future
health
index
2020

The age of
opportunity

Empowering the
next generation to
transform healthcare

South Africa

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.

The age of **opportunity**

Jasper Westerink, Philips Africa CEO

We stand at a critical point in healthcare.

Access to reliable, quality healthcare is a key challenge for South Africans, exasperated by a lack of medical insurance, neglected facilities and a shortage of healthcare practitioners, which is likely a large factor contributing to high levels of work-related stress felt by younger healthcare professionals, and an increasingly burnt-out workforce.

Physicians, nurses and support staff are juggling the challenges of patient care with increased administration, while managers deal with staffing issues and increasing pressure to reduce costs.

There is a danger that personal and professional stress, combined with inflexible working cultures and a lack of empowerment, could prompt an early exodus from the profession, leading to the future collapse of the South African healthcare system.

But there is opportunity.

The current generation of younger professionals will soon make up the majority of our local healthcare workforce. They have the responsibility – and the privilege – of delivering the changes that are needed to ensure healthcare systems are fit for purpose. Value-based care is the ultimate aspiration of this, delivered through the Quadruple Aim of better health outcomes, improved patient and staff experience, and lower cost of care.

 The challenge to transform healthcare lies on this group's shoulders, but too often their views are not widely understood. The Future Health Index 2020 report explores this generation's expectations around technology, training and job satisfaction, and the reality of their experience as healthcare professionals.

Immediate and considered action to protect the future integrity of the healthcare system.

It is vital for healthcare leaders to prioritise the career satisfaction of the younger generation of South African healthcare professionals in order to protect the future integrity of the healthcare system.

From the respondents surveyed these young people are passionate about their calling and are dedicated to making a difference in the lives of their patients, but they need change.

 These younger healthcare professionals experience high levels of work-related stress, and many have considered leaving the healthcare profession as a result, yet there is a general optimism about what the future holds.

 While the healthcare system in South Africa still has a long way to go in terms of technological advancements which can aid in improved patient care, workplace satisfaction and system efficiencies, this generation have high expectations that the adoption of the right technologies will transform the industry.

 I urge healthcare leaders in South Africa to absorb these valuable insights in order to attract and retain this pool of younger talented professionals who will shape the healthcare systems of tomorrow and forge a dynamic future, with the right support.

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

*Includes all medical staff under the age of 40.
**Includes 201 younger healthcare professionals in South Africa.

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

Theme 1

Widespread access to healthcare is a key challenge for South Africa with issues such as a lack of medical insurance, dilapidated facilities, and a significant shortage of doctors, holding the country's healthcare system back^. In an attempt to address these challenges, the South African government has proposed a state-run medical insurance system, the National Health Insurance (NHI)*, aimed to give all South Africans access to quality healthcare. The country is also aiming to tackle its healthcare issues by strengthening digital health governance structures, creating robust integrated platforms for information systems and more, as laid out in the National Digital Health Strategy for South Africa 2019 – 2024**.

While these developments help address healthcare infrastructure issues, the Future Health Index 2020 report shows that broader issues impact younger healthcare professionals' daily experiences. This, in turn, has an impact on the quality of patient care. Additionally, the report shows some gaps in three areas of their experience that might contribute to addressing these broader issues. Working to close these gaps will help create tangible improvements in South Africa's healthcare system.

- **Skills gap.** In South Africa, younger healthcare professionals have to balance providing their patients with the best care possible while juggling a number of non-clinical demands. While some younger South African healthcare professionals say that their hospitals and practices provide continuous education in non-clinical tasks, there is still room to further close the gaps experienced. In turn, this can improve patient experiences, specifically in business administration and driving efficiencies.

- **Knowledge gap.** Across the world, hospitals and practices are beginning to move towards value-based care. While younger South African healthcare professionals have some understanding of value-based care, a majority lack vital knowledge of the topic, indicating opportunity to enhance knowledge of the concept. In fact, many South African hospitals and practices are using spend per patient, which is a volume-based metric, to measure performance more frequently than the average of those across all of the countries surveyed.

- **Data gap.** About half of younger South African healthcare professionals report that they know how to use digital patient data to inform patient care. They often report feeling overwhelmed by the amount of data they have available, and sharing restrictions on data continue to pose problems in furthering use. Implementing additional training and support are considered key to ensuring younger healthcare professionals in South Africa use digital patient data to its maximum effect.

^https://www.bloomberg.com/news/articles/2019-08-14/how-south-africa-plans-to-fix-an-ailing-health-system-quicktake
*https://nai.uu.se/news-and-events/news/2019-11-06-quality-healthcare-for-all-in-south-africa---is-it-possible.html
**http://www.health.gov.za/index.php/2014-08-15-12-54-26?download=3651:national-digital-health-strategy-for-south-africa-2019-2024
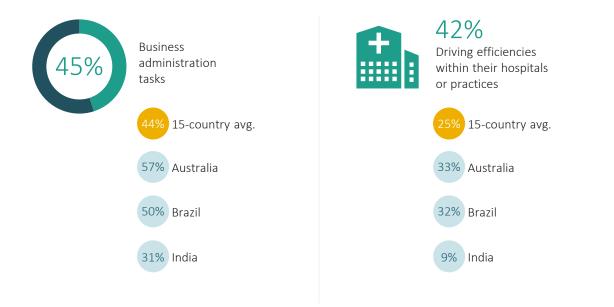
The **skills** gap

Younger South African healthcare professionals need continuous education to help build their non-clinical skills

The biggest skills gaps in South Africa include business administration and improving efficiency in the management of hospitals and practices.

Across all countries surveyed, many younger healthcare professionals say their medical education did not provide them with key non-clinical skills necessary for modern healthcare. Many younger South African healthcare professionals feel unprepared for business administration tasks and are among the most likely of their peers across all of the countries surveyed to feel unprepared to drive efficiencies within their hospital or practice.
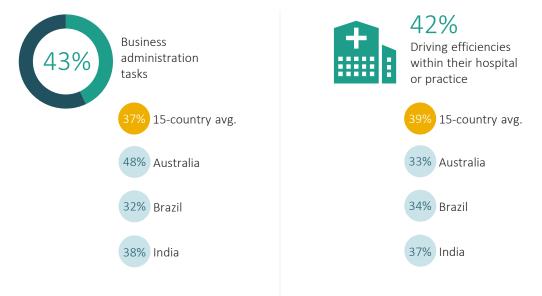
Percentage who feel their medical education did **not prepare** them at all for:

45% Business administration tasks

42% Driving efficiencies within their hospitals or practices

44% 15-country avg.
57% Australia
50% Brazil
31% India

25% 15-country avg.
33% Australia
32% Brazil
9% India

Some South African hospitals and practices are providing continuous education to close the gaps in non-clinical skills. However, many younger South African healthcare professionals do not have access.

Younger South African healthcare professionals say that their hospital or practice provides continuous education for skills related to business administration tasks and driving efficiencies. However, more than half say their hospitals and practices are not providing this education. There are significant opportunities for many hospitals and practices to offer the same educational opportunities as others in the system.

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

43% Business administration tasks

42% Driving efficiencies within their hospital or practice

37% 15-country avg.
48% Australia
32% Brazil
38% India

39% 15-country avg.
33% Australia
34% Brazil
37% India

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)

The **knowledge** gap

Knowledge of value-based care is low in South Africa, posing an opportunity to build understanding

Knowledge of value-based care* is limited, with a majority of younger healthcare professionals in South Africa having little to no knowledge.

In healthcare systems across the world, there is a general shift towards value-based care models. Younger healthcare professionals will ultimately be responsible for implementing this shift, so their understanding of the concept is critical. Despite this, there is limited or no knowledge of value-based care among many younger healthcare professionals across all of the countries surveyed. This is just as true for younger healthcare professionals in South Africa, indicating a need to improve their understanding.

71% Only knew it **by name, knew a little or knew nothing at all about it**

29% 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.   **73%** Australia   **72%** Brazil   **81%** India

*Value-based care is the concept of healthcare providers receiving reimbursement based on patient health outcomes rather than on the volume of tests or procedures completed.

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)

For many younger healthcare professionals in South Africa, their experience with volume-based performance metrics reinforces their lack of knowledge of value-based care.
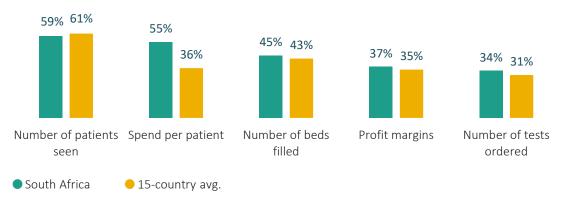
Most South African hospitals and practices are using volume-based metrics to measure performance.

93% of younger healthcare professionals in South Africa say their hospitals or practices **use volume-based measures**

South African hospitals and practices are using spend per patient as a way to measure performance more frequently than the average of those across all of the countries surveyed.

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

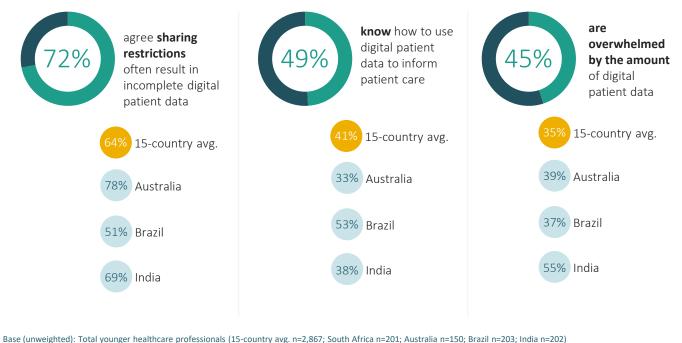|	South Africa	15-country avg.
Number of patients seen	59%	61%
Spend per patient	55%	36%
Number of beds filled	45%	43%
Profit margins	37%	35%
Number of tests ordered	34%	31%

● South Africa   ● 15-country avg.

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201)

The **data** gap

Training and support staff can help to strengthen knowledge, use and effectiveness of digital patient data

There is some knowledge of digital patient data among younger healthcare professionals in South Africa. However, there is room for more awareness as well as a need to address sharing restrictions and a sense of feeling overwhelmed; all of these currently impact the use of patient data.
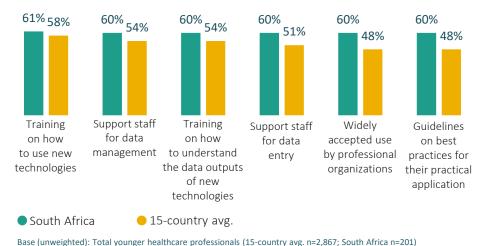
Younger healthcare professionals in South Africa are more likely than the average of those across all of the countries surveyed to say they know how to use digital patient data to inform patient care. However, about half say they don't know how to use this data or are undecided. Additionally, alongside countries such as India, Saudi Arabia and China, younger South African healthcare professionals are more likely than the average of those across all countries surveyed to feel overwhelmed by the amount of data available.

Younger South African healthcare professionals believe a blend of training, support staff and guidelines would help them use digital patient data more effectively.

No resources distinctly stand out as being the most helpful for younger South African healthcare professionals. Instead, they seek a mix of all types of support to ensure effective use of data. They are more likely than younger healthcare professionals in Brazil (45%) and India (49%) to say that support staff for data entry would be most helpful. Younger South African healthcare professionals are also more likely than their Brazilian peers (46%) to say that widely accepted use by professional organizations would be helpful.

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

72% agree **sharing restrictions** often result in incomplete digital patient data

- 64% 15-country avg.
- 78% Australia
- 51% Brazil
- 69% India

49% **know** how to use digital patient data to inform patient care

- 41% 15-country avg.
- 33% Australia
- 53% Brazil
- 38% India

45% **are overwhelmed by the amount** of digital patient data

- 35% 15-country avg.
- 39% Australia
- 37% Brazil
- 55% India

Bar chart:
Resource	South Africa	15-country avg.
Training on how to use new technologies	61%	58%
Support staff for data management	60%	54%
Training on how to understand the data outputs of new technologies	60%	54%
Support staff for data entry	60%	51%
Widely accepted use by professional organizations	60%	48%
Guidelines on best practices for their practical application	60%	48%

● South Africa ● 15-country avg.

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201)

Harnessing technology to help transform healthcare

Theme 2

According to the Future Health Index 2019 report*, many South African healthcare professionals see the value of digital health technology in improving their patients' experience of healthcare, as well as their own job satisfaction. This year's Future Health Index 2020 report found that recognition of digital health technology's potential continues to be evident. In fact, younger South African healthcare professionals feel hopeful that the adoption of next generation healthcare technologies can improve the healthcare system. However, this younger generation of healthcare professionals trends lower than some of the other countries surveyed on what they think of digital health technologies. This may be due to being at an earlier stage of digital health technology adoption along with other barriers the country's healthcare system must overcome to successfully harness the benefits of technology.

- **Technology's role in improving patient care.** Younger South African healthcare professionals continue to recognize the role of technology in improving patient outcomes and experiences. For example, it frees up more clinician time for patient care. They also feel strongly that the societal benefits of improved patient care through the use of anonymized health data outweigh the perceived data privacy concerns to the individual.

- **Technology's role in healthcare professionals' satisfaction.** Most younger healthcare professionals in South Africa are convinced of technology's potential to reduce their workload. Many see the portability of healthcare data as the top digital health innovation that would most improve their workplace satisfaction.

- **Dismantling data barriers.** Many younger healthcare professionals in South Africa are facing challenges in accessing useful or relevant patient data. This generation of healthcare professionals believes that a lack of interoperability stands in the way of fully embracing technology at hospitals and practices. Improving interoperability will ensure that healthcare data is being used in a way that provides actionable insights.

- **Recognizing the value of artificial intelligence.** As younger healthcare professionals in South Africa try new technologies to improve the healthcare system, artificial intelligence is seen as having great potential to improve both patient care and workplace satisfaction.

*Future Health Index. (2019). Base (unweighted): Total healthcare professionals (South Africa n=200)

Technology's role in improving patient care

Digital health technologies are valued as tools to enhance patient outcomes and experiences

Most younger South African healthcare professionals agree that the benefits of using anonymized health data outweigh privacy concerns.
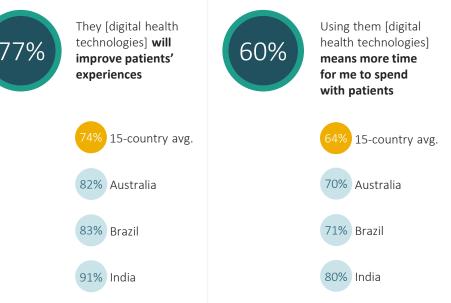
While a majority of younger healthcare professionals in South Africa believe the benefits of anonymized health data outweigh privacy concerns, they, along with their peers surveyed in Brazil, are slightly less likely than the average of those across all countries surveyed to feel this way.

Younger healthcare professionals in South Africa believe that technology can play a prominent role in improving patient outcomes and experiences.

In the Future Health Index 2019 report*, many healthcare professionals in South Africa acknowledged the importance of patient data to positively impact patients' experiences. This year's Future Health Index data shows that the next generation of South African healthcare professionals continues to appreciate how digital health technologies can play a powerful role in improving patient care.

71%

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.
- 84% Australia
- 67% Brazil
- 82% India

83%

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

- 79% 15-country avg.
- 89% Australia
- 87% Brazil
- 90% India

77%

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

- 74% 15-country avg.
- 82% Australia
- 83% Brazil
- 91% India

60%

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

- 64% 15-country avg.
- 70% Australia
- 71% Brazil
- 80% India

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)

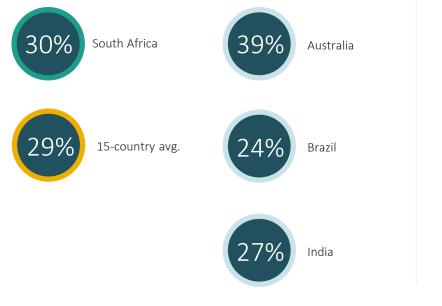*Future Health Index. (2019). Base (unweighted): Total healthcare professionals (South Africa n=200)

Technology's role in healthcare professionals' satisfaction

Technology is key to improving workplace satisfaction for younger South African healthcare professionals

For younger South African healthcare professionals, portability of healthcare data is the top digital health innovation that would most improve their job satisfaction.
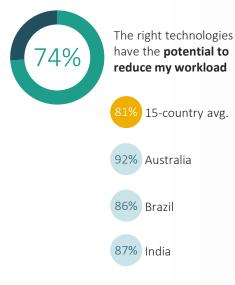
Younger South African healthcare professionals are on par with the average of those across all countries surveyed to believe this.

Percentage of those who feel **portability of healthcare data** between hospitals or practices would most improve work satisfaction:

30% South Africa

39% Australia

29% 15-country avg.

24% Brazil

27% India

Additionally, younger South African healthcare professionals see the implementation of the right technology having the ability to streamline workload.

Despite this, they are less likely to feel this way compared to their peers in many of the other countries surveyed, including Australia, Brazil, and India.

74% The right technologies have the **potential to reduce my workload**

81% 15-country avg.

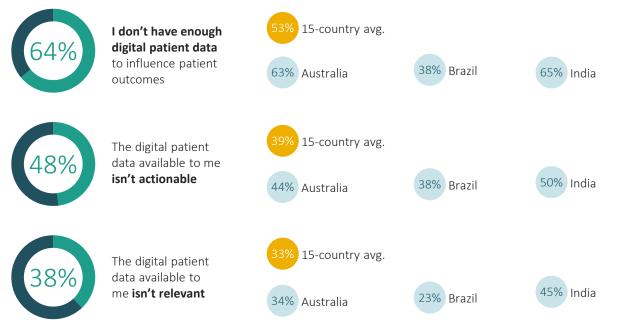**92%** Australia

86% Brazil

87% India

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)

Dismantling **data barriers**

Improved interoperability between platforms creates an opportunity to increase effectiveness of digital patient data

Most younger South African healthcare professionals do not have access to enough digital patient data to influence outcomes, and many face additional barriers when trying to use what is available.

Younger South African healthcare professionals are more likely than those in many of the other countries surveyed to say they have insufficient data to influence outcomes and to feel that the data they have available does not lead to actionable insights. Some younger South African healthcare professionals also feel that the digital patient data they have is not relevant. These issues may stem from South Africa being a developing country and still in the early stages of the digital patient data adoption cycle.

64% — **I don't have enough digital patient data** to influence patient outcomes

53% 15-country avg.
63% Australia   38% Brazil   65% India

48% — The digital patient data available to me **isn't actionable**

39% 15-country avg.
44% Australia   38% Brazil   50% India

38% — The digital patient data available to me **isn't relevant**

33% 15-country avg.
34% Australia   23% Brazil   45% India

Younger healthcare professionals in South Africa see improved interoperability between platforms as an important piece of the puzzle for improving the effectiveness of patient data.

In the Future Health Index 2019 report*, some South African healthcare professionals indicated that lack of interoperability was a reason for not sharing data inside or outside of their health facilities. This year's study shows that a lack of interoperability continues to create issues for younger healthcare professionals in South Africa, acting as a barrier to embracing technology at hospitals and practices. This trails behind budgetary constraints (42%) and is on par with bureaucratic processes (20%) and a lack of understanding of benefits (19%).

Utilizing healthcare data to its fullest potential:

56% believe **interoperability between platforms** needs to be improved to ensure healthcare data is utilized to its fullest potential

58% 15-country avg.   61% Brazil
68% Australia   55% India

Barrier to embracing technology at hospital or practices:

Lack of interoperability
20% (South Africa)
25% (15-country avg.)

● South Africa
● 15-country avg.

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)
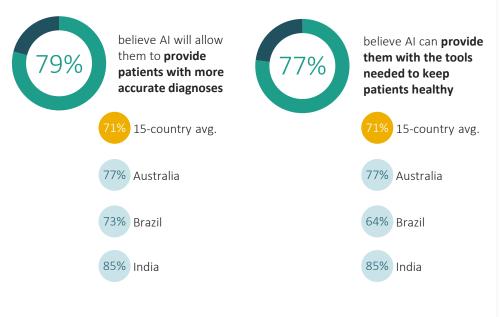
*Future Health Index. (2019). Base (unweighted): Total healthcare professionals who do not share patient information outside their health facility (South Africa n=114) OR Total healthcare professionals who do not share patient information inside their health facility (South Africa n=102)

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)

Recognizing the value of **artificial intelligence**

Artificial intelligence can improve both **patient care and workplace satisfaction**
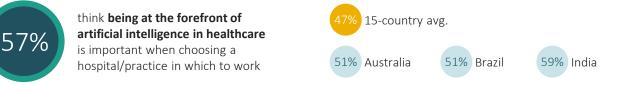
This next generation sees artificial intelligence (AI) as an effective tool in improving patient care.

South African healthcare professionals have been implementing AI in their practices to help those living with HIV*. This may contribute to younger South African healthcare professionals' belief that AI has the ability to improve patient care in other ways in the future.

79% believe AI will allow them to **provide patients with more accurate diagnoses**

71% 15-country avg.

77% Australia

73% Brazil

85% India

77% believe AI can **provide them with the tools needed to keep patients healthy**

71% 15-country avg.

77% Australia

64% Brazil

85% India

More than half of younger South African healthcare professionals view being at the forefront of AI in healthcare as important when selecting their place of work.

Younger South African healthcare professionals are more likely than the average of those across all of the countries surveyed to believe the use of artificial intelligence is important when choosing a hospital or practice in which to work.
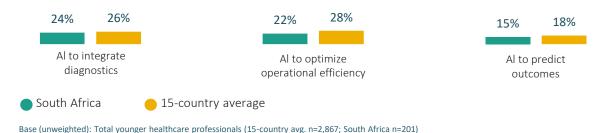
57% think **being at the forefront of artificial intelligence in healthcare** is important when choosing a hospital/practice in which to work

47% 15-country avg.

51% Australia   **51%** Brazil   **59%** India

AI is also believed to have the ability to positively impact workplace satisfaction.

Not only do younger South African healthcare professionals see the value of AI for patient care, but some also believe that using AI to integrate diagnostics and optimize operational efficiency will be most beneficial in increasing their workplace satisfaction.

The digital technologies that would be **beneficial for improving workplace satisfaction**:

	AI to integrate diagnostics	AI to optimize operational efficiency	AI to predict outcomes
South Africa	24%	22%	15%
15-country average	26%	28%	18%

● South Africa   ● 15-country average

Creating the ideal healthcare
working environment

3

South Africa's universities and other higher education institutions produce between 1,200 and 1,300 medical graduates annually, a figure widely viewed as grossly inadequate for the country's population*. The shortage of healthcare professionals in South Africa** is likely a large factor contributing to the high levels of work-related stress felt by younger healthcare professionals. There is a danger that stress, combined with inflexible working cultures and a lack of empowerment, could prompt an early exodus from the profession. It is vital for healthcare leaders to prioritize the career satisfaction of the younger generation of South African healthcare professionals in order to protect the future integrity of the healthcare system.

Minimizing stress. This next generation of younger South African healthcare professionals is dealing with high levels of work-related stress. This stress leads many of them to consider leaving the profession altogether, which may further exacerbate the country's shortage of healthcare professionals**. Improved technology may be one way to help them stay in the field, as most younger healthcare professionals in South Africa are excited about the future of their profession due to technology and believe it will reduce their stress levels.

Selecting a supportive workplace. For younger healthcare professionals in South Africa, culture, technology and work-life balance are deciding factors when choosing a practice or hospital in which to work. Working hours, work-life balance and autonomy are among the top of their list of ideal workplace characteristics.
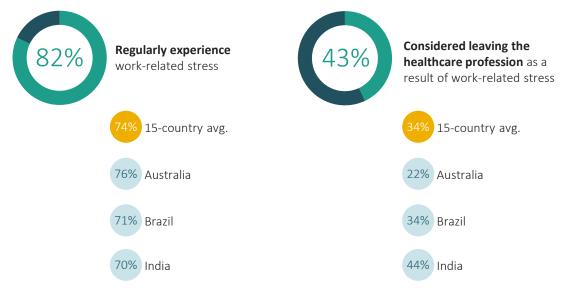
Transformational change has internal barriers. Worryingly, only about half of younger healthcare professionals in South Africa feel they have the ability to drive change in how their hospitals or practices are managed. Internal barriers, including non-medical stakeholders, are negatively impacting this generation of healthcare professionals and creating concerns about the future of their careers.

*https://www.who.int/workforcealliance/031616south_africa_case_studiesweb.pdf
**https://www.washingtonpost.com/business/how-south-africa-plans-to-fix-an-ailing-health-system/2019/08/14/7a8b0fae-be6a-11e9-a8b0-7ed8a0d5dc5d_story.html

Minimizing **stress**

Many younger South African healthcare professionals see technology as a way to **reduce their work-related stress**

Most younger healthcare professionals in South Africa experience high levels of work-related stress, and many have considered leaving the healthcare profession as a result.

South Africa faces a shortage of physicians among its population. In fact, the World Bank noted there's a ratio of 0.9 physicians per 1,000 people in South Africa*. This shortage of medical personnel could be affecting younger South African healthcare professionals' stress and job satisfaction levels, as many regularly experience work-related stress and have considered leaving the healthcare profession as a result. Their feelings of stress and consideration of leaving are higher than the average of their peers across all pf the countries surveyed.

82% Regularly experience work-related stress

74% 15-country avg.

76% Australia

71% Brazil

70% India

43% Considered leaving the healthcare profession as a result of work-related stress

34% 15-country avg.

22% Australia

34% Brazil

44% India

However, these younger professionals have high expectations that the adoption of the right technologies will reduce their stress and are excited by the future of medical technology.

On par with the average of those across all countries surveyed, younger South African healthcare professionals expect that the adoption of digital health technologies will decrease their stress levels. Also, a majority say that advancements in medical technology make them excited about the future of the profession.

72% say advancements in medical technology make them **excited about the future of the healthcare profession**

72% 15-country avg.   88% Australia   77% Brazil   90% India

63% Expect the adoption of digital health technologies to **decrease their stress levels**

67% 15-country avg.   73% Australia   79% Brazil   81% India

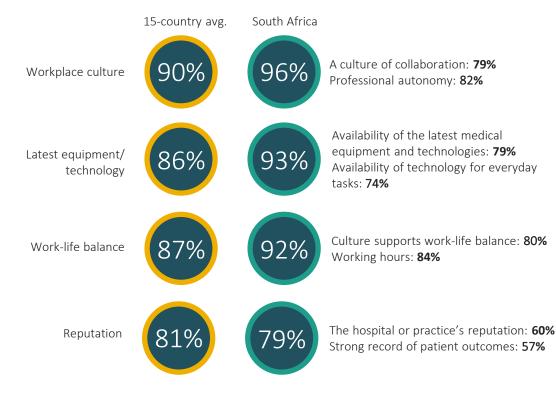*https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=ZA

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)
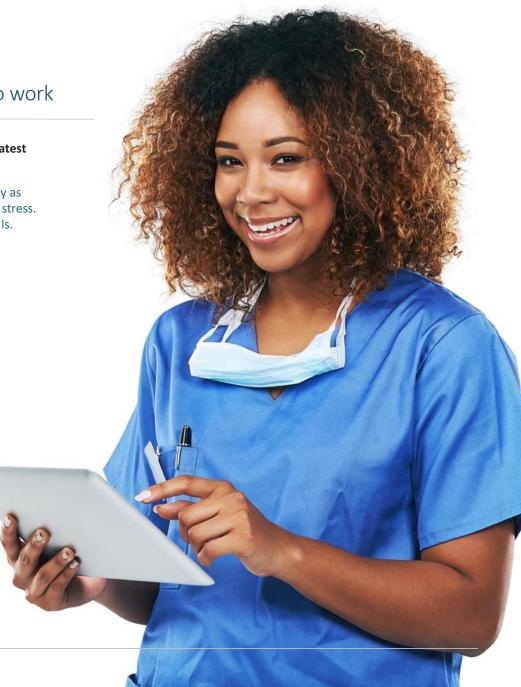
Selecting a **supportive** workplace

A mix of **culture, technology and work-life balance** are deciding factors in where to work

Younger South African healthcare professionals highly value factors around workplace culture, a good work-life balance and the latest technology – even more so than the average of those across all countries surveyed.

Unlike their peers in some of the other countries surveyed, younger South African healthcare professionals rate the latest technology as highly as work-life balance when deciding where to work, possibly due to its potential to decrease their workloads and work-related stress. Factors around working hours, work-life balance and autonomy are also important for younger South African healthcare professionals.

	15-country avg.	South Africa	
Workplace culture	90%	96%	A culture of collaboration: **79%** Professional autonomy: **82%**
Latest equipment/ technology	86%	93%	Availability of the latest medical equipment and technologies: **79%** Availability of technology for everyday tasks: **74%**
Work-life balance	87%	92%	Culture supports work-life balance: **80%** Working hours: **84%**
Reputation	81%	79%	The hospital or practice's reputation: **60%** Strong record of patient outcomes: **57%**

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201)

Transformational change has **internal barriers**

In South Africa, the decisions of non-medical leaders are impacting satisfaction

Only about half of younger healthcare professionals in South Africa feel they are able to drive change, a clear sign that improvement is needed in this area.
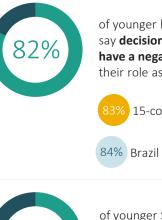
Younger South African healthcare professionals are also less likely than some of their peers surveyed to feel empowered to drive change.

Even more younger healthcare professionals in South Africa believe the decisions of non-medical leaders impact their satisfaction in a negative way, with some feeling that it causes the most concern about the future of their career.

55%

of younger healthcare professionals in South Africa feel they are **able to drive change in how their hospitals or practices are managed**

53% 15-country avg.

53% Australia

60% Brazil

67% India

82%

of younger healthcare professionals in South Africa 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.   90% Australia

84% Brazil   77% India

31%

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

30% 15-country avg.   35% Australia

24% Brazil   24% India

Base (unweighted): Total younger healthcare professionals (15-country avg. n=2,867; South Africa n=201; Australia n=150; Brazil n=203; India n=202)

Report conclusion and recommendations

Report **conclusion**

With a shortage in healthcare professionals, compounded by system inefficiencies, the upcoming generation of South African healthcare professionals is facing a lot of work-related stress, which could be significantly reduced by the implementation of new technology – a prospect that creates a sense of optimism among these professionals.

Unlike their peers in some of the other countries surveyed, younger South African healthcare professionals rate the latest technology as highly as work-life balance when deciding where to work, possibly due to its potential to decrease their workloads and work-related stress.

Therefore, younger South African healthcare professionals' ideal workplace has a mixture of work-life balance, new technologies, collaboration and culture, strengthened by continuous education to help build their non-clinical skills. This includes a call for business administration skills in order to drive efficiencies, and more training and support staff in order to most efficiently use digital patient data to inform patient care.

While some South African hospitals and practices are addressing the non-clinical skills gaps that their younger healthcare professionals are facing, there is still room for improvement and growth, which may lead to higher adoption of value-based care and improved experiences for the local medical community.

Empowering this next generation of professionals and prioritising career satisfaction, could help retain and attract talent to meet the growing demands of modern healthcare.

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

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, 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, 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.

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, 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.

www.philips.com/futurehealthindex-2020