

Future Health Index 2019

The Netherlands

Country report

Future Health Index 2019: An introduction

The Future Health Index is a research-based platform which focuses on how digital health technology can accelerate the shift from volume-based to value-based care in the global drive for sustainable healthcare systems.

Healthcare systems vary from country to country, but they share a **common goal**:

Providing quality care with improved experiences for both patients and healthcare professionals

This is also true in the Netherlands – the challenge, of course, is to provide that care in ways that are as efficient and economical as they are effective.

Philips' fourth annual Future Health Index, based on a survey of over **15,000 individuals** and more than **3,100 healthcare professionals in 15 countries**, explores health technology's impact on the patient and healthcare professional experience.

Central to ensuring improved healthcare experiences will be the deployment of digital technologies to support cost-effective, value-based, connected healthcare. And yet, despite increasing adoption rates in some instances, use of these digital tools remains fragmented, as the majority of Dutch healthcare professionals use Digital Health Records in their practice or facility but significantly fewer say they have the ability to harness big data to improve patient care.

The impediments include inadequate access to technology, difficulty with integrating technology into healthcare professionals' ways of working and concerns about data privacy and security. These barriers are falling, though not as quickly as many of us would like.

After analyzing the data, **three clear themes** have emerged:

Engaged and digitally enhanced healthcare professionals

The increasing number of healthcare professionals who use technologies like digital health records (DHRs) and telehealth report higher job satisfaction.

Empowered patients – access to data, more control

Individuals with access to their own health data are far more likely to engage with that information in ways that improve the quality of care and their overall experience.

Building relationships – enabled by technology

Relationships between healthcare professionals and patients are symbiotic. When patients and their healthcare professionals adopt health technology together, the higher level of engagement improves the experience and outcomes for both parties.

Engaged and digitally enhanced healthcare professionals

Some healthcare professionals are adapting to new ways of working and beginning to recognize the benefits of digital healthcare for both themselves and their patients.

However, most countries are not seeing healthcare professionals harness the full potential and support of digital health technology in all aspects of their work. If we turn this situation around, healthcare professionals can become true advocates of these methods to both their patients and their peers. Removing the remaining barriers to digital health technology use has the potential to enhance the work lives of more healthcare professionals.

Our 2019 research shows us that Dutch healthcare professionals are lagging behind in health technology adoption. There is an opportunity to showcase the benefits of these technologies to encourage broader usage.



Healthcare professionals **do not fear the digital revolution in healthcare**; they're embracing it

While there is not currently a universal digital health record (DHR) in the Netherlands, usage of digital health records within a practice or hospital system is high. In fact, of all the digital health technologies discussed, DHRs have the highest adoption levels and Dutch healthcare professionals outpace their peers in other countries in this regard.

Furthermore, Dutch healthcare professionals aren't afraid of new technologies – in fact, they are open to embracing new health technology to solve certain challenges the Dutch health system is faced with, including three of the four pillars of 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

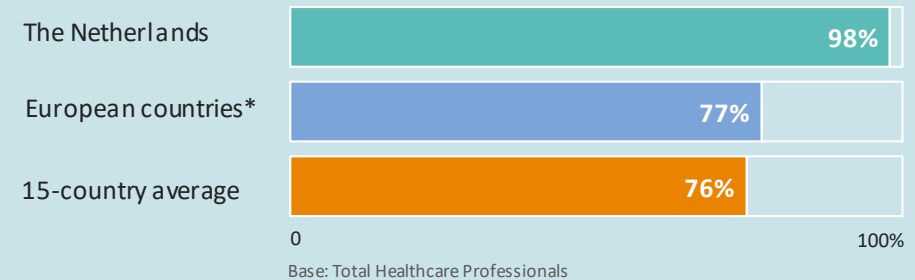
Improving the work life of health professionals



Lower cost of care

Reducing the per capita cost of healthcare

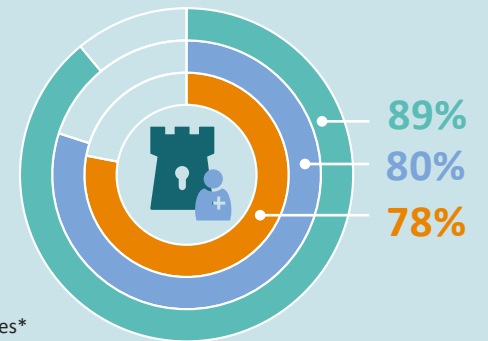
Percentage of healthcare professionals who say they use digital health records in their hospital/practice:



Job security is, comparatively, less of a concern in the Netherlands:

Percentage of healthcare professionals who are not worried about job security as it relates to new advancements in healthcare technology:

● The Netherlands ● 15-country average ● European countries*



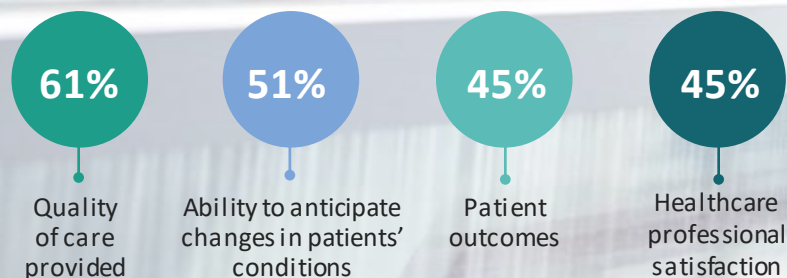
Base: Total Healthcare Professionals

*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

Healthcare professionals **recognize the positive impact of digital health records**, despite some challenges

Many Dutch healthcare professionals already see the positive impact of Digital Health Records (DHRs), including on quality of care and patient outcomes. However, some identify negative perceptions of the impact of DHRs, for example on their workload and time spent with patients.

The top four **positive outcomes** from using DHRs among Dutch healthcare professionals align with the Quadruple Aim:



Base: Total Healthcare Professionals that use digital health records (n=199)

The two areas with the highest levels of **negative impact** from using DHRs, according to healthcare professionals:

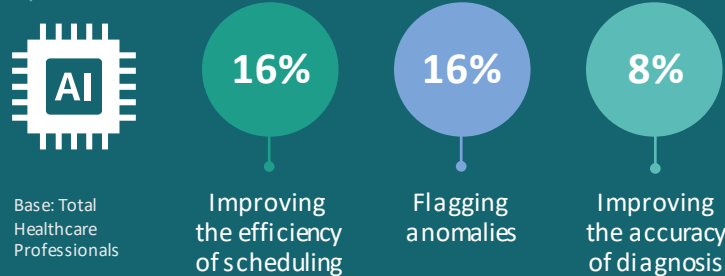


Base: Total Healthcare Professionals that use digital health records (n=199)

AI is more readily accepted by healthcare professionals in the Netherlands compared to other countries

A third (33%) of Dutch healthcare professionals are currently using Artificial intelligence (AI) in their practice, most commonly to improve efficiency, accuracy and to flag anomalies.

Top uses of AI

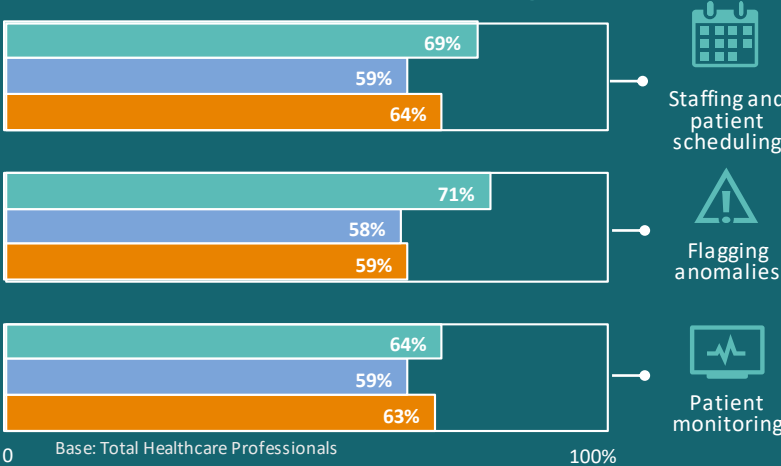


*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

Arguably, AI is one of the more advanced technologies transforming the current healthcare system. On the whole, Dutch healthcare professionals are comfortable with many of the benefits AI brings, such as flagging anomalies, as well as staffing and patient scheduling.

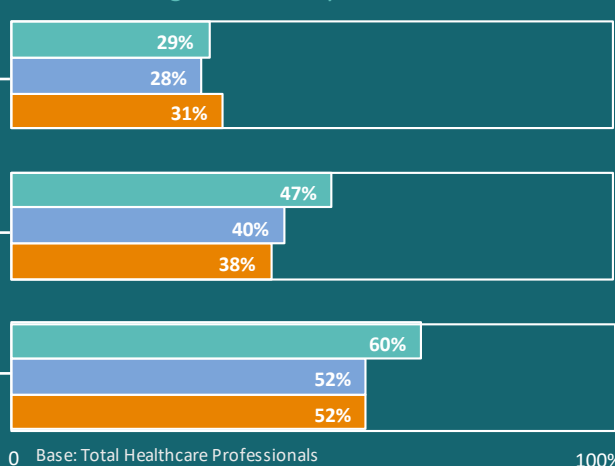
● The Netherlands ● 15-country average ● European countries*

Percentage of healthcare professionals comfortable with AI use for each of the following:



Looking ahead to the next five years, Dutch healthcare professionals believe that advancements in technologies have the most potential to improve patient monitoring and anomaly flagging. All of these areas enable healthcare professionals to deliver improved care.

Percentage of healthcare professionals who recognize the potential for technological advancements to improve each of the following in the next 5 years:



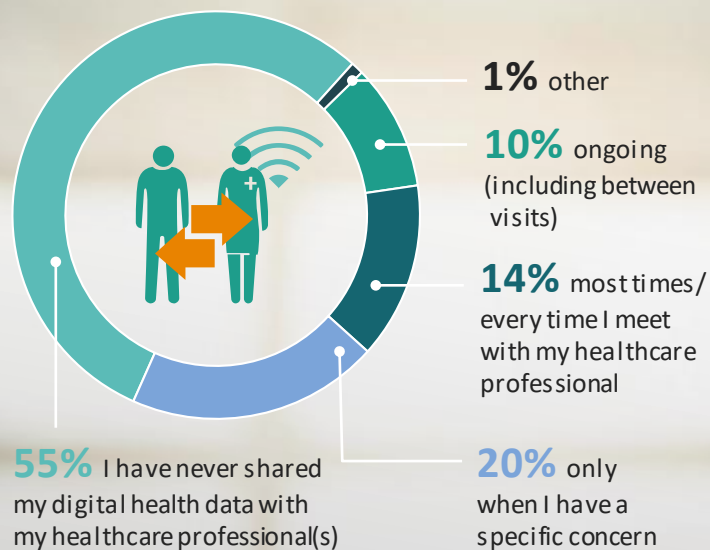
Digital health data is frequently collected – but rarely shared

While many healthcare professionals and individuals have digital data available to them, sharing is limited between patients and healthcare professionals. This suggests that health data is currently restricted to the individual.

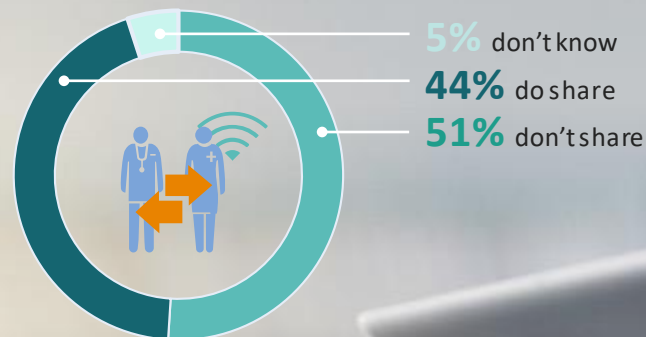
Sharing of data is necessary to fully leverage the benefits of digital health technologies.

More than half (55%) of individuals who use digital health technology or mobile health apps to track health indicators have never shared their digital health data with their healthcare professional

Frequency of Dutch sharing digital health data with their healthcare professional:



Base: Total individuals who use digital health trackers (n=693)



Base: Total Healthcare Professionals

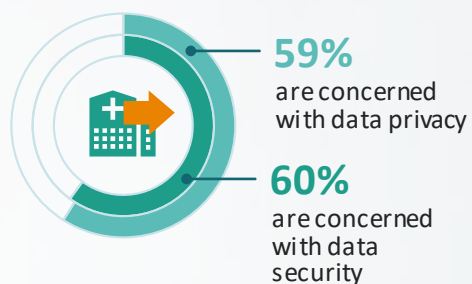
However, a similar picture emerges among healthcare professionals, where **51% do not currently share patient information electronically** with other healthcare professionals outside of their facility or network.

Security and privacy concerns are top barriers to data sharing among healthcare professionals

Privacy concerns are prevalent among healthcare professionals, as many who do not share patient information electronically *outside* their health facility cite concerns related to data privacy and security as the main barrier.

Top concerns for not sharing patient information with other healthcare professionals:

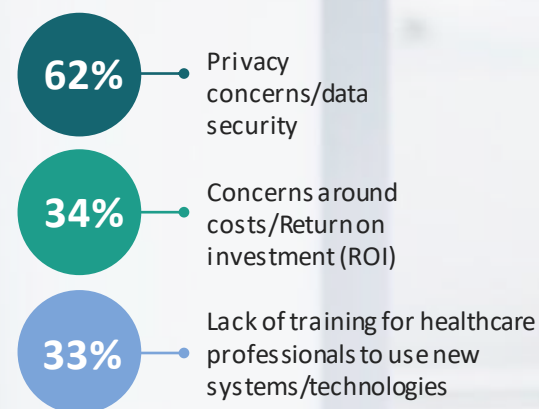
Outside health facility



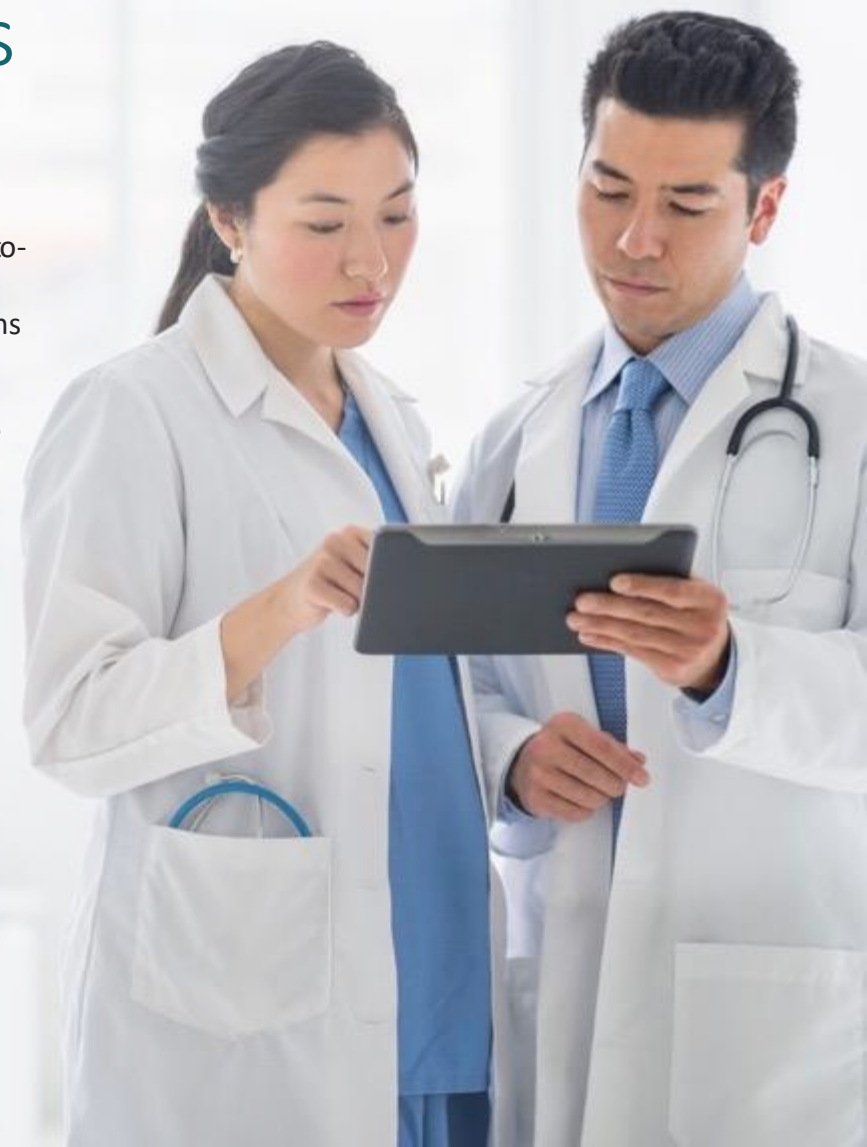
Base: Total Healthcare Professionals who don't share data outside their facilities (n=103)

Data privacy and security are also top barriers to telehealth adoption in healthcare in a healthcare professional-to-healthcare professional setting, where it significantly outweighs costs/ROI concerns and lack of training.

Top barriers to telehealth adoption in healthcare professional-to-healthcare professional setting:



Base: Total Healthcare Professionals



Empowered patients – access to data, more control

While digitally supported healthcare professionals will play an important role in changing the way that healthcare is delivered, understanding **how technology can have a positive impact on the patient experience** is just as significant.

The Dutch are looking for information and more control over almost all aspects of their lives. Giving Dutch individuals access to their own health data makes them more likely to engage with it in a way that will improve the quality of care they receive and their overall healthcare experience.



Healthcare consumers are potentially seeing **waste in the system**

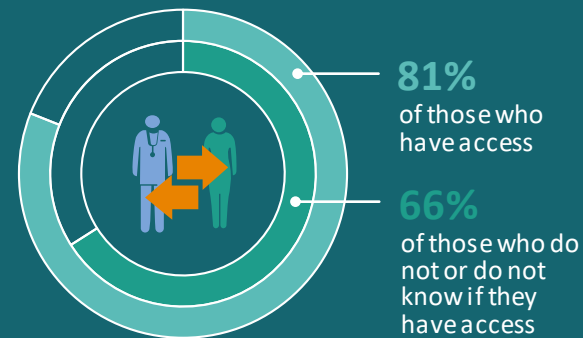
In the Netherlands, there are currently silos in many areas of care delivered to citizens. When silos exist in a healthcare system, it often results in wasteful care: duplicative tests become the norm and there are challenges with first-time-right diagnoses.

The Future Health Index 2019 research shows that individuals are aware of this issue and see a key opportunity to leverage digital health technology to take ownership of their own health data and facilitate greater exchange of it.

Overall, the Dutch are concerned about how they can improve the system and are open to changing it.

Regardless of current levels of access to digital health records (DHRs), a majority of individuals want their healthcare professional(s) to have access to their health data through DHRs.

Percentage of Dutch individuals who want their healthcare professional(s) to have access to their health data:



Base: Total individuals with access to their DHR (n=312)

Base: Total individuals without access to their DHR or don't know (n=694)

Additionally, those who say they have access to their DHR would be more likely to use it if it facilitated more integration of their healthcare professionals and supported easier management of their health.

This could be indicative of a desire to own their data given the silos within the system.

Percentage of Dutch individuals who would be more likely to use digital health records, if:



Base: Total individuals with access to their DHR (n=312)

Moving the Netherlands toward **preventative care** and **proactivity**

While the Dutch highly rate their overall health and access to care, proactivity towards their own health is noticeably lower than their peers' in other countries.

Most Dutch don't consider themselves proactive when it comes to managing their health and few are taking preventative actions.

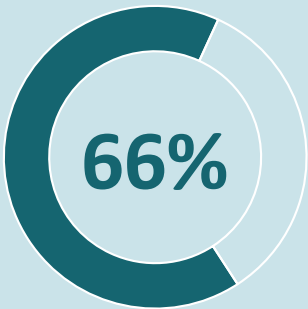
Promoting proactivity is key to encouraging healthcare over sick care.

Percentage of Dutch who rate themselves as having "good", "very good" or "excellent" health:



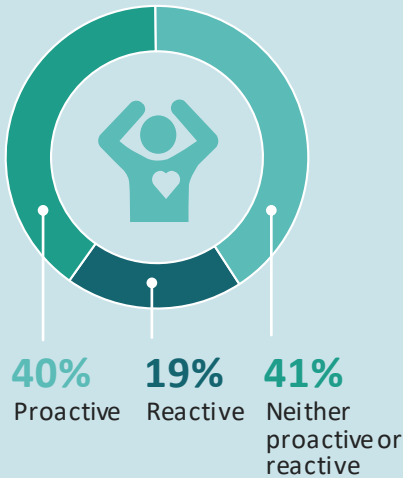
Base: Total individuals

Percentage of Dutch who believe they have access to care when they need it:



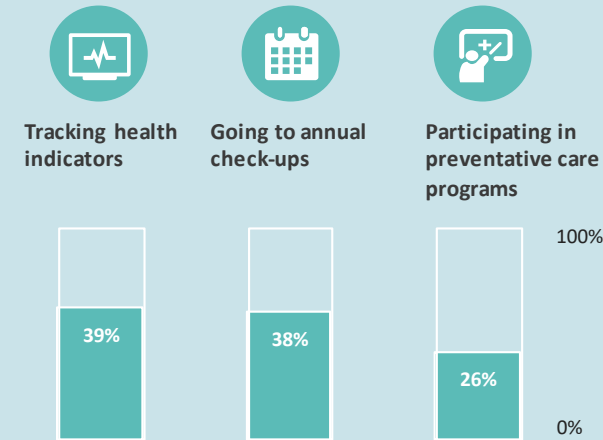
Base: Total individuals

Percentage of Dutch who rate themselves as proactive about their health:



Base: Total individuals

Percentage who take preventative actions to maintain their health:



Base: Total individuals who have been to a healthcare professional in the past 12 months (The Netherlands n=618, 15-country average n=9,334)

Data security and safety concerns are holding patients back from fully embracing digital health technology

Many Dutch citizens currently feel as though privacy and security concerns are the top barriers keeping them from further adopting **digital health technology and mobile health apps**, as well as **digital health records (DHRs)**. Addressing and overcoming these data security and safety concerns will be crucial for these technologies to succeed.

Security is a top concern to overcome to increase **DHR** usage.

Percentage of Dutch citizens with access to DHR that would be more likely to use it if privacy/security were improved:

19%



Base: Total individuals who have access to their digital health records (n=312)

Top reasons that would make the Dutch more likely to use **digital health technology or mobile health apps**:

Percentage of those who don't always use digital health trackers and are incentivized to use it more:



40%

If a healthcare professional recommended I use it



33%

Assurance that my health data would be secure



23%

If the application/products were more affordable

Base: Total individuals who never, rarely, sometimes, or often use digital health trackers (n=618)



Building relationships – enabled by technology

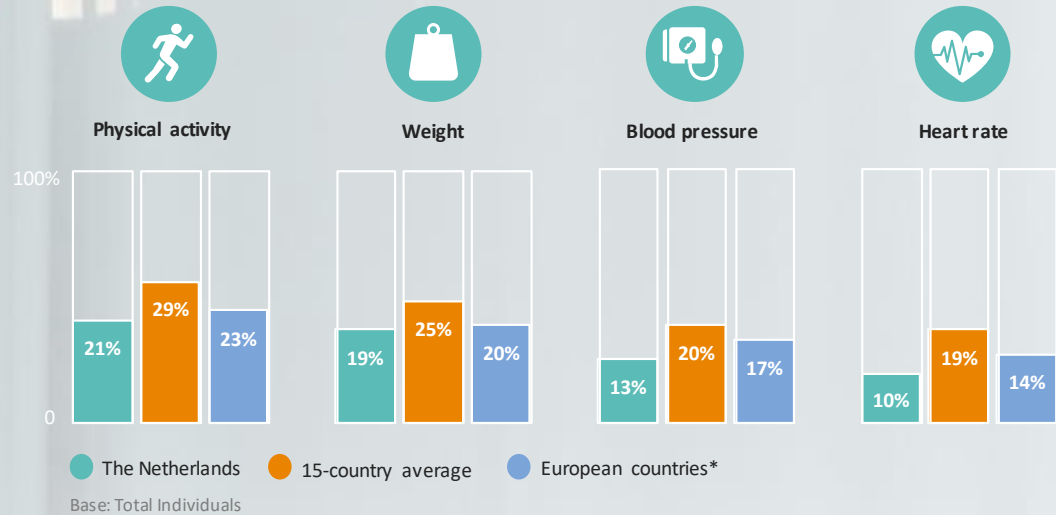
Throughout the Future Health Index 2019, we see that the relationship between healthcare professionals and patients is symbiotic – what one does affects the other in important ways and vice versa. If both patients and healthcare professionals adopt health technology, this can have a positive effect on their relationship, improving the healthcare experience for both and leading to greater engagement.

Our 2019 research shows us that Dutch individuals and healthcare professionals are lagging behind in health technology adoption. There is an opportunity to showcase the benefits of these technologies.

Reciprocal data sharing is **not yet the norm** in the Netherlands

The Dutch are generally considered a tech savvy nation and the Netherlands “continues to be the European leader in connectivity with a high quality, ubiquitous digital infrastructure,” according to the 2018 Digital Economy and Society Index (DESI). However, when it comes to health technology usage, the Dutch lag behind most countries included in the 2019 Future Health Index, including other developed countries.

The Dutch are less likely than the 15-country average to track health indicators often or always, using digital health technology or mobile health apps.
Percentage tracking key health indicators often or always:



*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK



About a third of those who never track one or more health indicators via digital health technologies or mobile health apps say nothing would make them more likely to use it in the future. This suggests that the Dutch are more resistant to adopting new technologies.



Base: Total Individuals who say they never track one or more health indicators via digital health technologies or mobile health apps (15-country average n=10,261, The Netherlands n=703, European countries n=4,935)

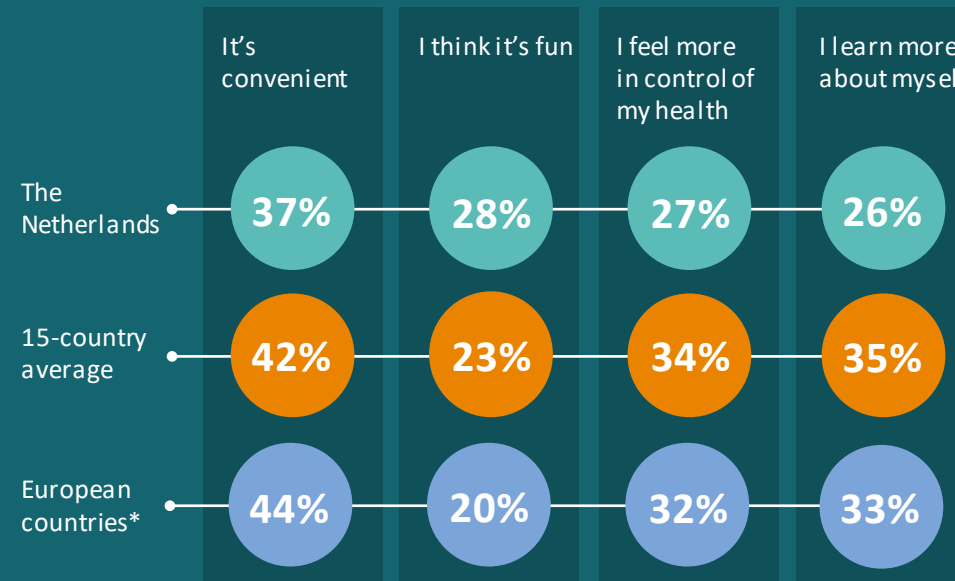
The Netherlands 15-country average European countries*

Those tracking health indicators do so for **personal use** and many are **skeptical of healthcare data accuracy**

Among those who track one or more health indicators, usage of digital health technology is highly limited to personal use: convenience, entertainment and general interest are cited as the top reasons for using these technologies.

A barrier to further adoption relates to the reliability of healthcare information, as a majority of Dutch individuals find it moderately to very difficult to understand if the data available to them is indeed reliable, according to the eHealth-monitor 2018 report.

Top reasons the Dutch are tracking health indicators using digital health technologies (among those who track any indicator):



Base: Total Individuals who use digital health technology (15-country average n=10,559, The Netherlands n=693, European countries* n=4,488)

Perceived difficulty of estimating reliability of healthcare information (Nictiz, 2018)



68%
Moderately to very difficult

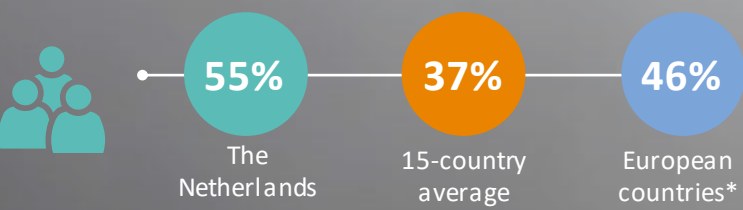
Nictiz: <https://www.nictiz.nl/rapporten/ehealth-monitor-2018-e-health-in-verschillende-snelheden-tabellenbijlage/>

*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

When digital health technology is used, it is **not (yet) leveraged to its full potential**

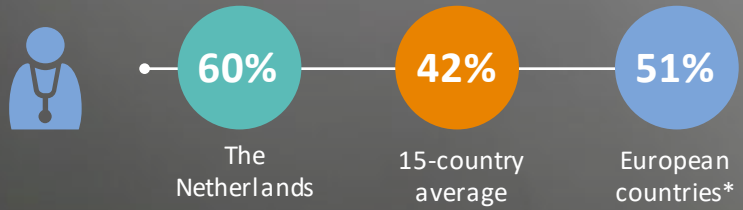
Additionally, sharing data or taking action as a result of tracking health indicators is not currently common practice in the Netherlands. By increasing the use of digital health technologies, the Dutch can unlock the full potential of data.

Percentage of individuals use digital health technology who have never shared data from the technology with their healthcare professional:



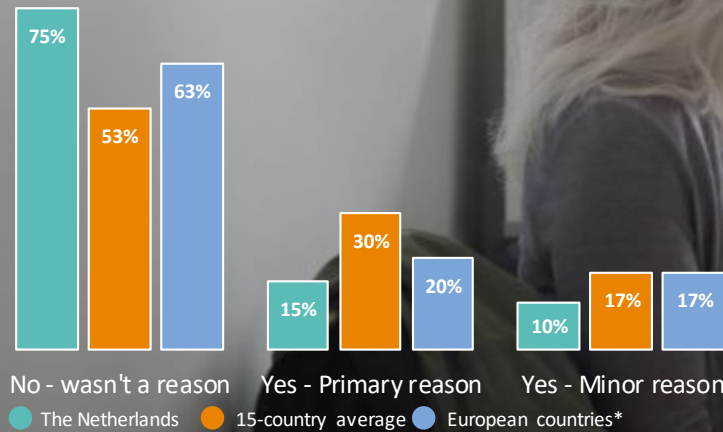
Base: Total Individuals who use digital health technology (15-country average n=10,559, The Netherlands n=693, European countries* n=4,488)

Percentage of healthcare professionals who say none of their patients share data with them on an ongoing basis



Base: Total Healthcare Professionals

Of individuals who use digital health technology, the Dutch lag behind the 15-country average when it comes to being mobilized by their health data. Only 25% say the information they receive from their digital health technology or mobile health apps led them to contact a healthcare professional:



Base: Total Individuals who use digital health technology sometimes, always, rarely, or often (15-country average n=10,559, The Netherlands n=693, European countries n=4,488)

*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

As the Dutch are healthy and happy, there may be **little motivation to instigate change**

For the most part, the Dutch say they are healthy and happy with the healthcare system and the quality of care they receive.

Consequently, there is currently little impetus to leverage new technologies and shift the Dutch from being health technology laggards. However, in order to future-proof the Dutch healthcare system and move towards a value-based care model, low healthcare technology adoption rates need to be addressed.



85%

rate the quality of care available overall highly (good/very good/excellent) compared to:

70% across the 15-country average
66% in European countries*



85%

rate their personal experience of care received highly (good/very good/excellent) compared to:

72% across the 15-country average
69% in European countries*



66%

believe healthcare in the Netherlands provides access when they need it compared to:

61% across the 15-country average
63% in European countries*



61%

believe healthcare in the Netherlands provides availability when they need it compared to:

55% across the 15-country average
52% in European countries*



62%

consider themselves healthy (good/very good/excellent) compared to

65% across the 15-country average
59% in European countries*

Base: Total individuals

*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

Incentives need to be substantial to increase adoption

To incentivize higher adoption of digital health technologies among individuals, the focus should be on more tangible and immediate benefits, such as scheduling appointments, providing access to patients' data and filling prescriptions online.

Additionally, healthcare professionals can help increase adoption by recommending new technologies. The Future Health Index 2019 shows us that the Dutch could be incentivized to use digital health technology due to a healthcare professional recommendation.

Top three incentives to increase usage of digital health technology or mobile health apps among those open to using it more:

40%

Healthcare professionals recommending digital health technology

23%

Products are more affordable

33%

Assurances that the data is secure



Base: Total individuals who are open to using digital health technology more (n=618)

Providing **helpful digital communication capabilities** can enhance the Dutch healthcare experience

To further engage the Dutch in embracing health technology, providing them with tools to manage their interactions with the system could help increase their health technology usage.

The top three most helpful digital communications capabilities include scheduling appointments online, requesting prescription refills online and accessing digital records of their health history.

Top most helpful digital communication capabilities for individuals:



54%

Scheduling appointments online



54%

Requesting prescription refills online, via text, etc.



43%

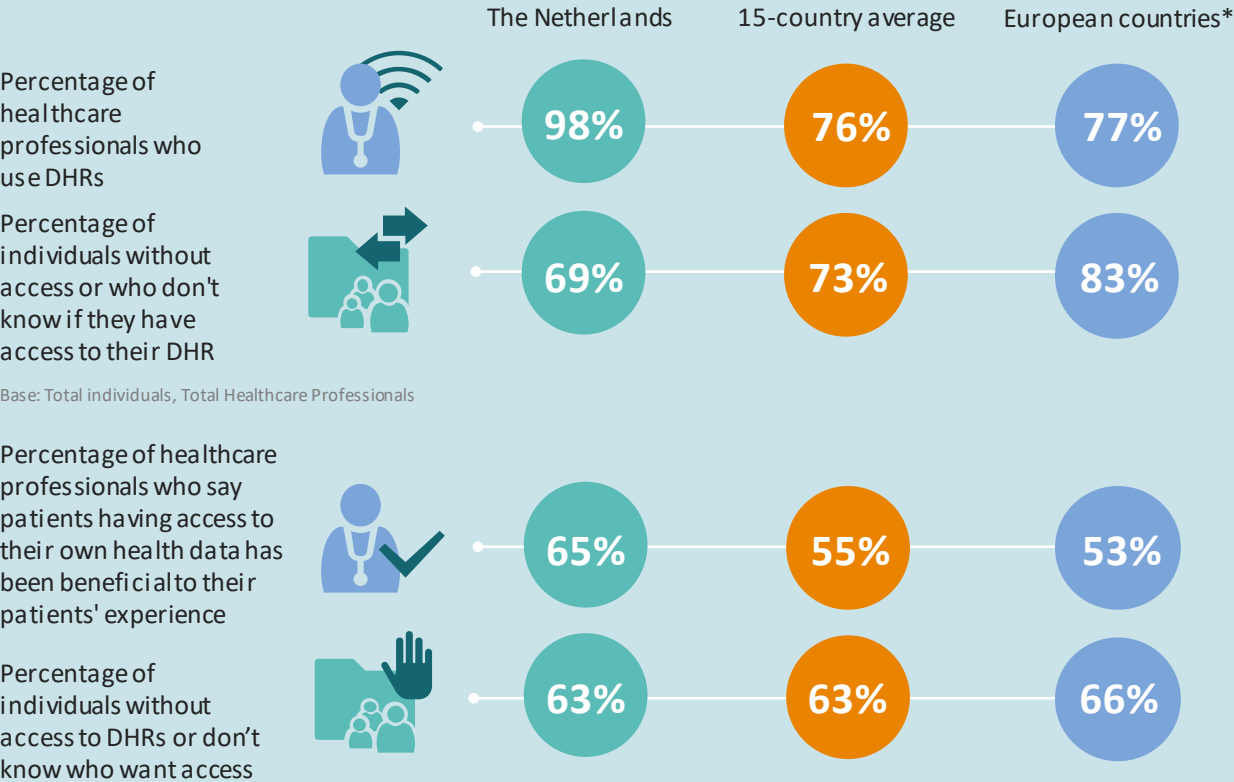
Digital record for their health history

Base: Total individuals

There is a disconnect between healthcare professionals’ of Digital Health Records and patients’ knowledge

While most Dutch healthcare professionals say they use Digital Health Records (DHRs), most individuals say they do not have access or don't know if they have access.

However, the Dutch do want access to their DHRs, and healthcare professionals agree that access to DHRs would be beneficial for patients’ experiences. With the support of healthcare professionals, the Dutch can be more involved in their own health.



Base: Total individuals, Total Healthcare Professionals

Base: Total Healthcare Professionals; Total individuals who don't have access to their DHRs (15-country average n=11,031, The Netherlands n=694, European countries n=5,872)

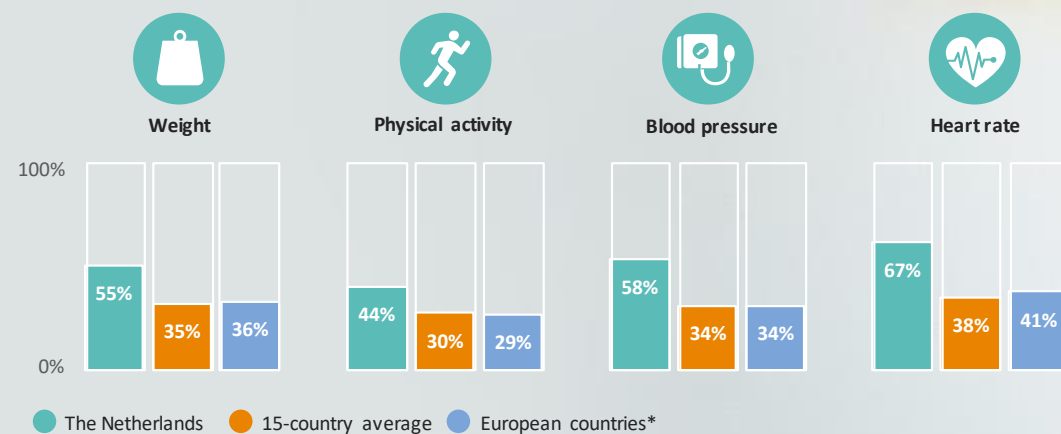
*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

Waiting for change to be instigated

As outlined previously, the Dutch would be more willing to use digital health technology to track health indicators if healthcare professionals recommended it to them – but currently, healthcare professionals are hesitant to do so.

In fact, significantly more Dutch healthcare professionals than the 15-country average have never or rarely recommended their patients track any health indicator.

Percentage of healthcare professionals who rarely/never recommend tracking each health indicator:



Base: Total Healthcare Professional

*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

Breaking the cycle and encouraging data sharing

At the same time, 60% of healthcare professionals state that none of their patients share data with them on an ongoing basis, which is significantly higher compared to the 15-country average (42%).

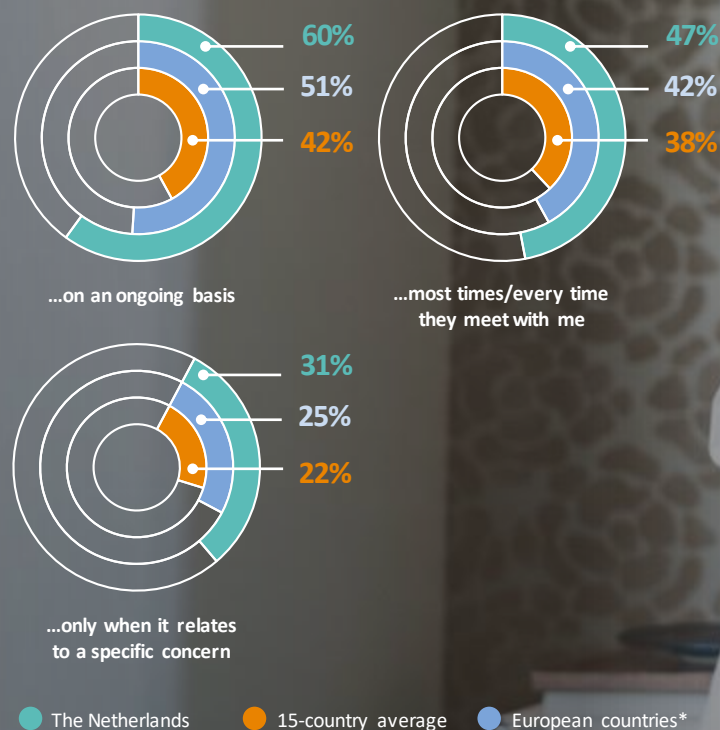
Overcoming this barrier and encouraging the basic flow of data between healthcare professionals and patients is key to unlocking the true power of digital health technology. And yet –



48% of Dutch healthcare professionals say that the ability to harness big data to improve patient care is not currently available to them

Base: Total Healthcare Professionals

Percentage of healthcare professionals who say **none** of their patients have shared data with them....:



Base: Total Healthcare Professionals

*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

Conclusions: how can health systems best prepare themselves for continuous transformation?

Technology continues to evolve and this will, in turn, be a **driver of continuous transformation** in health systems around the world.

Health technology use can empower patients and healthcare professionals, and strengthen their relationship. Healthcare professionals that are embracing the use of digital health technology are seeing a positive impact on their own experience, as well as that of their patients. Digitally empowered patients who are sharing their health data are seeing a strengthened relationship with healthcare professionals. To unlock the full potential, insurers also have a crucial role to play.



Insurers play a crucial role in facilitating implementation of technology according to Dutch healthcare professionals

Sentiment towards insurers in healthcare can be mixed. However, the Future Health Index 2019 shows that healthcare professionals clearly see a crucial role for insurers to engage in the transformation and are open to collaborating with insurers in the adoption of new technologies.

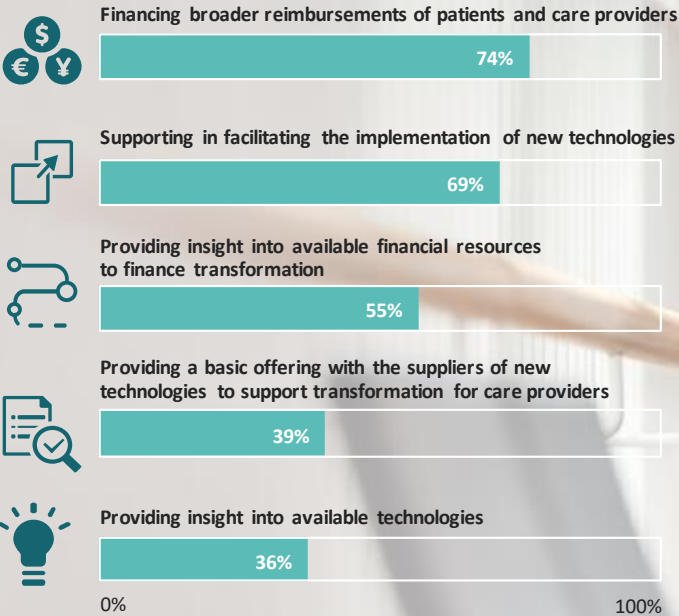
Dutch healthcare professionals almost universally say that insurers should play a role in facilitating the adoption of new technologies



91%
Insurers should play a role

Base: Total Healthcare Professionals

Percentage of healthcare professionals who see a role for insurers to support adoption by:



Base: Total Healthcare Professionals who see a role for insurers to support adoption (n=182)

Yet levels of collaboration between insurers and healthcare professionals are low

Despite widespread acknowledgement among Dutch healthcare professionals that insurers should play a crucial role in driving transformation, few are already collaborating/discussing with insurers, while most either don't collaborate at all or are unaware of it.

This presents an opportunity to increase the partnership and alliance between healthcare professionals and insurers in the Netherlands.

Percentage of healthcare professionals who work with insurers to transform existing healthcare processes and implement new healthcare technology:



Methodology

Research overview and objectives

The Future Health Index is a research-based platform which focuses on how **digital health technology can accelerate the shift from volume-based to value-based care** in the global drive for sustainable healthcare systems.

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 explores technology's impact on two aspects of the **Quadruple Aim**: the healthcare experience for both patients and healthcare professionals and how it is moving us to a new era of **continuous transformation**.

The Future Health Index 2019 analyzes 15 countries (Australia, Brazil, China¹, France, Germany, India, Italy, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Poland, the United Kingdom and the United States of America).

¹Each 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.

Methodology

Survey methodology

2019 Data

In partnership with IPSOS and SERMO, independent global market research firms, the surveys were fielded from March 4 to May 19, 2019 in 15 countries (Australia, Brazil, China, France, Germany, India, Italy, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Poland, U.K. and U.S.) in their native language. The survey was conducted online and offline (as relevant to the needs of each market) with a sample size of 1,000 per market for the general population and 200 per market for healthcare professionals. The exceptions were the US and Germany, who each had slightly larger samples of healthcare professionals. For the individuals (general population) audience, the survey is representative of key demographics e.g. age, gender, region, location type (i.e. rural/urban), income/SEL/education and ethnicity (where appropriate to ask). This was achieved through a mix of balancing and weighting. In Saudi Arabia and Brazil, the survey is nationally representative of the online population. The survey length was approximately 15 minutes for the US, Germany, and the Netherlands, and approximately 10 minutes for the remaining markets.

The total sample from the survey includes:

- **3,194 healthcare professionals²** (defined as those who work in healthcare as a doctor, surgeon, nurse practitioner, registered nurse, licensed practical nurse or nurse across a variety of specializations)
- **15,114 individuals³** (representative of each country's respective adult population).
- **At the 95% confidence level**, the 15-country total for the general population has a margin of error at +/- 0.8 percentage points and the 15-country total for the healthcare professional population has an estimated margin of error of +/- 1.7 percentage points.

²For the purposes of this survey, healthcare professionals are defined as those who work in healthcare as a doctor, surgeon, nurse practitioner, registered nurse, licensed practical nurse or nurse across a variety of specializations,

³Estimated Margin of Error is the margin of error that would be associated with a sample of this size for the full of HCP population in each. However, this is estimated since robust data is not available on the number of HCPs and specialty mixes in each country surveyed.

Methodology

Survey methodology continued

At the 95% confidence level, the 15-country total for the general population has a margin of error at +/- 0.8 percentage points and the 15-country total for the healthcare professional population has an estimated margin of error³ of +/- 1.7 percentage points.

Below is the specific sample size, margin of error at the 95% confidence level, and interviewing methodology used.

	Individuals (General Population)			Healthcare Professionals		
	Unweighted Sample Size (n=)	Margin of Error (percentage points)	Interview methodology	Unweighted Sample Size (n=)	Margin of Error (percentage points)	Interview methodology
15-country total	15,114	+/- 0.8	Online and offline	3,194	+/-1.7	Online
The Netherlands	1,006	+/- 3.1	Online	203	+/- 6.9	Online
European countries*	7,031	+/-1.2	Online and offline	1,430	+/-2.6	Online

Local Market General Population Weighting
For the general population sample, all countries were weighted to be representative of the national population based on census statistics (where available) for key demographics. The weighting was applied to ensure the sample is representative of individuals age 18+ in each country. In the Netherlands, this included age, gender, rural/urban, region, Income and education.

Total Country Weighting (Healthcare professionals and Individuals)
The 15-country average is an average calculation with each country's sample size weighted to have the same value to ensure each country has an equal weight in this total. The same was done for all regional totals, including European countries.

³Estimated 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 market. However, this is estimated since robust data is not available on the number of healthcare professionals and specialty mixes in each country surveyed.

*Note: European countries = France, Germany, Italy, the Netherlands, Poland, Russia and the UK

Methodology

Third party data

Title	Source	Link
Digital Economy and Society Index, DESI Country Profile (NL)	European Commission, 2018	http://ec.europa.eu/information_society/newsroom/image/document/2018-20/nl-desi_2018-_country-profile_eng_B440E332-00FB-01A6-56315943FF4C573F_52234.pdf
eHealth-monitor 2018: e-health in verschillende snelheden	Nictiz, 2018	https://www.nictiz.nl/rapporten/ehealth-monitor-2018-e-health-in-verschillende-snelheden-tabellenbijlage/

Glossary of terms

Access to care: The ability to access medical care when needed.

Artificial intelligence (AI): The ability of a device/technology to copy intelligent human behaviors to assist with different tasks.

Availability of care: The doctor a patient needs to see is available when care is required.

Data privacy: Ensuring personal or private information about individuals or organizations is only collected and/or stored by those who have authorized access.

Data security: Protecting data against unauthorized access.

Digital health communication capabilities/tools: Technologies that allow a patient to communicate with its healthcare professional (e.g., through a patient portal, remote appointments, etc.)

DHRs: Digital health records can store a variety of health information, including medical history, test results, health indicators, etc. They can be used within a certain healthcare facility, across different healthcare facilities, by only the patient themselves, by one healthcare professional or

Digital health technology: Technology that enables sharing of information throughout all parts of healthcare (doctors, nurses, community nurses, patients, hospitals, specialists, insurers, and government). This technology can take a variety of forms, including, but not limited to: devices that track various health indicators such as heart rate or steps (e.g., wearables such as a smart watch/fitness trackers or home health monitoring devices); computer software that allows secure communication between doctors and hospitals (e.g., digital health records) or allows communication between doctors and patients (e.g., patient platforms); health devices that are internet enabled and transmit data.

Future Health Index: The Future Health Index (FHI) is a research based platform designed to help determine the readiness of countries to address global health challenges and build sustainable, fit for purpose, national health systems. In the context of ever growing pressure on resources and costs, the FHI focuses on the crucial role digital tools and connected care technology can play in delivering more affordable, integrated and sustainable healthcare. Since its inception in 2016, the FHI program has used credible research to derive actionable insights that have initiated dialogue across the industry, with the aim to drive change.

Healthcare: All areas of the health system a person might interact with, from visiting a general practitioner to emergency services and specialists.

Healthcare professional: All medical staff – including doctors, nurses, surgeons, radiologists, etc.

Integrated care: Coordination of healthcare within and across organizational boundaries to access, exchange and cooperatively use data amongst stakeholders, with the goal of optimizing the health of individuals and populations

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

Telehealth: The use of electronic information, digital health technology or mobile health applications and telecommunications technologies to support long-distance exchange between healthcare professionals, patient and healthcare professional as well as 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':

- Improved patient experience
- Better health outcomes
- Improved staff experience
- Lower cost of care
- Improved staff experience
- Lower cost of care



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