This paper is part of a series of thematic analysis undertaken by the European Commission to illustrate the impact of the Recovery and Resilience Facility (RRF). The RRF is the European Union’s largest ever funding instrument and is intended to support European economies and societies to recover from the Covid-19 pandemic and build resilience against future shocks. EU Member States commit to implement ambitious reforms and investments and receive funds from the RRF when they achieve these commitments.
Healthcare services constitute one of the most important economic sectors in Europe, accounting for almost 10% of the GDP, 15% of the government expenditure and 8.3% of the total workforce in the EU. A healthier population and labour force contributes to higher productivity and boosts economic growth. The paramount importance of health has been highlighted by the public health crisis resulting from the COVID-19 pandemic, which has revealed structural weaknesses in health systems across the EU. A key lesson learnt is that additional reforms and investments are necessary to strengthen the capacity, quality and resilience of health systems. Such reforms and investments will not only prepare the EU for future health crises, they are also essential in view of an increasing demand for healthcare resulting from a significantly ageing EU population.

Against this background, the Commission continues to work towards a strong European Health Union. In 2020, the Commission adopted a package of measures to be better equipped against future public health crises and to ensure a more robust health security framework. In particular, the Commission brought forward proposals for a regulation revising the Cross-Border Health Threats Decision as well as reinforced mandates for the European Centre for Disease Control and Prevention (ECDC) and the European Medicines Agency (EMA). Moreover, the European Health Union was further developed by the foundation of the Health Emergency Preparedness and Response Authority (HERA) in September 2021. HERA aspires to provide additional operational capacity through a permanent structure for risk modelling, foresight and horizon scanning, flexible manufacturing capacities, vaccine development and medical research. Europe’s Beating Cancer Plan further supports the build-up of a European Health Union. The plan adopted in February 2021 aims to prevent cancer and ensure that cancer patients, survivors, their families and carers can enjoy high standards of diagnosis, treatment and a high quality of life.

In addition, the Commission adopted a Pharmaceutical Strategy for Europe in November 2020. The strategy is a comprehensive, ambitious and long-term plan aiming to ensure that patients have access to innovative and affordable medicines as well as to support competitiveness, innovation capacity and sustainability of the EU’s pharmaceutical industry. The strategy envisages the revision of the pharmaceutical legislation, to accommodate cutting-edge products, scientific developments and technological transformation. The strategy also addresses concerns highlighted by the COVID-19 pandemic, such as the resilience of supply chains for active pharmaceutical ingredients and medicines.

Looking ahead, the adoption of a regulatory proposal to create a European Health Data Space (EHDS) is expected as one the key priorities of this Commission in the area of health. The purpose of the EHDS is to promote health-data exchange, support digital health services and research on new preventive strategies, diagnosis and treatments of diseases, medicines, medical devices and health outcomes.

In 2020, within the European Semester, for the first time all 27 Member States received Country-Specific Recommendations (CSRs) related to health. The approved recovery and resilience plans are expected to contribute to effectively addressing the challenges identified in CSRs under the European Semester. Furthermore, health resilience is among the six pillars of the Recovery and Resilience Facility. The challenges captured by the CSRs relate in particular to the resilience of health systems, the availability of critical medical products, the financial capacity of the health system, the shortages of health workforce and working conditions; the infrastructure for e-health and its roll-out, the access to and availability of care (including differences between regions), the transition of care from hospitals to outpatient and primary care, and the overall coordination and integration of care. Examples of measures addressing these issues, both as reforms and investments, can be seen in the national recovery and resilience plans.
Healthcare in the recovery and resilience plans

Overview of the plans

Overall, Member States have shown a strong commitment to improving health systems by including measures dedicated to health. All of the 22 plans currently covered by the Scoreboard include measures related to healthcare. The total expenditure on healthcare-related measures amounts to approximately EUR 37 billion, which corresponds to 8% of the plans’ total expenditure. The measures included in the plans contribute to a variety of health objectives, such as the improvement of primary healthcare, the transition from hospital care to outpatient care, the reorganisation of hospital networks, the upscaling of prevention, the increase in the quality of diagnosing and treating patients, the strengthening of the healthcare workforce and the modernisation of healthcare facilities.

Member States have included a wide array of health investments in their recovery and resilience plans. The plans include approximately EUR 25 billion in investments in the construction of new, or upgrade of existing, health infrastructures (including medical equipment to which the refurbishments are related). These investments are complemented by investments in medical devices for the diagnosis and treatment of cancer patients, strengthening overall resilience of the cancer prevention and care system. Some EUR 15 billion in investments in the plan also include primary care or prevention. These investments aim at increasing the allocation for primary care in rural areas and opening of new primary care outpatient clinics in deprived areas, introducing mobile pharmacies offering primary care services, and strengthening the role of general practitioners in primary care.

A large number of investments focus on the digital transition in healthcare (e-health). The plans contain digital (e-)health measures that also contribute to achieving the target of allocating at least 20% of their total budget to the digital transition. For example, several Member States dedicate funds to investments in health information assets, digital upskilling

1 The figures in this thematic analysis are based on the pillar tagging methodology (in particular the policy area “Healthcare: Resilience, Sustainability, Adequacy, Availability, Accessibility and Quality, including Digitisation and Infrastructure”) and are complemented by identifying measures on the basis of their description (in the annexes of the Council Implementing Decisions).

2 Further details concerning e-health can be found in the Scoreboard thematic analysis on Digital public services.
and the transformation of healthcare delivery via telemedicine. The total expenditure towards the digital transition in healthcare amounts to approximately EUR 12 billion across the plans. One Member State (Croatia) has included in its recovery and resilience plan an investment concerning the development of a software solution that, relying on blockchain technology, shall monitor stockpile data for all medicines to anticipate and prevent shortages of medicines in Croatia.

**Member States plan to adopt and implement an ambitious reform agenda to complement investments in the healthcare sector.** This agenda features reforms to strengthen the resilience of the health sector and increase the availability of integrated and high-quality healthcare services. Some recovery and resilience plans include reforms of the management of public health funds and health investment funds, as well as reforms of healthcare governance and human resources in the healthcare sector. Others propose measures to address shortages of health professionals by reforming the regulation of medical professions and job profiles. Key reforms focus on re-organising health systems to strengthen their capacity, improving the governance of health systems to increase sustainability of healthcare services, and establishing mechanisms to attract and retain health professionals in specific regions. For example, the Spanish plan includes a reform to ensure the deployment of professionals in certain geographical areas that are not sufficiently served through other incentive measures.

**Health reforms are also geared towards improving access to healthcare, developing centres of excellence as well as e-health services.** Most plans envisage to adopt national public health programmes to support primary, secondary and tertiary prevention. In particular, reforms focus on setting up and rolling out national preventive screening programmes, promoting psychosocial integration and improving palliative care. Member States also plan reforms dedicated to the digital transformation of health and measures aiming to improve the accessibility of health services. In particular, reforms supporting digital health transformation are expected to promote new digital services, including those related to telemedicine and digitalised medical records. Several reforms are geared towards improving the functioning of hospital networks to optimise care by specialised and generalist hospitals and general practitioners. Other reforms concern the regulation of medicines and medical devices to improve access to medicinal products and to provide incentives for R&D.
Furthermore, reforms focus on improving the fiscal sustainability of health care systems. Given that the demand for health care in the EU, including the part that is financed by the public, is likely to increase in the near future, it is important to ensure that public finances are able to cover this increase without causing public debt to rise. On this account, the plans include several reforms that can make health systems more efficient, which in turn can help improve their fiscal sustainability in the long-term and make them able to meet the increased demand for care in a sustainable way. Key reforms focus on improving the governance of health systems by making them more transparent and integrated, optimising benefits packages and cost-sharing schemes according to cost-effectiveness criteria while preserving access, rebalancing from hospital-centric models to primary care and prevention, and strengthening the cost-effective use and the affordability of medicines.

Case examples

The French recovery and resilience plan contains a wide array of investments to support the digitalisation of the health system (e-health). France has committed to implementing a comprehensive set of investments to accelerate the development of digital tools in the health sector by: (a) speeding up the deployment of State information systems including shared medical records, the digital health platform and a one-stop shop for all digital services for healthcare professionals; (b) upgrading the existing software already used in the public and private sector to make them compatible with the necessary interoperability and security requirements, thereby promoting the exchange of health data, such as hospital release documents, biology reports, radiology reports and images, prescription and liaison letters; (c) supporting and incentivising healthcare professionals in the digital transition; and (d) equipping social medicine facilities with digital infrastructure such as internet connections, computers and software. The investments in the digitalisation of the French health system amount to approximately EUR 2 billion.

The Greek plan includes a measure aimed at public health and prevention. An ambitious set of measures focusing on public aims to improve access to high-quality health services for all citizens. This includes the implementation of a system of primary, secondary and tertiary prevention as envisaged in the National Public Health Prevention Program “Spiros Doxiadis”. These are expected to support the resilience of the health care system by reducing morbidity, for instance through the promotion of physical exercise and healthy eating, by supporting the early detection of diseases, for instance through screening programmes, and by interventions aimed at preventing disability and supporting individuals with long-term conditions, with a view to improving their autonomy, quality of life and life-expectancy. Lastly, these measures envisage the modernization of the public health system to improve its capacity to emergencies and threats.

The Spanish plan includes reforms aimed at strengthening the health workforce. A reform to strengthen professional skills and reduce temporary employment of nurses and doctors in Spain aims to address shortages of nurses and doctors by: (a) reducing temporary contracts, (b) improving the deployment of professionals in certain geographical areas that are not sufficiently served; and (c) improving the environment and working conditions through measures that contribute to professional development and retain talent in the Spanish system.

The Slovenian plan contains large investments in hospital infrastructure to improve the effective treatment of communicable diseases in Slovenia. The plan includes two hospital infrastructure projects aimed at increasing and upgrading the capacities to treat communicable diseases in Slovenia: (a) the upgrading of the infectious clinic in Ljubljana and (b) the construction of a new infectious clinic in Maribor. Both facilities are expected to enter into use by mid-2026 and are expected to provide more than 200 additional beds for the treatment of communicable diseases.

The Italian plan includes a comprehensive investment for the strengthening and enhancement of biomed-
ical research in Italy. The investment supports the financing of proof of concept (PoC) projects aimed at reducing the gap between scientific research and industrial application results, by providing prototypes for commercialisation and mitigating potential risks – arising from possible patents, licences or barriers to entry – which could discourage market investors. Moreover, the investment promotes the funding of research programmes/projects in the field of rare diseases and rare cancers and other diseases with a high impact on health.

The Finnish plan includes measures to improve the cost-effectiveness of the healthcare system by strengthening the knowledge base and evidence-based decision making in Finland. Cost-effectiveness is expected to improve by means of the proposed investments and reforms, especially those improving data and the evidence base for decision-making, and the planned digital and phone-in services. Management solutions include the development and implementation of advanced knowledge management and analytics solutions.

Country overview

For all Member States, the listed relevant components are based on the Council Implementing Decision.

**Austria**


The plan includes a reform that aims to strengthen primary care. It is accompanied by multiple investments supporting: (i) the promotion of primary healthcare projects by increasing provision of primary healthcare via healthcare centres, i.e. shifting the weight from hospitals; (ii) the development of the electronic mother-child-pass platform including the interfaces to the early aid networks to enable running a screening programme for the early detection of health risk factors, diseases and health problems during pregnancy and early childhood and (iii) the national roll-out of ‘early aid’ for disadvantaged pregnant women and their families. The plan also includes investments in the establishment of a network of community nurses located close to their patients to provide local, low-threshold and needs-based care. The proposed modernisation of the Austrian health sector is expected to make it more resilient, reduce health system costs and the inefficient use of resources in secondary care, and to create better health opportunities, in particular for socially disadvantaged families.

**Belgium**

*Allocation: EUR 83 million. Relevant components 2.2 and 5.2*

The Belgian recovery and resilience plan includes targeted investments in e-health solutions that aim to increase the quality, speed and agility of healthcare through the digitalisation of health processes. Key measures concern the extension of e-prescription capabilities, the improvement of the quality of prescriptions, the development of clinical decision support systems and the operationalisation of tele-consultancy. Furthermore, the Belgian plan includes investments in nuclear medicine and in health related R&I.

**Cyprus**

*Allocation: EUR 69.6 million. Relevant component 1.1.*

Cyprus intends to implement significant investments and reforms in the healthcare sector to increase its efficiency, accessibility and overall resilience. Key reforms focus on establishing a National Centre on Clinical Documentation, developing e-Health solutions and gradually shifting the healthcare provision and reimbursement framework towards value-based models. Key investments aim at enhancing, modernising and upgrading Cyprus’ state hospitals, establishing the Cyprus Innovative Public Health ICT System and purchasing and upgrading medical equipment in hospitals.

**Czechia**

*Allocation: EUR 1.1 billion. Relevant components 1.1, 1.2, 3.2, 5.1, 6.1 and 6.2.*

The reforms and investments in the Czech plan are geared
towards improving the access to and resilience of the healthcare system, developing e-health services, digital tools and telemedicine, and centres of excellence in key areas of healthcare. In particular, the measures focus on setting up intensive medicine and highly specialised care centres, rehabilitation care for critical patients as well as a plan to strengthen cancer prevention and care.

**Germany**

*Allocation: EUR 4.4 billion. Relevant component 5.1.*

Germany aims to support the modernisation and resilience of the healthcare sector, including through a measure to digitalise public health offices, as well as a large investment scheme dedicated to hospitals. A key improvement for the public health offices is the full deployment and expansion of the German Electronic Reporting and Information System for Infection Control (DEMIS), which can be used in the context of pandemics. More generally, the public health authorities will be spurred into the digital age, by ensuring that information systems are consistently interoperable across all levels and by developing and rolling out standardised systems and tools. Hospitals will be enabled to overcome recent deficits in their efforts to modernise and will receive funding to improve in a wide range of critical areas, such as digitalising emergency rooms, expanding tele-medicine, improving medication management and ensuring information security.

**Denmark**

*Allocation: EUR 33 million. Relevant component 1.*

The plan includes targeted measures to increase the resilience of the health sector by managing strategic stocks of critical medical products efficiently. Also, Denmark aims to strengthen digitalisation in the healthcare sector and a clinical study on the effects of COVID-19 vaccines will be conducted. Finally, the plan includes measures to improve emergency management and monitoring of critical medical products.

**Estonia**

*Allocation: EUR 326.3 million. Relevant component 6.*

The plan includes reforms and investments to improve the accessibility and resilience of the health care system. The targeted measures aim to address health workforce shortages, strengthen primary care, modernise e-health governance and improve the integration of health and social services. The investments relate to the construction of the Northern Estonia Medical Campus and the purchase of multi-purpose medical helicopters.

**Finland**

*Allocation: EUR 424.8 million. Relevant component P4C1.*

The Finnish plan will support implementation of the 2021 social welfare and health care reform, including establishment of new regional welfare areas. The plan also includes investments that contribute to the implementation of the ‘care guarantee’ legislation that defines maximum waiting times for hospital and primary care services, including mental health services. Furthermore, the plan aims to improve the ‘treatment guarantee’ legislation that defines maximum waiting times for access to non-urgent treatments, and to strengthen the knowledge base that supports the cost-effectiveness of healthcare. It also introduces digital innovations that promote the care guarantee as well as a customer-oriented digital care information system in Åland.

**Greece**

*Allocation: EUR 1.5 billion. Relevant component 3.3.*

The Greek plan aims to strengthen healthcare system and create a comprehensive system of public health and prevention, paired with some actions on mental health, whilst adjusting the legislative framework to support the rationalization of pharmaceutical spending and supporting pharmaceutical R&D. The plan also includes significant investments in the renovation of public hospitals and primary healthcare centres as well as in the digital transformation of healthcare to rationalize governance.

**Spain**

*Allocation: 1.7 billion. Relevant components 17 and 18.*

The Spanish plan includes a wide range of reforms and investments. The plan contains reforms to extend the portfolio of services offered by the national health system to interventions not covered previously (such as dental care, preventive care for children, genomics and orthopedic and prosthetic care) and to address the increasing demand for healthcare. The capacity and resilience of the health system will be strengthened through investments in equipment, the development of professional skills of health workers and
by reducing temporary employment in the sector. Substantial investments in the health system are also planned to address structural weaknesses and adapt the health system to be more robust, flexible and resilient.

**France**

*Allocation: EUR 4.5 billion. Relevant component 9.*

France plans major investments in the health sector’s infrastructure and digitalisation. This includes large investments for improving hospitals and medico-social establishments and cooperation between health actors, as well as for strengthening digital health services. France also plans investment to support biomedical research and improve medical practices. The reforms accompanying these investments should also increase the resilience of the health sector, whether through the ‘Sécur de la Santé’ aimed in particular at upgrading the careers of health personnel, or through the implementation of the Law on the Orientation and Transformation of the Health System, which will make it possible to rebalance the supply of healthcare throughout the country as well as to organise local care.

**Italy**

*Allocation EUR 16.3 billion. Relevant components M1C2, M5C2, M5C3, M6C1 and M6C2.*

The Italian recovery and resilience plan contains a comprehensive mix of reforms and investments aimed at strengthening the response capacity of Italy’s National Health Service, in response to demographic and epidemiological trends driving increasing demand for healthcare in an ageing population. The plan includes measures to improve infrastructure and technology endowments, promote research and innovation, and develop the technical, professional, digital and managerial skills of the health care staff. It aims to increase the volume of home-care services and the use of telemedicine to best support patients with chronic diseases. Large investments aim to improve the governance of the National Health System and enhance the access to, and support provision of, integrated and patient-centred healthcare and continuity of care at territorial level. Furthermore, investments concern the development, strengthening and modernisation of the technological and physical infrastructure of the national healthcare service and the research sector. Reforms focus on the reorganisation of the network of scientific hospitalisation and care institutes by updating the rules in national regulations to review their legal regime.

**Croatia**

*Allocation: EUR 353.6 million. Relevant components 2.3 and 5.1.*

Croatia aims to build national capacities to implement health reforms while working to meet health system targets. These targets include longer life expectancy, better quality of life and reduction of health inequalities. The main reforms focus on improving the efficiency, quality, and accessibility of the health system. The public health system will be strengthened to effectively tackle the COVID-19 pandemic, in order to preserve human lives, citizens’ health and the economy. In addition, the plan sets out to modernise the hospital system, develop human resources, as well as to provide high-quality medical and technological equipment, strengthen day-to-day hospitals and reduce waiting lists.

**Lithuania**

*Allocation EUR 257 million. Relevant component A1.*

Lithuania aims to improve the sustainability and resilience of the health system in reaction to shocks by allowing more flexibility to respond. The measures focus on improving cooperation at all levels of the health system, strengthening epidemiological surveillance of communicable diseases, more efficient use of resources, investments in the hospital and out-patient care infrastructure, human resources and the development of remote and personalised healthcare. The reforms and investments have three strands: (i) improving quality and accessibility of services and promoting innova-
tion, (ii) reforming the long-term care provision, and (iii) systemically strengthening the resilience of the health system to function during emergencies.

**Luxembourg**

*Allocation EUR 1.2 million. Relevant component 1B.*

The component ‘Strengthening the resilience of the health system’ in the plan aims at delivering a work programme aligned with the strategic objectives of a more resilient health sector, and presents an implementation roadmap. A related reform seeks to address shortages of health professionals by reforming the regulation of medical professions and job profiles, by opening up the health sector to additional locally-trained staff. Two investment projects (single digital registry of healthcare professionals, development of tele-medicine) seek to accelerate the digitalisation of the sector, thereby increasing its resilience and efficiency.

**Latvia**

*Allocation EUR 181.5 million. Relevant component 4.*

Latvia plans to introduce a comprehensive, integrated healthcare delivery model to increase quality and cost-effectiveness of integrated health services, and to improve the preparedness of the health system to deliver services in epidemiological crises. This includes investments in hospital and ambulatory care infrastructure and human resources. In particular, the reforms and investments aim to improve infrastructure of three university hospitals in Riga, seven regional hospitals and at least 40 ambulatory care institutions, contribute to building a human-centred, integrated and resilient care system, digital health, human resources mapping, and strengthen the governance of the health system by improving service delivery and piloting of new service models.

**Malta**

*Allocation EUR 69.9 million. Relevant component C4.*

Malta’s plan focuses on strengthening the resilience, accessibility and quality of the health sector. Key reforms include the development and implementation of a health policy framework, with a particular focus on health prevention and a strong workforce. In addition, the national legislation framework for the establishment of a blood, tissue and cell centre for Malta will be reviewed for necessary updates. Sustainability will be sought through increased prevention, improved monitoring and improved management of resources. Investments contribute to the digital transformation and resilience of the health system. The aim is to improve patient care, enhance patient experience, reduce waiting time and improve the quality of healthcare provision through e.g. fostering digital pathology, the digital transformation of outpatient and consumer engagement processes and the adoption of new technologies to improve radiotherapy delivery.

**Portugal**

*Allocation EUR 1.4 billion. Relevant component C01.*

The Portuguese plan includes a set of mutually-enforcing initiatives to strengthen the response capacity of the National Health Service in the fields of primary, mental and long-term care, combined with efficiency-oriented measures to enhance the governance, cost effectiveness, access and quality of public hospital services. Crucially, wide-ranging investments are geared towards reinforcing the network of health services and digitalising the National Health Service as a whole, with specific measures also targeting the outermost regions of Madeira and the Azores. Furthermore, primary, mental and long-term health care services are planned to become strongly anchored on local services and community-based care. The plan also contains ancillary measures to promote a greater uptake of centralised purchasing and the dissemination of best governance practices, including an enhanced monitoring of hospitals’ performance and stronger accountability of hospital managers with respect to cost effectiveness and quality of service.

**Romania**

*Allocation EUR: 2.9 billion. Relevant components C12 and C713.*

Romania’s plan includes reforms of the management of public health funds, of efficiently managing investments in health infrastructure and of healthcare governance and human resources in the healthcare sector. Investments are envisaged to improve the hospital infrastructure. The construction or renovation of integrated community centres with new facilities and staff, provision of equipment to family doctors and the acquisition of mobile medical units will contribute to increasing the access to primary and preven-
Recovery and Resilience Scoreboard
Thematic analysis

Effective care services for vulnerable groups and underserved communities. Romania aims to strengthen digitalisation in healthcare by developing eHealth and tele-medicine systems and services, along with staff training.

Slovenia
Slovenia’s plan covers several reforms making the healthcare system more efficient and resilient. It includes measures concerning healthcare system reform, digital transformation of healthcare, accessibility of the health system, and strengthening the competence of health personnel to ensure quality of care aiming at improving the accessibility of the healthcare system. Investment projects in the healthcare infrastructure are also planned to effectively address communicable diseases.

Slovakia
Allocation: EUR 1.3 billion. Relevant components C11 and C12.
Slovakia envisages several reforms and investments to improve the fiscal sustainability and resilience of healthcare. Among other elements, they plan a modernisation of the hospital network which aims to optimise care by categorisation of hospitals and increase the coverage of the general practitioners. The package also includes initiatives to modernise mental care and improve long-term care and investments in digitalisation. Healthcare reforms, including of the (public and highly indebted) hospital network, should also contribute to improving long-term fiscal sustainability.