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Special report

Digitalisation of healthcare

EU support for member states effective overall, but difficulties in using EU funds

Contents

Executive summary

I According to the Treaty on the Functioning of the European Union, responsibility for defining health policies and organising and delivering health services and medical care, including the allocation of resources, lies with the member states. The role of the EU is to support and complement their actions.

II The COVID-19 pandemic accentuated the relevance of healthcare digitalisation in our societies, and increased public interest in the subject. As a result of social distancing measures, the use of electronic means to deliver healthcare – "eHealth" – became especially relevant. The pandemic also increased the need for coordination and better flows of health data across the EU, and showed the added value of EU action in the area of healthcare digitalisation.

III For this reason, we decided to examine whether the Commission's actions to support member states in digitalising their healthcare systems were effective. Our audit assessed not only whether the EU policy framework provided member states with clear objectives and support, but also whether the Commission helped member states to identify and use the EU funds available to finance their projects, and monitored member states' progress in healthcare digitalisation, including their use of EU funds. We expect that our report will help the Commission to improve the implementation of its policy.

IV We found that, given its mandate, the Commission supported the digitalisation of the member states' healthcare systems effectively overall. The EU policy has been promoting the digitalisation of healthcare for more than 20 years, mainly through 'soft' instruments, such as recommending actions or setting non-binding objectives. The COVID-19 pandemic led to the strengthening of the EU policy framework for healthcare digitalisation through the adoption of binding decisions and regulations.

V In this context, the impact of the EU policy on the member states before the COVID-19 pandemic depended entirely on voluntary commitment. This was influenced by political priorities, the level of readiness to introduce digital solutions, and the challenges that the member states encountered during the process.

VI In the 2014-2020 and 2021-2027 programming periods, several EU programmes have financed healthcare-digitalisation projects. Among them, the Cohesion Policy and the Recovery and Resilience Facility made provision for €2.4 billion and €13.6 billion, respectively, to finance projects in the member states for digitalising their healthcare systems. The Commission provided member states with guidance on the EU programmes available.

VII The EU programmes financing healthcare-digitalisation projects in the member states were managed by different Directorates-General and implemented under different forms of management. The rules for applying for support – and for implementing the funded actions – varied between the various EU programmes. This made it difficult for some member states to identify the EU funds available, and created obstacles for them when applying for funding, although a majority of member states said that the EU support matched their needs. All the projects we audited contributed to healthcare digitalisation in the member states we visited.

VIII The Commission monitors the member states' progress in healthcare digitalisation through two main sources in the context of the 2030 Digital Decade Policy Programme: the eGovernment Benchmark since 2022 and the Digital Decade eHealth indicator since 2023. These indicators are based on different methodologies and have different purposes, but they cover similar aspects of access to electronic health records. We found some shortcomings in the reporting on the Digital Decade eHealth indicator. We also found that the eGovernment Benchmark report does not provide information on the reasons for variations in country scores from one year to the other.

IX The Commission's current financial monitoring framework provides an overview of the EU funds that member states use to digitalise their healthcare systems for each financing programme. Neither the Commission nor most member states have a comprehensive overview of all EU funds used by each member state to digitalise its healthcare systems. It is therefore difficult to establish the extent of EU financial support in the member states.

X We recommended that the Commission should improve its reporting on the eGovernment Benchmark and the Digital Decade eHealth indicator, and its reporting on the use of EU funds for healthcare digitalisation.

Introduction

The relevance of healthcare digitalisation

01 eHealth is the use of electronic means to deliver healthcare. It combines the use of information and communications technology (ICT) in health products, services and processes with organisational change in healthcare systems and new skills[1]. In this report, we call the process that leads to the adoption of eHealth solutions "healthcare digitalisation" or "the digitalisation of healthcare systems".

02 From a practical point of view, eHealth covers the interaction between patients and healthcare providers, the transmission of data between institutions, and communication between health professionals[2] (*Box 1*). When we talk about health data, we are referring to personal data about a person's physical or mental health, including the provision of healthcare services, which reveal information about the person's health status[3].

Box 1

Examples of eHealth services

o ePrescription: a prescription for medicines or treatments that is provided in electronic format by a health professional and transmitted to a pharmacy where the medicine can then be dispensed.

o Electronic health record: a comprehensive medical record, or similar documentation in electronic format, of the past and present physical and mental health of an individual.

o Telemedicine: the provision of healthcare services, including remote care and teleconsultation, through the use of information and communication technologies, in situations where the health professional and the patient are not in the same location.

Source: ECA special report 07/2019. Glossary; Proposal for a Regulation on the European Health Data Space, European Commission, p. 46.

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[1] eHealth Action Plan 2012-2020, European Commission, 2012, footnote 1.

[2] Ibid.

[3] Article 4(15) of Regulation 2016/679 (General Data Protection Regulation).

03 The COVID-19 pandemic changed the role and perception of digitalisation in our societies and economies. As a result of social distancing measures, virtual technologies for healthcare became especially relevant, and their use accelerated. Member states facilitated the use of digital tools, such as telemedicine services and digitalised invoices and prescriptions. Since the pandemic, even if in-person treatment is still the main form of healthcare delivery, eHealth services are being used ever more frequently[4]. According to the Organisation for Economic Cooperation and Development, accelerating the digital transformation of healthcare systems and adopting digital health technologies can further transform health systems, improving their effectiveness[5].

04 The COVID-19 pandemic also increased the need for coordination and better flows of health data across the EU, and showed the added value of EU action in the area of healthcare digitalisation[6]. To facilitate travelling and the tracing of COVID-19 cases, the Commission developed the EU Digital COVID Certificate and a gateway for ensuring EU-wide interoperability between national applications holding data on COVID-19 cases[7].

05 In 2021, the European Commission launched a public consultation on an EU initiative for a European Health Data Space. The right to access one's health data in electronic format was considered important by 88 % of respondents[8]. According to the Eurobarometer on the Digital Decade published in 2023, a significant majority of respondents (76 %) expect that digital technologies will have a crucial impact on accessing or receiving healthcare services (e.g. telemedicine and artificial intelligence for diagnosing diseases) by 2030, including in EU countries where patients are not actually resident. A smaller proportion of respondents (13 %) think that their country should prioritise citizens' access to their electronic health records from now until 2030.

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[4] Study supporting the evaluation of Directive 2011/24/EU, European Commission, p. 121.

[5] Health at a Glance 2023, OECD, pp. 35-60/234.

[6] EHDS Impact Assessment Report, European Commission, Part 4/4, p. 35.

[7] ECA special report 01/2023.

[8] EHDS Impact Assessment Report, European Commission, Part 2/4, pp. 10-12/84.

The EU framework for healthcare digitalisation

06 The EU has been promoting the digitalisation of healthcare for more than 20 years. *Figure 1* shows the key EU initiatives in the area of eHealth, while *Annex I* contains a broader list of the main EU initiatives promoting eHealth.

Figure 1 – Key EU initiatives in eHealth

non-binding *communications*

binding *decisions, directives and proposal for a regulation*

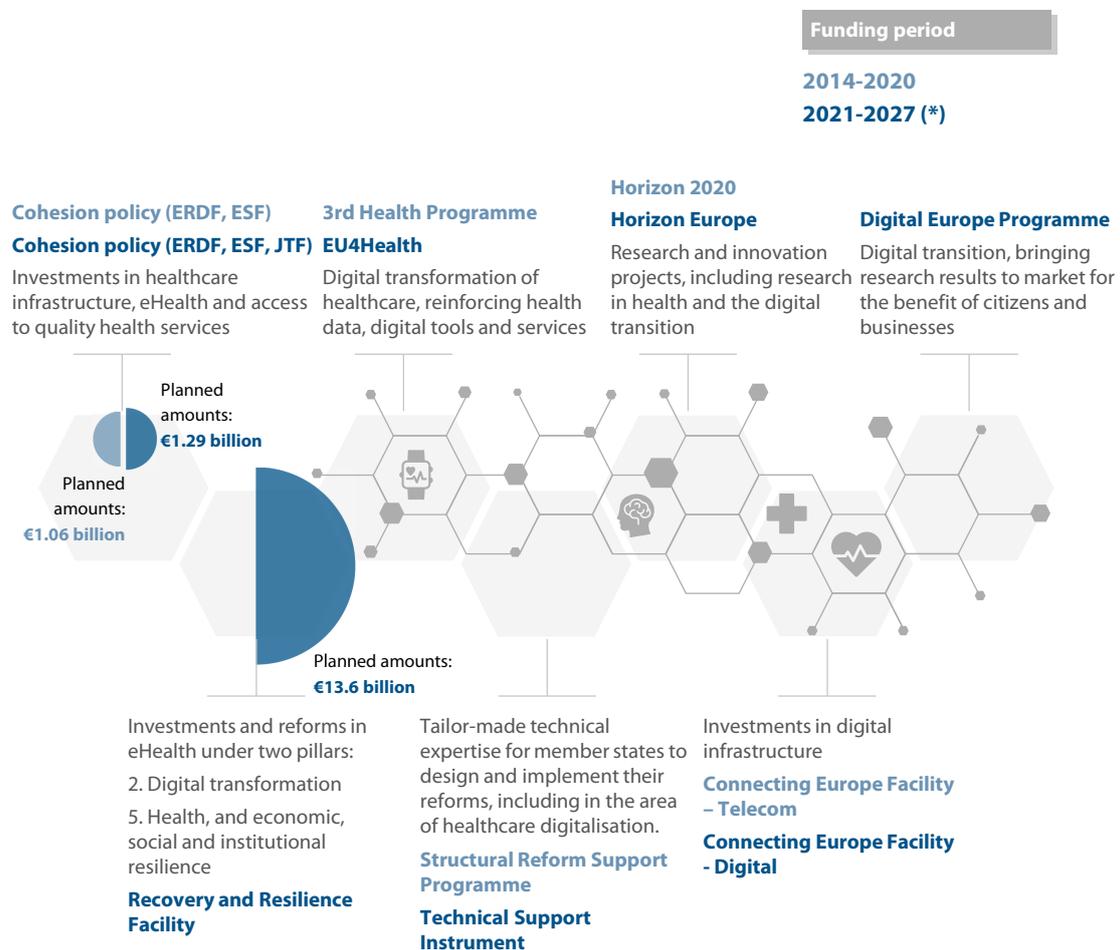| Year	Initiative	Relevance for eHealth	
1999	"eEurope. An Information Society for All"	Identified "healthcare online" as a priority area for action.	
2004	"Action plan for a European eHealth Area"	First EU eHealth Action Plan.	
2011	Directive on the application of patients' rights in cross-border healthcare (Cross-border healthcare Directive)	Formalised cooperation between member states by establishing the eHealth Network, which connects the different national eHealth authorities and promotes the eHealth Digital Service Infrastructure (eHDSI, currently branded as MyHealth@EU).	*eHDSI infrastructure* allows member states to exchange health data across the EU, ensuring continuity of care for European citizens while they are travelling in another EU member state.
2012	"eHealth Action Plan 2012-2020. Innovative healthcare for the 21st century"	Outlined the vision for eHealth in Europe.	
2015	"Digital Single Market Strategy for Europe"	Mentioned eHealth and telemedicine as tools to boost competitiveness through interoperability and standardisation.	
2018	"Enabling the digital transformation of health and care in the Digital Single Market"	Enabled the implementation of the Digital Single Market Strategy in the health sector, identifying three priorities: a) providing citizens with secure access to their health data, and sharing those data; b) better data to promote research, disease prevention and personalised healthcare; c) digital tools for citizen empowerment and person-centred care.	*Underlying strategy*
2021	2030 Digital Compass: the European way for the Digital Decade	Proposed a common digital target of 100 % of European citizens having access to their electronic health records by 2030.	
2022	Decision establishing the Digital Decade Policy Programme 2030	Adopted a target aligned with the one proposed in the 2030 Digital Compass.	*Proposed target*
2022	Proposal for a Regulation of the European Parliament and the Council on a European Health Data Space (EHDS Regulation)	The European Health Data Space (EHDS) aims to facilitate the exchange of and access to health data across the EU by: • allowing EU patients to access their health data and health professionals to consult their patients' files, in electronic format, also from other EU countries; • harmonising rules on interoperability of and logging in to electronic health record systems; • allowing the use of health data for research, policy-making, regulatory activities and other health purposes across the EU.	

Source: ECA analysis of EU documentation.

07 In the 2014-2020 and 2021-2027 programming periods, several EU programmes have financed healthcare-digitalisation projects. *Figure 2* presents an overview of the main ones. The figure shows only the planned amounts that can be specifically linked to projects to digitalise member states' healthcare systems. This was possible for the Cohesion Policy (the European Regional Development Fund [ERDF], the European Social Fund [ESF], and also, in the 2021-2027 period, the Just Transition Fund [JTF]) and the Recovery and Resilience Facility (RRF). For the other programmes, there is no automatic mechanism for linking funding to healthcare-digitalisation projects in the member states.

Figure 2 – Main EU programmes supporting healthcare digitalisation in the 2014-2020 and 2021-2027 programming periods

Funding period

2014-2020
2021-2027 (*)

Cohesion policy (ERDF, ESF)
Cohesion policy (ERDF, ESF, JTF)

Investments in healthcare infrastructure, eHealth and access to quality health services

3rd Health Programme
EU4Health

Digital transformation of healthcare, reinforcing health data, digital tools and services

Horizon 2020
Horizon Europe

Research and innovation projects, including research in health and the digital transition

Digital Europe Programme

Digital transition, bringing research results to market for the benefit of citizens and businesses

Planned amounts:
€1.29 billion

Planned amounts:
€1.06 billion

Planned amounts:
€13.6 billion

Investments and reforms in eHealth under two pillars:

2. Digital transformation

5. Health, and economic, social and institutional resilience

Recovery and Resilience Facility

Tailor-made technical expertise for member states to design and implement their reforms, including in the area of healthcare digitalisation.

Structural Reform Support Programme

Technical Support Instrument

Investments in digital infrastructure

Connecting Europe Facility – Telecom

Connecting Europe Facility - Digital

(*) 2021-2026 for the RRF.

Source: ECA analysis of EU documentation. Financial data provided by the Commission.

08 The Commission monitors EU digital performance and tracks EU member states' progress through two main sources:

o the eGovernment Benchmark for online health-related services; and
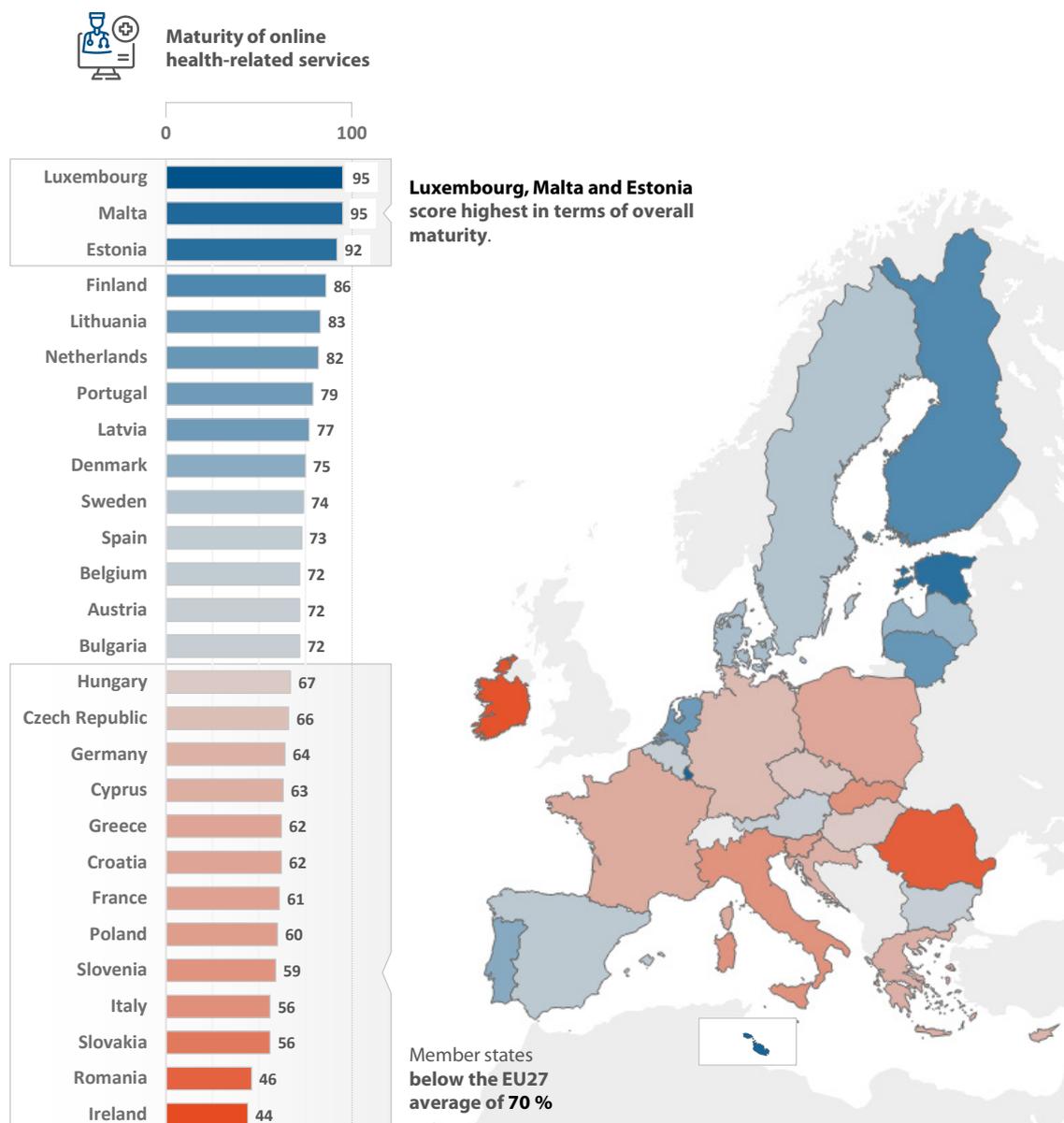
o the Digital Decade eHealth indicator.

eGovernment Benchmark

09 Since 2002, the eGovernment Benchmark has monitored the digitalisation of public services in Europe: besides the EU27, it also covers Iceland, Norway, Switzerland, Albania, Moldova, North Macedonia, Montenegro, Serbia, Turkey and Ukraine. The eGovernment Benchmark evaluates the maturity of online public services across four dimensions:

o User Centricity – the extent to which services are available online, compatible with mobile devices, and supported by online assistance;

o Transparency – the extent to which service processes are transparent, services are designed with user involvement, and users can manage their personal data;

o Key Enablers – the extent to which technological enablers (e.g. electronic documents) are in place for the delivery of online services;

o Cross-Border Services – the extent to which online services are available and usable for users from other European countries.

10 Since 2022, the eGovernment Benchmark has also covered the maturity of online health-related services, whose progress is assessed every two years (*Figure 3*).

Figure 3 – eGovernment Benchmark: maturity of online health-related services

Maturity of online health-related services

Country	Score
Luxembourg	95
Malta	95
Estonia	92
Finland	86
Lithuania	83
Netherlands	82
Portugal	79
Latvia	77
Denmark	75
Sweden	74
Spain	73
Belgium	72
Austria	72
Bulgaria	72
Hungary	67
Czech Republic	66
Germany	64
Cyprus	63
Greece	62
Croatia	62
France	61
Poland	60
Slovenia	59
Italy	56
Slovakia	56
Romania	46
Ireland	44

Luxembourg, Malta and Estonia score highest in terms of overall maturity.

Member states **below the EU27 average of 70 %**

Note: The EU27 average was recalculated by the ECA, excluding non-EU countries (Albania, Iceland, Moldova, Montenegro, North Macedonia, Norway, Serbia, Switzerland, Turkey and Ukraine).

Source: European Commission, eGovernment Benchmark 2024. Background Report, Figures 4.1 and 4.2, pp. 54-55. The data refer to 2023.

Digital Decade eHealth indicator

11 The Digital Decade eHealth indicator was established as part of the Commission's 2030 Digital Compass[9], which translates the EU's digital ambitions for 2030 into concrete targets and tracks their progress. The 2030 Digital Compass is structured along four cardinal points:
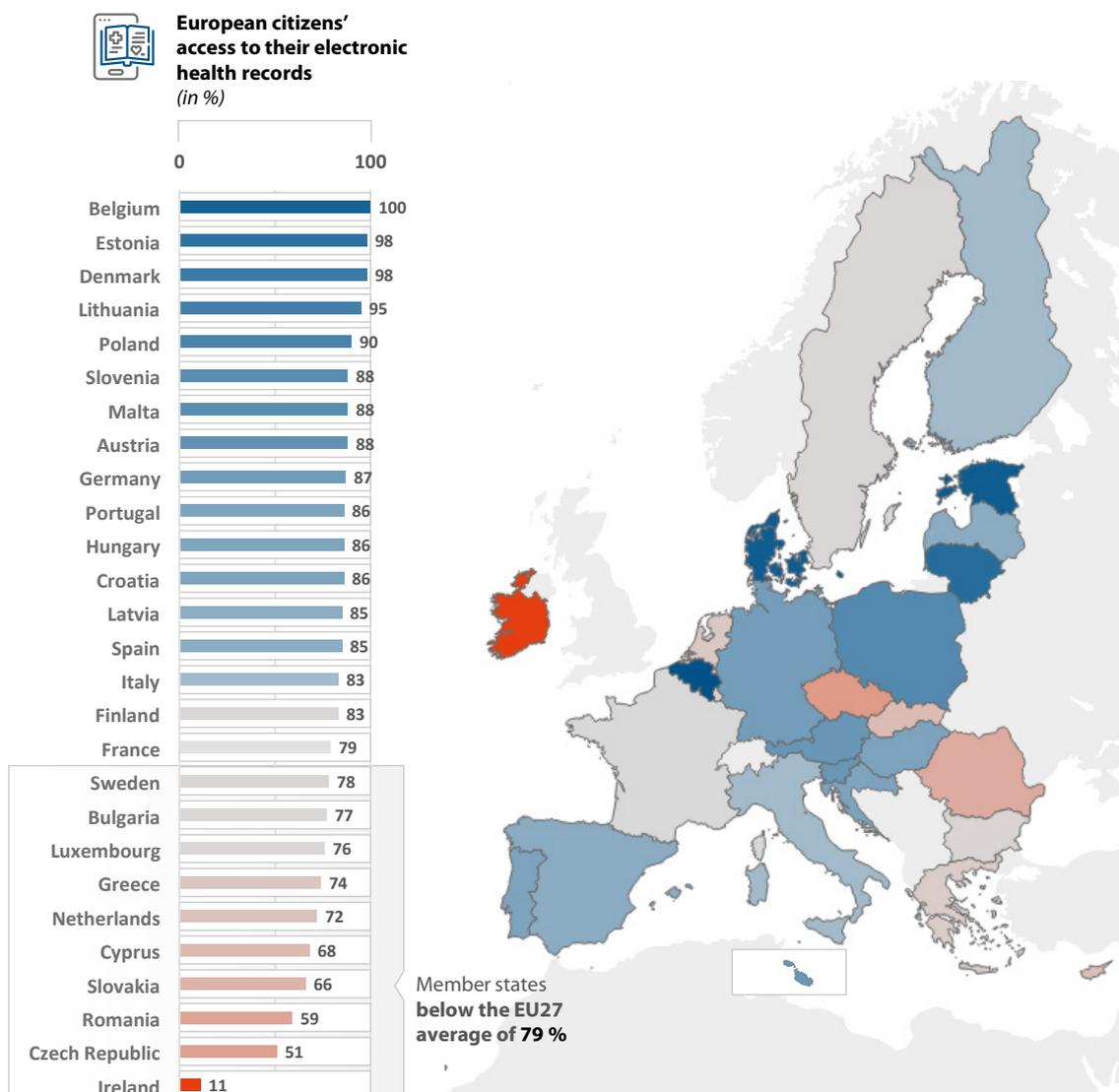
(1) a digitally skilled population and highly skilled digital professionals;

(2) secure and high-performance sustainable digital infrastructures;

(3) digital transformation of business;

(4) digitalisation of public services.

12 Under the fourth cardinal point, the 2030 Digital Compass proposals included a target of 100 % of European citizens having online access to their electronic health records by 2030. In 2022, the European Parliament and the Council established the Digital Decade Policy Programme 2030[10], which adopted targets aligned with the ones proposed in the 2030 Digital Compass, and set out a monitoring and cooperation mechanism to facilitate their delivery. Since 2023, the Commission has published the State of the Digital Decade report and the Digital Decade Country Reports, which cover the target for European citizens' online access to electronic health records (*Figure 4*).

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[9] COM(2021) 118.

[10] Decision 2022/2481.

Figure 4 – Digital Decade eHealth indicator

European citizens' access to their electronic health records
(in %)

Country	Value
Belgium	100
Estonia	98
Denmark	98
Lithuania	95
Poland	90
Slovenia	88
Malta	88
Austria	88
Germany	87
Portugal	86
Hungary	86
Croatia	86
Latvia	85
Spain	85
Italy	83
Finland	83
France	79
Sweden	78
Bulgaria	77
Luxembourg	76
Greece	74
Netherlands	72
Cyprus	68
Slovakia	66
Romania	59
Czech Republic	51
Ireland	11

Member states **below the EU27 average of 79 %**

Source: European Commission, Digital Decade 2024: e-Health indicator study. Main report, p. 11. The data refer to 2023.
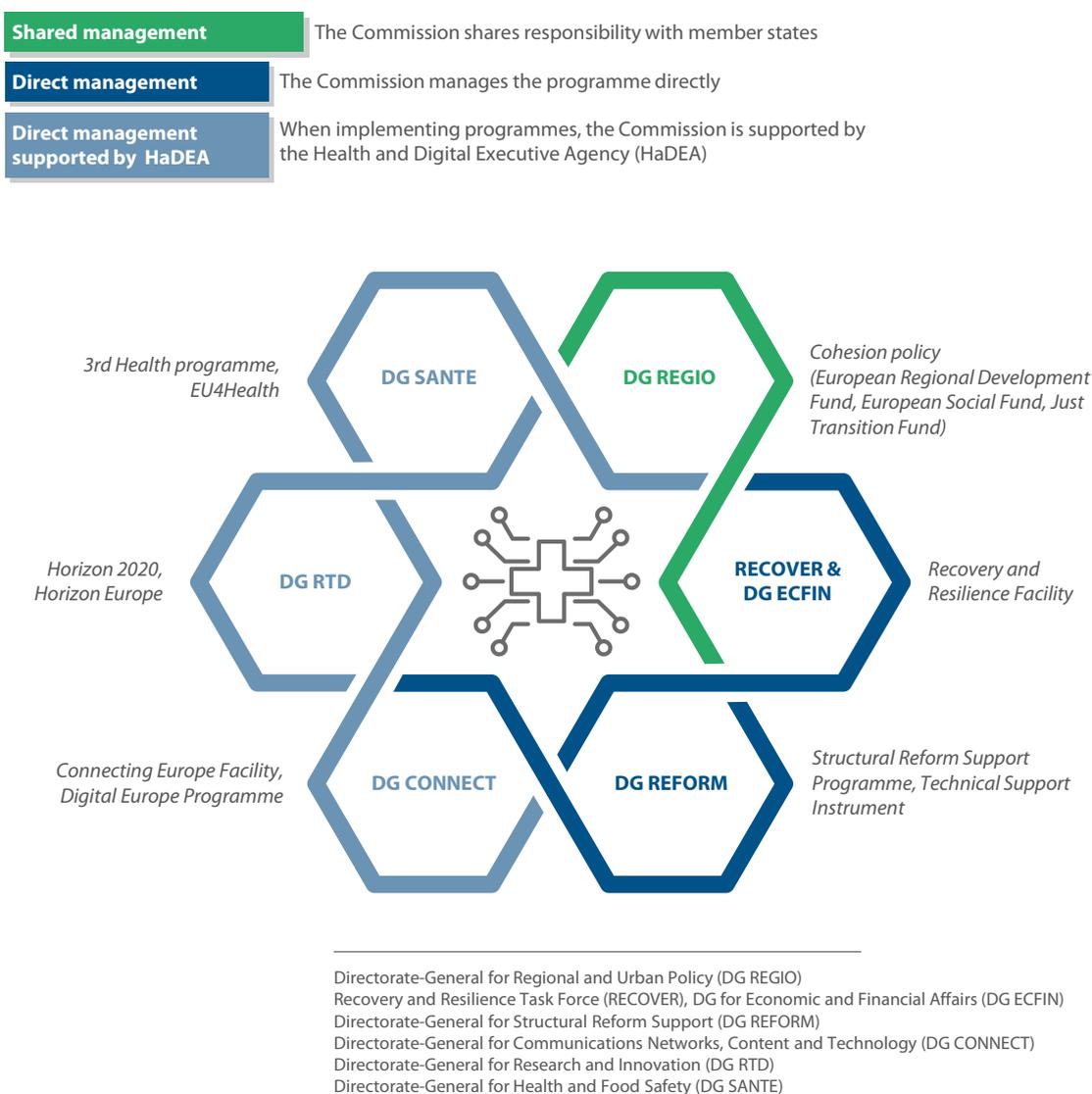
The roles and responsibilities of the major stakeholders

13 Article 168 of the Treaty on the Functioning of the European Union states that responsibility for defining health policies and organising and delivering health services and medical care, including the allocation of resources, lies with the member states. The role of the EU is to support and complement their actions. The Directorate-General for Health and Food Safety (DG SANTE) is the leading Commission department for EU health-related initiatives.

14 Although the EU Treaties do not contain any special provisions on digitalisation, the Commission can take relevant action within the framework of sectoral and horizontal policies to stimulate innovation, economic growth and the development of the Single Market in close coordination with member states. The Directorate-General for Communications Networks, Content and Technology (DG CONNECT) develops and implements EU digital policies.

15 Responsibilities for implementing EU programmes are assigned as shown in *Figure 5*.

Figure 5 – EU programmes and responsible DGs

Shared management	The Commission shares responsibility with member states
Direct management	The Commission manages the programme directly
Direct management supported by HaDEA	When implementing programmes, the Commission is supported by the Health and Digital Executive Agency (HaDEA)

3rd Health programme, EU4Health — DG SANTE

Cohesion policy (European Regional Development Fund, European Social Fund, Just Transition Fund) — DG REGIO

Horizon 2020, Horizon Europe — DG RTD

Recovery and Resilience Facility — RECOVER & DG ECFIN

Connecting Europe Facility, Digital Europe Programme — DG CONNECT

Structural Reform Support Programme, Technical Support Instrument — DG REFORM

Directorate-General for Regional and Urban Policy (DG REGIO)
Recovery and Resilience Task Force (RECOVER), DG for Economic and Financial Affairs (DG ECFIN)
Directorate-General for Structural Reform Support (DG REFORM)
Directorate-General for Communications Networks, Content and Technology (DG CONNECT)
Directorate-General for Research and Innovation (DG RTD)
Directorate-General for Health and Food Safety (DG SANTE)

Source: ECA analysis of EU documentation.

Audit scope and approach

16 The COVID-19 pandemic accentuated the relevance of healthcare digitalisation, and increased public interest in the subject. For this reason, we decided to examine whether the Commission's actions to support member states in the digitalisation of their healthcare systems were effective. We expect that our report will help the Commission to improve the implementation of its policy. Our audit assessed whether:

o the EU healthcare-digitalisation policy framework provided member states with clear objectives, and supported the member states' initiatives to digitalise their healthcare systems;

o the Commission helped member states to identify the EU funds available to finance their healthcare-digitalisation projects, and the funds actually matched member states' needs;

o the Commission's monitoring framework provided timely, relevant and comparable information to track member states' progress in healthcare digitalisation, and their use of EU funds.

17 Applying a patient's perspective, we focused on the use of health data for the direct provision of healthcare to patients, and excluded the re-use of health data for research, innovation and other purposes. We did not assess cross-border exchanges of health data between member states, because this aspect had already been covered by two previous audits[11]. We did not specifically examine the European Health Data Space because, at the time of our audit work, its legal framework was still being negotiated by the EU's co-legislators (paragraph *30*).

18 We covered the 2014-2020 and the 2021-2027 programming periods, and focused on the following EU programmes: the ERDF, the RRF, the third Health Programme, EU4Health, the Structural Reform Support Programme, and the Technical Support Instrument (*Figure 2*).

19 We surveyed all member states (*Annex II*) through the eHealth Network to collect information on their national eHealth strategies, action plans, sources of financing, and achievements. We received replies from 21 out of 27 member states, but some member states did not reply to all the questions. We used the member states' replies to support our findings.

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[11] ECA special reports 07/2019 and 01/2023.

20 To obtain an in-depth understanding of support for member states and the use of EU funding, we selected three member states (Spain, Malta and Poland) for on-the-spot visits. These member states were selected on the basis of the EU financing received for healthcare digitalisation, the 2023 Digital Decade eHealth indicator on access to electronic health records, and the 2022 eGovernment Benchmark on the overall maturity of eHealth services.

21 In the selected member states, we examined EU-funded projects covering ePrescriptions, electronic health records, and telemedicine to assess whether they contributed to the digitalisation of member states' healthcare systems. We selected five projects in each member state by considering their materiality and stage of completion in order to cover a diverse mix of EU funding programmes and services (*Annex III*).

22 We obtained additional evidence by:

o   analysing relevant EU legislation and documentation from the Commission, the Council and the European Parliament, and reports by the Organisation for Economic Cooperation and Development;

o   interviewing Commission staff from the departments concerned (*Figure 5*);

o   interviewing national authorities responsible for eHealth strategies and project implementation in the selected member states.

Observations

After the COVID-19 pandemic, the EU policy framework was strengthened, and its impact no longer depends only on the member states' commitment

23 We assessed whether the EU policy on healthcare digitalisation:

o has been consistent over time, and provided member states with clear objectives;

o promoted the member states' initiatives to digitalise their healthcare systems.

The COVID-19 pandemic led to the strengthening of the EU policy framework for healthcare digitalisation

24 We expected the EU policy framework for healthcare digitalisation to guide member states by providing them with objectives that were SMART, i.e. Specific, Measurable, Achievable, Relevant for the policy objectives, and Time-bound. We examined the main EU initiatives on healthcare digitalisation (*Annex I*) which have been around for more than 20 years for consistency, and to establish whether their objectives were SMART.

25 Since the start of these initiatives, the EU has highlighted the benefits of eHealth both for patients and the European market. To coordinate them better, the EU put in place a policy framework to promote the provision of online health services in the member states. We observed that the EU has been consistent in promoting and reiterating this objective over the years.

26 Given the EU's role in the health sector (paragraph *13*), its policy relies on 'soft' instruments, such as recommending actions or setting non-binding objectives. *Table 1* presents the example of the EU's objectives for the provision of electronic health records, which have become more specific and measurable over time. The objectives were always relevant and time-bound, but their achievability required commitment on the part of the member states in order for actions to be implemented.

Table 1 – EU objectives for the provision of electronic health records

Year	Document	Objectives
2002	eEurope 2005 action plan	**By the end of 2005**, the Commission and member states were to ensure that online health services (e.g. **electronic health records**) were provided to citizens.
2004	Action plan for a European eHealth Area	**By the end of 2005**, each member state was to develop a national or regional roadmap setting targets for the interoperability and use of **electronic health records**. **By the end of 2006**, member states, in collaboration with the Commission, were to identify and outline interoperability standards for **electronic health records**.
2021	2030 Digital Compass	**By 2030**, 100 % of European citizens were to have online access to their **electronic health records**.

Source: ECA analysis of EU documentation.

27 We found that experience with the COVID-19 pandemic has accelerated member states' efforts in healthcare digitalisation. According to the Commission, the creation and deployment of the European Federated Gateway Service and the EU Digital COVID Certificates (paragraph *04*) proved that political convergence and support between different stakeholders made it possible to deliver concrete outcomes within a short timeframe[12].

28 After the COVID-19 pandemic, in 2022 all EU member states committed to reaching the targets proposed by the Commission in its 2030 Digital Compass, including the target for access to electronic health records for all EU citizens (paragraph *12*). These targets became binding after the Digital Decade Policy Programme 2030 was adopted by the European Parliament and the Council[13].

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[12] EHDS Impact Assessment Report, European Commission, Part 4/4, p. 28.

[13] Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade Policy Programme 2030.

29 Another example of a policy shift from voluntary to binding frameworks concerns the eHealth Digital Service Infrastructure (eHDSI), currently branded as MyHealth@EU, launched in 2019 (*Box 2*). As the member states' participation in the eHDSI was voluntary, only 14 member states were connected to the eHDSI in May 2024: 11 of them exchange patient summaries, and 10 exchange ePrescriptions[14].

Box 2

eHealth Digital Service Infrastructure

eHealth Digital Service Infrastructure, currently branded as MyHealth@EU, allows member states to exchange:

o   ePrescriptions (*Box 1*) – EU citizens can obtain their medication in a pharmacy located in another EU country by transferring their electronic prescription from their country of residence to their country of travel.

o   Patient Summaries – These provide doctors with essential information (e.g. on allergies, current medication, previous illnesses, and surgeries) in their own language about a patient from another EU country.

In the long term, medical images, laboratory results and hospital discharge reports are also to be made available across the EU.

Source: Commission webpage on electronic cross-border health services.

30 To strengthen the process, the Commission proposed a regulation in 2022 establishing a European Health Data Space (EHDS), which will make the member states' participation in the eHDSI (MyHealth@EU) mandatory. In March 2024, the European Parliament and the Council reached a provisional agreement[15]. As of September 2024, the agreement has yet to be formally adopted.

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[14]   Data provided by the Commission and available in the Commission dashboard MyHealth@EU Monitoring Framework (KPIs).

[15]   Provisional agreement resulting from interinstitutional negotiations (22.3.2024).

The impact of the EU policy framework depended on the member states' situation and commitment

31 To assess the impact of the EU policy framework on member states' initiatives, we surveyed all 27 member states through the eHealth Network (paragraph *19*) and visited three member states (paragraph *20*). We expected member states to find the EU initiatives useful, and to have used them as a reference when digitalising their healthcare systems.

Usefulness of EU initiatives

32 Analysing the replies to our survey (*Annex II*), we found that 18 out of 21 member states felt that the EU policy framework was appropriate; the three remaining member states did not select the "yes/no" option, but gave a score. The average score given by the 21 member states was 3.7 out of 5. *Box 3* provides some examples of EU-added value identified by the member states that replied to our survey.

Box 3

Examples of EU-added value identified by the member states that replied to our survey

Summarising the replies from seven member states, the EU policy framework provided a comprehensive strategy, set clear objectives, supported inter-operability of eHealth solutions across the EU, and facilitated the alignment of national initiatives with international standards and good practice.

One member state felt that the Commission's coordinating role during the COVID-19 pandemic was crucial in accelerating the involvement of those member states that had not previously been active.

Source: ECA, based on member states' replies to our survey.

33 We also found that Spain and Malta rely on the EU policy to make changes at national level:

o in Spain, the authorities expect the EU Regulation on EHDS (paragraph *30*) – when adopted – to provide them with leverage to enforce collaboration with the private sector;

o in Malta, the process of finalising the draft legislation on the National Electronic Health Record has taken account of the adoption process of the EHDS Regulation,

with the aim of achieving a high degree of alignment between national and EU legislation.

34 Nevertheless, respondents to our survey also mentioned challenges in applying the EU policy framework on healthcare digitalisation:

o two member states acknowledged that successful implementation of the EU policy ultimately comes under their responsibility, and depends on their willingness and capacity to carry out the proposed strategies;

o two member states felt that differences in readiness to adopt digital solutions and available resources – such as a lack of infrastructure and a shortage of digital skills in the healthcare sector – can lead to uneven progress between member states;

o two other member states replied that the variety and complexity of national healthcare systems (centralised vs decentralised) and the different stakeholders involved (public and private) also explain different rates of progress.

Member states' use of EU tools and actions

20 out of 21 member states **used EU tools and/or received EU support** when digitalising their healthcare systems.

Member states' replies to ECA questionnaire

35 Based on the replies to our survey (*Annex II*), 20 out of 21 member states used EU tools and/or received EU support when digitalising their healthcare systems. The most frequently mentioned EU initiatives were technical standards and guidelines (20 member states), and coordination and experts' meetings (19 member states).

36 These EU initiatives aimed to support cross-border exchanges of health data, but we found that they also helped to promote the digitalisation of national healthcare systems. *Figure 6* summarises the main opportunities and challenges of the EU initiatives from the replies to our survey and from our visits to the three member states we selected.

Figure 6 – Main opportunities and challenges of EU initiatives for digitalisation of healthcare

EU coordination and experts' meetings

The eHealth Network (eHN) meets in plenary twice a year. Additional meetings are organised for working groups and coordinated actions.

OPPORTUNITIES

— According to Malta, the eHN meetings facilitate alignment between EU and national policies.

— Poland felt that the eHN allows a member state to participate in EU digital health policy-making.

— Five other member states took the view that the eHN facilitates the exchange of best practices and experiences, and contributes to the development and adoption of common standards and guidelines.

CHALLENGES

— Malta found it challenging to take an active role in all EU-level activities, due to its limited resources.

— Based on the replies to our questionnaire, this was also the case for two bigger member states.

— Two other member states felt that voluntary cooperation did not ensure sufficient involvement by member states in the working groups.

EU technical standards and guidelines

The eHN agreed upon and adopted technical guidelines on the electronic exchange of health data, ePrescription and eDispensation, patient summaries, laboratory results, medical imaging, and hospital discharge reports.

OPPORTUNITIES

— In Spain, the national system for exchanging ePrescriptions between autonomous regions is based on EU technical specifications.

— In Malta, the technical standards and guidelines adopted by the eHN influenced the design of the national electronic health records.

— Poland used the eHN technical standards to ensure the interoperability - including across borders - of their eHealth services.

CHALLENGES

— According to one member state, although national standards existed before the eHN technical guidelines were adopted, adapting them to EU standards required an effort at national level.

— Another member state felt that the same may happen in the case of minor changes to guidelines.

Source: ECA, based on the member states' replies to our survey and on our visits to selected member states.

eHealth national strategies

20 out of 21 member states claimed to have a
national strategy on healthcare digitalisation.

Member states' replies to ECA questionnaire

37 There is no legally binding requirement for member states to have a national strategy or an action plan for the digitalisation of healthcare. Based on the replies to our survey, 20 out of 21 member states claimed to have a national strategy on healthcare digitalisation, either as part of their national health strategy (three member states) or as a standalone eHealth strategy (16 member states). One member state did not specify which. Of the respondents, 11 member states also claimed to have regional eHealth strategies. *Box 4* shows the situation in the three member states we visited during our audit.

Box 4

eHealth strategies in Spain, Malta and Poland

In **Spain**, the first national Digital Health Strategy of the National Health System was approved in December 2021. It will run from 2021 to 2026, aligned with the execution of the national recovery and resilience plan within the RRF. Six working plans were established to implement the Digital Health Strategy, five of them financed by EU funds. Spain's autonomous communities also developed their own digital health policies.

In **Malta**, one of the first comprehensive strategies was the Digital Health Strategy 2018-2021, based on the National Health Systems Strategy 2014-2020. This was followed by the National Health Systems Strategy 2023-2030, published in December 2022, which included a section specifically dedicated to digital health. At the time of our audit, the related action plan was being prepared. During 2024, the Ministry of Health intends to publish a new Digital Health and Health Data strategy 2030.

In **Poland**, references to "health IT management" were included in the National Strategic Framework for Health Policy Paper 2014-2020 that was published in July 2015. The latest strategy "Healthy Future. Strategic framework for the development of the health system 2021-2027, with a view to 2030", which was adopted in December 2021, contains a specific chapter on eHealth. The eHealth Development Programme for 2022-2027 indicates the investments and reforms needed to implement the "Healthy Future" strategy.

Source: ECA, based on our analysis of documents received from Spain, Malta and Poland.

38 Analysing the minutes of its meetings since 2012, we found that the eHealth network positively contributed to the development of eHealth strategies in the member states. During the meetings, member states' representatives shared their experiences of preparing and implementing their national strategies, by providing practical examples of challenges faced and solutions found.

Despite Commission guidance on EU funds for healthcare digitalisation, member states faced obstacles in using them

39 We assessed whether:

o the Commission supported member states in identifying the EU funds available to finance projects in healthcare digitalisation;

o the available EU funds and the requirements to obtain them matched member states' needs.

The Commission provided member states with guidance on the availability of EU funds for projects in healthcare digitalisation

40 We expected the Commission to provide member states with information on the EU funds available, as well as guidance on how to use them. We examined the documents for the main EU initiatives promoting eHealth (*Annex I*). They mentioned in broad terms the EU financing programmes that can be used to fund these initiatives. Some documents like the Communication on the European Health Data Space and the proposal for its regulation stated the overall budget available. Details on eligible actions and beneficiaries, the amount of support, and implementing rules were specified in the programmes' legal acts.

41 Our analysis focused on a sample of EU financing programmes (paragraph *18*). We found that their specific objectives for the digitalisation of healthcare are quite similar, while their general objectives and thematic priorities are specific to each programme and are mostly complementary. As regards eligible actions, we found that the programmes we analysed generally allow member states to cover a broad range of actions, from investments and reforms to studies and capacity building. We observed that these programmes are implemented using different management modes and by different DGs (*Figure 5*), provide different types of support, and address various beneficiaries (*Table 2*).

Table 2 – EU support for member states' digitalisation of healthcare and eligible beneficiaries by selected EU programmes

EU programme	Support provided to member states	Beneficiaries
ERDF	Financial support, based on co-financing of eligible expenses	Public or private bodies, entities with or without legal personality, natural persons
RRF	Financial support, based on achievement of milestone & targets (not linked to costs)	Member States
3rd Health Programme, EU4Health	Financial support, based on co-financing of eligible expenses	Legal entities or international organisations
Structural Reform Support Programme, Technical Support Instrument	Technical support (expertise)	National authorities of member states, international organisations, public or private bodies and entities

Source: ECA analysis of EU documentation; *Annex IV*.

42 Our analysis of the minutes of its meetings since 2012 showed that the eHealth Network has raised the member states' awareness of the EU funds available. At the Network's meetings, the Commission shared information especially on those programmes (the Connecting Europe Facility, the Digital Europe Programme and EU4Health) which finance cross-border or EU-level initiatives such as the rollout of eHDSI (MyHealth@EU), including its services for patient summaries and ePrescriptions, and infrastructure and preparatory actions for the EHDS. Presentations about other programmes managed by the Commission, such as the ERDF and the RRF, as well as programmes managed by the European Investment Bank, were also delivered.

43 In 2019, the eHealth Network adopted "Investment Guidelines" to help member states decide how to finance interoperable eHealth solutions. The guidelines included general information on proposed funding at EU level for the 2021-2027 period. We also found that at one eHealth Network meeting in 2022, the Commission confirmed its availability to provide member states with support and guidance on EU funding opportunities. The Commission subsequently provided specific information on actions under EU4Health, for example for the implementation of MyHealth@EU, and under the Digital Europe Programme.

44 The Commission does not perceive the range of instruments available to member states as a barrier, but rather as a means of providing tailored instruments to achieve specific policy goals. However, the Spanish authorities felt that – for some of the autonomous regions – the wide range of financing available made it difficult to identify which EU funds were best suited to their needs.

EU funds for healthcare digitalisation matched member states' needs overall, but member states faced obstacles in using them

45 We expected member states to use the EU funds available for healthcare digitalisation, and the EU funds to match member states' needs. To assess this aspect, we collected information through the survey we sent to all member states and from the selected member states.

Member states' use of EU funds

18 out of the 21 member states claimed to have used one or more **EU funds to digitalise their healthcare systems**

Member states' replies to ECA questionnaire

46 Based on the replies to our survey, 18 out of 21 member states claimed to have used one or more EU funds to digitalise their healthcare systems. The most frequently used funds were the ERDF, the RRF, EU4Health and the Connecting Europe Facility. When asked about the specific use of the EU funds, 15 out of 20 member states claimed to have used EU funds to finance their electronic health records, 13 out of 20 used EU funds to finance their ePrescription system, and five out of 19 used them to finance telemedicine solutions.

47 We found that the three member states we selected used a variety of EU funds to digitalise their healthcare systems. *Figure 7* provides an overview of the planned amounts for eHealth from the ERDF and the RRF. However, for the RRF, we noted discrepancies in the amounts provided by the Commission and the selected member states.

Figure 7 – Planned amounts for eHealth from the ERDF and the RRF in Spain, Malta and Poland in 2014-2020 and 2021-2027 programming periods (million EUR)
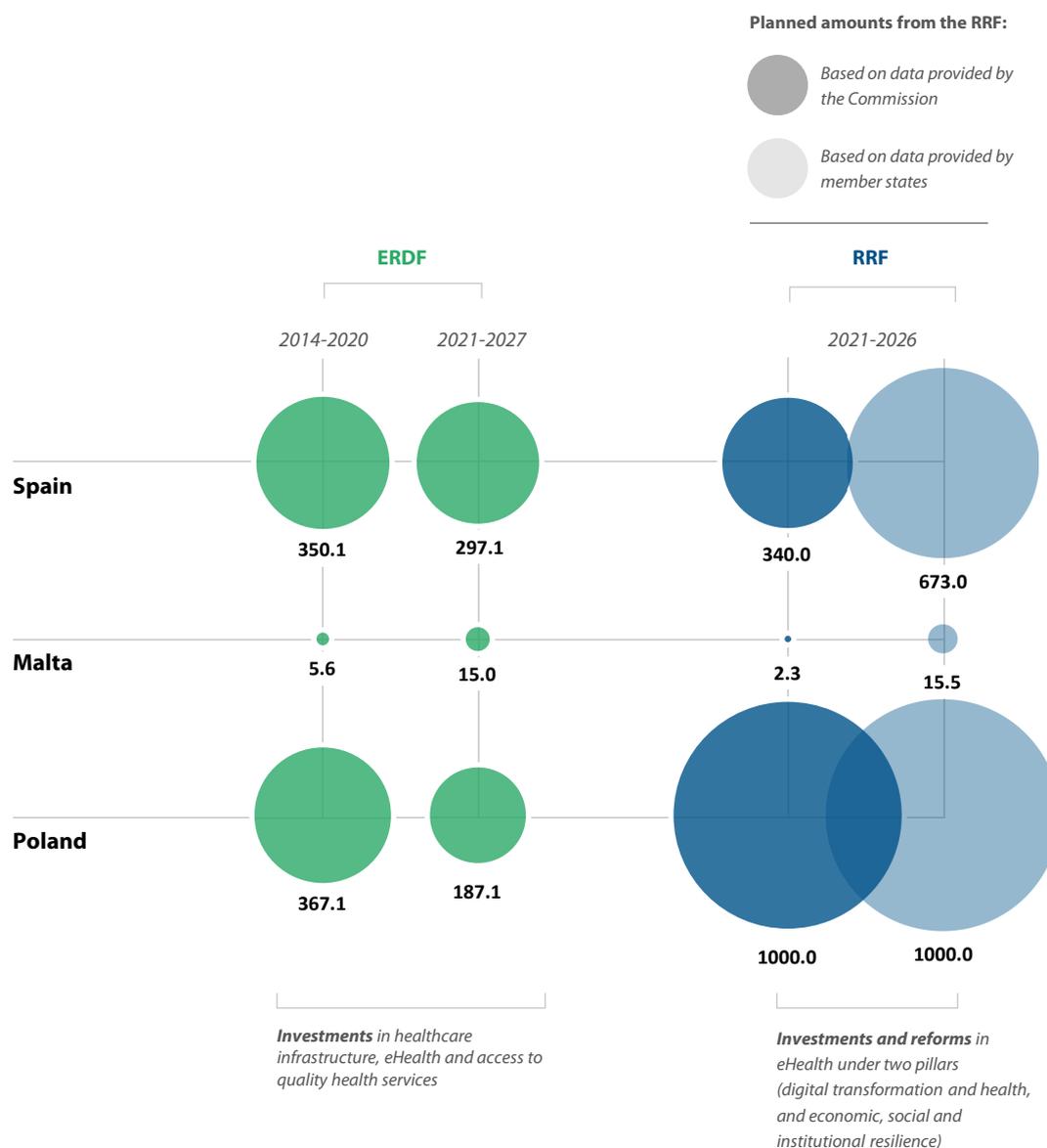
Source: For the ERDF: Cohesion Open Data Platform. For the RRF: data provided by the Commission and the selected member states.

48 Of the projects that we audited (*Annex III*), we found that the ERDF was a key funding source in the three selected member states:

o in Spain, the ERDF has been used to co-finance the introduction of ePrescriptions and electronic health records at regional and central level since the 2007-2013 programming period;

o in Malta, the CONvErGE (Connected eGovernment) project – co-financed by the ERDF 2014-2020 – was fundamental to the digitalisation of the whole public sector, and its digital health components were key initiatives for the digitalisation of healthcare;

o so far, Poland has financed most activities relating to the digitisation of healthcare with national or EU Cohesion policy funds (the ERDF and the European Social Fund). A core project was the creation of an electronic platform enabling public administrations and citizens to collect, analyse and share digital health data (the P1 platform). Phase 1 of the project was financed under the 2007-2013 ERDF programme, and phase 2 was completed under the 2014-2020 ERDF programme.

49 During our visits, we also found that member states optimised their use of available EU funds in different ways. For instance:

o in Spain, national financing complemented the ERDF beyond the mandatory eligibility period: e.g. one project we audited (*Annex III*) that was co-financed by the 2014-2020 ERDF was declared for EU financing until 31/12/2023, with the remaining activities in 2024 being financed by national funds;

o in Malta, one project originally planned to be financed with RRF funds is expected to be implemented either through national funds or supported under the 2021-2027 ERDF;

o in Poland, one project that we audited (*Annex III*) was financed with the remaining funds from the 2014-2020 European Social Fund before the end of the eligibility period in order to maximise their use (*Box 5*).

> **Box 5**
>
> **e-Konsylium project in Poland**
>
> Based on an existing platform (financed by national funds), the project set up a service of remote cardiology consultation involving four specialised hospitals, 20 district hospitals, and 80 primary healthcare centres.
>
> According to the authorities we interviewed in Poland, the project attracted considerable interest because doctors themselves had long been reporting the need for such a service. As soon as the necessary funds are available, another project will be launched to cover five specialisations: lung diseases, haematology, oncology, cardiology, and rare diseases in children.

Source: ECA, based on our analysis of documents provided by the national authorities.

EU funds matching member states' needs

15 out of 18 member states claimed that
EU funds responded to their needs and priorities

Member states' replies to ECA questionnaire

50 Based on the replies to our survey, 15 out of 18 member states claimed that EU funds responded to their needs and priorities. *Box 6* shows two examples which illustrate how EU financing was instrumental in expediting healthcare digitalisation in member states.

> **Box 6**
>
> **Instrumental role of EU financing in healthcare digitalisation**
>
> o   EU financing helped to overcome the financial limitations of national budgets: one member state which replied to our survey explained that the state budget for investments in health digitalisation was relatively small, so the development of eHealth solutions was mainly funded by EU programmes.
>
> o   EU financing fostered implementation: during our visit to Malta, the authorities explained that some relevant projects would not have been implemented without EU financing. The funding provided additional benefits such as procedural guarantees (e.g. tendering rules, and contractual deadlines to be met), the use of international standards, and a national commitment to the reform process.

Source: ECA, based on our analysis of member states' replies to our survey and evidence provided by national authorities during our visit.

51 All the projects we audited in the three selected member states (*Annex III*) contributed to healthcare digitalisation:

o   in Spain, they supported telemedicine, remote monitoring of chronic diseases, ePrescriptions, patients' consultation of medical images over the internet, and use of standardised terminology;

o   in Malta, they financed high-tech oncological equipment, digital diagnosis, data collection, electronic health records, and medical equipment transferring data to the eHealth systems;

o   in Poland, they supported the creation of a national electronic health platform, the digitalisation of hospitals and their connection to the national platform, and teleconsultation services.

Obstacles encountered by some member states when using EU funds for healthcare digitalisation

52 Analysing the replies to our survey, the evidence collected during our visits, and the minutes of the eHealth Network, we found that member states faced obstacles when applying and managing EU funds for healthcare digitalisation. *Figure 8* summarises the main obstacles that member states faced when using EU funds to digitise their healthcare systems.

Figure 8 – Main obstacles faced by member states when using EU funds for healthcare digitalisation

Administrative burden

Application and fund management complicated by different programmes with specific rules and different management arrangements.

Timing issues

Parallel development of EU financing instruments while member states busy with fighting COVID-19 pandemic.

Insufficient administrative capacity

Difficulty for small entities with limited resources to complete the administrative steps to apply for and manage the projects.

National co-financing

Challenge of having national co-financing at a given time; participation in joint actions jeopardised by limited national resources.

Source: ECA, based on replies to our survey, visits in member states, and eHealth Network's minutes.

53 One challenge cited by five respondents to our survey concerned the administrative burden involved in applying for, making proper use of, and reporting on the EU funds. This is partly due to the fact that the EU financing is spread over different programmes, each of which has specific rules and different management arrangements (*Table 3*), thus complicating the application and fund management process.

Table 3 – Differences in programme management

3rd Health programme, EU4Health, Horizon 2020, Horizon Europe, Connecting Europe Facility, Digital Europe Programme	European Regional Development Fund, Recovery Resilience Facility
Implemented through yearly calls. To receive financing under these EU programmes, member states must submit a proposal under each call for each programme they are interested in applying for.	Based on multiannual programming. At the beginning of the programming period, member states develop plans which are then approved by the Commission (ERDF) or by the Council (RRF). They implement the plans through projects which they select themselves throughout the period. The ways these two instruments are financed differ significantly. *Annex IV* summarises the main differences between the ERDF and the RRF.

Source: ECA analysis of Commission documents.

54 We found that challenges were also posed by the parallel development of the EU financing instruments. For instance, the ERDF regulations were adopted in mid-2021, when member states were also involved in implementing the RRF[16]. This was problematic, not only due to the fact that the instruments were programmed very close to each other, but also because – as one respondent pointed out – programming took place at a time when national officials were more focused on fighting the pandemic than on securing funding for new digitalisation projects.

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[16]   ECA Review report 01/2023, paragraphs 45-47.

55 Another obstacle involved national co-financing. Two member states that replied to our survey highlighted the challenge of having the necessary national co-financing available for the given period, because of the annual cycle of national financial planning. The impact of national constraints was also confirmed by the eHealth Network in 2022, where some member states mentioned limited national resources among the difficulties of obtaining national co-financing, while others cited the lack of national resources as a barrier to participation in joint actions.

56 Among the challenges in using EU funds, two respondents also mentioned insufficient administrative capacity. During our visit, Spain confirmed that the many possible sources of EU financing made it difficult – especially for small entities with limited resources – to complete the administrative steps to apply for and manage the projects.

The Commission monitors the member states' progress in healthcare digitalisation, but has no comprehensive overview of their use of EU funds

57 We assessed whether the Commission's monitoring framework:

o provides timely, relevant and comparable information to track the member states' progress in healthcare digitalisation;

o allows tracking of the member states' use of EU funds supporting their healthcare digitalisation.

The Commission monitors the member states' progress in healthcare digitalisation, albeit with shortcomings

58 We expected the Commission to monitor the progress of member states' healthcare digitalisation by using timely, relevant and comparable indicators, and to report on them. We examined the Commission's indicators, underlying methodologies and reports, as described in paragraphs *08-12*.

59 The Commission monitors the member states' progress in healthcare digitalisation through two main sources in the context of the 2030 Digital Decade Policy Programme: the eGovernment Benchmark since 2022 and the Digital Decade eHealth indicator since 2023. These sets of indicators are based on different methodologies and cover different aspects (*Figure 9*).

**Figure 9 – Main characteristics of the eGovernment Benchmark and the Digital Decade eHealth indicator**

	eGovernment Benchmark (Health life event)	Digital Decade eHealth indicator
Purpose	Assessing the overall maturity of the digital public services provided by public authorities in the health sector from a customer's point of view	Monitoring the member states' progress towards achieving the target of 100 % of European citizens having online access to their electronic health records by 2030
Frequency	Every two years	Annual
First application	2022 (covering 2021)	2023 (covering 2022)
Methodology	Covering four dimensions consisting of 14 underlying indicators Assessing seven eHealth services	Composed of 12 sub-indicators
Data collection	Based on mystery shopping (testing services and products by acting like an ordinary customer) and automated tools (online tests of websites)	Based on member states' replies to an online survey, checked by the Commission through follow-up requests for clarifications

Source: ECA analysis of relevant documentation on the eGovernment Benchmark and Digital Decade eHealth indicator.

60 Both indicators allocate scores to member states. However, as they differ in scope and methodology, they are not comparable[17]. Therefore, when presenting the outcomes of the two monitoring systems, we did not rank the member states using a combined score, but assessed whether they were above or below the EU average for each indicator (*Figure 10*).

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[17] European Commission, eGovernment Benchmark 2024. Background Report, Footnote 6, p. 54.

Figure 10 – Member states' positions below or above the EU average using the 2024 eGovernment Benchmark and Digital Decade eHealth indicator both covering 2023
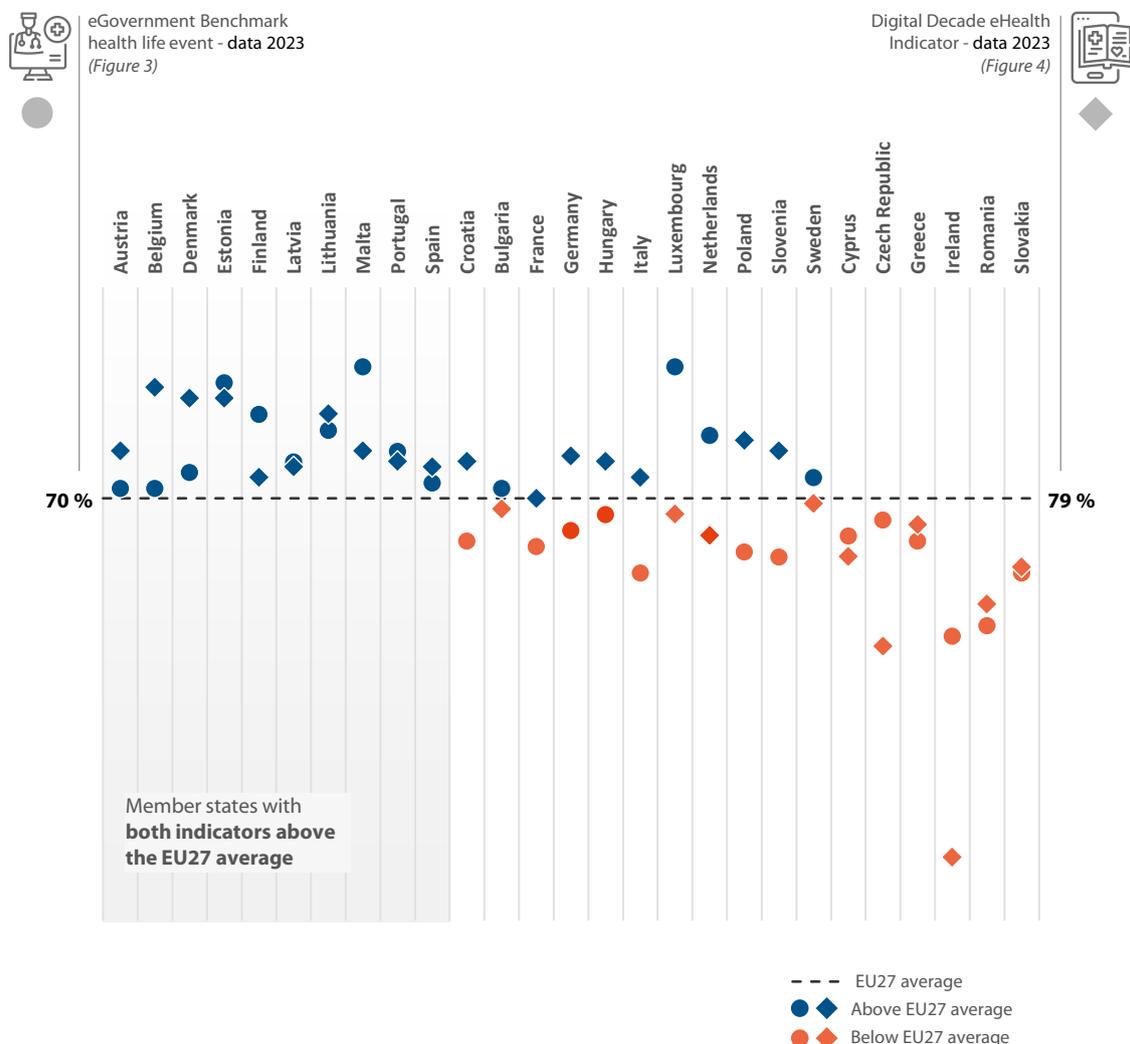
Note: The EU27 average for the eGovernment Benchmark was recalculated by the ECA, excluding non-EU countries (Albania, Iceland, Moldova, Montenegro, North Macedonia, Norway, Serbia, Switzerland, Turkey and Ukraine).

Source: ECA, based on eGovernment Benchmark 2024 and eHealth Digital Decade Indicator 2024.

61 We compared the results of the two years available for each indicator: 2021 and 2023 for the eGovernment Benchmark, and 2022 and 2023 for the Digital Decade eHealth indicator (*Table 4*). We found that although most member states had made progress, for some of them the scores had decreased. For the Digital Decade eHealth indicator, the report explains that this is mainly due to more accurate reporting. For the eGovernment Benchmark the reasons are not explained, thus making it more difficult to understand the changes in the scores.

Table 4 – Comparison of eGovernment Benchmark and Digital Decade eHealth indicator for the two available years

Member state	eGovernment Benchmark - health life event			Digital Decade eHealth Indicator		
	2021	2023	Change	2022	2023	Change
Austria	65	72	↗	88	88	↔
Belgium	75	72	↘	85	100	↗
Bulgaria	49	72	↗	77	77	↔
Cyprus	43	63	↗	70	68	↘
Czech Republic	62	66	↗	47	51	↗
Germany	68	64	↘	71	87	↗
Denmark	79	75	↘	96	98	↗
Estonia	93	92	↘	89	98	↗
Greece	53	62	↗	61	74	↗
Spain	79	73	↘	83	85	↗
Finland	81	86	↗	90	83	↘
France	59	61	↗	54	79	↗
Croatia	51	62	↗	86	86	↔
Hungary	55	67	↗	80	86	↗
Ireland	38	44	↗	0	11	↗
Italy	56	56	↔	71	83	↗
Lithuania	80	83	↗	92	95	↗
Luxembourg	97	95	↘	67	76	↗
Latvia	68	77	↗	79	85	↗
Malta	91	95	↗	78	88	↗
Netherlands	84	82	↘	69	72	↗
Poland	48	60	↗	86	90	↗
Portugal	70	79	↗	63	86	↗
Romania	33	46	↗	57	59	↗
Sweden	61	74	↗	70	78	↗
Slovenia	52	59	↗	80	88	↗
Slovakia	53	56	↗	45	66	↗

Source: European Commission, eGovernment Benchmark 2022. Background Report, Figure 4.1, p. 48; eGovernment Benchmark 2024. Background Report, Figures 4.1 and 4.2, pp. 54-55; Digital Decade e-Health indicators development, Figure 1, p. 4; Digital Decade 2024: e-Health indicator study. Main report, p. 11.

62 The eGovernment Benchmark and the Digital Decade eHealth indicator do not cover the same eHealth services, but they do have some aspects in common. The Digital Decade eHealth indicator is entirely focused on citizens' online access to their electronic health records, although this is only one of the services covered by the eGovernment Benchmark (*Figure 11*).

Figure 11 – eHealth services covered by the eGovernment Benchmark and the Digital Decade eHealth indicator

eGovernment Benchmark (Health life event)

1) Obtain guidance and information about where you can get healthcare

2) Monitor online information on a doctor's registration, specialty and necessary licences

3) Obtain a European Health Insurance Card

4) Register and (re)schedule hospital appointments

5) Apply for tele-consultations with a hospital doctor

6) Obtain an ePrescription from a hospital doctor

7) Access to **electronic health records**

Digital Decade eHealth indicator

Citizens' online access to their **electronic health records**, focusing on the following aspects:

1) Nationwide availability of online access services to electronic health records for citizens

2) Electronic health records summary data available to citizens

3) ePrescription/eDispensation data available to citizens

4) Electronic results and reports available to citizens

5) Access to electronic health records data with eID for authentication

6) Access via an online portal or mobile application

7) Percentage of national population able to access their electronic health records across the country

8) Categories of healthcare providers online and supplying relevant health data

9) Access to electronic health data records for legal guardians

10) Access to electronic health data records for authorised persons

11) Assistance for disadvantaged groups

12) Web Content Accessibility Guidelines v2.1 and Web Accessibility Directive compliance

Source: ECA, based on eGovernment Benchmark and eHealth Digital Decade Indicator.

63 Examining its methodology, we found that for the 2024 exercise – covering the year 2023 – the eGovernment Benchmark analyses two additional aspects (mobile

service delivery and Web Accessibility Directive), which are also covered by Digital Decade eHealth sub-indicators 6 and 12 (under the related column in *Figure 11*). Nevertheless, the analyses differ:

o   the Digital Decade eHealth indicator uses self-reporting data from member states to assess both aspects;

o   the eGovernment Benchmark assesses both aspects by direct testing.

64 We observed shortcomings in reporting the Digital Decade eHealth indicator for Spain and Malta (*Box 7*). These concerned the accuracy of the information provided in one case and scoring methodology in the other. In the first case, the Commission did not have sufficient checks in place to detect incorrect information. In the second case, the scoring methodology used did not reflect the differences between countries.

Box 7

Shortcomings in reporting the Digital Decade eHealth indicator

Accuracy of information. According to the Commission's report published in 2023, most public and private healthcare operators in Spain provide relevant health data to regional access services. However, the Spanish authorities confirmed during our visit that the current eHealth legal framework applies only to data and operators acting within the national public health system. Privately-run healthcare services and related data are not subject to mandatory digitalisation. Patients may have access to the digital services provided by private operators through their own web portals, but these data are not available to the public healthcare authorities. The Commission corrected this information in the 2024 report[18], and explained that private healthcare providers do not supply data to the online access service for electronic health records.

Scoring methodology. Both Malta and Poland received the maximum score for the availability of ePrescriptions (sub-indicator 3 under the related column in (*Figure 11*). In Poland, prescriptions had to be issued electronically in all cases. However, during our audit, we found that ePrescriptions were available in Malta only for medicines which were prescribed for certain chronic diseases and provided for free through a national scheme. In the Commission's 2024 report, which covers the year 2023, Malta still received the maximum score for the availability of ePrescriptions[19].

Source: ECA analysis of the Digital Decade eHealth indicator's results for Spain, Malta and Poland.

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[18]   European Commission, 2024 Digital Decade eHealth Indicator Study. Annex – Country Factsheets, pp. 105 and 108/121.

[19]   European Commission, 2024 Digital Decade eHealth Indicator Study. Annex – Country Factsheets, pp. 79 and 87/121.

Neither the Commission nor most member states have a comprehensive overview of the EU funds used for healthcare digitalisation

65 As the Commission is ultimately responsible for executing the EU budget, we expected it to have a system in place to track the EU funds used by member states to digitalise their healthcare systems. To assess this, we examined databases and reports published by the Commission, and analysed the replies to our survey and evidence collected in the selected member states.

Eight out of 19 member states claimed to have an **overview of the amounts of EU funding used** to support the digitalisation of their healthcare systems.

Member states' replies to ECA questionnaire

66 Based on the replies to our survey, only eight out of 19 member states claimed to have an overview of the amounts of EU funding used to support the digitalisation of their healthcare systems. Of those eight, one referred only to the EU4Health financing, and one explained it had an overview only of those projects where the Ministry of Health was involved, since the Ministry is generally unaware of the EU funding the regions have requested unless it is involved itself.

67 This aspect was corroborated when we asked the selected member states to provide us with an overview of the EU financing they had received for healthcare digitalisation, and a list of relevant projects. Member states had to select the projects manually, because they often had no specific classification method (e.g. using a code) to identify them as such: they were often placed in much broader categories and labelled as "digital" or "health" projects, for instance.

68 We found that member states report to the Commission on the progress of their EU-financed projects and on the use of EU funds as part of the reporting mechanism for the EU funding programmes. Member states provide these financial data to different Commission departments, depending on the DG responsible for the EU programme concerned (*Figure 5*). Each DG has an overview of the resources that are allocated and disbursed under the EU programmes they manage. In the case of DG REGIO, these data are publicly available on the Cohesion Open Data Platform.

69 As the Commission acknowledged, the range of funding instruments, projects and beneficiaries across the EU programmes is very complex. Member states' authorities and other public and private entities participate at different levels across the EU programmes, through shared or direct management, direct grants, competitive calls, loans, and research projects. Additionally, digitalisation of healthcare systems is often a horizontal matter included in several actions or across sectors. Due to this complexity, neither the Commission nor most member states which use EU funds as part of their national digitalisation strategies for health have a comprehensive overview of all EU funds used by each member state for the digitalisation of its healthcare systems.

Conclusions and recommendations

70 We found that, given its mandate, the Commission supported the digitalisation of the member states' healthcare systems effectively overall. The EU policy framework supporting healthcare digitalisation was mainly based on soft law. The COVID-19 pandemic showed the importance of eHealth and cooperation across the EU. This led to the adoption of binding decisions and regulations which have strengthened the EU policy framework for healthcare digitalisation (paragraphs *24*-*30*).

71 The impact of the EU policy framework on the member states depended on voluntary commitment. This was influenced by political priorities, the level of readiness to introduce digital solutions, and the challenges encountered during the process (paragraphs *31*-*38*).

72 The EU provided member states with technical and financial support to facilitate the digitalisation of their healthcare systems. This support was financed by several EU programmes managed by different Directorates-General and implemented through different forms of management. The Commission mainly used the eHealth Network to provide guidance on the EU programmes offering financial and technical support for healthcare digitalisation (paragraphs *40*-*44*).

73 According to the member states, the EU support matched their needs. We also found that all the projects we audited contributed to healthcare digitalisation in the member states we visited. However, the rules for applying for support – and for implementing the funded actions – varied between the various EU programmes. This made it difficult for member states to identify the EU funds available, and created obstacles for member states when applying for funding (paragraphs *45*-*56*).

74 The Commission monitors the member states' progress in healthcare digitalisation by means of two main sources in the context of the 2030 Digital Decade Policy Programme: the eGovernment Benchmark since 2022 and the Digital Decade eHealth indicator since 2023. These indicators are based on different methodologies and have different purposes, but they cover similar aspects of access to electronic health records. We found shortcomings in the reporting of the Digital Decade eHealth indicator. We also found that the eGovernment Benchmark reporting did not provide information on the reasons for variations in country scores from one year to the other (paragraphs *58*-*64*).

Recommendation 1 – Improve reporting on the eGovernment Benchmark and the Digital Decade eHealth indicator

To increase the accuracy of the information provided to stakeholders, the Commission should improve the reporting on the eGovernment Benchmark and the Digital Decade eHealth indicator by clarifying the limitations, differences and complementarity between the two tools.

Target implementation date: July 2026

75 The Commission's current financial monitoring framework provides an overview of the EU funds that member states use to digitalise their healthcare systems for each financing programme. Nevertheless, neither the Commission nor most member states have a comprehensive overview of all EU funds used by each member state for the digitalisation of its healthcare systems. It is therefore difficult to establish the extent of EU financial support in the member states (paragraphs *65-69*).

Recommendation 2 – Improve reporting on the use of EU funds for healthcare digitalisation

The Commission should improve the information for the public on the use of EU funds for healthcare digitalisation by providing an overview at EU and member state level across the various financing programmes.

Target implementation date: 2026

This report was adopted by Chamber 1, headed by Ms Joëlle Elvinger, Member of the Court of Auditors, in Luxembourg at its meeting of 9 October 2024.

For the Court of Auditors

Tony Murphy
President

Annexes

Annex I – Main EU initiatives promoting eHealth

Year	Milestone
1999	Communication: "eEurope. An Information Society for All"
2000	Communication: "eEurope 2002. Action Plan"
2002	Communication: "eEurope 2005. Action Plan"
2004	Communication: "Action plan for a European eHealth Area"
2007	Action Plan in the area of eHealth: ICT solutions for patients, medical services and payment institutions (Annex to the "Lead market initiative for Europe")
2008	Communication: "Telemedicine for the benefit of patients, healthcare systems and society"
2010	Communication: "A Digital Agenda for Europe"
2011	Directive on the application of patients' rights in cross-border healthcare (Cross-border healthcare Directive)
2012	Communication: "eHealth Action Plan 2012-2020. Innovative healthcare for the 21st century"
2015	Communication: "Digital Single Market Strategy for Europe"
2018	Communication: Enabling the digital transformation of health and care in the Digital Single Market"
2019	Recommendation on a European Electronic Health Record exchange format
2021	2030 Digital Compass: the European way for the Digital Decade (the "Digital Compass Communication")
2022	Communication: "A European Health Data Space: harnessing the power of health data for people, patients and innovation"
2022	Proposal for a Regulation of European Parliament and Council on the European Health Data Space (EHDS Regulation)
2022	Decision establishing the Digital Decade Policy Programme 2030
2023	European Declaration on Digital Rights and Principles for the Digital Decade

Source: ECA analysis of EU documentation.

Annex II – Content of the survey sent to member states

No	Question
EU framework on healthcare digitalisation	
1	Do you think that the EU policy framework is appropriate to support member states in digitalising their healthcare systems?
2	Have you used any tools and actions established at EU level when digitalising your healthcare systems?
Member states' strategies on healthcare digitalisation	
3	Has your country adopted a national strategy on healthcare digitalisation?
4	Has your country adopted regional strategies on healthcare digitalisation?
Responsible authorities	
5	Has your country identified the authorities responsible for the implementation of the national strategy on healthcare digitalisation?
6	If applicable, has your country identified the authorities responsible for the implementation of the regional strategies on healthcare digitalisation?
Targets on healthcare digitalisation	
7	Has your country set national targets in the area of healthcare digitalisation?
8	Are the national targets in line with the EU voluntary and binding digital targets on healthcare digitalisation?
9	If applicable, has your country set regional targets in the area of healthcare digitalisation?
10	Are the regional targets in line with the national and EU digital targets?
Actions plans on healthcare digitalisation	
11	Has your country adopted action plans to implement the national strategies on healthcare digitalisation and achieve the national targets?
12	If applicable, has your country adopted action plans on healthcare digitalisation at regional level?
13	Do the action plans indicate the measures (investments and reforms) needed to implement the strategies and achieve the targets?
14	Do the action plans indicate the financing sources (national and EU) needed to implement the measures?
15	Are there any measures included in the action plans, which were not implemented?

No	Question
Financing of healthcare digitalisation	
16	Did your country use EU funds to finance the digitalisation of your healthcare systems?
17	Do the EU financing programmes respond to your country's needs and priorities?
Monitoring and reporting on healthcare digitalisation	
18	Does your country monitor its progress in healthcare digitalisation, including the implementation of the national/regional strategies, the implementation of the action plans and the achievement of the national/regional targets?
19	Has your country got an overview of the EU amounts used to support its healthcare digitalisation since its first strategy/action plan?
20	Does your country share the results of its monitoring with the Commission?
21	Does your country make the results of its monitoring publicly available?
Electronic Health Records (EHRs)	
22	Has your country implemented a national Electronic Health Record system?
23	Has your country used any technical guidelines issued by the eHealth Network to implement its national Electronic Health Record system?
24	What is the approximate percentage of patients who have had access to their Electronic Health Records in your country in the last 3 years (2020-2022)?
25	Have any EU funded projects contributed to the progress achieved in the field of electronic health records in your country?
26	What are the main challenges and opportunities in using electronic health records in your country?
e-Prescriptions	
27	Has your country implemented a national e-Prescription system?
28	Has your country used any technical guidelines issued by the eHealth Network to implement its national e-Prescription system?
29	What is the approximate percentage of e-Prescriptions (out of the total number of prescriptions) dispensed in your country in the last 3 years (2020-2022)?
30	Have any EU funded projects contributed to the progress achieved in the field of e-Prescriptions in your country?
31	What are the main challenges and opportunities in using e-Prescriptions in your country?

No	Question
Telemedicine/teleconsultation	
32	Has your country implemented a national telemedicine/teleconsultation system?
33	Has your country used any European guidelines/communications/best practice to implement its telemedicine/teleconsultation system?
34	What is the approximate percentage of patients who have used telemedicine/teleconsultation services in your country in the last 3 years (2020-2022)?
35	Have any EU funded projects contributed to the progress achieved in the field of telemedicine/teleconsultation in your country?
36	What are the main challenges and opportunities in using the telemedicine/teleconsultation in your country?

Annex III – List of audited projects

Member state	EU programme	Project description	Total amount (million EUR)	EU contribution (million EUR)
Malta	ERDF	EPR component: to install an electronic patient records system for the primary healthcare sector.	2.17	1.74
		NHR component: to implement the National Electronic Health Records system.	1.44	1.15
Malta	ERDF	To install critical medical equipment in a hospital to capture data and transmit them to the eHealth Service Systems.	1.30	1.11
Malta	RRF	To install a new Magnetic Resonance Linear Accelerator machine for an oncology hospital	21.50	18.27
Malta	RRF	To install new software and specialised hardware and create a new online storage platform in an histopathology department, to move cancer diagnosis from an analogue to a digital system.	2.93	2.49
Malta	3rd Health Programme	To establish routine data collection in the area of morbidity statistics from administrative sources (rather than surveys).	0.03	0.02
Poland	ERDF	To create an electronic platform with digital services (ePrescription, etc.) enabling public administrations and citizens to collect, analyse and share digital health data.	36.38	30.79
Poland	ERDF	To connect 52 hospitals to the P1 Platform focusing on three services: exchange of electronic medical documentation, electronic registration to hospitals, hospital in-house referrals of patients for tests.	33.79	28.11
Poland	ERDF	To expand the hospital's IT/digital systems to connect with the P1 platform.	1.50	1.50
Poland	ERDF	To implement an IT/digitalisation system in the hospital and expand it to four regional medical centres to connect them to the hospital system.	1.79	1.43

Member state	EU programme	Project description	Total amount (million EUR)	EU contribution (million EUR)
Poland	ESF	To connect 104 partners (four specialised hospitals, 20 district hospitals, 80 primary healthcare centres) for on-line consultations in the area of cardiology.	4.35	3.66
Spain	Structural Reform Support Programme	To build capacity and knowledge on how to implement telemedicine programmes in the primary healthcare, with a focus on rural areas, in Castilla La Mancha and Catalonia.	0.29	0,29
Spain	EU4Health	To cover part of the membership fee to the SNOMED Clinical Terms, a computer-processable collection of medical terms providing codes, synonyms and definitions used in clinical documentation and reporting.	0.66	0.53
Spain	RRF	"New interoperable electronic prescription services" module: to allow the dispensation of medication in an autonomous region different from the one where it was prescribed, by electronic means, without the need to present a paper prescription	2.37	2.37
Spain	ERDF	To implement an information system enabling citizens to view their medical images (i.e. radiography, tomography, ultrasound, etc.) through the internet.	0.27	0.22
Spain	ERDF	To implement a platform fully dedicated to chronic care and promote remote and standardised collection of patient bio measurements (telemonitoring) for discharged patients with complex problems of heart failure, diabetes, renal failure, etc.	7.87	5.10

Source: ECA, based on documentation collected during the audit. The amounts are in million EUR and show planned amounts.

Annex IV – Main differences between Cohesion policy financing and the RRF

Item	Cohesion policy	RRF
Purpose	A long-term investment policy, whose objective is to strengthen economic and social Cohesion by reducing development disparities between regions.	A one-off temporary instrument, which helps member states to recover from the economic crisis caused by the COVID-19 pandemic by encouraging sustainable growth and building resilience against future shocks.
Eligibility period	For 2014-2020: ten years (7+3). For 2021-2027: nine years (7+2). The eligibility period runs beyond the end of the programming period (+3 for 2014-2020 and +2 for 2021-2027), so expenditure can be declared for reimbursement after the programming period ends.	Six and a half years (FEB 2020-AUG 2026). During this period, the agreed milestones and targets must be attained, and the related payments can be made by the end of 2026. No disbursements will be made by the Commission after 2026.
Management mode	The Commission shares responsibility with member states (shared management). All member states have one coordinating body at Partnership Agreement level. Hundreds of national and regional authorities are involved in programming, implementation, monitoring and audit. Beneficiaries can be public or private bodies, entities with or without legal personality, or natural persons. They are responsible for initiating and implementing operations.	The Commission manages the RRF directly (direct management). At member state level, a lead authority (the "RRF coordinator") has overall responsibility, and acts as the single point of contact for the Commission. Member states are the beneficiaries responsible for implementing the measures contained in the plans. Ministries or regions may be entrusted with implementing projects and reporting to the coordinator on their progress.

Item	Cohesion policy	RRF
Programming	One partnership agreement at national level for each member state, setting out the strategic orientation of the funding and the arrangements for using it. One or more programmes with different thematic or geographical scope, setting out investment priorities.	A single document for each member state (NRRP), detailing the investments and reforms supported by the RRF grants and, where relevant, loans. The Commission assesses the NRRP and proposes an Implementing Decision to be adopted by the Council, which sets the overall financial contribution and lays out the measures and respective milestones and targets and associated disbursements.
Changes to programmes	These only require assessment and approval by the Commission.	These require the Commission's assessment and the Council's approval.
Support	Support for beneficiaries through national and regional authorities, based on project-level reimbursements.	Central budget support, through grants and loans, directly to member states. Implementation at national level can take different approaches.
Disbursements	Primarily based on the reimbursement of actual costs incurred.	Member states must provide cost estimates before the RRP is adopted to justify the financial allocation, but later RRF payments are not linked to these costs. Disbursements are based on the satisfactory fulfilment of milestones and targets.
National co-financing	Rates range from 15 % to 60 %, depending on the fund and the level of development of the supported region. Cases of 100 % EU financing in exceptional circumstances (e.g. the financial crisis of 2008-2009 and the COVID-19 pandemic).	No co-financing requirements.

Item	Cohesion policy	RRF
Decommitment	Funds are committed yearly at the start of the period to each member state, and are lost if they are not used within three years (for 2021 to 2026), and within two years (for 2027) of the commitment.	The Commission had to commit 70 % of the grants by the end of 2022, and the remaining 30 % and all loans by the end of 2023. Any funds not committed by these deadlines will not be allocated. All milestones and targets must be met by 31 August 2026. Amounts not paid by the end of 2026 will be decommitted.
Member states' reporting to the Commission	Financial data: five times a year. Performance data, including data on common indicators: twice a year.	Implementation of milestones and targets, accompanied by evidence: with each payment request (up to twice a year). Information on progress on implementing upcoming milestones and targets: twice a year (APR, OCT). Data on common indicators: twice a year (FEB, AUG).

Source: ECA Review report 01/2023.

Abbreviations

EHDS: European Health Data Space

eHDSI: eHealth Digital Service Infrastructure

eHN: eHealth Network

ERDF: European Regional Development Fund

NRRP: National Recovery and Resilience Plan

RRF: Recovery and Resilience Facility

Glossary

Digitalisation: Introducing digital technology and digitised information to processes and tasks.

Direct management: Management of an EU fund or programme by the Commission alone, as opposed to shared management or indirect management.

eHealth: Provision of healthcare by electronic means.

Interoperability: Ability of a system to communicate and work with other systems, e.g. by exchanging data.

Patient summary: Summarised medical record with the essential information health professionals need to provide optimum care.

Shared management: Method of spending the EU budget in which, in contrast to direct management, the Commission delegates to the member state while retaining ultimate responsibility.

Telemedicine: Provision of healthcare by electronic means where health professional and patient are in different locations.

Replies of the Commission

https://www.eca.europa.eu/en/publications/sr-2024-25

Timeline

https://www.eca.europa.eu/en/publications/sr-2024-25

Audit team

The ECA's special reports set out the results of its audits of EU policies and programmes, or of management-related topics from specific budgetary areas. The ECA selects and designs these audit tasks to be of maximum impact by considering the risks to performance or compliance, the level of income or spending involved, forthcoming developments and political and public interest.

This performance audit was carried out by Audit Chamber I – Sustainable use of natural resources, headed by ECA Member Joëlle Elvinger. The audit was led by ECA Member Joëlle Elvinger, supported by Ildikó Preiss, Head of Private Office, Paolo Pesce, Private Office Attaché; Paul Stafford and Emmanuel Rauch, Principal Managers; Michela Lanzutti, Head of Task; Dirk Neumeister, Malgorzata Frydel, Stéphane Gilson and Hajnalka Hertz-Faragó, Auditors. Max Krecké provided research support. Agata Sylwestrzak, Luis Ferrer López and Mark Smith provided linguistic support. Marika Meisenzahl provided graphical support.

From left to right: Ildikó Preiss, Malgorzata Frydel, Michela Lanzutti, Dirk Neumeister, Joëlle Elvinger, Paolo Pesce, Emmanuel Rauch, Stéphane Gilson, Hajnalka Hertz-Faragó and Luis Ferrer López.

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The COVID-19 pandemic made healthcare digitalisation a more important part of our lives. We examined whether the Commission's actions to support member states in digitalising their healthcare systems were effective. We found that, given its mandate, the Commission supported member states effectively overall. After the COVID-19 pandemic, the EU policy framework was strengthened. The Commission provided member states with guidance on EU funds, and monitored their progress in healthcare digitalisation. However, member states faced obstacles in using EU funds, and neither the Commission nor most member states have a comprehensive overview of how the funds are used. We recommended that the Commission should improve its reporting on member states' progress in healthcare digitalisation and on the use of EU funds.

ECA special report pursuant to Article 287(4), second subparagraph, TFEU.

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