Spotlight

Role of telehealth in achieving equitable access to healthcare

Virtual care can enhance the patient experience, improve health outcomes and reduce costs, but systemic disparities hinder healthcare access in some marginalized populations.

A 2022 study conducted by the Department of Health and Human Services Office of Health Policy[8] revealed that the people least likely to benefit from telehealth services had the lowest incomes and education levels, and were aged 65 and older from Black, Asian and Latino communities.

Standard guidance for a fairer offering of telemedicine services includes implementing policies to ensure broadband internet is widely available and collaborating with community partnerships.

More than half of counties in the US offer very limited or no access to maternity care. Within these counties, more than 2.2 million women of childbearing age live in full maternity care deserts, with no hospital offering obstetric care, no birth center and no obstetric provider[9]. Virtual care can help bridge this gap. A new initiative[10] in rural Colorado aims to address maternal care disparities in rural areas and increase access to prescribed prenatal care through at-home monitoring.

Appendices

Research methodology

2024 quantitative survey methodology

The quantitative study was executed by GemSeek, a global business and consumer research services firm employing a methodology of online (CAWI) surveying.

2,800 healthcare leaders, 200 in each of the 14 countries included (Australia, Brazil, China*, India, Indonesia, Italy, Japan, the Netherlands, Poland, Saudi Arabia, Singapore, South Africa, the United Kingdom, and the United States), participated in a 15-to-20-minute survey from December 2023 to February 2024.

Where relevant, the survey was translated into the local language. 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.

All percentages used when reporting results have been rounded to the nearest whole number. Therefore, totals may not add to 100%.

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)	Interview methodology
Australia	200	+/- 7.0	Online
Brazil	200	+/- 7.0	Online
China	200	+/- 7.0	Online
India	200	+/- 7.0	Online
Indonesia	200	+/- 7.0	Online
Italy	200	+/- 7.0	Online
Japan	200	+/- 7.0	Online
Netherlands	200	+/- 7.0	Online
Poland	200	+/- 7.0	Online
Saudi Arabia	200	+/- 7.0	Online
Singapore	200	+/- 7.0	Online
South Africa	200	+/- 7.0	Online
United Kingdom	200	+/- 7.0	Online
United States	200	+/- 7.0	Online
Total	**2,800**	**+/- 2.0**	

2024 qualitative interview methodology

The qualitative portion of the Future Health Index 2024 was also conducted by GemSeek. To provide context and additional depth to the quantitative data, the survey results were supplemented with findings from a series of 45-minute, English language interviews with healthcare leaders. These interviews were conducted February to March 2024. There were eight participants, two from each of the following countries: Singapore, South Africa, the United Kingdom, and the United States.

* 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 population in each country. However, this is estimated since robust data is not available on the number of healthcare leaders in each country surveyed.

Sources

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Glossary of terms

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.

Automation
The use of technology and software solutions to perform tasks and processes with limited human involvement. It may involve the application of digital tools, machines, and computer systems to streamline and optimize various aspects of healthcare delivery, administration, and management.

Clinical decision support
The provision of information to help inform decisions about patient care.

Data bias
A flaw that occurs when certain elements of a dataset are missing, under-represented or over-represented.

Data-driven insights
Information gathered from the analysis of raw data and used to inform decision-making.

Data integration
Used here to refer to a variety of clinical and/or operational information amassed from numerous sources including but not limited to electronic medical records (EMRs), medical devices, and workflow management tools.

Decarbonization
The process of removing carbon, or material containing carbon, from a substance or object.

Generative AI
Artificial intelligence algorithms that can be used to produce content such as text, images, audio or other data in response to inputted prompts.

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

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 organization
The hospital or healthcare facility for or in which the healthcare leader works.

Healthcare professional
Individuals who are directly involved in providing healthcare services to patients (including doctors, nurses, surgeons, specialists, technologists, technicians, etc.).

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

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.

Social determinants of health
Non-medical factors that influence health outcomes, such as the conditions in which people are born, grow, work and live.

Staff
This refers to all employees within a healthcare organization, including healthcare professionals, IT, financial services, administrative support, facilities, 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.

Timely, high-quality care
For the purposes of this survey, this phrase reflects healthcare being provided to all patients and the communities served by a healthcare organization.

Underserved communities
Includes people who receive fewer health care services and/or encounter barriers to accessing health care services (e.g., economic, geographic, cultural, and/or linguistic barriers).

Virtual care
The use of telecommunication technologies that remotely connects a patient to a healthcare professional, or a healthcare professional to a healthcare professional.

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.

The Future Health Index is commissioned by Philips.

To see the full report, visit
www.philips.com/futurehealthindex-2024

The Future Health Index 2024 report explores how healthcare leaders view their hospital's ability to deliver timely, high-quality care to everyone. A quantitative survey was conducted among almost 3,000 healthcare leaders from 14 countries (Australia, Brazil, China, India, Indonesia, Italy, Japan, the Netherlands, Poland, Saudi Arabia, Singapore, South Africa, the United Kingdom and the United States). This was supplemented by eight qualitative interviews of healthcare leaders, two from each of the following countries: Singapore, South Africa, the United Kingdom and the United States. Both the quantitative and qualitative research stages were conducted between December 2023 – March 2024.

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