



World Health
Organization

European Region

Exploring the digital health landscape in the WHO European Region

Digital health country profiles





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Abstract

In the midst of a rapidly changing landscape in digital health, the health sector is experiencing a profound transformation marked by the growing integration of digital health technologies. This shift not only offers a multitude of benefits but also revolutionizes the dynamics between patients and health-care providers within the health-care system. This collection of country profiles – based on the 2022 Survey on Digital Health in the WHO European Region – explores the ways in which Member States are reshaping their health-care systems through the integration of digital health. The profiles indicate critical digital health components at the national level, including digital health governance, electronic health records, patient portals, telehealth, mobile health, and big data and analytics. Analysing these elements provides insights into how each Member State strategically navigates the swiftly evolving landscape of digital health.

Keywords

DIGITAL HEALTH; MOBILE HEALTH; TELEHEALTH; ELECTRONIC HEALTH RECORDS; ARTIFICIAL INTELLIGENCE; HEALTH INFORMATION EXCHANGE

ISBN: 978-92-890-6099-8 (PDF)

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Acknowledgements

The WHO Regional Office for Europe would like to thank the Data and Digital Health Unit in the Division of Country Health Policies and Systems for its key role in the development of this report under the technical guidance of Natasha Azzopardi-Muscat (WHO Regional Office for Europe) and David Novillo Ortiz (WHO Regional Office for Europe), who also developed the concept for these country profiles.

The digital health country profiles were written by Keyrellous Adib (WHO Regional Office for Europe) with design support from Elettra Ronchi

(consultant to the WHO Regional Office for Europe) and data management support from Nagui Salama (consultant to the WHO Regional Office for Europe).

Our sincere gratitude is extended to the nominated experts and survey participants whose expertise and unwavering commitment have been pivotal in the development of these country profiles. Their invaluable insights and contributions have played a crucial role in shaping the content and ensuring the accuracy and relevance of the information presented.

For further information please contact the WHO Data and Digital Health Unit (EUDigitalHealth@who.int).



Abbreviations

app application

COVID-19 coronavirus disease

EHRs Electronic health records

mHealth mobile health

A guide to the country profiles



Background

The 2022 Survey on Digital Health in the WHO European Region (henceforth the WHO Regional Survey 2022) offers an overview of the current state of digital health, examining its development, governance frameworks and perceived barriers to widespread adoption. Conducted during the global recovery from the coronavirus disease (COVID-19) pandemic, the survey delves into the uptake and use of digital solutions to support monitoring and surveillance and the provision of health services. Drawing upon the foundation of the third global survey on eHealth 2015,¹ the WHO Regional Survey 2022 captures the dynamic digital health landscape, with the objective of gauging regional progress

and contributing to the implementation of the regional digital health action plan. Additionally, the collected information aims to foster shared learning among Member States, help identify current barriers to digital health adoption, explore forward-looking digital health trends and steer the agenda for innovation in digital health in the Region. The report *The ongoing journey to commitment and transformation: digital health in the WHO European Region 2023*,² derived from the same 2022 survey, provides an overview of the status of digital health at both regional and subregional levels, while this collection of country profiles aims to provide detailed insights at the national level.

-
- 1 WHO Global Observatory for eHealth. Atlas of eHealth country profiles: the use of eHealth in support of universal health coverage: based on the findings of the third global survey on eHealth 2015. Geneva: World Health Organization; 2016 (<https://iris.who.int/handle/10665/204523>, accessed 24 November 2023).
 - 2 The ongoing journey to commitment and transformation: digital health in the WHO European Region 2023. Copenhagen: WHO Regional Office for Europe; 2023 (https://cdn.who.int/media/docs/librariesprovider2/data-and-evidence/english-ddh-260823_7amcet.pdf?sfvrsn=4c674522_2&download=true, accessed 24 November 2023).



Methodological considerations

The WHO Regional Survey 2022 is largely based on the third global survey on eHealth 2015,³ which was amended and updated to take account of recent progress and policy priorities. The 2022 survey was launched by the WHO Regional Office for Europe in April 2022 and was open for responses until October 2022. The information and questions were presented both in English and in Russian, and implemented in digital format, although it could be provided in paper format upon request. The survey consisted of 95 questions that covered different aspects related to the integration, regulation and implementation of digital health approaches.

All Member States were formally invited to partake in this initiative, and each was recommended

to nominate a national survey coordinator. The coordinators' roles were crucial in identifying relevant national digital health experts and ensuring their input was incorporated into the survey. A total of 53 WHO Member States – representing a 100% response rate – completed the survey. However, as some of the survey's questions were not mandatory, there was a range of response rates across different question areas. In some instances, Member States chose not to respond, or indicated that they didn't know or that the question wasn't applicable. For the analysis, these instances were excluded from the number of respondents on which percentages were computed. In this collection of country profiles, data from 52³ Member States has been collectively agreed upon for publication.

3 There is no profile for Bosnia and Herzegovina.

Overview of country profiles



Introduction

The data presented in the country profiles are categorized into seven digital health themes, offering readers a snapshot of digital health at national level for each specific theme. While these individual theme groupings provide insights, it

is advised to consider responses to all themes collectively for a more comprehensive overview and to obtain a fuller understanding of the digital health landscape in 2022. The seven digital health themes are presented below.



Digital health foundations

This section focuses on essential elements crucial for establishing an enabling environment for digital health. It covers key indicators on national digital health strategies or policies, regulatory frameworks, funding sources, digital health literacy and capacity-building, as well as the monitoring and evaluation of digital health interventions. The data are presented based on individual country responses (yes, no, or

don't know), the regional "yes" response, which is the average "yes" response (expressed as a percentage), and the year of adoption for specific indicators, particularly in the case of national policies/strategies. In the digital health literacy and capacity-building subsection of each country profile, the individual country responses could be yes, no, under development or don't know.



Electronic health records (EHRs)

This section of each country profile offers an insight into the adoption status of EHRs within the country. It assesses whether a national or regional EHR system has been implemented and identifies connections with other systems. It also identifies the level of the health system where EHRs are in use (primary, secondary or tertiary) and outlines the EHR functionalities adopted

in primary care practices. Data are presented through individual country responses and the regional “yes” response percentage. In addition, this section incorporates information on the electronic prescription of medications, specifying the percentage of prescriptions that are issued electronically.



National digital health patient portals

This section focuses on national digital health patient portals, which are online platforms that provide patients with secure and real-time access to their personal health records from any location with an internet connection. It offers

a country-specific overview of national digital health portals and their functionalities. Data are presented through individual country responses and the regional “yes” response percentage.



Telehealth programmes

This section of the country profiles focuses on telehealth programmes, particularly the operation of five common telehealth programmes regionally, examining their maturity levels. The data are presented through individual country responses, offering insights into the presence and maturity of these programmes, as well as the regional “yes” response percentage.

The maturity of telehealth services or programmes is categorized as:

- ▶ **informal** – early adoption of a telehealth service in the absence of formal processes and policies;
- ▶ **pilot** – testing and evaluating the use of a telehealth service in a given situation; or
- ▶ **established** – an ongoing telehealth service that has been conducted for a minimum of 2 years and is planned to continue for at least 2 more years.



Mobile health (mHealth) services and programmes

This section provides a country-specific overview of mHealth activities. mHealth services and applications utilize the capabilities of smartphones, playing a transformative role in health care by enabling immediate access,

fostering personal engagement, and streamlining remote health-care services. Each response comprised a country response and regional “yes” response percentage.



Health-related mobile applications (apps)

This section of the country profile provides insights into health-related mobile apps, focusing on government-sponsored apps, health and wellness care apps, and those introduced during

the COVID-19 pandemic. Each country’s response is detailed, and a regional “yes” response percentage is provided.



Big data and advanced analytics for health

This section of the country profiles focuses on the adoption of policies or strategies by governments regarding the utilization of big data in the health sector, the governance of big data use in the private sector, and the extraction of data from EHR systems. It also explores elements such as

standards and interoperability strategies, the responsible organizations or agencies, and the adoption of international terminology standards. Each country’s response is detailed, and the regional “yes” response percentage is provided.

The data of the country profiles is available at the WHO European Health Information Gateway⁴

⁴WHO European Health Information Gateway. Digital Health. Copenhagen: WHO Regional Office for Europe; 2024 (<https://gateway.euro.who.int/en/datasets/digital-health/>, accessed 16 April 2024).

Summary of key findings



Policies and strategies

Country	National digital health policy or strategy	National health information system policy or strategy	National telehealth policy or strategy	Protect the privacy of personally identifiable data	Digital health education action plan, policy or strategy	Overarching national data strategy	Govern the use of big data in the health sector	Interoperability strategy or policy
Albania	✓	✓	✓	✓	✓	✓	✓	✓
Andorra	✓	✓	✓	✓	✓	–	–	–
Armenia	✗	✓	✓	✓	✗	✗	✗	✓
Austria	✓	✓	✓	✓	✗	✗	✓	–
Azerbaijan	✓	✓	✓	✓	✓	✓	✗	✓
Belarus	✓	✓	✓	✓	!	✓	✗	✓
Belgium	✓	✓	✓	✓	✓	✓	✓	✓
Bulgaria	✗	✓	✗	✓	–	✗	✗	✓
Croatia	✓	✓	✓	✓	✗	✗	✗	✗
Cyprus	✓	✗	✓	✓	!	✓	✓	✓
Czechia	✓	✓	✓	✓	✗	✗	✗	✓
Denmark	✓	✓	✓	✓	✓	✓	✓	✓
Estonia	✓	✓	–	✓	✗	✓	–	✓
Finland	✓	✓	✓	✓	✗	✓	✓	✓
France	✓	✓	✓	✓	✓	✓	✓	✓
Georgia	✓	✓	✓	✓	!	✗	✗	✗
Germany	✓	✗	✓	✓	✗	✓	✗	✓
Greece	✓	✓	✓	✓	✗	✓	✓	✗
Hungary	✓	✓	✓	✓	✓	✓	✓	✓
Iceland	✓	✓	✓	✓	✗	✓	✓	✓
Ireland	✓	✗	✓	✓	✗	✗	✗	✗
Israel	✓	✓	✓	✓	✗	✓	✓	✓
Italy	✓	✓	✓	✓	!	✓	✗	✓
Kazakhstan	✓	✓	✓	✓	!	✗	✗	✗
Kyrgyzstan	✓	✓	✓	✓	✗	✗	✗	✗



Policies and strategies (contd)

Country	National digital health policy or strategy	National health information system policy or strategy	National telehealth policy or strategy	Protect the privacy of personally identifiable data	Digital health education action plan, policy or strategy	Overarching national data strategy	Govern the use of big data in the health sector	Interoperability strategy or policy
Latvia	✓	✓	✓	✓	!	✓	✗	✗
Lithuania	✓	✓	✓	✓	✗	✗	✗	✗
Luxembourg	✗	✗	✗	✓	✗	✓	✗	✓
Malta	✓	✓	✓	✓	✗	✓	✗	✗
Monaco	✗	✗	–	✓	✗	✓	–	–
Montenegro	✓	✓	✓	✓	✗	✗	✗	✓
Netherlands (Kingdom of the)	✓	✗	✗	✓	✓	✗	✗	✓
North Macedonia	✗	✓	✗	✓	✗	✗	✗	✗
Norway	✓	✓	✓	✓	✓	✓	✓	✓
Poland	✓	✗	✗	✓	!	✗	✗	✓
Portugal	✓	✓	✓	✓	✓	✓	✗	✗
Republic of Moldova	✗	✗	✗	✓	✗	✗	✗	✓
Romania	✓	✓	✓	✓	✗	✓	✗	✗
Russian Federation	✓	✓	✓	✓	✓	✓	✓	✗
San Marino	✓	✓	✗	✓	✗	✗	✗	✗
Serbia	✓	✓	✓	–	!	–	–	✗
Slovakia	✗	✓	✗	✓	✗	✗	✗	✗
Slovenia	✗	✗	✗	✓	✗	✗	✗	✗
Spain	✓	✓	✓	✓	✓	✓	✗	✗
Sweden	✓	✗	✓	✓	✗	✓	✗	✗
Switzerland	✓	✓	✓	✓	✓	✓	✗	✓
Tajikistan	✓	✓	✓	✓	✓	✓	✓	✗
Türkiye	✓	✓	✓	✓	!	✓	✓	✓
Turkmenistan	✓	✓	✓	✓	✓	–	–	✓
Ukraine	✓	✓	✓	✓	!	✓	✓	✓
United Kingdom	✓	✓	✗	✓	✓	✓	✓	✓
Uzbekistan	✓	✓	✓	–	✓	✗	✗	✗

Yes
 No
 Don't know, missing or not applicable
 Under development



Digital health technologies: EHR systems and patient portals

Country	National EHR system	Regional EHR system	National digital health patient portal	Electronic prescription of medications
Albania	✓	✓	✓	✓
Andorra	✓	✓	✓	✓
Armenia	✓	✓	✓	✓
Austria	✓	✗	✓	✓
Azerbaijan	✗	✓	✓	!
Belarus	✗	✓	✗	✓
Belgium	✓	✗	✓	✓
Bulgaria	✓	✓	✓	✓
Croatia	✓	✗	✓	✓
Cyprus	✗	✓	✗	✓
Czechia	✗	✗	✗	✓
Denmark	✗	✓	✓	✓
Estonia	✓	✓	✓	✓
Finland	✓	✓	✓	✓
France	✓	✓	✓	✓
Georgia	✓	✓	✗	✓
Germany	✓	✗	✗	✓
Greece	✓	✓	✓	✓
Hungary	✓	✗	✓	✓
Iceland	✓	✓	✓	✓
Ireland	✗	✗	✗	–
Israel	✗	✓	✗	✓
Italy	✓	✓	✓	✓
Kazakhstan	✓	✓	✓	✓
Kyrgyzstan	✗	✓	✓	✗
Latvia	✓	✗	✓	✓
Lithuania	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✗
Malta	✗	✗	✓	✓
Monaco	–	–	✓	–
Montenegro	✗	✗	✓	✓
Netherlands (Kingdom of the)	✗	✓	✗	✓
North Macedonia	✓	✗	✗	✓
Norway	✗	✓	✓	✓
Poland	✓	✓	✓	✓



Digital health technologies: EHR systems and patient portals (contd)

Country	National EHR system	Regional EHR system	National digital health patient portal	Electronic prescription of medications
Portugal	✓	✓	✓	✓
Republic of Moldova	✗	✗	✗	✗
Romania	✓	✗	✗	✓
Russian Federation	✓	✓	✗	✓
San Marino	✓	✓	✓	✓
Serbia	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓
Slovenia	✓	✗	✓	✓
Spain	✓	✓	✗	✓
Sweden	✗	✓	✓	✓
Switzerland	✓	✗	✓	✗
Tajikistan	✓	✓	✗	✓
Türkiye	✓	✓	✓	✓
Turkmenistan	✓	✓	–	✓
Ukraine	✓	✓	✓	✓
United Kingdom	✗	✓	✓	✓
Uzbekistan	✗	✗	✗	✓

✓ Yes
 ! Yes, but not used
 ✗ No
 – Don't know, missing or not applicable



Digital health technologies: telehealth

Country	Teledermatology	Telepsychiatry	Telepathology	Telemedicine	Teleradiology
Albania	✗	✓	✓	✓	✓
Andorra	✓	✓	✓	✓	✓
Armenia	✗	✗	✗	✗	✓
Austria	✓	✓	✓	✓	✓
Azerbaijan	–	✗	✗	✓	✓
Belarus	✓	✓	✓	✗	✓
Belgium	✓	–	–	✓	✓
Bulgaria	–	–	–	–	–
Croatia	–	–	–	–	✓
Cyprus	✗	✗	✗	✗	✗
Czechia	✗	✓	✗	✗	✓
Denmark	✓	✓	✓	✓	✓
Estonia	–	✓	–	✓	✓
Finland	✓	✓	✓	✓	✓
France	–	–	–	✓	–
Georgia	✓	✗	✗	✓	✓
Germany	✓	✓	✓	✓	✓
Greece	✓	✓	–	–	✓
Hungary	✓	✓	✓	✓	✓
Iceland	✓	✓	✗	✗	✓
Ireland	✗	✓	✗	✓	✓
Israel	✓	✓	✓	✓	✓
Italy	✗	✗	✗	✓	✓
Kazakhstan	✗	✗	✗	✗	✓
Kyrgyzstan	✗	✗	✗	✗	✗
Latvia	✗	✗	✗	✓	✓
Lithuania	✗	✗	✗	✓	✗
Luxembourg	✗	✗	✓	✓	✓
Malta	✓	✗	✗	✓	✓
Monaco	✗	✗	✗	✓	✗
Montenegro	✗	✗	✗	✓	✓
Netherlands (Kingdom of the)	✓	✓	✓	✓	✓
North Macedonia	✗	✓	✗	✓	✗
Norway	✓	✓	✓	✓	✓
Poland	✓	✓	✗	✓	✓
Portugal	✓	✓	✓	✓	✓
Republic of Moldova	✗	✗	✗	✗	✗



Digital health technologies: telehealth (contd)

Country	Teledermatology	Telepsychiatry	Telepathology	Telemedicine	Teleradiology
Romania	✓	✓	✓	✓	✓
Russian Federation	✗	✗	✓	✓	✓
San Marino	✗	✗	✗	✓	✗
Serbia	✗	✗	✗	✗	✓
Slovakia	✓	✗	✓	✗	✓
Slovenia	✗	✗	–	✓	✓
Spain	✓	–	✓	✓	✓
Sweden	✓	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓	✓
Tajikistan	–	–	–	✓	✓
Türkiye	✗	✓	✗	✓	✓
Turkmenistan	–	–	–	–	✓
Ukraine	✓	✗	✗	✓	✓
United Kingdom	✓	–	–	✓	✓
Uzbekistan	✗	✗	✗	✗	✗

✓ Yes ✗ No – Don't know, missing or not applicable



Digital health technologies: Government-sponsored mHealth apps

Country	Health promotion	Management of disasters and emergencies	General public health announcements	Feedback on health-care services
Albania	✗	✗	✗	✗
Andorra	✗	✗	✗	✗
Armenia	✓	✗	✗	✗
Austria	✓	✓	✗	✗
Azerbaijan	✓	✗	✓	✗
Belarus	⊖	⊖	⊖	⊖
Belgium	✗	✗	✗	✗
Bulgaria	✗	✗	✗	✗
Croatia	✓	✗	✗	✓
Cyprus	✓	✗	✗	✗
Czechia	✗	✗	✗	✗
Denmark	✓	✗	✗	✓
Estonia	✗	✗	✗	✗
Finland	⊖	✓	⊖	✓
France	✓	✓	✓	✓
Georgia	✓	✓	✓	✗
Germany	✗	✓	✗	✗
Greece	✗	✗	✗	✗
Hungary	✗	✗	✗	✗
Iceland	✗	✓	✗	✗
Ireland	✓	⊖	⊖	⊖
Israel	✓	✓	✓	✗
Italy	✓	✗	✗	✗
Kazakhstan	⊖	⊖	⊖	✓
Kyrgyzstan	⊖	⊖	⊖	⊖
Latvia	✗	✓	✓	✗
Lithuania	✗	✓	✗	✗
Luxembourg	✗	✗	✗	✗
Malta	✗	✗	✗	✗
Monaco	✓	✓	✓	✗
Montenegro	⊖	⊖	✓	⊖
Netherlands (Kingdom of the)	✓	✓	✗	✗
North Macedonia	✗	✗	✗	✗
Norway	✓	✗	✗	✗



Digital health technologies: Government-sponsored mHealth apps (contd)

Country	Health promotion	Management of disasters and emergencies	General public health announcements	Feedback on health-care services
Poland	✓	✗	✗	✗
Portugal	✓	✗	✗	✗
Republic of Moldova	✗	✗	✗	✗
Romania	✗	✓	✗	✓
Russian Federation	–	–	–	–
San Marino	✗	✗	✗	✗
Serbia	✓	✗	✗	✗
Slovakia	✗	✗	✗	✗
Slovenia	✗	✗	✗	✗
Spain	✓	–	✓	–
Sweden	–	–	–	–
Switzerland	✓	✗	✓	✗
Tajikistan	✗	✗	✗	✗
Türkiye	✓	✓	✓	✗
Turkmenistan	✓	✓	✓	–
Ukraine	✗	✗	✗	✗
United Kingdom	–	–	–	–
Uzbekistan	✗	✗	✓	✓

✓ Yes
 ✗ No
 – Don't know, missing or not applicable





Monitoring and evaluation of digital health interventions, programmes and services

Country	Government agency or organization responsible for national monitoring	Government agency or organization responsible for regional monitoring	Developed guidance for evaluating digital health interventions	Evaluation of telehealth programmes	Evaluation of mHealth service or programmes
Albania	✓	✗	✓	✓	–
Andorra	✓	✗	✗	✗	✗
Armenia	✗	✗	–	✓	✓
Austria	✓	✓	✗	✓	✗
Azerbaijan	✓	✗	–	✗	✗
Belarus	✓	–	✓	✓	✗
Belgium	✓	✓	✗	✓	✓
Bulgaria	✓	✗	✓	–	–
Croatia	✓	✗	✗	–	✗
Cyprus	✓	✗	✗	✗	✗
Czechia	✗	✗	–	✗	–
Denmark	✓	✓	–	✓	–
Estonia	✓	✗	✓	✓	–
Finland	✓	✓	✓	✗	✗
France	✓	✗	✓	✓	–
Georgia	✓	✗	✗	✗	✗
Germany	✓	✗	✓	✓	✓
Greece	✓	✗	✓	–	–
Hungary	✓	✗	✗	✗	✗
Iceland	✓	✗	✓	✗	✗
Ireland	✓	–	✗	✓	✗
Israel	✗	✗	–	✓	–
Italy	✓	✓	✓	✗	✗
Kazakhstan	✓	–	✓	✗	✗
Kyrgyzstan	✓	–	✗	✗	✗
Latvia	✓	✗	✗	✗	✗
Lithuania	✗	✗	–	✗	✗
Luxembourg	✗	✗	✗	✗	✗
Malta	✗	✗	–	–	✗
Monaco	✗	✗	✗	–	–
Montenegro	✓	–	✓	✗	✗
Netherlands (Kingdom of the)	✓	✗	✗	✗	✗



Monitoring and evaluation of digital health interventions, programmes and services (contd)

Country	Government agency or organization responsible for national monitoring	Government agency or organization responsible for regional monitoring	Developed guidance for evaluating digital health interventions	Evaluation of telehealth programmes	Evaluation of mHealth service or programmes
North Macedonia	✗	✗	✗	✗	✗
Norway	✓	✗	✗	✓	–
Poland	✓	✗	✗	✓	✗
Portugal	✓	✗	✗	✗	✗
Republic of Moldova	✗	✗	–	✗	✗
Romania	✗	✗	–	✗	–
Russian Federation	✓	–	✓	✓	–
San Marino	✗	✗	–	✗	✗
Serbia	✓	✗	✗	✗	✗
Slovakia	✓	✗	✗	✗	✗
Slovenia	✗	✗	–	–	✗
Spain	✓	✓	✓	✗	✓
Sweden	✓	–	✓	✓	✗
Switzerland	✓	✗	–	✗	–
Tajikistan	✓	✓	✓	–	✓
Türkiye	✓	✗	✓	–	✗
Turkmenistan	✓	–	✓	–	–
Ukraine	✓	✗	✓	✓	✗
United Kingdom	–	–	–	–	✓
Uzbekistan	✓	✓	✗	✗	✗

✓ Yes
 ✗ No
 – Don't know, missing or not applicable



Digital health country profiles

Albania	Finland	Lithuania	San Marino
Andorra	France	Luxembourg	Serbia
Armenia	Georgia	Malta	Slovakia
Austria	Germany	Monaco	Slovenia
Azerbaijan	Greece	Montenegro	Spain
Belarus	Hungary	Netherlands (Kingdom of the)	Sweden
Belgium	Iceland	North Macedonia	Switzerland
Bulgaria	Ireland	Norway	Tajikistan
Croatia	Israel	Poland	Türkiye
Cyprus	Italy	Portugal	Turkmenistan
Czechia	Kazakhstan	Republic of Moldova	Ukraine
Denmark	Kyrgyzstan	Romania	United Kingdom
Estonia	Latvia	Russian Federation	Uzbekistan

Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	–	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	⊖	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2014
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✗	52%	–
Telepathology	✓	44%	Pilot
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✗	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✔	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✔	35%
Governs the use of big data in the private sector	–	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	2020
National telehealth policy or strategy	✓	78%	2020



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	–	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	75%	2019
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✗	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✗	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	–	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✔	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✔	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	⊖	60%
Governs the use of big data in the health sector	⊖	35%
Governs the use of big data in the private sector	⊖	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	⊖	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✘	83%	–
National health information system policy or strategy	✔	79%	2017
National telehealth policy or strategy	✔	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	–	100%
Private or commercial funding	–	35%
Donor/non-public funding	–	37%
Public-private partnerships	–	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✘	52%
Health professionals: in-service training in digital health	✔	71%
Health science students: certified training in digital health	✘	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✔	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✔	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✔	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✔	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✘	83%
Allow individuals to demand the deletion of health-related data from their EHR	✘	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✔	65%
Govern the secure identification of patients and health-care providers	✔	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	—	49%
Evaluation of telehealth programmes	✔	37%
Evaluation of mHealth service or programmes	✔	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✔	67%	90%	2017
Regional EHR system	✔	69%		
Regional EHR systems connected or federated at national level	✔	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✔	84%
Secondary care facilities (e.g. hospitals and emergency care)	✔	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✔	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✔	90%	30%
Sharing of clinical/patient medical information with other health professionals	✔	86%	
Receive clinical/patient medical information securely from other professionals	✔	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✔	86%	
Receive patient summaries	✔	71%	
Send order/request for lab test	✔	84%	
Receive lab test results	✔	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Informal
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✗	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	–	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✗	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✗	76%
Health promotion	✓	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✗	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✗	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	2012
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	–	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✓	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	95%	2012
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	—
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✗	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✗	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	–	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2016
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	–	35%
Donor/non-public funding	–	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	–	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	–	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✗	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✗	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✗	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	–	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✗	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✗	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✓	9%
Exercise and fitness	✓	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	–	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2018
National health information system policy or strategy	✓	79%	2021
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✗	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	20%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✔	84%	Established
Tele dermatology	✔	52%	Established
Telepathology	✔	44%	Established
Telepsychiatry	✔	51%	Established
Telemedicine	✘	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✘	80%
Mobile teleconsultation	✘	81%
Patient monitoring	✘	63%
Treatment adherence	✘	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✘	76%
Health promotion	✔	63%
Surveillance	✘	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	⊖	45%
General public health announcements	⊖	26%
Management of disasters and emergencies	⊖	30%
Feedback on health-care services	⊖	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	⊖	12%
Diet and nutrition	⊖	9%
Exercise and fitness	⊖	12%
Women's health	⊖	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	⊖	30%
COVID-19 contact-tracing or proximity-tracing	⊖	64%
Booking COVID-19 testing	⊖	38%
Booking COVID-19 vaccination	⊖	55%
Booking care provider consultation	⊖	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2013
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	–	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✗	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✗	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✓	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✓	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	90%	2013
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	45%
Sharing of clinical/patient medical information with other health professionals	–	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✗	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✓	52%	Pilot
Telepathology	–	44%	–
Telepsychiatry	–	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✔	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✘	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✘	83%	–
National health information system policy or strategy	✔	79%	2022
National telehealth policy or strategy	✘	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✔	100%
Private or commercial funding	✘	35%
Donor/non-public funding	✘	37%
Public-private partnerships	✘	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	–	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	–	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✔	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✔	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✔	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✔	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✔	83%
Allow individuals to demand the deletion of health-related data from their EHR	✘	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✔	65%
Govern the secure identification of patients and health-care providers	✔	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	–	2021
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	–	84%
Secondary care facilities (e.g. hospitals and emergency care)	–	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	–	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	–	86%	
Receive clinical/patient medical information securely from other professionals	–	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	–	86%	
Receive patient summaries	–	71%	
Send order/request for lab test	–	84%	
Receive lab test results	–	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal		71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology		84%	
Teledermatology		52%	
Telepathology		44%	
Telepsychiatry		51%	
Telemedicine		77%	

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders		80%
Mobile teleconsultation		81%
Patient monitoring		63%
Treatment adherence		51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information		76%
Health promotion		63%
Surveillance		49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✔	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	⊖	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	⊖	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	–	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2016
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✗	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	–	52%	–
Telepathology	–	44%	–
Telepsychiatry	–	51%	–
Telemedicine	–	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	–	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✓	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✗	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2019
National health information system policy or strategy	✗	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✗	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	90%
Sharing of clinical/patient medical information with other health professionals	✗	86%	
Receive clinical/patient medical information securely from other professionals	✗	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✗	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✘	84%	–
Tele dermatology	✘	52%	–
Telepathology	✘	44%	–
Telepsychiatry	✘	51%	–
Telemedicine	✘	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✔	80%
Mobile teleconsultation	✘	81%
Patient monitoring	✘	63%
Treatment adherence	✘	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✔	76%
Health promotion	✔	63%
Surveillance	✘	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2016
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✗	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✗	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✗	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	✘	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✘	67%	–	–
Regional EHR system	✘	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✔	84%
Secondary care facilities (e.g. hospitals and emergency care)	✔	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✔	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✔	90%	95%
Sharing of clinical/patient medical information with other health professionals	✘	86%	
Receive clinical/patient medical information securely from other professionals	✘	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✘	86%	
Receive patient summaries	✘	71%	
Send order/request for lab test	✘	84%	
Receive lab test results	✔	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✔	84%	Established
Teledermatology	✘	52%	–
Telepathology	✘	44%	–
Telepsychiatry	✔	51%	Pilot
Telemedicine	✘	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	–	80%
Mobile teleconsultation	–	81%
Patient monitoring	–	63%
Treatment adherence	–	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	–	76%
Health promotion	–	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2018
National health information system policy or strategy	✓	79%	2018
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✓	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✓	52%	Established
Telepathology	✓	44%	Pilot
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	⊖	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	⊖	63%
Surveillance	⊖	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✓	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2021
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	–	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2008
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	99%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	⊖	52%	⊖
Telepathology	⊖	44%	⊖
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	⊖	80%
Mobile teleconsultation	⊖	81%
Patient monitoring	⊖	63%
Treatment adherence	⊖	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	⊖	76%
Health promotion	⊖	63%
Surveillance	⊖	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	⊖	35%
Governs the use of big data in the private sector	✔	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2014
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	–	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✓	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2010
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	–	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	–	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✓	52%	Pilot
Telepathology	✓	44%	Pilot
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information

	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%



Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	–	45%
General public health announcements	–	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✓	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✓	12%
Diet and nutrition	✓	9%
Exercise and fitness	✓	12%
Women's health	–	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	–	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2018
National health information system policy or strategy	✓	79%	2018
National telehealth policy or strategy	✓	78%	2018



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	⊖	35%
Donor/non-public funding	⊖	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	⊖	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2022
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	–	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	⊖	84%	⊖
Tele dermatology	⊖	52%	⊖
Telepathology	⊖	44%	⊖
Telepsychiatry	⊖	51%	⊖
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✓	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	–	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	92%	2019
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	91%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Informal
Tele dermatology	✓	52%	Pilot
Telepathology	✘	44%	–
Telepsychiatry	✘	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✘	63%
Treatment adherence	✘	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✘	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✓	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✗	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	–	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	–	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✓	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	–	2021
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✔	84%	Established
Teledermatology	✔	52%	Established
Telepathology	✔	44%	Established
Telepsychiatry	✔	51%	Established
Telemedicine	✔	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✔	80%
Mobile teleconsultation	✔	81%
Patient monitoring	✔	63%
Treatment adherence	✔	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✔	76%
Health promotion	✘	63%
Surveillance	✘	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✔	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✔	12%
Diet and nutrition	✔	9%
Exercise and fitness	✔	12%
Women's health	✔	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✔	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	–	35%
Donor/non-public funding	–	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	–	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✗	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	–	2021
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✗	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✗	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✗	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✗	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✗	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	–	44%	–
Telepsychiatry	✓	51%	Established
Telemedicine	–	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	–	81%
Patient monitoring	–	63%
Treatment adherence	–	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	–	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✔	35%
Governs the use of big data in the private sector	⊖	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	⊖	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	⊖	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2021
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	–	37%
Public-private partnerships	–	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2017
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	97%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Pilot
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✗	80%
Mobile teleconsultation	✗	81%
Patient monitoring	✗	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✔	35%
Governs the use of big data in the private sector	✔	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2016
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	2019



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2014
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Pilot
Telepathology	✗	44%	–
Telepsychiatry	✓	51%	Established
Telemedicine	✗	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✗	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✔	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✔	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✔	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✔	35%
Governs the use of big data in the private sector	✔	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2013
National health information system policy or strategy	✗	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	–	35%
Donor/non-public funding	–	37%
Public-private partnerships	–	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✗	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✗	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	–	84%
Secondary care facilities (e.g. hospitals and emergency care)	–	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	–	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	–	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✗	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Teledermatology	✘	52%	–
Telepathology	✘	44%	–
Telepsychiatry	✓	51%	Pilot
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✘	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	–	26%
Management of disasters and emergencies	–	30%
Feedback on health-care services	–	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	–	12%
Diet and nutrition	–	9%
Exercise and fitness	–	12%
Women's health	–	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	–	38%
Booking COVID-19 vaccination	–	55%
Booking care provider consultation	–	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✗	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2017
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	2012



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	–	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	✔	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✘	67%	–	–
Regional EHR system	✔	69%		
Regional EHR systems connected or federated at national level	✔	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✔	84%
Secondary care facilities (e.g. hospitals and emergency care)	✔	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✔	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✔	90%	100%
Sharing of clinical/patient medical information with other health professionals	✔	86%	
Receive clinical/patient medical information securely from other professionals	✔	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✔	86%	
Receive patient summaries	✔	71%	
Send order/request for lab test	✔	84%	
Receive lab test results	✔	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✔	84%	Established
Teledermatology	✔	52%	Established
Telepathology	✔	44%	Pilot
Telepsychiatry	✔	51%	Established
Telemedicine	✔	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✔	80%
Mobile teleconsultation	✔	81%
Patient monitoring	✔	63%
Treatment adherence	✘	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✔	76%
Health promotion	✔	63%
Surveillance	✘	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2016
National health information system policy or strategy	✓	79%	2008
National telehealth policy or strategy	✓	78%	2020



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✓	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	57%	2015
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✗	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	90%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✗	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✓	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2021
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	90%	2020
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	–	78%
Shared platform for communication	–	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	–	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✗	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information

	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✗	49%



Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	–	45%
General public health announcements	–	26%
Management of disasters and emergencies	–	30%
Feedback on health-care services	✓	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	–	12%
Diet and nutrition	–	9%
Exercise and fitness	–	12%
Women's health	–	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	–	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2022
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✗	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✗	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✗	84%
Secondary care facilities (e.g. hospitals and emergency care)	✗	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✗	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✗	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	–	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	–	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✗	84%	–
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✗	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✗	80%
Mobile teleconsultation	✗	81%
Patient monitoring	✗	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	–	45%
General public health announcements	–	26%
Management of disasters and emergencies	–	30%
Feedback on health-care services	–	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	–	12%
Diet and nutrition	–	9%
Exercise and fitness	–	12%
Women's health	–	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	–	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	–	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	–	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✗	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✗	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	2014
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	–	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2014
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✗	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Informal

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✔	26%
Management of disasters and emergencies	✔	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✘	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2017
National health information system policy or strategy	✓	79%	2015
National telehealth policy or strategy	✓	78%	2020



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	—	49%
Evaluation of telehealth programmes	✘	37%
Evaluation of mHealth service or programmes	✘	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2015
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✘	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✗	84%	–
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✔	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✔	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✔	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✘	83%	–
National health information system policy or strategy	✘	79%	–
National telehealth policy or strategy	✘	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✔	100%
Private or commercial funding	✘	35%
Donor/non-public funding	✘	37%
Public-private partnerships	✔	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✘	52%
Health professionals: in-service training in digital health	✘	71%
Health science students: certified training in digital health	✔	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✔	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✔	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✔	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✔	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✔	83%
Allow individuals to demand the deletion of health-related data from their EHR	✔	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✔	65%
Govern the secure identification of patients and health-care providers	✔	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	✘	49%
Evaluation of telehealth programmes	✘	37%
Evaluation of mHealth service or programmes	✘	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✔	67%	100%	2019
Regional EHR system	✔	69%		
Regional EHR systems connected or federated at national level	✘	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✘	84%
Secondary care facilities (e.g. hospitals and emergency care)	✘	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✘	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✘	90%	100%
Sharing of clinical/patient medical information with other health professionals	✘	86%	
Receive clinical/patient medical information securely from other professionals	✘	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✘	86%	
Receive patient summaries	✘	71%	
Send order/request for lab test	✘	84%	
Receive lab test results	✔	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✗	52%	–
Telepathology	✓	44%	Established
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Informal

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✗	81%
Patient monitoring	✗	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✗	76%
Health promotion	✗	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	✘	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✘	67%	–	–
Regional EHR system	✘	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✔	84%
Secondary care facilities (e.g. hospitals and emergency care)	✔	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✔	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✔	90%	–
Sharing of clinical/patient medical information with other health professionals	✘	86%	
Receive clinical/patient medical information securely from other professionals	✘	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✔	86%	
Receive patient summaries	✘	71%	
Send order/request for lab test	✔	84%	
Receive lab test results	✔	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	–	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✔	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✘	83%	–
National health information system policy or strategy	✘	79%	–
National telehealth policy or strategy	–	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✔	100%
Private or commercial funding	✘	35%
Donor/non-public funding	✘	37%
Public-private partnerships	✘	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✘	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	✘	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✔	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✔	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	–	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✔	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✔	83%
Allow individuals to demand the deletion of health-related data from their EHR	✔	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	–	65%
Govern the secure identification of patients and health-care providers	✔	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	⊗	77%
Government agency or organization responsible for regional monitoring	⊗	19%
Developed guidance for evaluating digital health interventions	⊗	49%
Evaluation of telehealth programmes	⊖	37%
Evaluation of mHealth service or programmes	⊖	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	⊖	67%	⊖	⊖
Regional EHR system	⊖	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	⊖	84%
Secondary care facilities (e.g. hospitals and emergency care)	⊖	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	⊖	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	⊖	90%	⊖
Sharing of clinical/patient medical information with other health professionals	⊖	86%	
Receive clinical/patient medical information securely from other professionals	⊖	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	⊖	86%	
Receive patient summaries	⊖	71%	
Send order/request for lab test	⊖	84%	
Receive lab test results	⊖	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✗	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✗	84%	–
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	–	80%
Mobile teleconsultation	–	81%
Patient monitoring	–	63%
Treatment adherence	–	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	–	76%
Health promotion	–	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✗	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	⊖	35%
Governs the use of big data in the private sector	⊖	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	⊖	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	⊖	56%
Responsible national organization or agency	⊖	71%
Adoption of international terminology standards	⊖	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2018
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	–	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	–	78%
Shared platform for communication	–	42%
Patient can access their medical history and data	–	72%
Provider access to patient's clinical information	–	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Informal

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✗	80%
Mobile teleconsultation	✗	81%
Patient monitoring	✗	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✗	76%
Health promotion	✓	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	⊖	45%
General public health announcements	✔	26%
Management of disasters and emergencies	⊖	30%
Feedback on health-care services	⊖	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	⊖	12%
Diet and nutrition	⊖	9%
Exercise and fitness	⊖	12%
Women's health	⊖	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	⊖	30%
COVID-19 contact-tracing or proximity-tracing	⊖	64%
Booking COVID-19 testing	⊖	38%
Booking COVID-19 vaccination	⊖	55%
Booking care provider consultation	⊖	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Netherlands (Kingdom of the)

Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2013
National health information system policy or strategy	✗	79%	–
National telehealth policy or strategy	✗	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
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Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	–	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
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Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
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Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	–	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	91%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Teledermatology	✓	52%	Established
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✗	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✗	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✗	83%	–
National health information system policy or strategy	✓	79%	2013
National telehealth policy or strategy	✗	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✗	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✗	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✗	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	✘	49%
Evaluation of telehealth programmes	✘	37%
Evaluation of mHealth service or programmes	✘	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✔	67%	90%	2015
Regional EHR system	✘	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✔	84%
Secondary care facilities (e.g. hospitals and emergency care)	✔	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✔	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✔	90%	100%
Sharing of clinical/patient medical information with other health professionals	✔	86%	
Receive clinical/patient medical information securely from other professionals	✔	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✔	86%	
Receive patient summaries	✔	71%	
Send order/request for lab test	✔	84%	
Receive lab test results	✔	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✘	84%	–
Tele dermatology	✘	52%	–
Telepathology	✘	44%	–
Telepsychiatry	✔	51%	Informal
Telemedicine	✔	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✔	80%
Mobile teleconsultation	✔	81%
Patient monitoring	✘	63%
Treatment adherence	✘	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✘	76%
Health promotion	✔	63%
Surveillance	✘	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✘	96%

Legend

- ✔ Yes
- ✘ No
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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2017
National health information system policy or strategy	✓	79%	2013
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	97%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Informal
Tele dermatology	✓	52%	Informal
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	–	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✓	12%
Diet and nutrition	✗	9%
Exercise and fitness	✓	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	–	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✗	79%	–
National telehealth policy or strategy	✗	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2021
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	95%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✗	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✓	52%	Pilot
Telepathology	✗	44%	–
Telepsychiatry	✓	51%	Pilot
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✗	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✗	76%
Health promotion	✗	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✗	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✗	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2019
National health information system policy or strategy	✓	79%	2019
National telehealth policy or strategy	✓	78%	2020



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2012
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	⊖	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	⊖	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	99%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✓	52%	Pilot
Telepathology	✓	44%	Informal
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✗	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✘	83%	–
National health information system policy or strategy	✘	79%	–
National telehealth policy or strategy	✘	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✔	100%
Private or commercial funding	✘	35%
Donor/non-public funding	✔	37%
Public-private partnerships	✘	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✘	52%
Health professionals: in-service training in digital health	✘	71%
Health science students: certified training in digital health	✘	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✔	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✘	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✘	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✘	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✘	83%
Allow individuals to demand the deletion of health-related data from their EHR	✘	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✘	65%
Govern the secure identification of patients and health-care providers	✘	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	✘	37%
Evaluation of mHealth service or programmes	✘	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✘	67%	–	–
Regional EHR system	✘	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✘	84%
Secondary care facilities (e.g. hospitals and emergency care)	✘	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✘	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✘	90%	–
Sharing of clinical/patient medical information with other health professionals	✔	86%	
Receive clinical/patient medical information securely from other professionals	✔	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✔	86%	
Receive patient summaries	✔	71%	
Send order/request for lab test	✔	84%	
Receive lab test results	✔	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✘	84%	–
Teledermatology	✘	52%	–
Telepathology	✘	44%	–
Telepsychiatry	✘	51%	–
Telemedicine	✘	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✔	80%
Mobile teleconsultation	✔	81%
Patient monitoring	✔	63%
Treatment adherence	✔	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✘	76%
Health promotion	✔	63%
Surveillance	✘	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✘	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✓	37%
Public-private partnerships	–	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	—	49%
Evaluation of telehealth programmes	✘	37%
Evaluation of mHealth service or programmes	—	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✔	67%	40%	2014
Regional EHR system	✘	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✔	84%
Secondary care facilities (e.g. hospitals and emergency care)	✔	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✘	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✔	90%	100%
Sharing of clinical/patient medical information with other health professionals	✘	86%	
Receive clinical/patient medical information securely from other professionals	✘	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✘	86%	
Receive patient summaries	✘	71%	
Send order/request for lab test	✘	84%	
Receive lab test results	✘	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✘	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✘	76%
Health promotion	✘	63%
Surveillance	✘	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✔	30%
Feedback on health-care services	✔	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2021
National health information system policy or strategy	✓	79%	2021
National telehealth policy or strategy	✓	78%	2017



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	⊖	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✗	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	91%	2011
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✗	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✘	52%	–
Telepathology	✓	44%	Informal
Telepsychiatry	✘	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	⊖	45%
General public health announcements	⊖	26%
Management of disasters and emergencies	⊖	30%
Feedback on health-care services	⊖	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	⊖	12%
Diet and nutrition	⊖	9%
Exercise and fitness	⊖	12%
Women's health	⊖	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	⊖	30%
COVID-19 contact-tracing or proximity-tracing	⊖	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✗	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✗	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	2015
National telehealth policy or strategy	✗	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✗	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✗	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✗	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	—	49%
Evaluation of telehealth programmes	✘	37%
Evaluation of mHealth service or programmes	✘	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	1992
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	—	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✗	84%	–
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✗	80%
Mobile teleconsultation	✗	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✘	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2022
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	–	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✗	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth Programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	90%	2022
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✗	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✗	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✗	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✗	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	⊖	60%
Governs the use of big data in the health sector	⊖	35%
Governs the use of big data in the private sector	⊖	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	⊖	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✗	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✘	83%	–
National health information system policy or strategy	✔	79%	2018
National telehealth policy or strategy	✘	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✔	100%
Private or commercial funding	✘	35%
Donor/non-public funding	✘	37%
Public-private partnerships	✘	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✘	52%
Health professionals: in-service training in digital health	✘	71%
Health science students: certified training in digital health	✘	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✔	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✔	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✘	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✔	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✔	83%
Allow individuals to demand the deletion of health-related data from their EHR	✔	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✔	65%
Govern the secure identification of patients and health-care providers	✔	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✗	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	–	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✗	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Informal
Tele dermatology	✓	52%	Informal
Telepathology	✓	44%	Informal
Telepsychiatry	✗	51%	–
Telemedicine	✗	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	–	80%
Mobile teleconsultation	–	81%
Patient monitoring	–	63%
Treatment adherence	–	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	–	76%
Health promotion	–	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✔	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✔	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✘	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✗	83%	–
National health information system policy or strategy	✗	79%	–
National telehealth policy or strategy	✗	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	–	35%
Donor/non-public funding	–	37%
Public-private partnerships	–	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✗	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✘	77%
Government agency or organization responsible for regional monitoring	✘	19%
Developed guidance for evaluating digital health interventions	—	49%
Evaluation of telehealth programmes	—	37%
Evaluation of mHealth service or programmes	✘	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✔	67%	92%	2016
Regional EHR system	✘	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✘	84%
Secondary care facilities (e.g. hospitals and emergency care)	✘	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✘	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✔	90%	95%
Sharing of clinical/patient medical information with other health professionals	✘	86%	
Receive clinical/patient medical information securely from other professionals	✔	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✔	86%	
Receive patient summaries	✔	71%	
Send order/request for lab test	✔	84%	
Receive lab test results	✔	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✗	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✗	52%	–
Telepathology	–	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Informal

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	–	81%
Patient monitoring	–	63%
Treatment adherence	✗	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✘	60%
Governs the use of big data in the health sector	✘	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✘	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✘	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2021
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✓	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	✓	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2006
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	✓	44%	Informal
Telepsychiatry	–	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	–	30%
Feedback on health-care services	–	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	–	12%
Diet and nutrition	–	9%
Exercise and fitness	–	12%
Women's health	–	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	–	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2016
National health information system policy or strategy	✗	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✗	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	–	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	✗	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	⊖	45%
General public health announcements	⊖	26%
Management of disasters and emergencies	⊖	30%
Feedback on health-care services	⊖	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	⊖	12%
Diet and nutrition	⊖	9%
Exercise and fitness	⊖	12%
Women's health	⊖	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	⊖	30%
COVID-19 contact-tracing or proximity-tracing	⊖	64%
Booking COVID-19 testing	⊖	38%
Booking COVID-19 vaccination	⊖	55%
Booking care provider consultation	⊖	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✗	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2018
National health information system policy or strategy	✓	79%	2017
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	✗	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	100%	2018
Regional EHR system	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✗	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✗	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✗	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✓	52%	Established
Telepathology	✓	44%	Established
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	⊖	80%
Mobile teleconsultation	⊖	81%
Patient monitoring	⊖	63%
Treatment adherence	⊖	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	⊖	76%
Health promotion	⊖	63%
Surveillance	⊖	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✗	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✗	12%
Diet and nutrition	✗	9%
Exercise and fitness	✗	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✗	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✗	35%
Governs the use of big data in the private sector	✗	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	–	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	–	83%
Allow individuals to demand the deletion of health-related data from their EHR	–	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	–	65%
Govern the secure identification of patients and health-care providers	–	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✓	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	✓	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	15%	2018
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✗	84%
Secondary care facilities (e.g. hospitals and emergency care)	✗	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	✘	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✔	84%	Established
Tele dermatology	✘	52%	✘
Telepathology	✘	44%	✘
Telepsychiatry	✘	51%	✘
Telemedicine	✔	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✔	80%
Mobile teleconsultation	✔	81%
Patient monitoring	✔	63%
Treatment adherence	✔	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✘	76%
Health promotion	✔	63%
Surveillance	✔	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✘	64%
Booking COVID-19 testing	✘	38%
Booking COVID-19 vaccination	✘	55%
Booking care provider consultation	✘	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✔	35%
Governs the use of big data in the private sector	—	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✔	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✘	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	2011
National telehealth policy or strategy	✓	78%	2019



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✓	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	95%	2015
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	100%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✗	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Tele dermatology	✗	52%	–
Telepathology	✗	44%	–
Telepsychiatry	✓	51%	Established
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information

	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%



Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	✗	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✓	12%
Diet and nutrition	✗	9%
Exercise and fitness	✓	12%
Women's health	✗	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✗	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	2019
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	–	35%
Donor/non-public funding	–	37%
Public-private partnerships	–	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	–	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	–	83%
Allow individuals to demand the deletion of health-related data from their EHR	–	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	–	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	–	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	–	2011
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✗	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	–
Sharing of clinical/patient medical information with other health professionals	–	86%	
Receive clinical/patient medical information securely from other professionals	–	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	–	86%	
Receive patient summaries	–	71%	
Send order/request for lab test	–	84%	
Receive lab test results	–	92%	

National digital health patient portal



	Country response	Regional "yes" response
National digital health patient portal	–	71%

Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Established
Teledermatology	–	52%	–
Telepathology	–	44%	–
Telepsychiatry	–	51%	–
Telemedicine	–	77%	–

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	–	80%
Mobile teleconsultation	–	81%
Patient monitoring	–	63%
Treatment adherence	–	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	–	76%
Health promotion	–	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✓	45%
General public health announcements	✓	26%
Management of disasters and emergencies	✓	30%
Feedback on health-care services	⊖	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	⊖	12%
Diet and nutrition	⊖	9%
Exercise and fitness	⊖	12%
Women's health	⊖	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	⊖	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	⊖	38%
Booking COVID-19 vaccination	⊖	55%
Booking care provider consultation	⊖	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	⊖	60%
Governs the use of big data in the health sector	⊖	35%
Governs the use of big data in the private sector	⊖	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	⊖	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
- ⊖ Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2020
National health information system policy or strategy	✓	79%	2020
National telehealth policy or strategy	✓	78%	2022



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✓	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	Under development	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✗	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✗	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	✓	77%
Government agency or organization responsible for regional monitoring	✗	19%
Developed guidance for evaluating digital health interventions	✓	49%
Evaluation of telehealth programmes	✓	37%
Evaluation of mHealth service or programmes	✗	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✓	67%	95%	2019
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✓	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	50%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	✓	78%
Shared platform for communication	✓	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	✓	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Pilot
Tele dermatology	✓	52%	Pilot
Telepathology	✗	44%	–
Telepsychiatry	✗	51%	–
Telemedicine	✓	77%	Pilot

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✗	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✓	63%
Surveillance	✓	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	✘	45%
General public health announcements	✘	26%
Management of disasters and emergencies	✘	30%
Feedback on health-care services	✘	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	✘	12%
Diet and nutrition	✘	9%
Exercise and fitness	✘	12%
Women's health	✘	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✘	30%
COVID-19 contact-tracing or proximity-tracing	✔	64%
Booking COVID-19 testing	✔	38%
Booking COVID-19 vaccination	✔	55%
Booking care provider consultation	✔	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✔	60%
Governs the use of big data in the health sector	✔	35%
Governs the use of big data in the private sector	✘	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✘	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✔	56%
Responsible national organization or agency	✔	71%
Adoption of international terminology standards	✔	96%

Legend

- ✔ Yes
- ✘ No
- Indicates question was unanswered or with the response "Don't know" or "Not applicable"

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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	2019
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✗	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✗	37%
Public-private partnerships	✗	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	✓	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✓	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✓	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
Allow individuals to specify which health-related data from their EHR can be shared with health professionals of their choice	✗	65%
Govern the secure identification of patients and health-care providers	✓	89%



Monitoring and evaluation of digital health interventions

	Country response	Regional "yes" response
Government agency or organization responsible for national monitoring	–	77%
Government agency or organization responsible for regional monitoring	–	19%
Developed guidance for evaluating digital health interventions	–	49%
Evaluation of telehealth programmes	–	37%
Evaluation of mHealth service or programmes	✓	15%

EHRs

	Country response	Regional "yes" response	Percentage of health-care institutions linked/able to access the national EHR system	Year first introduced
National EHR system	✗	67%	–	–
Regional EHR system	✓	69%		
Regional EHR systems connected or federated at national level	✗	69%		



Health facilities with EHR

	Country response (used routinely)	Regional "yes" response (used routinely)
Primary care facilities (e.g. clinics and health-care centres)	✓	84%
Secondary care facilities (e.g. hospitals and emergency care)	✓	78%
Tertiary care facilities (e.g. specialized care and referral from primary/secondary care)	✓	69%



Primary practice EHR functionalities

	Country response (used routinely or occasionally)	Regional "yes" response (used routinely or occasionally)	Percentage of prescriptions issued electronically
Electronic prescription of medications	✓	90%	91%
Sharing of clinical/patient medical information with other health professionals	✓	86%	
Receive clinical/patient medical information securely from other professionals	✓	84%	
Receive summary of the care received during a hospitalization upon discharge (such as discharge summary)	✓	86%	
Receive patient summaries	✓	71%	
Send order/request for lab test	✓	84%	
Receive lab test results	✓	92%	

National digital health patient portal

	Country response	Regional "yes" response
National digital health patient portal	✓	71%

Patient portal functionalities

	Country response	Regional "yes" response
Booking of medical appointments	✓	53%
Bring together relevant health-related information	–	78%
Shared platform for communication	–	42%
Patient can access their medical history and data	✓	72%
Provider access to patient's clinical information	–	56%



Telehealth programmes



	Country response	Regional "yes" response	Maturity of programme
Teleradiology	✓	84%	Informal
Tele dermatology	✓	52%	Pilot
Telepathology	–	44%	–
Telepsychiatry	–	51%	–
Telemedicine	✓	77%	Established

mHealth services and programmes

Accessing/providing health services

	Country response	Regional "yes" response
Appointment reminders	✓	80%
Mobile teleconsultation	✓	81%
Patient monitoring	✓	63%
Treatment adherence	✓	51%



Accessing/providing health information



	Country response	Regional "yes" response
Access to electronic patient information	✓	76%
Health promotion	✗	63%
Surveillance	–	49%

Health-related mobile apps

Government-sponsored apps: accessing/providing health-related services

	Country response	Regional "yes" response
Health promotion	–	45%
General public health announcements	–	26%
Management of disasters and emergencies	–	30%
Feedback on health-care services	–	15%



mHealth apps evaluated and approved: supporting/providing health and wellness care

	Country response	Regional "yes" response
Mindfulness and mental health	–	12%
Diet and nutrition	–	9%
Exercise and fitness	–	12%
Women's health	–	7%

Mobile apps introduced during COVID-19

	Country response	Regional "yes" response
COVID-19 symptom checking	✓	30%
COVID-19 contact-tracing or proximity-tracing	✓	64%
Booking COVID-19 testing	✓	38%
Booking COVID-19 vaccination	✓	55%
Booking care provider consultation	✓	32%



Big data and advanced analytics for health



Policy or strategy: purpose

	Country response	Regional "yes" response
Overarching national data strategy	✓	60%
Governs the use of big data in the health sector	✓	35%
Governs the use of big data in the private sector	✓	32%
Governs data extraction from EHR systems for regional/local or national registries and databases	✓	71%



Standards and interoperability

	Country response	Regional "yes" response
Interoperability strategy or policy	✓	56%
Responsible national organization or agency	✓	71%
Adoption of international terminology standards	✓	96%

Legend

- ✓ Yes
- ✗ No
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Digital health foundations



National digital health governance frameworks

(Standalone or included in overall national health policy or strategy)



	Country response	Regional "yes" response	Year adopted
National digital health policy or strategy	✓	83%	–
National health information system policy or strategy	✓	79%	–
National telehealth policy or strategy	✓	78%	–



Funding sources for digital health

	Country response	Regional "yes" response
Public funding	✓	100%
Private or commercial funding	✗	35%
Donor/non-public funding	✓	37%
Public-private partnerships	✓	39%



Digital health literacy and capacity-building

	Country response	Regional "yes" response
Digital health education action plan, policy or strategy	✓	52%
Health professionals: in-service training in digital health	✓	71%
Health science students: certified training in digital health	✓	60%



Regulatory frameworks

	Country response	Regional "yes" response
Protect the privacy of personally identifiable data	–	100%
Protect the privacy of individuals' health-related data held in electronic format in an EHR	✗	91%
Govern the sharing of digital data between health professionals and across care settings using an EHR	✗	74%
Allow individuals electronic access to their own health-related data when held in an EHR	✓	86%
Allow individuals to demand their own health-related data be corrected when held in an EHR if it is known to be inaccurate	✓	83%
Allow individuals to demand the deletion of health-related data from their EHR	✓	43%
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THE WHO REGIONAL OFFICE FOR EUROPE

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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