future health index 2020

The age of **opportunity**

Empowering the next generation to **transform healthcare**

Australia

The Future Health Index is commissioned by Philips

Contents

Context

The research for the Future Health Index 2020 report was conducted in November and December 2019 during the onset of the COVID-19 pandemic, painting a **realistic picture of the state of healthcare systems** on the eve of the crisis. The report findings demonstrate that even before the pandemic, healthcare was in need of radical change. **Younger healthcare professionals have experienced significant stress and new responsibilities in recent months.**

The Future Health Index 2020 report is a valuable tool in helping us to uncover the needs of this next generation of healthcare professionals and, in doing so, establish where **changes can be made** to meet them.

Australia overview

Matt Moran, Managing Director Australia and New Zealand

Rapid innovation is shifting the foundation of healthcare.
The rapid adoption of virtual care technology, interoperable data platforms and updated outcome measurement are driving accelerated change across the industry.

With new solutions that enable more efficient and effective monitoring of patients both at home and in hospital, healthcare providers are better equipped than ever to streamline processes and provide greater care.

Increasing healthcare costs are putting greater strain on an overloaded healthcare system.
Rising healthcare costs in Australia, both in the private and public systems, are driving higher patient expenses and longer waiting times. Hospitals and healthcare practices around the world are increasingly shifting towards value-based care, which refers to the concept of healthcare professionals receiving reimbursement based on patient health outcomes rather than on the volume of tests or procedures completed.

Hence, more value-based care models need to be developed that focus on outcomes (quality) rather than activities (quantity) which we believe will go a long way in addressing the Quadruple Aim of improved patient experience, better health outcomes, improved staff experience and lower cost of care.

In the future, these value-based models will enable a patient-centric delivery of services and payments across the country.

There is a unique growth opportunity in healthcare.
The new generation of healthcare professionals are entering a world of rapid change. Digital technologies and virtual care are shifting how healthcare providers operate and the future of patient care. Looking to the future there is a significant opportunity for junior healthcare professionals to embrace these technologies and upskill to meet these new parameters.

The insights from the FHI report provide critical areas for healthcare leaders and policy makers to address. With young healthcare professionals shouldering a growing number of responsibilities, it's key that we evaluate how to better engage them to enable them to thrive and contribute positively to an evolving healthcare landscape.

Australia has already made great advances in healthcare and modernizing its healthcare system. It is equally important to nurture and enable our young healthcare professionals to be better equipped and prepared for the challenges to come.

This is the age of **opportunity.**

Future Health Index 2020 report: **research premise**

In its fifth year, the Future Health Index 2020 report is based on **proprietary research across 15 countries.**

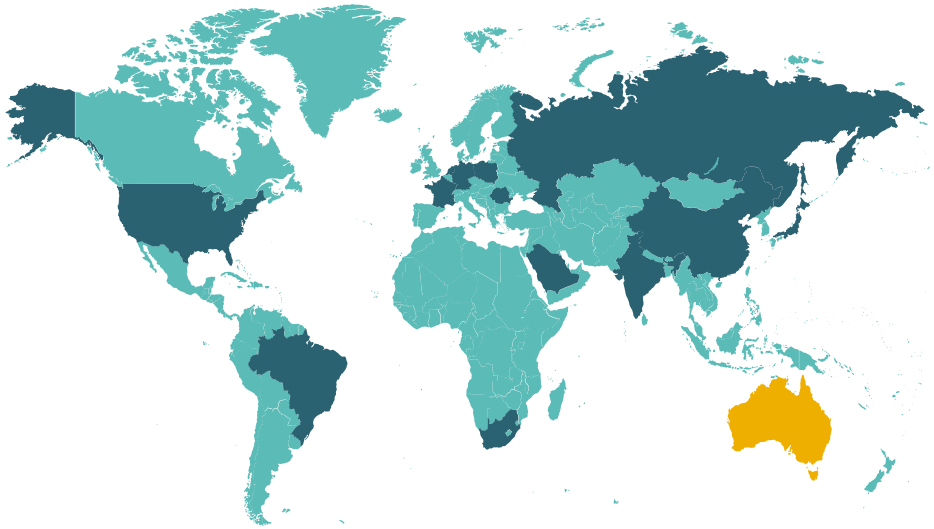
The research explores how to support and empower the next generation of healthcare professionals* and leaders who will **deliver tomorrow's healthcare,** specifically exploring their perceptions of today's reality and the role technology plays in supporting them to deliver better care.

This is the first global survey of its kind focused on the **next generation** of healthcare professionals.

Responses from almost

3,000

younger healthcare professionals across 15 countries*



Countries included in the research

1. Australia
2. Brazil
3. China
4. France
5. Germany
6. India
7. Japan
8. Netherlands
9. Poland
10. Romania
11. Russia
12. Saudi Arabia
13. Singapore
14. South Africa
15. United States of America

*Younger healthcare professionals are defined as healthcare professionals including general practitioners, specialists and nurses, under the age of 40. In Australia, 150 younger healthcare professionals were surveyed.

Exploring the gaps in **healthcare education** and **training**

Australia's hybrid public and private national healthcare system is held in high regard around the world. However, Australia's unique geography and diverse population pose evolving challenges to providing universal healthcare access*.

While this new generation of Australian healthcare professionals is set to bring ambition and a sense of idealism into the healthcare field, the Future Health Index 2020 report identifies some gaps in their experience that have the potential to impact job satisfaction. These gaps could potentially lead some to consider leaving the profession entirely, and as such these shortfalls in their experience must be taken seriously.

- **Skills gap.** Despite Australia's highly regarded healthcare system, its younger healthcare professionals indicate gaps in key non-clinical skills, in particular, business administration and driving efficiencies in their hospital or practice. As a result, this new generation of healthcare professionals is entering the workforce significantly underprepared for crucial tasks that fall within their role in a modern healthcare system. To help address this, many Australian hospitals and practices are providing continuous education to their younger healthcare professionals. This must continue to happen to enhance non-clinical capabilities.
- **Knowledge gap.** While some of Australia's younger healthcare professionals are familiar with value-based care, and attitudes are changing to new models of care, the concept is still embryonic in terms of its wider understanding and adoption. Value-based care refers to the concept of healthcare professionals receiving reimbursement based on patient health outcomes rather than on the volume of tests or procedures completed. Hospitals are still readily applying volume-based metrics, with the number of patients seen and profit margins the most common of those. A broader and deeper focus on value-based care measures to benchmark performance may help younger healthcare professionals in Australia better understand what value-based care means in practice.
- **Data gap.** Furthermore, Australia's younger healthcare professionals are not currently utilizing digital patient data to its maximum potential. This is mainly due to lack of understanding around how to use that data to inform patient care, and restrictions on sharing that data. This next generation of healthcare professionals wants more training and guidelines on the use of data to ensure it is being used to improve patient care effectively.

"I think non-clinical skills should be incorporated early on into doctors' training regardless of the specialty they chose."

Australia, Cardiologist, 6 years in practice

*https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-future-lshc-asia-pacific.pdf

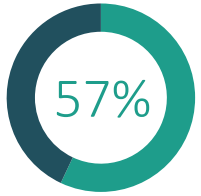
The **skills** gap

Australia's younger healthcare professionals start their careers missing **key non-clinical competencies**

The medical education system in Australia leaves many younger healthcare professionals feeling unprepared for business administration tasks and driving efficiencies in their hospital or practice.

Fresh from their formative medical school years, Australia's younger healthcare professionals are more likely than the average of those across all countries surveyed to feel unprepared for business administration tasks. Likewise, younger healthcare professionals in Australia are more likely than those in many of the countries surveyed to say their medical education did not prepare them at all to drive efficiencies. They do however feel more prepared for this aspect of their role than their German peers, who are among the least prepared for this key non-clinical skill.

Percentage who feel their medical education did **not prepare** them at all for:



Business administration tasks

- 44% 15-country avg.
- 65% France
- 62% Germany
- 50% United States of America

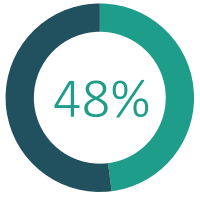
33% Driving efficiencies within their hospital or practice

- 25% 15-country avg.
- 27% France
- 51% Germany
- 31% United States of America

In an effort to close the skills gap, some Australian hospitals and practices provide their younger healthcare professionals with continuous education to ease the transition from the classroom into practice.

Many younger Australian healthcare professionals say that their hospital or practice is proactively identifying existing gaps in their education and providing the resources needed to help them succeed. Australia is more effective at providing continuous education for business administration tasks, and its hospitals and practices are more likely than the average of those across all of the countries surveyed to do so.

Percentage who say their hospital or practice provides **continuous education** as needed for:



Business administration tasks

- 37% 15-country avg.
- 23% France
- 27% Germany
- 30% United States of America

33% Driving efficiencies within their hospital or practice

- 39% 15-country avg.
- 26% France
- 27% Germany
- 39% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

The **knowledge** gap

Some Australians know a lot about **value-based care**, yet hospitals and practices still measure success with volume-based metrics

A moderate number of younger Australian healthcare professionals are knowledgeable about value-based care.

Around a quarter of Australian younger healthcare professionals indicated a high level of knowledge of value-based care. This is much greater than younger healthcare professionals in France, Germany or the United States of America, while remaining on par with the average of all the countries surveyed.

In 2057, it is projected that 22% of the population in Australia will be over the age of 65 and the profile of the older population is also projected to change. A larger portion of older Australian citizens will fall into the 75-84 demographic and require more resources for everyday living*. Greater awareness and understanding of the concept of value-based care will help drive the necessary shift needed towards implementation and effectively allocating resources for Australia's aging population.

73% only knew it **by name, knew a little or knew nothing at all about it**

27% knew **a lot about it**

Country comparisons (Those who had limited or no knowledge of value-based care prior to taking the survey):

78% 15-country avg.

96% France

90% Germany

83% United States of America

*https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/demographics-of-older-australians/australia-s-changing-age-gender-profile

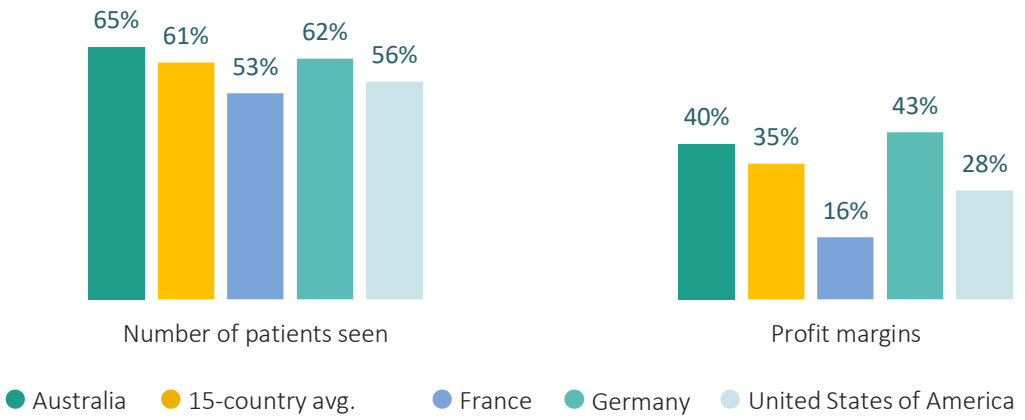
Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

Despite some knowledge levels of value-based care, Australian hospitals and practices rely heavily on volume-based metrics to measure success.

Australian hospitals and practices still use volume-based metrics, such as number of patients seen and profit margins, to measure performance.

85% of younger healthcare professionals in Australia say their hospital or practice **uses volume-based measures**

The percentage of **hospitals and practices** using these volume-based performance measures:



Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

The **data** gap

Younger Australian healthcare professionals **need support to improve their understanding** of how to use digital patient data

Uncertainty over how to use digital patient data and restrictions around sharing that data suggest that many of Australia's younger healthcare professionals are in the dark about how data can inform patient care.

Younger healthcare professionals in Australia are more likely than those in many of the countries surveyed, including Germany and the United States of America, to report that their top difficulties with digital patient data are restrictions on sharing data. These issues result in incomplete patient profiles, not having adequate amounts of data at their disposal, and not knowing how to use the data available to inform patient care.

78% Sharing restrictions often result in **incomplete digital patient data**

- 64% 15-country avg.
- 52% France
- 62% Germany
- 59% United States of America

63% **Don't have enough** digital patient data to influence outcomes

- 53% 15-country avg.
- 54% France
- 40% Germany
- 36% United States of America

47% **Do not know** how to use digital patient data to inform patient care

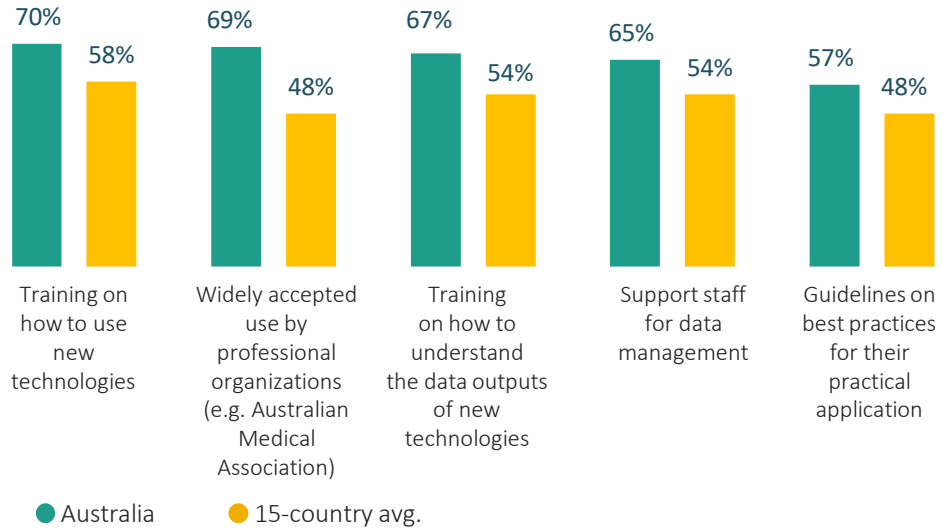
- 35% 15-country avg.
- 37% France
- 24% Germany
- 22% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

Australia's younger healthcare professionals want training and guidelines to help them use digital patient data successfully.

Younger healthcare professionals in Australia are keen to improve their skills in new technology. Qualitative research highlights that this group is particularly passionate about being competent in data analysis. The Future Health Index 2020 revealed that Australia's younger healthcare professionals are more interested in formal training on how to use new technologies and understand data outputs than those in many of the other countries surveyed.

Resources that would be helpful to ensure younger healthcare professionals are able to use **digital patient data** most effectively:



Base (unweighted): Total younger healthcare professionals (Australia n=150; 15-country avg. n=2,867)

Harnessing technology to help transform healthcare

Australia is committed to integrating technology into their healthcare systems. A key component of the National Digital Health Strategy in Australia is a universal health record called My Health Record, which has so far seen the country's medical professionals uploading 1.6 billion documents for the 22.65 million My Health Record-registered citizens^.

The Future Health Index 2020 report reveals that younger healthcare professionals in Australia see the value of digital health technology, and have particular interest in artificial intelligence (AI). This is a shift from last year's Future Health Index report^^, which showed that Australian healthcare professionals were less comfortable in applying AI in practice. Younger healthcare professionals in Australia report a number of factors affecting their ability to use digital patient data to its full potential.

- **Technology's role in improving patient care.** Australia's younger healthcare professionals are keenly aware of how digital health technologies can improve patient outcomes and experiences. They also believe that the adoption and use of digital health technologies will enable them to spend more time to spend with patients.
- **Technology's role in healthcare professionals' satisfaction.** Digital health technology adoption has the potential to significantly improve younger healthcare professionals' job satisfaction. In general, Australia's next generation of healthcare professionals believes technology can reduce their workload, decrease stress levels and improve their overall experience on the job.
- **The power of interoperability.** Many hospitals and practices in Australia are willing to embrace new digital health technologies. However, a lack of interoperability between platforms is preventing further adoption of new digital health technologies. Improved interoperability between platforms will ensure Australia's younger healthcare professionals derive more value from the health data that is available to them.
- **Recognizing the value of artificial intelligence.** The next generation of healthcare professionals in Australia believes in the potential for AI to offer personalized care and help keep patients healthy. Looking to the future of healthcare systems, Australian younger healthcare professionals are optimistic that AI will play a role in both patient experiences and healthcare professional satisfaction.

"EMRs allow portability of patient records and access to patient records while being remote from the patient (e.g. viewing notes and documenting patient interactions while being in a different ward or site to the patient). This allows for a potential increase in efficiency. I believe that this increased efficiency would also increase satisfaction."*

Australia, Hospital Medicine, 1 year in practice

*This refers to digital health records (e.g. EMRs, EHRs) which are technologies that can store a variety of health information, including medical history, test results, health indicators, etc. Digital health records can be used within a certain healthcare facility, across different healthcare facilities, by only the patients themselves, by one healthcare professional or across all healthcare professionals involved in a patient's care.

^https://conversation.digitalhealth.gov.au/my-health-record

**https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-future-lshc-asia-pacific.pdf

^^Future Health Index. (2019). Base (unweighted): Total healthcare professionals (Australia n=204)

Technology's role in improving patient care

Patient outcomes and experiences in Australia are improved through **digital health technology**

Most of Australia's younger healthcare professionals appreciate the benefits of anonymized health data, despite the perception of potential risks to individual privacy.

Younger healthcare professionals in Australia are more likely to have a very positive view of the use of anonymized data in delivering patient care than their peers in France, Germany and the United States of America.

84%

Agree the societal benefits of improved patient care from the use of anonymized health data outweigh the perceived data privacy concerns to the individual.

- 78% 15-country avg.
- 62% France
- 71% Germany
- 62% United States of America

In Australia, younger healthcare professionals understand the positive impact digital health technology can have on patients' treatment outcomes and overall experiences interacting with the broader healthcare system.

Younger healthcare professionals in Australia are more likely to agree that digital health technologies can improve various aspects of care compared to those practicing in France, Germany or the United States of America.

89%

They [digital health technologies] **are an important tool** to achieve better patient outcomes.

- 79% 15-country avg.
- 70% France
- 69% Germany
- 58% United States of America

82%

They [digital health technologies] **will improve patients' experiences.**

- 74% 15-country avg.
- 65% France
- 53% Germany
- 55% United States of America

70%

Using them [digital health technologies] **means more time for me to spend with patients.**

- 64% 15-country avg.
- 49% France
- 54% Germany
- 34% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

Technology's role in healthcare professionals' satisfaction

Younger Australian healthcare professionals have faith that the **right digital health technologies** can streamline their workload

Portability of healthcare data would most improve younger Australian healthcare professionals' satisfaction.

The next generation of healthcare professionals in Australia is more likely than those in many of the other countries surveyed to call for innovation around data portability, alongside their peers in France, Germany and the United States of America.

Percentage of younger healthcare professionals who say **portability of healthcare data** between hospitals or practices would most improve their work satisfaction:

- 39% Australia
- 29% 15-country avg.
- 36% France
- 44% Germany
- 45% United States of America

Australian younger healthcare professionals are more likely than those in some of the other countries surveyed to see digital health technologies as key for streamlining work efficiencies.

Australia's next generation of healthcare professionals almost universally believe that digital health technologies will potentially reduce their workload. These younger healthcare professionals are also more likely than those in France, the United States of America and Germany to expect adoption of this technology to decrease their stress levels, while remaining on par with the average of all younger healthcare professionals surveyed.

92% The right technologies have the **potential to reduce my workload.**

- 81% 15-country avg.
- 65% France
- 68% Germany
- 78% United States of America

73% I expect the adoption of the right technologies to **decrease my stress levels.**

- 67% 15-country avg.
- 36% France
- 54% Germany
- 38% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

The power of **interoperability**

Australian hospitals are embracing new technology, but **interoperability issues** complicate the process

According to the country's younger healthcare professionals, Australian hospitals and practices are particularly open to embracing new technology.

Australian hospitals and practices are more likely than the average of those across all countries surveyed to be willing to embrace new technologies. This is especially true when compared to those in Germany, another country recognized as having an advanced healthcare system.

The percentage of hospital or practices **willing to embrace technology**:

87%

- 78% 15-country avg.
- 83% France
- 66% Germany
- 86% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States n=201)

Interoperability challenges are especially difficult for Australia's younger healthcare professionals and can have a negative effect on further digital health technology adoption.

Australia's younger healthcare professionals are more likely than those in some of the other countries surveyed to report that a lack of interoperability across systems and platforms is a top barrier faced by Australian hospitals and practices.

- 33% Australia
- 25% 15-country avg.
- 23% France
- 28% Germany
- 23% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States n=201)

Interoperability is essential for Australia's younger healthcare professionals to make use of the wealth of data available to them.

Younger healthcare professionals in Australia are more likely than those in many of the other countries surveyed to say improved interoperability between platforms is the top opportunity to ensure healthcare data is used to its fullest potential. This was further supported in qualitative interviews with younger Australian healthcare professionals, who were enthusiastic about the need for multi-disciplinary patient care where all specialties can exchange information about the same patient.

68%

believe **interoperability between platforms** needs to be improved to ensure healthcare data is utilized to its fullest potential

- 58% 15-country avg.
- 49% France
- 53% Germany
- 68% United States of America

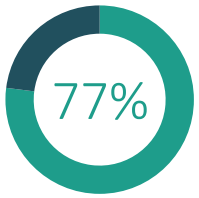
Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States n=201)

Recognizing the value of **artificial intelligence**

Artificial intelligence will lead the way in **keeping patients healthy** and **younger healthcare professionals satisfied**

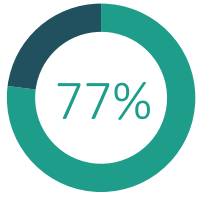
Australia's next generation of healthcare professionals believes artificial intelligence (AI) can be used to keep patients healthy, make accurate diagnoses and offer personalized care.

Australia's younger healthcare professionals, regardless of whether they use AI in their daily practice or not, have strong hopes that the technology can usher in a new era of patient care. Younger healthcare professionals in Australia are more likely than those in France, Germany or the United States of America to recognize how AI can improve patient care and outcomes.



believe AI can **provide them with the tools needed to keep patients healthy**

- 71% 15-country avg.
- 53% France
- 58% Germany
- 50% United States of America



believe AI will **provide patients with more accurate diagnoses**

- 71% 15-country avg.
- 50% France
- 57% Germany
- 50% United States of America

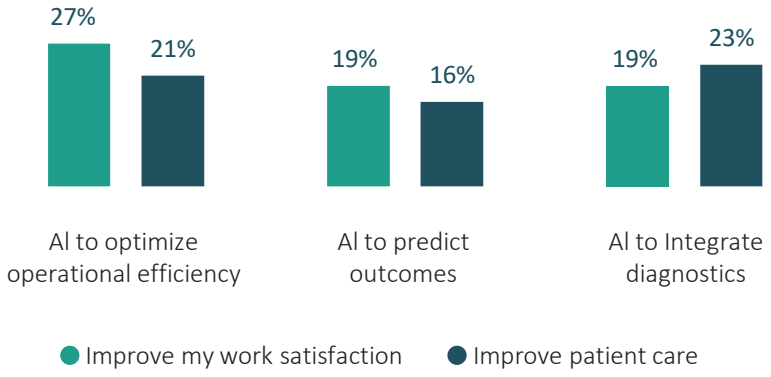
believe AI will allow them to **offer personalized care**

- 69% 15-country avg.
- 54% France
- 56% Germany
- 41% United States of America

In addition to improving patient care, AI can also improve the job satisfaction of Australia's younger healthcare professionals.

Australia's younger healthcare professionals are starting to appreciate the many ways in which AI can benefit both their patients and themselves, from optimizing efficiencies, predicting outcomes and integrating diagnostics. They are just as likely to believe that their work satisfaction and the care they are delivering their patients will improve with the use of AI.

The digital technologies that would be **most beneficial** to:



Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

Creating the ideal healthcare **working environment**

Australia's younger healthcare professionals place a great deal of importance on workplace culture when they select where to start their careers in medicine. In a study conducted by The Health Foundation, Australia's general practitioners were found to be the second happiest of those in the 11 countries surveyed*. However, while Australia's next generation of healthcare professionals reports higher levels of job satisfaction than the average, they do not feel empowered to effect positive change in their workplace. A difficulty in communicating their experiences and concerns to executives in leadership may lead to lower levels of job satisfaction in the future.

- **Flexibility first.** Australia's younger healthcare professionals see an average of 76 patients per week, well below the average of those across all countries surveyed at 100 patients per week. This lower workload may contribute to their high job satisfaction and low rates of stress in the workplace.
- **Selecting a supportive workplace.** When selecting a hospital or practice in which to work, Australia's younger healthcare professionals pay close attention to its culture and work-life balance. A culture of collaboration, professional autonomy and working hours play a bigger role in their eventual decision over other considerations, such as reputation and the availability of the latest medical technology and equipment.
- **Transformational change has internal barriers.** Among Australia's younger healthcare professionals, only about half feel empowered to drive change in terms of how their hospital or practice is managed. The impact of decisions made by non-medical leaders weighs heavily on this group. Younger healthcare professionals in Australia and across the Asia Pacific countries surveyed say that this a key reason why they cannot drive change in their workplace. This also leads to lower job satisfaction and makes them worry about their future career prospects as they work toward management experience themselves.

*https://www.ausdoc.com.au/news/australian-gps-among-worlds-happiest

"Industry leaders need to prioritise getting in the right people, the well-being of their staff, ensuring good work-life balance and ensuring adequate remuneration."

Australia, Cardiologist, 5 years in practice

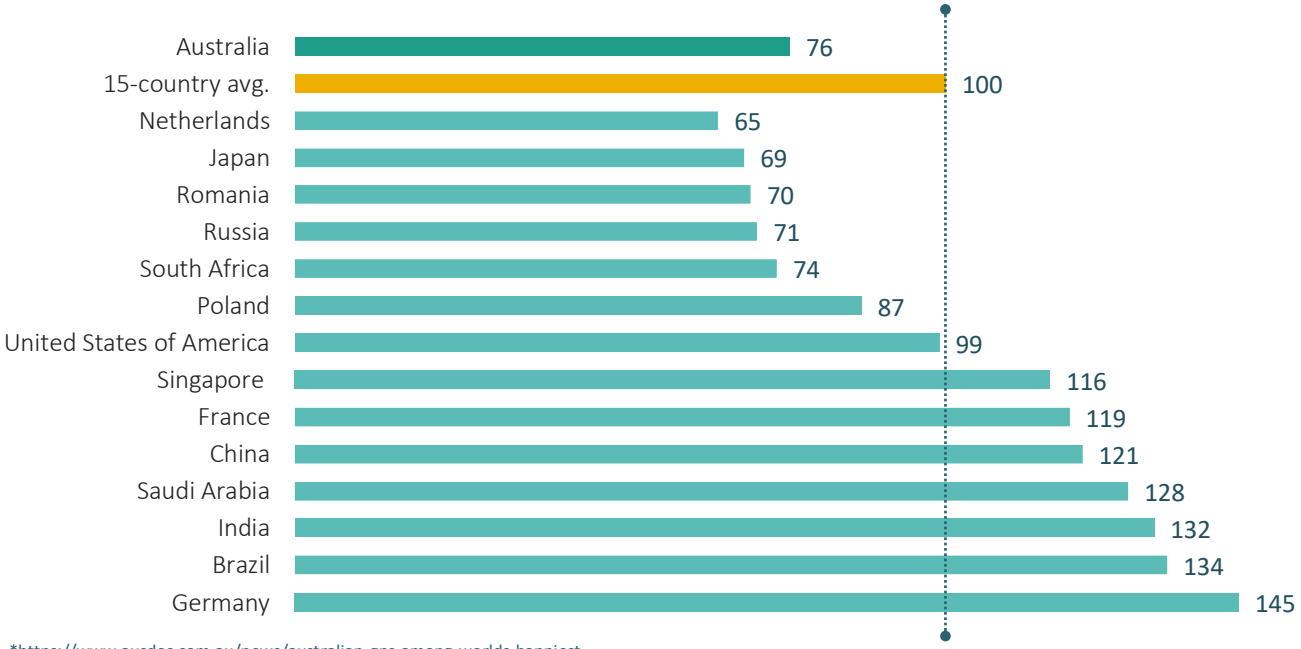
Flexibility first

Australia's younger healthcare professionals are **among the most satisfied** with their jobs

Younger Australian healthcare professionals see fewer patients on average than their counterparts in France, Germany and the United States of America.

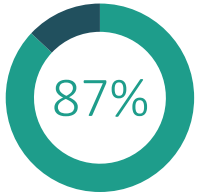
In an average week, Australia's younger healthcare professionals see 76 patients, while the average of those across all countries surveyed is 100. This may be contributing to a greater sense of work-life balance in Australia, which could ultimately lead to greater job satisfaction and higher talent retention in the healthcare profession.

Average patients seen by younger healthcare professionals (per week) by country:



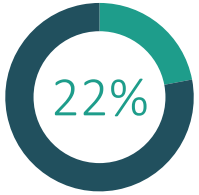
In Australia, younger healthcare professionals are satisfied with their role and are less likely to consider leaving the healthcare profession due to stress.

With more time to consult with their patients*, Australia's younger healthcare professionals are more satisfied with their work and less likely to have considered leaving the profession than their counterparts in France, Germany or the United States of America.



are satisfied with their work as a healthcare professional

- 80% 15-country avg.
- 75% France
- 79% Germany
- 74% United States of America



considered leaving the healthcare profession as a result of work-related stress

- 34% 15-country avg.
- 35% France
- 38% Germany
- 46% United States of America

*https://www.ausdoc.com.au/news/australian-gps-among-worlds-happiest

Base (unweighted): Total younger healthcare professionals (n=2,867); Australia (n=150), Brazil (n=203), China (n=201), France (n=202), Germany (n=200), India (n=202), Japan (n=202), the Netherlands (n=201), Poland (n=201), Romania (n=202), Russia (n=200), Saudi Arabia (n=201), Singapore (n=100), South Africa (n=201), United States of America (n=201)

Selecting a **supportive** workplace

Australians desire a **culture of collaboration** and **work-life balance**

Australia's younger healthcare professionals value workplace culture more than the latest equipment or technology.

Australia's younger healthcare professionals are more likely than their peers in many of the other countries surveyed to value workplace culture and work-life balance when choosing a hospital or practice. Younger Australian healthcare professionals also pay closer attention to the reputation of a healthcare facility than the average of those across all countries surveyed.

	Australia	15-country average	
Workplace culture	97%	90%	A culture of collaboration: **79%** Professional autonomy: **78%**
Work-life balance	94%	87%	Working hours: **83%** Culture supports work-life balance: **81%**
Reputation	90%	81%	Strong record of patient outcomes: **68%** The hospital or practices' reputation: **59%**
Latest equipment/ technology	87%	86%	Availability of the latest medical equipment and technologies: **66%** Availability of technology for everyday tasks: **59%**

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of America n=201)

Transformational change has **internal barriers**

Decisions made by non-medical leaders are causing concern and having a negative effect on job satisfaction

Australian younger healthcare professionals do not feel empowered to drive change.

Younger healthcare professionals in Australia do not feel able to drive change in how their hospital or practice is managed. However, they are more likely than their peers in the United States of America to feel that they have a say.

53%

of younger healthcare professionals in Australia feel they are able to drive change in how their hospital or practice is managed.

- 53% 15-country avg.
- 43% France
- 54% Germany
- 42% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United State of Americas n=201)

The decisions of non-medical leaders have a huge impact on Australia's younger healthcare professionals' career satisfaction.

90%

of younger healthcare professionals in Australia say **decisions being made by non-medical leaders have a negative impact** on their satisfaction with their role as a healthcare professional.

- 83% 15-country avg.
- 91% France
- 89% Germany
- 89% United States of America

35%

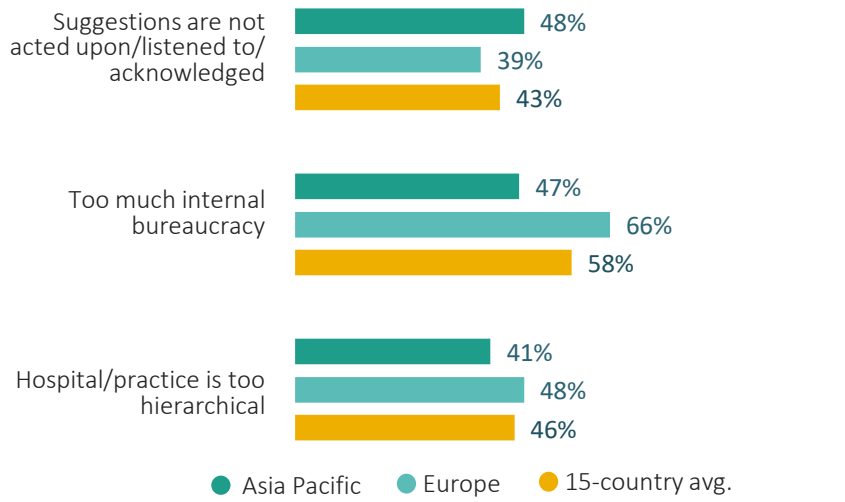
of younger Australian healthcare professionals say **decisions being made by non-medical stakeholders** concerns them most about their career.

- 30% 15-country avg.
- 43% France
- 36% Germany
- 46% United States of America

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; Australia n=150; France n=202; Germany n=200; United States of Americas n=201)

Moreover, across the Asia Pacific countries surveyed, suggestions not being acted upon and internal bureaucracy prevent younger healthcare professionals from feeling like they have a say in the management of their workplace.

Younger healthcare professionals across the Asia Pacific countries surveyed (including Australia) say that they do not feel empowered to drive change in their workplace because their suggestions are not listened to or acknowledged. Too much internal bureaucracy also prevents them from driving change, but they are less likely than their European counterparts (including Germany and France) to say so.



Please note the Asia Pacific (region) referenced in this report consists of Australia, China, India, Japan and Singapore.

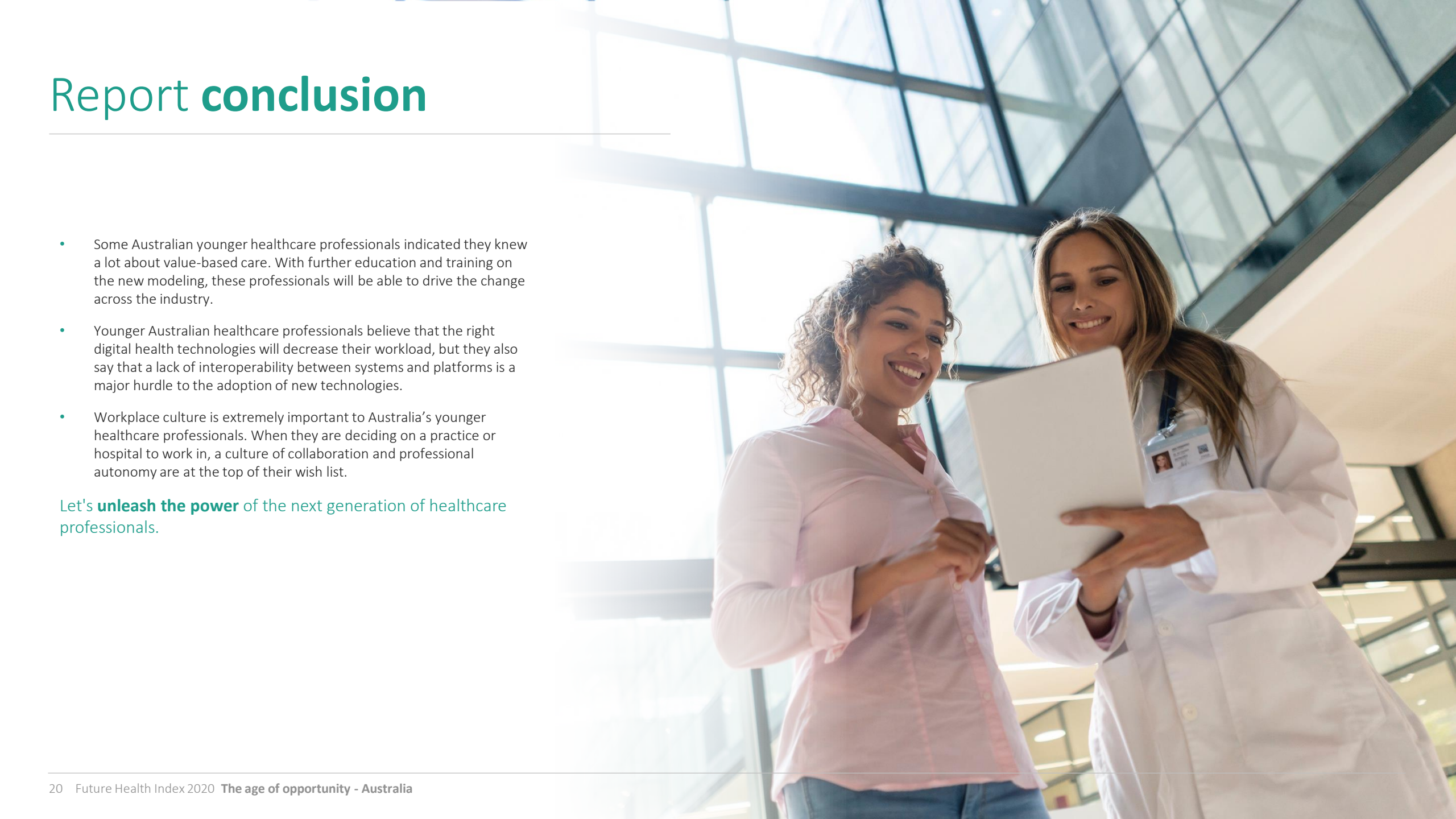
Base (unweighted): Total younger healthcare professionals who do not feel or do not know if they feel they are able to drive change in how their hospital/practice is managed (15-country avg. n=1,382; Asia Pacific n=397)

Report conclusion and recommendations

Report **conclusion**

- Some Australian younger healthcare professionals indicated they knew a lot about value-based care. With further education and training on the new modeling, these professionals will be able to drive the change across the industry.
- Younger Australian healthcare professionals believe that the right digital health technologies will decrease their workload, but they also say that a lack of interoperability between systems and platforms is a major hurdle to the adoption of new technologies.
- Workplace culture is extremely important to Australia's younger healthcare professionals. When they are deciding on a practice or hospital to work in, a culture of collaboration and professional autonomy are at the top of their wish list.

Let's **unleash the power** of the next generation of healthcare professionals.



Recommendations

The Future Health Index 2020 report has captured **vital insights** from a new generation of healthcare professionals, revealing the gap between their expectations around training, technology and culture, and the reality of their experience as healthcare professionals.

When considering how to address the issues that have been highlighted in the report, there are three core areas on which healthcare leaders should first focus:

Education and training

- ✓ Increase focus on administrative and business management to reduce the burden on healthcare professionals
- ✓ Provide training on the use and interpretation of technology and data
- ✓ Build an understanding of the principles of value-based care

Technology

- ✓ Invest in data sharing technologies to make them more usable
- ✓ Harness technology to both improve work-life balance and clinical performance
- ✓ Work with payers and government to encourage the industry to deliver greater product interoperability

Culture

- ✓ Examine decision-making hierarchy and process to ensure that opinions of younger healthcare professionals are acknowledged and acted upon
- ✓ Involve younger professionals in the operational side of the hospital or practice
- ✓ Enable flexible working through staggered shift patterns
- ✓ Leverage technology to minimize stress and burnout

"With a strong younger generation of healthcare professionals, the system becomes more resilient and more adaptable to potential future crises."

Glossary of terms

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

Artificial intelligence (AI)
Artificial intelligence (AI) uses data science techniques, designed by people and inspired by intelligent behavior, to create systems and solutions that can sense, reason, act and adapt to assist with complex and repetitive tasks.

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

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

Data security
Protecting data against unauthorized access.

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

Electronic medical records (EMRs) and electronic health records (EHRs) fall within the term 'digital health records'.

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

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

Healthcare professionals under 40
This is our group of survey respondents: healthcare professionals (all medical staff, including doctors, nurses, surgeons, radiologists, etc.) aged under 40 years at the time of the research. Some of these people will already be leaders in their field, but together they will make up the main body of the healthcare workforce over the next 20 years.

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

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

Medical education
Education related to the practice of becoming a healthcare professional – both the initial medical school training and continuing medical education following qualification.

Quadruple Aim
Philips makes value-based care principles actionable by addressing the Quadruple Aim:

- Improved patient experience – improving the patient experience of care (including quality and satisfaction)
- Better health outcomes – improving the health of individuals and populations
- Improved staff experience – improving the work-life balance of healthcare professionals
- Lower cost of care – reducing the per capita cost of healthcare

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.

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

Telehealth
The use of electronic information, digital health technology or mobile health applications and telecommunications technologies to support long-distance exchange between healthcare professionals and patients and healthcare professionals and their peers, as well as for health-related education, public health and health administration.

Value-based care
Value-based care describes a healthcare system that aims to increase access to care and improve patient outcomes at lower cost. It is a people-centric approach that spans the entire health continuum. In short, it is about providing the right care in the right place, at the right time and the right level of cost. At Philips, we also focus on improving the experiences of both the patient and the healthcare providers in line with the Quadruple Aim.

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

Younger healthcare professional
All medical staff under the age of 40 who have completed their first medical or nursing degree.

Research methodology

Research background

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

In 2016, the Future Health Index measured perceptions of healthcare to produce a snapshot of how healthcare is experienced on both sides of the patient-professional divide. In 2017, it compared these perceptions to the reality of health systems in each country researched. In 2018, the Future Health Index identified key challenges to the large-scale adoption of value-based healthcare and overall improved access. It assessed where connected care technology can help speed up the healthcare transformation process. In 2019, the Future Health Index explored technology's impact on two aspects of the Quadruple Aim: the healthcare experience for both patients and healthcare professionals[1] and how technology is moving us to a new era of continuous transformation.

2020 research overview and objectives

Now in its fifth year, the Future Health Index 2020 report builds on the findings of the previous reports by examining the expectations and experiences of younger healthcare professionals aged under 40 and how they can be empowered to meet the demands of tomorrow's healthcare.

As the first global survey of its kind, the Future Health Index 2020 report features intriguing insights into the next generation of healthcare professionals, a group that will form most of the healthcare workforce over the next 20 years. The research explores this group's expectations around technology, training and job satisfaction, and the reality of their experience as healthcare professionals.

The research gives a clear mandate to healthcare leaders to respond to the concerns of this young generation of healthcare professionals and highlights three areas to address as a matter of urgency: education and training, technology, and workplace culture.

The research for the 2020 Future Health Index was conducted in 15 countries (Australia, Brazil, China[2], France, Germany, India, Japan, the Netherlands, Poland, Romania, Russia, Saudi Arabia, Singapore, South Africa and the United States of America).

To provide a holistic understanding of the current healthcare systems around the world, the 2020 study combines quantitative surveys and qualitative online focus groups conducted from January-February 2020 among the following key stakeholders:

- Healthcare professionals in 15 countries (quantitative)
- Healthcare professionals in 5 countries (qualitative)

2020 quantitative survey methodology

In partnership with SERMO, an independent global market research firm, a survey was fielded from November 15 to December 27, 2019 in 15 countries (Australia, Brazil, China, France, Germany, India, Japan, the Netherlands, Poland, Romania, Russia, Saudi Arabia, Singapore, South Africa and the United States of America) in their native language. The survey was conducted online and offline (as relevant to the needs of each country) with a sample size of 200 per country for healthcare professionals under 40 years old. The exceptions were Singapore and Australia[3], which each had slightly smaller samples. The survey length was approximately 15 minutes.

The total sample from the survey includes:

- 2,867 healthcare professionals under the age of 40 years old (defined as all medical staff, including doctors, nurses, surgeons, radiologists, etc.), who have completed their first medical or nursing degree.

At the 95% confidence level, the 15-country total for the healthcare professional population has an estimated margin of error[4] of +/- 1.8 percentage points.

References can be found at the end of this section

Research methodology

Below is the specific sample size, 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	150	+/- 8.0	Online
Brazil	203	+/- 6.9	Online
China	201	+/- 6.9	Online
France	202	+/- 6.9	Online
Germany	200	+/- 6.9	Online
India	202	+/- 6.9	Online
Japan	202	+/- 6.9	Online
Netherlands	201	+/- 6.9	Online
Poland	201	+/- 6.9	Online
Romania	202	+/- 6.9	Online
Russia	200	+/- 6.9	Online
Saudi Arabia	201	+/- 6.9	In-person
Singapore	100	+/- 9.8	Online
South Africa	201	+/- 6.9	Online
United States of America	201	+/- 6.9	Online

Weighting

Total country weighting:

The 15-country average is an average calculation whereby each country's sample size was weighted to have the same value, as such ensuring that each country has an equal weight in this total. The same was done for all regional totals, as well as emerging country and developed country totals[5].

Country classifications are according to the International Monetary Fund[6].

- For the Future Health Index 2020 report, Brazil, China, India, Poland, Romania, Russia, Saudi Arabia and South Africa are considered emerging countries.
- For the Future Health Index 2020 report, Australia, France, Germany, Japan, the Netherlands, Singapore and the United States of America are considered developed countries.

Statistical analysis

A statistical analysis was performed to explore the relationship between the type of hospital/practice (in this instance, 'smart,' 'digital' or 'analog') and younger healthcare professionals' agreement with several questions asked in the Future Health Index 2020 survey. The analysis showed that there is, in fact, a statistical relationship between the type of hospital/practice and certain aspects of their careers.

The following survey questions were used for this analysis:

To what extent do you agree or disagree with the following?

- The reality of my career lives up to the hopes and expectations that I had during my medical education
- I regularly experience work-related stress
- I have considered leaving the healthcare profession as a result of work-related stress
- Advancements in medical technology make me excited about the future of the healthcare profession

How satisfied or dissatisfied are you in your work as a healthcare professional?

- In Saudi Arabia shown as "How satisfied or dissatisfied are you in your personal decision to become a healthcare professional?"

A chi-square test of independence was performed for the analysis of each of these survey questions. All results showed the relationship between these variables was significant at the $p<.001$ level.

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.

Research methodology

2020 qualitative interviews methodology

To provide context to the quantitative data (as described previously), the research was supplemented with two waves of online focus groups with doctors. Wave one, conducted from January 10, 2020-January 13, 2020, had 36 participants across the following markets: Brazil, United States of America, France, Germany and Australia. Wave two, conducted from February 3, 2020-February 6, 2020, had 41 participants across the following markets: Brazil, United States of America, France, Germany and Australia. Online focus groups were conducted in participation with SERMO, an independent global market research firm.

References

1. For the purposes of this survey, 'healthcare professional' refers to all medical staff, including doctors, nurses, surgeons, radiologists, etc.
2. Each third-party data source approaches data collection for China differently. Some include Taiwan and/or Hong Kong, others treat them separately. For the purposes of this research, when third-party data has been used, we have not adjusted the data from the way it was collected. As such the data is reflective of each source's approach to measuring China. Survey data is representative of Mainland China only and does not include Taiwan or Hong Kong.
3. Singapore healthcare professional sample: 100 in total; Australia healthcare professional sample: 150 in total.
4. Estimated Margin of Error is the margin of error that would be associated with a sample of this size for the full healthcare professional population in each country. However, this is estimated since robust data is not available on the number of healthcare professionals under the age of 40 and specialty mixes in each country surveyed.
5. Countries are classified as emerging or developed by the International Monetary Fund based on 1) per capita income level, 2) export diversification, and 3) degree of integration into the global financial system.
6. "World Economic Outlook Database." International Monetary Fund, April.2018. https://www.imf.org/external/pubs/ft/weo/2018/01/weodata/weoselagr.aspx.

The Future Health Index is commissioned by Philips.

To see the full report visit www.philips.com/futurehealthindex-2020

The 2020 study comprises original research via a survey of 2,867 healthcare professionals under the age of 40 years old, who have completed their first medical or nursing degree, across 15 countries: Australia, Brazil, China, France, Germany, India, Japan, Netherlands, Poland, Romania, Russia, Saudi Arabia, Singapore, South Africa and United States of America.

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