



Adoption of eHealth in Selected European Countries (2022+)



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In this report...

Insight. Strategy. Results.

Overview

- ▶ This mini-report contains topline information on the demographics of selected European countries, their eHealth initiatives, as well as the potential impact of COVID-19 on their development
- ▶ These eHealth initiatives are mostly state-sanctioned or are in collaboration with government organisations
- ▶ Barriers to eHealth adoption and potential solutions from the perspective of regulators and decision-makers are outlined

Limitations

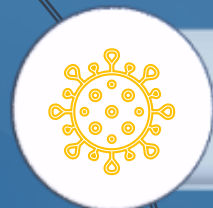
- ▶ This research piece is not extensive and only includes noteworthy eHealth initiatives from countries in scope
- ▶ Analytical content is based solely on Velametis' analyses, views and forecasting of the eHealth
- ▶ Information not included in this report also contributed to country ratings
- ▶ This report is based on the assumption COVID-19 will be under control in Europe from 2022 onwards





Dashboard Slide

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Adoption of eHealth: The COVID-19 Effect



Country Ratings Based on eHealth Initiatives



eHealth Barriers and Potential Solutions

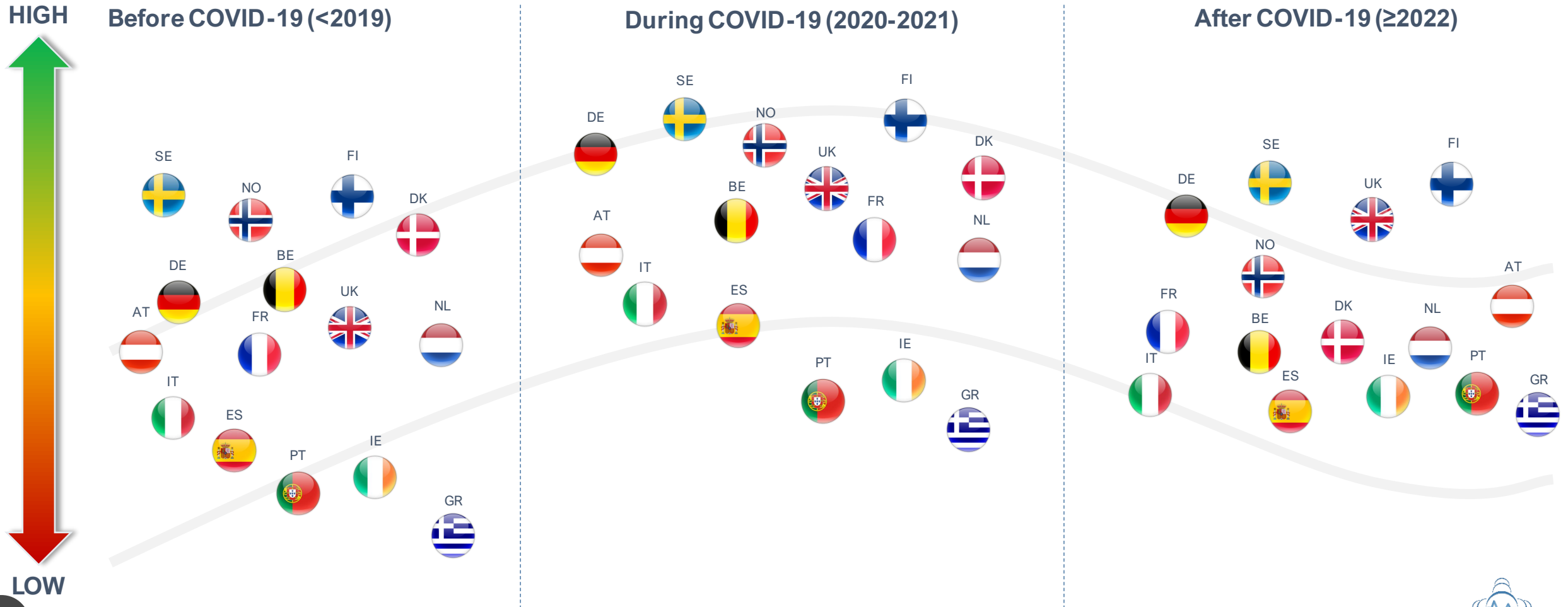


Glossary

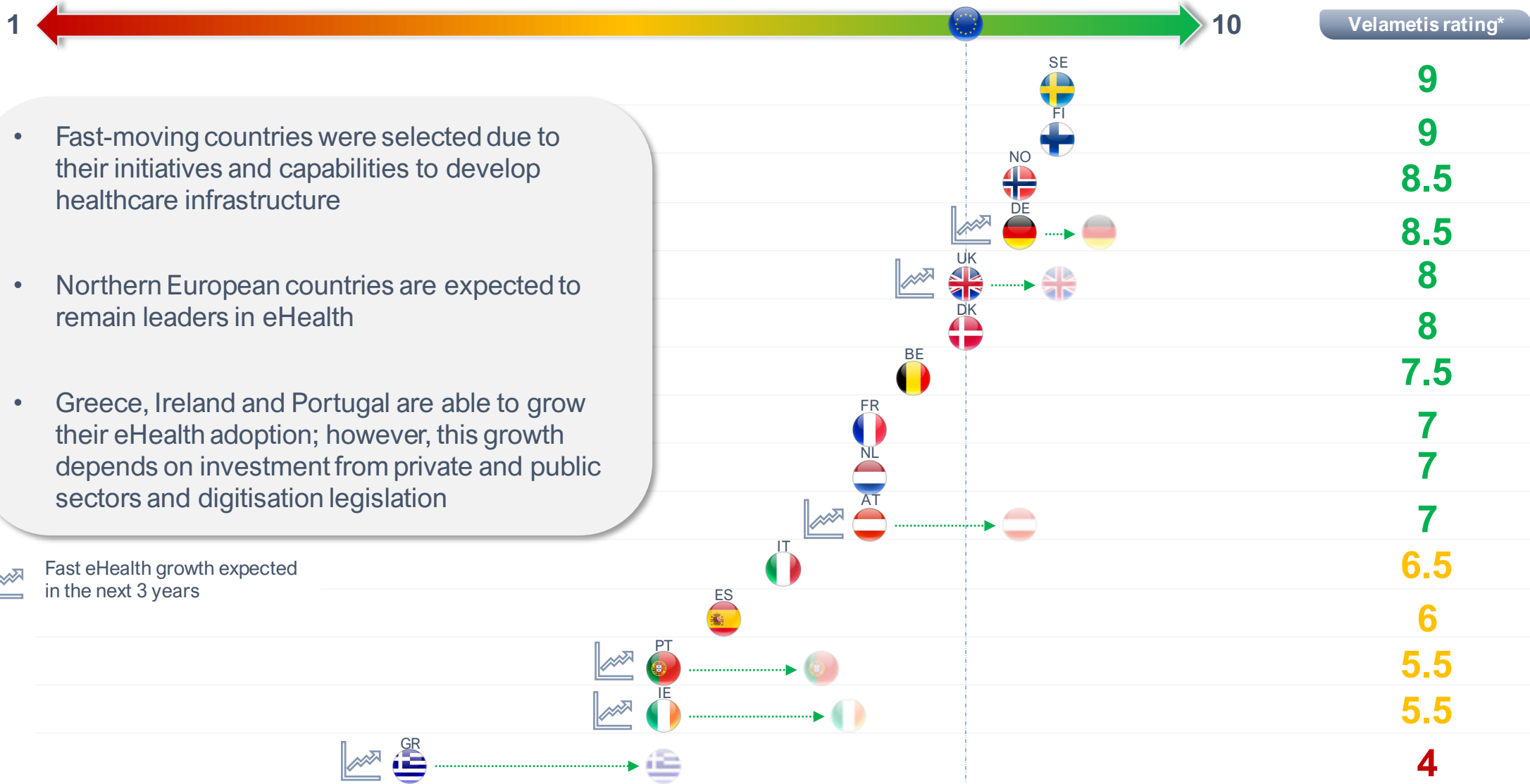


Adoption of eHealth: The COVID-19 Effect


After the eHealth inflection seen during COVID-19, several countries will continue to bet on digital initiatives in healthcare



Country Ratings Based on eHealth Initiatives



- Fast-moving countries were selected due to their initiatives and capabilities to develop healthcare infrastructure
- Northern European countries are expected to remain leaders in eHealth
- Greece, Ireland and Portugal are able to grow their eHealth adoption; however, this growth depends on investment from private and public sectors and digitisation legislation

 Fast eHealth growth expected in the next 3 years

*Rating out of 10 is based solely on Velametis' analysis of the country's acceptance of DH and their activities to adopt DH technologies before, during and after the COVID-19 pandemic; the rating outlines potential attractiveness to Pharma and tech companies interested in investing in DH. Impact assessment is determined by number of DH activities, DH investment, infrastructure readiness, stakeholder readiness and digital literacy.

Main eHealth Barriers and Potential Solutions

European countries are building eHealth infrastructures as top priority

BARRIERS

1 Lack of infrastructure



2 Limited stakeholder involvement



3 No standard legislation/regulatory framework



POTENTIAL SOLUTIONS

- Create EHR and centralised database
- Develop tools and strategies to promote integrated care
- Create laws to support eHealth infrastructure

- Develop tools designed to improve patient care by adding value to all stakeholders
- Develop user-friendly, interconnected tools compatible with multiple devices and operating systems
- Improve data management and access through digital tools

- Create laws to facilitate access to eHealth tools and applications
- Strengthen laws which promote data security and integrity

EU and Country Profiles

Topline slides include demographics, eHealth initiatives of note and their potential impact



European Union

The EU is creating initiatives to accelerate health digitisation among the union's members

Profile (2019)



Population size: **511.9 million**



Fertility rate: **1.6**



Population > age of 65 : **19.4%**

> age of 65 suffering from ≥1 chronic disease: **54%**



GDP per capita (€ PPP): **30,000**



Healthcare spending: **9.8%** of GDP

Noteworthy eHealth initiatives

- Jan 2021: Thirteen projects with AI at the heart of innovative approaches will be supported by the EC. The focus will be the detection and prevention of the spread of COVID-19 (funding of at least €55.2 million)
- Oct 2019: The EC created the eHealth HUB to provide business-oriented services tailored to the needs of EU eHealth SMEs and stakeholders
- Apr 2019: The eHSG published the paper “Proposed Guiding Principles for Reimbursement of Digital Health Products and Solutions”
- The EC created Digital Health Europe to support large scale deployment of digital solutions for patient-centred integrated care
- The European Connected Health Alliance (EChAlliance) was created to be the global health connector for digital health in order to facilitate multi-stakeholder connections around ecosystems

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Sweden

The country's infrastructure is one of the best prepared for eHealth adoption



Country Profile (2019)



Population size: **10.1 million**



Fertility rate: **1.8**



Population > age of 65 : **19.8%**

> age of 65 suffering from ≥ 1 chronic disease: **48%**



GDP per capita (€ PPP): **36,300**



Healthcare spending: **11%** of GDP

Noteworthy eHealth initiatives

- RISE (Research Institute of Sweden) is responsible for innovation, growth and international competitiveness of Swedish industry. RISE is supporting multiple projects including DH implementation, ethics, remote care and AI
- Sweden had one the highest internet and computer usage per capita in the world in 2019, as well as a fibre optic grid that reaches most of the country. This facilitates DH adoption
- The Swedish eHealth Agency (eHälsomyndigheten) was created in 2014 in order to lead and coordinate eHealth initiatives devised to improve health and social care

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH





Finland

eHealth initiatives are centred on data sharing and collaboration between stakeholders

Country Profile (2019)



Population size: **5.5 million**



Fertility rate: **1.5**



Population > age of 65 : **20.9%**

> age of 65 suffering from ≥1 chronic disease: **60%**



GDP per capita (€ PPP): **32,700**



Healthcare spending: **9.2%** of GDP

Noteworthy eHealth initiatives

- In 2015, the Ministry of Social Affairs and Health eHealth created the eSocial Strategy 2020 to support the social welfare and healthcare sectors through the improvement of information management, as well as access to online services
- Virtuaalisairaala (the Virtual Hospital) is a 2.0 project designed to create a health database and to support multiple eHealth initiatives
 - The Virtuaalisairaala 2.0 project includes research institutes, the private sector and patient organisations working in cooperation
- Health Village is an eHealth service platform developed with patients and HCPs. It is designed to support traditional care with digital services, and is also a product of the Virtuaalisairaala 2.0 project

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH





Norway

Departments and networks were created at national level to strengthen the eHealth infrastructure

Country Profile (2019)



Population size: **5.3 million**



Fertility rate: **1.6**



Population > age of 65 : **16.6%**

> age of 65 suffering from ≥1 chronic disease: **N/A**



GDP per capita (€ PPP): **43,900**



Healthcare spending: **10.4%** of GDP

Noteworthy eHealth initiatives

- The PatientSky cloud platform enables HCPs to provide patient care and is implemented at national level
- Norwegian Health Network (NHN) / Helsenorge is encouraging video-consultations in collaboration with helsenorge.no
- Pridok EHR platform solution for HCPs in Norway
- Jan 2016: The Norwegian ministry of Health and Care Services established The Directorate of eHealth (NDE) to coordinate DH implementation through close collaboration with regional/local health authorities and technical organisations
- The Department of eHealth was created to oversee the provision of DH services to HCPs and the public; the department governs the NDE

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Germany

The focus of digitisation is on building an eHealth infrastructure supported by legislation



Country Profile (2019)



Population size: **82.7 million**



Fertility rate: **1.6**



Population > age of 65 : **21.2%**

> age of 65 suffering from ≥ 1 chronic disease: **58%**



GDP per capita (€ PPP): **37,100**



Healthcare spending: **11.2%** of GDP

Noteworthy eHealth initiatives

- Jan 2021: Hospital Future Act (KHZG) will enable public hospitals to receive €4.3 billion for digital health innovation
- Dec 2019: DiGa Fast-Track was created by the Digital Healthcare Act (DVG); apps could be prescribed by HCPs and costs reimbursed through the German Health Insurance
- 2015: Germany passed its first eHealth law to outline a roadmap for building a national digital infrastructure, improving access to health information and governing introduction of novel digital applications

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH



United Kingdom

Fast eHealth growth
expected in the next 3 years

Several initiatives are being implemented at national and regional level in the form of “eHealth clusters”

Country Profile (2019)



Population size: **66.1 million**



Fertility rate: **1.7**



Population > age of 65 : **18.1%**

> age of 65 suffering from ≥ 1 chronic disease: **60%**



GDP per capita (€ PPP): **31,700**



Healthcare spending: **9.6%** of GDP

Noteworthy eHealth initiatives

- Apr 2019: NHSX is a joint unit composed of Department of Health and Social Care, NHS England and NHS Improvement, established to drive digital transformation and innovation of patient care
- Apr 2013: NHS Digital was created to design, develop and operate the national IT and data services in order to support HCPs in improving patient care
- There are several digital/eHealth clusters being created across the UK. These include eHealth Cluster in Liverpool and the Digital Health Accelerator in London

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH



Denmark

The focus of initiatives is the facilitation of HCP to patient communications and data exchange

Country Profile (2019)



Population size: **5.8 million**



Fertility rate: **1.8**



Population > age of 65 : **19.1%**

> age of 65 suffering from ≥ 1 chronic disease: **49%**



GDP per capita (€ PPP): **38,400**



Healthcare spending: **10.1%** of GDP

Noteworthy eHealth initiatives

- The Danish Ministry of Health created MedCom, a non-profit organisation, to facilitate cooperation and communication between authorities, organisations and private firms linked to the healthcare sector
- In Denmark eHealth expansion is based on public-private cooperation between the government, the regions, the municipalities, and the industry
 - This initiative is part of the Digital Health Strategy 2018-2022, which establishes a strong digital relation with the patient, supports Patient Reported Outcomes, integrated care and prevention initiatives

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Belgium

Initiatives will allow patients to have more access and control over their data



Country Profile (2019)



Population size: **11.4 million**



Fertility rate: **1.7**



Population > age of 65 : **18.5%**

> age of 65 suffering from ≥ 1 chronic disease: **60%**



GDP per capita (€ PPP): **35,000**



Healthcare spending: **10.3%** of GDP

Noteworthy eHealth initiatives

- E-gezondheid/ e-santé is a portal of eHealth services in Belgium, which recently released the e-Health 2019-2021 Action Plan, addressing the “7 clusters” in order to improve digitisation in healthcare
- mHealthBelgium is a platform which focuses on centralising all relevant and required information on mobile apps for patients, healthcare professionals and healthcare institutions. mHealthBelgium is an initiative of the Belgian Federal Government
- MijnGezondheid/MaSanté is an online portal created as a “Personal Health Viewer” that allows users to consult their personal health data and general information

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

France

Building the digital infrastructure is the most important agenda in the country; AI may have a significant role in eHealth



Country Profile (2019)



Population size: **66.9 million**



Fertility rate: **1.9**



Population > age of 65 : **19.3%**

> age of 65 suffering from ≥1 chronic disease: **63%**



GDP per capita (€ PPP): **31,200**



Healthcare spending: **11.6%** of GDP

Noteworthy eHealth initiatives

- 2019: Ma Santé 2022 is a healthcare bill designed to improve healthcare interoperability, whilst launching a nationwide EHR (electronic health record) and leveraging data collection and AI in healthcare
- Esante France combines customer relations, public health data management and the development of digital health software with applications at national level
- France Digitale is a tech community created in 2012 to promote the emergence of French and European digital companies (Région Île-de-France is a partner)

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH



Netherlands

Collaborations between government and private entities will spur digitisation in healthcare

Country Profile (2019)



Population size: **17.1 million**



Fertility rate: **1.6**



Population > age of 65 : **18.5%**

> age of 65 suffering from ≥1 chronic disease: **44%**



GDP per capita (€ PPP): **38,400**



Healthcare spending: **10.1%** of GDP

Noteworthy eHealth initiatives

- In 2020, the Dutch government created the Electronic Data Exchange in Healthcare Act, which will require data exchange between HCPs to take place electronically
- The eHealth At Home Incentive Scheme was commissioned by the Dutch Ministry of Health in order to create measures in support of digital remote care during COVID-19. The total subsidy was of €23 million
- VIPP 5 (Acceleration Programme Information Exchange Patient & Professional) was created for the facilitation of digital exchange of information between patients and HCPs via a personal health environment. The programme will run until July 2023
- 2005: The Ministry of Health collaborated with Topicus HealthCare to establish a national eHealth infrastructure

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Austria

The country's adoption of eHealth is being spearheaded by Vienna's digital initiatives; data security and integrity are essential for Austria's digitisation



Country Profile (2019)



Population size: **8.8 million**



Fertility rate: **1.5**



Population > age of 65 : **18.5%**

> age of 65 suffering from ≥ 1 chronic disease: **47%**



GDP per capita (€ PPP): **38,100**



Healthcare spending: **10.4%** of GDP

Noteworthy eHealth initiatives

- DigitalCity.Wien is an independent and non-profit initiative of the city of Vienna and the Vienna information technology industry. The objective is to make Vienna the digital capital in Europe and the city is leading several eHealth initiatives
- 2005: The Health Telematics Law was enacted in 2005 and amended in 2012 as part of the Austrian health care reform act, established to define minimum standards for a secure health data exchange
- 2005: The Ministry of Health created the ELGA (life-long electronic health record) initiative, a plan designed for implementing a nationwide electronic health record system in Austria. Implementation of ELGA started in December 2015

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH



Italy

Recent eHealth plans have been formalised, however decentralisation of healthcare may prove to be a barrier to fast adoption of eHealth

Country Profile (2019)



Population size: **60.5 million**



Fertility rate: **1.3**



Population > age of 65 : **22.3%**

> age of 65 suffering from ≥ 1 chronic disease: **49%**



GDP per capita (€ PPP): **28,900**



Healthcare spending: **8.8%** of GDP

Noteworthy eHealth initiatives

- Jul 2020: AGID (Agency for Digital Italy) implemented a three-year (2020-2022) plan to promote digital transformation of the public sector in Italy. The plan consists of three projects: Electronic Health Record, Single Booking Centre and Telemedicine
 - Italy's Electronic Health Record is active in 21 regions, and allows citizens to trace and consult their entire health care history. This information is managed by individual regions and can be shared with HCPs
 - The Single Booking Centre plan was developed to simplify reservation/booking of services, improve access to assistance and reduce waiting times in treatment centres

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Spain

Significant investments were made for digitisation of the country's industries including eHealth; Barcelona is expected to lead eHealth growth



Country Profile (2019)



Population size: **46.6 million**



Fertility rate: **1.3**



Population > age of 65 : **19%**

> age of 65 suffering from ≥1 chronic disease: **49%**



GDP per capita (€ PPP): **27,600**



Healthcare spending: **8.9%** of GDP

Noteworthy eHealth initiatives

- The Catalonia region is considered one of Spain' frontrunners in eHealth. The Barcelona Health Hub was created to generate innovation, promote start-ups and foster stakeholder interaction within eHealth
- Spain Digital 2025 includes ~50 measures grouped into ten strategic pillars, which intend to promote the country's digital transformation process over the next five years. Total investment will be ~€70,000 million (not exclusive to eHealth)
- In 2005, Plan Avanza (implementation between 2006-2010) was approved and was updated to Plan Avanza 2 in 2010 (implementation between 2011-2015)
 - Both plans were developed to establish a framework and roadmap digital initiatives in Spain, in addition to achieving the objectives of the "Digital Agenda for Europe" (not exclusive to eHealth)

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Portugal

Fast eHealth growth
expected in the next 3 years

5.5

Focus is on creating and maintaining a eHealth ecosystem and enhancing Portuguese digital offerings at the national and international levels



Country Profile (2019)



Population size: **10.3 million**



Fertility rate: **1.4**



Population > age of 65 : **21.1%**

> age of 65 suffering from ≥ 1 chronic disease: **53%**



GDP per capita (€ PPP): **23,000**



Healthcare spending: **8.8%** of GDP

Noteworthy eHealth initiatives

- Digital Health Portugal was established in order to lobby for Portuguese healthcare technology offerings, in addition to creating international demand for products and services
- ENESIS (National Strategy for Health Information Ecosystem) 2020 and 2022 are national strategies designed by the SMPS (Shared Services of the Ministry of Health), created to promote the digital transformation of the health sector in Portugal
- The SNS (National Health System) Portal was launched in 2016 for the purpose of integrating information about public healthcare services with real-time data, and includes several digital projects to support on HCPs and citizens

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Ireland

eHealth is seen as a means to bolster healthcare and the economy



Country Profile (2019)

Population size: **4.8 million**Fertility rate: **1.8**Population > age of 65 : **13.5%**> age of 65 suffering from ≥ 1 chronic
disease: **50.5%**GDP per capita (€ PPP): **54,300**Healthcare spending: **6.3%** of GDP

Noteworthy eHealth initiatives

- The Department of Health published the eHealth Strategy for Ireland in 2013, with the intention of providing an outline of eHealth and demonstrating how the individual citizen, the Irish healthcare system and the economy will benefit from eHealth
- eHealth Ireland's Ecosystem is an initiative created in order to bring communities together by connecting stakeholders interested in developing integrated care across Ireland
- eHealth Ireland was devised to improve population wellbeing, health service efficiencies and economic opportunity through the use of technology-enabled solutions

Anticipated impact of initiatives on eHealth adoption

LOW

MEDIUM

HIGH

Greece

In 2020, many companies expanded their eHealth activities in Greece



Country Profile (2019)



Population size: **10.8 million**



Fertility rate: **1.4**



Population > age of 65 : **21.5%**

> age of 65 suffering from ≥1 chronic disease: **53%**



GDP per capita (€ PPP): **20,200**



Healthcare spending: **8%** of GDP

Noteworthy eHealth initiatives

- A national eHealth roadmap was launched in 2006 by the Ministry of Health and Social Solidarity. The development and implementation of the electronic patient record network is a priority for the National Health System
- Slow legislation has acted as a major barrier in the adoption of eHealth in Greece between 2006-2015, however this is seen to be changing
- Multiple Tech and Pharma companies are setting up operations in Thessaloniki for eHealth-related activities (these include Pfizer and Vodafone)

Anticipated impact of initiatives on eHealth adoption



Glossary

AI	Artificial Intelligence
BfArM	The Federal Institute for Drugs and Medical Devices (Bundesinstitut für Arzneimittel und Medizinprodukte, BfArM)
DiGA	Digital Health Applications by BfArM
DH	Digital Health
DVG	Digital Care Act (Germany)
EC	European Commission
eH/ eHealth	Electronic Health
EHR	Electronic Health Record
eHSG	eHealth Stakeholder Group
HCP	Healthcare Professional
mHealth	Mobile Health
NHS	National Health Service (UK)
NHSX	National Health Service unit (UK) responsible for developing best practice for technology, digital and data sharing/transparency
PPP	Purchasing power parity defined as the rate of currency conversion that equalises the purchasing power of different currencies
SME	Small and medium-sized enterprise



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