Focus Paper no. 4/2022
"The NRRP and healthcare: goals, resources and milestones achieved"

Summary

This Focus Paper offers an overview of the NRRP measures envisaged within its Health Mission, which is designed to strengthen the Italian healthcare system. The Focus analyses a number of financial aspects in greater detail, namely the distribution of resources across the country and the issue of funding current expenditure to operate the new or enhanced services that the NRRP will make available. In addition, the objectives planned for the first half of 2022, all of which were achieved on schedule, are briefly examined.

The inclusion of a Mission focused on healthcare in the NRRP reflects the need to respond to critical issues that emerged in the wake of the health emergency. COVID-19 helped exacerbate the strains that were already running through the National Health Service (NHS), despite the fact that certain indicators of effectiveness appeared favourable and public healthcare expenditure was below the European average as a proportion of GDP. In particular, the problems associated with the inadequacy of territorial healthcare assistance, geographical imbalances, bottlenecks in the supply of hospital services (with the overcrowding of emergency services), a scarcity of personnel in certain professional categories, the neglect of prevention and the weak public commitment to research.

The NRRP dedicates €15.63 billion to the Health mission, of which nearly €3 billion for existing projects, €9.6 billion for new projects and €3 billion from the Development and Cohesion Fund (DCF). In addition, a further €2.89 billion are available through the Complementary Fund (CoF), bringing total funding to €18.5 billion. In addition, other resources should be available to the NHS, such as from REACT-EU (about €1.7 billion) and the National Operative Programme (NOP) for health (€625 million) (Table 1).

The NRRP measures appear consistent with the general approach on the reorganisation of health systems in European countries, which includes the rationalisation of the hospital sector and the strengthening of local healthcare assistance and health prevention and promotion. The basic approach of the NRRP programmes is represented on the one hand by a strengthening of territorial healthcare assistance – with the specification of structural, organisational and technological standards and the new structure of prevention arrangements, and with the creation of new facilities, including short-stay units – and the strengthening of home care (the first Component of the Health Mission, for which €7 billion of NRRP funding and €500 million of CoF funding have been allocated).

Table 1 – Mission 6: NRRP and the Complementary Investment Plan

Component and project name	Type	NRRP measure	Existing projects *(mln)*	New projects *(mln)*	DCF *(mln)*	Total NRRP *(mln)*	CoF *(mln)*	Total *(mln)*	Sequential number	NRRP milestone / target	Description	Qualitative indicators - NRRP milestones *(milestone)*	Quantitative indicators - NRRP targets	Completion timeline
						(a)	(b)	(a+b)						
Component 1 **Proximity networks, facilities and telemedicine for territorial healthcare assistance**	**Reform**	Definition of a new organisational model for the territorial healthcare assistance network							M6C1-1	Milestone	Entry into force of secondary legislation (ministerial decree) providing for: 1) definition of a new organizational model of the territorial healthcare assistance network (specification of structural, technological and organizational standards) ; 2) definition of a new institutional structure of health, environmental and climate prevention	Provision in decree indicating entry into force		Q2-2022
	Investment	1.1 Community health centres and initial access to homecare	0.0	500.0	1,500.0	2,000.0	0.0	2,000.0	M6C1-2	Milestone	Approval of an Institutional Development Contract	Notification of the approval by Ministry of Health and regions		Q2-2022
									M6C1-3	Target	Community health centres available and technologically equipped		1,350	Q2-2026
	Investment	1.2. Home as the first place of care and telemedicine	0.0	4,000.0	0.0	4,000.0	0.0	4,000.0	M6C1-4	Milestone	Approval of the Guidelines containing the digital model for the implementation of home care	Guidelines approved by Ministry of Health		Q2-2022
									M6C1-5	Milestone	Approval of an Institutional Development Contract	Notification of the approved contract		Q2-2022
	Sub-Investment	*1.2.1 Home care as first point of assistance*	*0.0*	*2,720.0*	*0.0*	*2,720.0*	*0.0*	*2,720.0*	*M6C1-6*	*Target*	*Number of new patients in home care (increase number of people treated in home care to 10 % of the population over 65, 1.5 million people in 2026)*		*800,000*	*Q2-2026*
	Sub-Investment	*1.2.2 Territorial Coordination Centres*	*0.0*	*280.0*	*0.0*	*280.0*	*0.0*	*280.0*	*M6C1-7*	*Target*	*Fully functional centres in operation (1 for each 100,000 inhabitants)*		*600*	*Q2-2024*
	Sub-Investment	*1.2.3 Telemedicine to better support patients with chronic diseases*	*0.0*	*1,000.0*	*0.0*	*1,000.0*	*0.0*	*1,000.0*	*M6C1-8*	*Target*	*At lease one project per region (including those organised within consortiums among regions)*		*20*	*Q4-2023*
									M6C1-9	*Target*	*Number of patients treated with telemedicine systems*		*200,000*	*Q4-2025*
	Investment	1.3. Strengthening intermediate healthcare and its facilities (community hospitals)	0.0	0.0	1,000.0	1,000.0	0.0	1,000.0	M6C1-10	Milestone	Approval of an Institutional Development Contract	Notification of approval of contract		Q2-2022
									M6C1-11	Target	Community Hospitals renovated, interconnected and technologically equipped		400	Q2-2026
	Investment	Health, environment, biodiversity and climate	0.0	0.0	0.0	0.0	500.0	500.0			Strengthening facilities and services of the SNPS-SNPA (National System for Health Prevention from environmental and climate risks); pilot operational programmes for two contaminated sites; national ongoing training programme; promotion and funding of applied research; national SNPA-SNPS digital network platform			-

Table 1 – *(cont.)* Mission 6: NRRP and the Complementary Investment Plan

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							(a)	(b)	(a+b)						
Component 2 **Innovation, research and digitalisation of National Health Service**	Technological and digital modernisation	**Reform**	Reform 1: Revise and update the current legal framework of the institutes for science-based care and research (IRCCS) and Ministry of Health research policies							M6C2-1	Milestone	Entry into force of the legislative decree envisaging the reorganisation of the regulations governing the institutes for science-based care and research (IRCCS)	Provision in decree indicating entry into force		Q4-2022
		Investment	1.1 Modernisation of hospitals' technological and digital facilities	1,413.0	2,139.0	500.0	4,052.4	0.0	4,052.4	M6C2-4	Milestone	Reorganization plan approved by Ministry of Health/Regions	Notification of approval		Q4-2021
										M6C2-5	Milestone	Approval of an Institutional Development Contract	Notification of the signature of the contract by Ministry of Health and regions		Q2-2022
										M6C2-7	Milestone	Award of all public contracts. Publication of tendering procedures (Consip framework agreement) and conclusion of contracts with service providers and digitalisation of hospitals classed as DEA Level I and II)	Notification of all awarded public contracts		Q4-2022
		Sub-Investment	*1.1.1 Modernisation of hospitals' technological and digital facilities (digitalisation)*	*0.0*	*950.0*	*500.0*	*2,863.0*	*0.0*	*2,863.0*	*M6C2-8*	*Target*	*Digitalisation of hospital facilities (DEA - Emergency and Arrivals Departments – Level I and II). Every digitalised hospital shall have a data processing centre (DPC)*		*280*	*Q4-2025*
				1,413.0	*0.0*	*0.0*		*0.0*		*M6C2-9*	*Target*	*Additional beds in intensive (at least 3,500) and semi-intensive (4,200) care units. The increase must be permanent (an increase of about 70% in the number of beds prior to the pandemic)*		*7,700*	*Q2-2026*
		Sub-Investment	*1.1.2 Modernisation of hospitals' technological and digital facilities (large medical devices)*	*0.0*	*1,189.0*	*0.0*	*1,189.0*	*0.0*	*1,189.0*	*M6C2-6*	*Target*	*Large medical devices in operation. Tender procedures and award of contracts with service providers. Testing of healthcare equipment*		*3,100*	*Q4-2024*
		Investment	1.2. Toward a safe and sustainable hospital	1,000.0	638.9	0.0	1,638.9	0.0	1,638.9	M6C2-10	Target	Completion of seismic upgrade measures in hospital facilities		109	Q2-2026
				0.0	0.0	0.0	0.0	1,450.0	1,450.0			Upgrade hospitals to applicable seismic resilience regulations. 220 projects completed			-
		Investment	1.3. Strengthening of the technological infrastructure and of the tools for data collection, data processing, data analysis and simulation	569.6	1,102.9	0.0	1,672.5		1,672.5						-
		Sub-Investment	*1.3.1 Strengthening of the technological infrastructure and of the tools for data collection, data processing, data analysis and simulation (EHR)*	*569.6*	*810.0*	*0.0*	*1,380.0*	*0.0*	*1,380.0*	*M6C2-12*	*Milestone*	*Entry into full service of Health Card system and infrastructure for interoperability of the Electronic Health Record (EHR)*	*Entry into service of Health Card system and infrastructure for interoperability of the Electronic Health Record (EHR)*		*Q2-2026*
										M6C2-11	*Target*	*General practitioners input data to EHR. Increase in types of digitalised documents in the EHR and digital updating of general practitioners*		*85%*	*Q4-2025*
										M6C2-13	*Target*	*Adoption of EHR by all regions*		*21*	*Q2-2026*
		Sub-Investment	*1.3.2 Strengthening of the technological infrastructure and of the tools for data collection, data processing, data analysis and simulation (technological infrastructure of Ministry of Health and data analysis, predictive modelling for essential assistence levels oversight)*	*0.0*	*292.6*	*0.0*	*292.6*	*0.0*	*292.6*						-

Table 1 – *(cont.)* Mission 6: NRRP and the Complementary Investment Plan

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							(a)	(b)	(a+b)						
Component 2 **Innovation, research and digitalisation of National Health Service**	Training, scientific research and technology transfer	Investment	2.1. Strengthening and leveraging of the NHS biomedical research	0.0	524.1	0.0	524.1	0.0	524.1	M6C2-2	Target	Funding of research programmes/projects in the field of rare diseases and rare cancers. Grant of funding through public tenders (number of projects)		100	Q4-2025
										M6C2-3	Target	Funding of research projects on diseases with a high impact on health. Grant of funding through public tenders (number of projects)		324	Q4-2025
		Investment	2.2 Development of technical-professional, digital and management skills of professionals in healthcare system	0.0	737.6	0.0	737.6		737.6						-
		Sub-Investment	*2.2 (a) Development of technical-professional, digital and management skills of professionals in healthcare system. Sub-measure: additional study grants for general medicine training*	*0.0*	*102.0*	*0.0*	*102.0*	*0.0*	*102.0*	*M6C2-14*	*Target*	*Award of study grants for specific course in general medicine. Completion of three 3-year training cycle*		*1,800*	*Q2-2023*
										M6C2-15	*Target*	*Award of additional study grants (between 1,800 and 2,700) for specific course in general medicine. Completion of three 3-year training cycles*		*2,700*	*Q2-2024*
		Sub-Investment	*2.2 (b) Development of technical-professional, digital and management skills of professionals in healthcare system: Sub-measure: training course in hospital infections*	*0.0*	*80.0*	*0.0*	*80.0*	*0.0*	*80.0*						-
		Sub-Investment	*2.2 (c) Development of technical-professional, digital and management skills of professionals in healthcare system: Sub-measure: management training course*	*0.0*	*18.0*	*0.0*	*18.0*	*0.0*	*18.0*	*M6C2-16*	*Target*	*Training courses in management and digital skills for NHS personnel*		*4,500*	*Q2-2026*
		Sub-Investment	*2.2 (d) Development of technical-professional, digital and management skills of professionals in healthcare system: Sub-measure: specialist medical training contracts*	*0.0*	*537.6*	*0.0*	*537.6*	*0.0*	*537.6*	*M6C2-17*	*Target*	*Number of contracts for specialist medical training financing a complete training cycle (5 years)*		*4,200*	*Q2-2026*
		Investment	Innovative health ecosystem	0.0	0.0	0.0	0.0	437.4	437.4			Creation of clinical-international excellence networks: creation of a network of technology transfer centres; strengthening and development of life-science hubs by geographical area; creation of a hub for managing and countering infectious disease epidemics/pandemics			
		Investment	Research initiatives for innovative technologies and pathways in health and care	0.0	0.0	0.0	0.0	500.0	500.0			Funding of research projects for four initiatives: robotics and digital tools, remote monitoring, process re-engineering and *data mining* . For each pillar of the initiative, 4-5 major research projects will receive funding			
Total				**2,982.6**	**9,642.5**	**3,000.0**	**15,625.5**	**2,887.4**	**18,513.0**						

Source: NRRP and Complementary Investment Plan (updated to 30.09.21) and Annex to the Council Implementing Decision on the approval of the assessment of the recovery and resilience plan for Italy (these two documents are available at Italia Domani); decree of the Minister for the Economy and Finance of 23 November 2021 containing amendments to Table A of the decree of 6 August 2021 allocating financial resources for the implementation of the projects of the National Recovery and Resilience Plan (NRRP) and breakdown of milestones and targets by half-year reporting deadline for the digital transformation; Attachment 1 to the decree of the Minister for the Economy and Finance of 15 July 2021, adopted in implementation of Art. 1, paragraph 7, of Decree Law 59/2021.

On the other hand, funding has been committed for the reorganisation of the network of Institutes for science-based care and research (IRCCS), the modernisation of hospitals – with new technologies, digitisation, seismic upgrading and a focus on high-intensity care services – and the improvement of research and training capacities (second Component of the Health Mission, with some €8.6 billion in NRRP funding and €2.4 billion from the CoF).

There are a number of critical issues to be addressed in order to implement the projects.

First, the discussions between the levels of government on the steps involved in the implementation of the NRRP have often raised concerns about the difficulty of meeting the scheduled deadlines. On the one hand, this has prompted an effort to rigorously specify timelines and implement processes to counter inertia and delays and, on the other, it has contributed to making the process of achieving the intergovernmental agreements underlying the various actions a complex and somewhat tortuous endeavour.

Second, another sensitive aspect is the effort to strike a balance between binding national standards across the country and regional autonomy. In the case of the territorial health care reform, for example, these problems were laid bare by the lack of agreement within the State-Regions Conference and the difficulty of balancing the need to clearly circumscribe the obligations of the regions with the risk of weakening the Regulation on territorial healthcare assistance models and standards. As a consequence, part of this Regulation has not been given prescriptive power. However, it is to be hoped that the Regions will also take account of the approaches delineated in the descriptive/exhortative portion of the document, which among other things in many cases makes reference to the provisions of existing legislation, which require compliance in any case. While some aspects of the reform have already been delineated, in other cases the task of defining the standards does not seem to have been completed. These open issues include the role of primary care, which must be made consistent with the overall design of healthcare services, through the regulation of the participation of general practitioners in the new healthcare system.

Third, there is uncertainty about the current resources available to operate the health services upgraded with the planned investments, especially once the funding secured by the NRRP is depleted and the new facilities are operational. The cost estimates often appear to be mainly based on the available resources, and part of the costs would be covered with NHS funding made available by the cost savings generated by the reorganisation of the system and by technological and digital innovation (Table 2). Even if the NHS reforms will plausibly improve efficiency, counting on future cost savings can be imprudent, especially in a sector, such as healthcare, in which technical progress is often accompanied by an increase in costs. Furthermore, it is difficult to strengthen the system further through rationalisation, especially after the past efforts already made in this area. The increase in NHS funding in the next few years enacted with the 2022

Budget Act will partly be allocated to upgrading the system (starting with €1.015 billion per year at regime for territorial healthcare assistance). However, other costs connected with the renewal of staff collective bargaining agreements and the use of the new essential care standards will also have to be addressed. Looking specifically at personnel, the related expenditure is also constrained by the ceilings imposed on such spending, even if these were raised with the 2022 Budget Act. It is desirable that the new territorial healthcare assistance standards facilitate the determination of staffing needs by the regions, required by various laws and, most recently, by the Budget Act. This would help banish concerns about the ability of the regions to govern this expenditure item.

Table 2 – Personnel and maintenance costs
(millions of euros)

	2026		From 2027	
	Expenditure already considered by DL 34/2020	Costs covered by NRRP	Expenditure already considered by DL 34/2020	Costs to be funded with sustainability plan measures (1)
Component 1 – Proximity networks, facilities and telemedicine for territorial healthcare assistance	**745**	**1,100**	**745**	**1,339**
1.1 Community health centres and initial access to healthcare system	95		95	
1.2 Home as the first place of care and telemedicine				
1.2.1 Home care as first point of assistance	*500*	*1,100*	*500*	*1,100*
1.2.2 Territorial Coordination Centres	*151*		*151*	
1.3 Strengthening intermediate healthcare and its facilities (community hospitals)				239
Component 2 - Innovation, research and digitalisation of National Health Service	**372**		**372**	**322**
– Personnel	347		347	82
– Maintenance	25		25	240
Total	**1,117**	**1,100**	**1,117**	**1,661**

Source: Technical Reports accompanying Decree Law 34/2020 and the 2022 Budget Bill, as well as the NRRP submitted to the European Commission on 30 April 2021.
(1) The table does not indicate funding envisaged in the sustainability plan (mainly generated by expenditure savings), but only the costs to be financed with those funds.

Faced with these critical issues, the approach adopted so far has been to reconcile compliance with the deadlines of the NRRP with postponement of solutions to certain problems, including major issues, for subsequent resolution through the dialogue between levels of government, also bearing in mind the uncertainties concerning the availability of current funding. Resources may also be increased over time, if budget resources can be found, in order to ensure consistency between capital and current expenditure.

The NRRP investments could help smooth out some of the issues faced by the Italian healthcare system, especially with regard to territorial healthcare, but other problems will have to be addressed differently.

As regards the infrastructure rebalancing, for example, in view of the considerable differences among regional health services (RHSs), the criteria for the distribution and allocation of funding appear to be quite rigid, even if they are designed to support weaker areas with the minimum expenditure constraint for Southern Italy (40 per cent), which has been complied with so far. Applying a fixed percentage to all measures does not appear compatible with the results of the surveys of starting conditions and the infrastructure requirements identified in the various territorial areas. One example of this is the case of large medical devices: differences emerge from a comparison of the percentage allotments of the related funding and the distribution of the needs for investments in high and medium technology electro-medical equipment identified in a survey conducted in 2020: two Southern regions (Campania and Puglia) obtain a significant advantage with the allotment, while two from the Centre (Umbria and Lazio) are disadvantaged (Table 3). However, it is possible that more recent and accurately targeted surveys for NRRP investments will produce results more consistent with the allocation established by the decree.

Table 3 – Funding of large medical devices
(millions of euros and percentages)

	Allotment Decree of 20 January 2022		Distribution of equipment requirements		Difference between shares
	(a)		(b)		(a-b)
Piedmont	79.0	6.6%	75.8	4.9%	1.8%
Valle d'Aosta	2.3	0.2%	7.4	0.5%	-0.3%
Lombardy	179.8	15.1%	206.3	13.3%	1.8%
AP Bolzano	9.3	0.8%	7.6	0.5%	0.3%
AP Trento	9.7	0.8%	12.1	0.8%	0.0%
Veneto	87.8	7.4%	127.2	8.2%	-0.8%
Friuli-Venezia Giulia	22.2	1.9%	37	2.4%	-0.5%
Liguria	28.6	2.4%	83	5.3%	-2.9%
Emilia-Romagna	80.9	6.8%	92.4	6.0%	0.8%
Tuscany	67.6	5.7%	91.9	5.9%	-0.2%
Umbria	15.9	1.3%	86.5	5.6%	-4.2%
Marche	27.6	2.3%	35.9	2.3%	0.0%
Lazio	102.8	8.6%	183.9	11.8%	-3.2%
Abruzzo	31.1	2.6%	41.1	2.6%	0.0%
Molise	7.3	0.6%	27.6	1.8%	-1.2%
Campania	132.0	11.1%	95	6.1%	5.0%
Puglia	93.7	7.9%	50.9	3.3%	4.6%
Basilicata	13.2	1.1%	25.5	1.6%	-0.5%
Calabria	44.8	3.8%	35.3	2.3%	1.5%
Sicily	114.7	9.6%	145.4	9.4%	0.3%
Sardinia	38.9	3.3%	84.3	5.4%	-2.2%
Total	**1,189.2**	**100.0%**	**1,552.2**	**100.0%**	**0.0%**

Source: Court of Auditors based on Ministry of Health data in Corte dei Conti (2021), "*Rapporto sul coordinamento della finanza pubblica 2021";* decree of the Minister of Health of 20 January 2022.

Furthermore, the NRRP does not resolve the issue of staff shortages, as it is not the appropriate tool for funding ongoing current expenditure, although it could produce greater clarity about the related staffing requirements, thanks to the definition of the new standards. Such issues must be addressed (as has already happened in part) through the financial planning conducted for the Budget Act.

Other critical issues, such as those concerning emergency services, are primarily addressed by the NRRP by relying on technological improvements and alleviating pressure by ensuring efficient territorial healthcare assistance. Emergency room problems are significant and urgent, and therefore will probably also need to be addressed using tools other than the NRRP, eliminating personnel shortfalls as soon as possible.

Nevertheless, the NRRP represents an important opportunity to increase investment in healthcare and stimulate the necessary reorganisation of the system.