OPEN ACCESS

HEALTH CARE MANAGEMENT

A new organizational model of primary healthcare in Liguria, Italy. Insights and implications

FILIPPO ANSALDI[1,2], MATTEO ASTENGO[2], ALBERTO BATTAGLINI[2], FEDERICO GRAMMATICO[2], FRANCESCA MARCHINI[2], ANDREA FIORANO[1,2], SILVIA ALLEGRETTI[1], IRENE SCHENONE[2], DANIELA AMICIZIA[1,2]
[1] Department of Health Sciences, University of Genoa, Italy; [2] Regional Health Agency of Liguria (A.Li.Sa.), Genoa, Italy

Keywords

National resilience and recovery • Plan • Regional • Models • Community • Hospital • Community • House

Summary

After years of cost-containment policies, the Italian National Health Service (NHS) has now the chance to change and improve, especially thanks to the National Recovery and Resilience Plan (NRRP). The plan serves as a catalyst for reform, allocating substantial funds to reinforce proximity networks, facilities, and telemedicine for territorial healthcare. Mission 6, specifically dedicated to health, focuses on integrating primary healthcare, hospital, and specialty care networks, underscoring the importance of a robust primary healthcare system.In alignment with NRRP objectives, the Ligurian model introduces innovative structures, such as Community Houses (CdCs), Community Hospitals (OdCs), and Territorial Operation Centres (COTs). These interconnected components form a dynamic network designed to enhance healthcare accessibility, prevent inappropriate hospital admissions, and facilitate efficient patient transitions. The model prioritizes multidisciplinary collaboration, community engagement, and the integration of socio-healthcare services. Despite substantial NRRP funding for infrastructure, challenges related to staffing and human resources persist. The social and epidemiological context highlights concern about the economic feasibility of the reform, potential workforce shortages, and the imperative for updated regulatory frameworks. The strategic reallocation of personnel from acute hospitals to new facilities is crucial, requiring meticulous workforce planning, role definitions, and trainingIn conclusion, the Ligurian model emerges as a proactive response to the structural vulnerabilities exposed by the pandemic, aligning with international trends in emphasizing primary care, prevention, and community-based services.

Introduction

The recent COVID-19 pandemic has highlighted critical limitations and challenges within the Italian National Health Service (NHS), especially regarding disparities in access for the most fragile and vulnerable population groups. To mitigate these issues and improve overall health outcomes, primary healthcare (PHC) has proven to be a key tool, due to its inclusiveness, equity, and cost-effectiveness in achieving universal health coverage. Strengthening PHC could bolster the resilience of the healthcare system, enabling it to better prepare for, respond to, and recover from future shocks and crises [1]. The World Health Organization (WHO) emphasizes the importance of PHC in consolidating and strengthening national health systems, bringing health services closer to communities [2]. The existing literature demonstrates that health systems with robust primary and proximity care services tend to exhibit better population health outcomes [3]. This comprehensive approach enables health systems to support person-centred health needs in various settings: from health promotion to disease prevention, treatment, rehabilitation, palliative care, *etc*. [2].

After a decade of cost-containment policies, the Italian NHS is in evident need of reform, in order to address the above-mentioned challenges effectively [1, 4]. In this regard, proximity structures and telemedicine for territorial healthcare assistance could help to reduce inequalities in healthcare access and improve overall healthcare services.

In the context of rethinking and redesigning the NHS and building on the critical role of primary healthcare, the National Recovery and Resilience Plan (Piano Nazionale di Ripresa e Resilienza, NRRP), which is embedded in the Next Generation EU (NGEU) programme, plays a pivotal role in shaping new organizational models that are consistent with the health needs and preferences of citizens [1, 4]. The programme is divided into six missions and has a duration of six years, from 2021 to 2026, with provisions for grants. One mission focuses specifically on "Health" (Mission 6), while the others address: 1) Digitalisation, Innovation, Competitiveness, Culture and tourism; 2) The "Green Revolution" and Ecological Transition; 3) Infrastructure for Sustainable Mobility; 4) Education and Research, and 5) Inclusion and Cohesion.

For Mission 6, a total of € 18.5 billion (€ 15.6 billion from the Recovery and Resilience Facility and € 2.9 billion from the Fund) is allocated to reinforcing proximity networks, facilities, and telemedicine for territorial healthcare [5]. The aim is to enable more effective management of social care needs and better identify priorities for action, which are closely related to the integration of primary healthcare, hospitals and specialist care networks.

https://doi.org/10.15167/2421-4248/jpmh2024.65.2.3145

The reform is targeted at reinforcing the primary healthcare system, and focuses specifically on enhancing the district, which is the territorial branch of the Local Health Agency (LHA) and is now responsible for the local management and coordination of health services. The LHA works towards promoting integration among healthcare facilities and providing a continuous response to the evolving healthcare needs of the population, as well as guaranteeing equality in access to care and ensuring uniformity of Essential Levels of Assistance (Livelli Essenziali d'Assistenza, LEAs). These latter are the services that the Italian NHS is required to provide for all citizens, either free of charge or on payment of a fee (ticket), using public resources obtained from general taxation [6].

In May 2022, the Italian health minister issued a new Decree (DM77 - "Defining models and standards for the development of primary care in the national health service"), to address some of the major challenges outlined by the National Recovery and Resilience Plan [1], which emphasizes the need for an innovative "regional care pathway system". While concerns persist regarding structuring and implementing a single model in a highly diversified regional landscape like Italy's, standards have been defined for some of the cornerstone structures of this new model.

Among those, Territorial Operation Centres ("Centrali Operative Territoriali" in Italian, COTs) coordinate patient care by establishing connections between the services and professionals involved in the various care settings, while Community Houses ("Case della Comunità", CdC) and Community Hospitals ("Ospedali di comunità", OdC) are among the sites of response to the issues addressed by the Italian government through the NRRP. These facilities are interconnected with hospices and other hospital-related structures and manage selected patients in need of specialist hospital services, particularly those with complex chronic conditions that necessitate frequent hospitalizations [7].

The care pathway must be articulated across the various settings, which are closely interconnected to allow flexible transitions according to the individual's needs and stage of life. The goal is not only to keep patients at home and to delay or prevent institutionalization, but also to ensure uniformity and appropriateness throughout the regional territory. Additionally, it is essential to improve digital interconnection with the territorial and hospital socio-healthcare system.

This overview aims to shed light on the primary healthcare model in Liguria, a region in North-western Italy, and its evolutions. It delves into critical considerations such as structural components, financing, increased costs, the current state of advancement, human resource requirements and training priorities for district managers.

The ligurian territorial healthcare model

As of January 1, 2023, the resident population of the Liguria Region was 1,502,624 (723,806 males and 778,818 females), with a general trend of declining births and gradual ageing of the population. The average age of Ligurians is 49.3 years, and the percentage of individuals aged 65 and over is 28.8% of the total population (23.5% in Italy). The current sociodemographic structure and its future projection highlight a prevalence of chronic-degenerative pathologies. The socio-healthcare system will therefore be increasingly called upon to respond to the health needs of Ligurians; this will require profound changes in its organizational model.

The territorial network

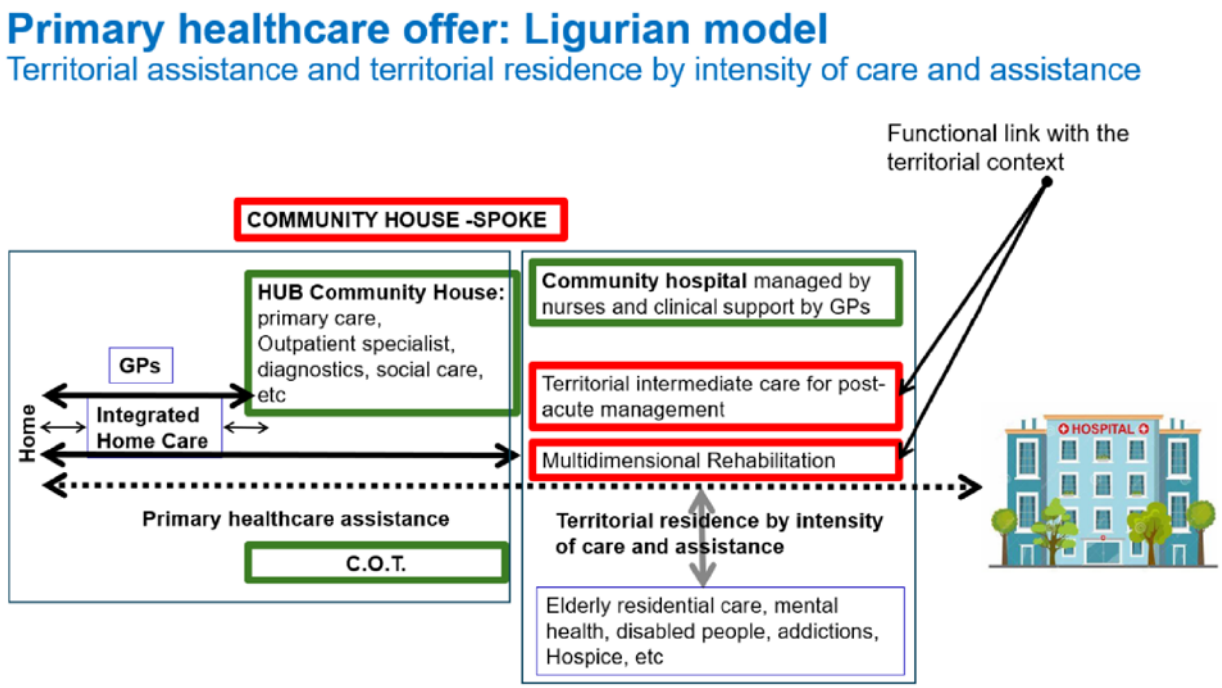
In recent decades, in Liguria, like other places [8,9], an increasing interest in improving the organization of primary care was seen, with particular emphasis being placed on reducing unnecessary visits to the emergency department (ED) for non-severe conditions and hospital admissions of chronically ill patients. Initiatives to reinforce the healthcare network have included extending the opening hours of general practitioners' (GPs) group practices and out-of-hours care and considering expanding the range of facilities to offer a broader spectrum of acute and chronic medical services. The National Recovery and Resilience Plan offers a significant opportunity to improve integration and strengthen the healthcare framework. Regional Government Resolution 1223/2022 incorporates the directives of the NRRP and DM77, providing a revision of the territorial network of various professionals, including Family or Community Nurses (IFoC), whose collaboration is necessary for the functioning of Community Houses, Community Hospitals and Territorial Operation Centres to promote "proximity prevention". In this way, the community ceases to be a passive spectator and, thanks to empowerment processes, becomes an active subject in building proposals to improve the health conditions of the community and evaluate local socio-health policies.

The advance of telemedicine emerges as a critical element in the reorganization of territorial care. Indeed, telemedicine can:

- reduce the distance between healthcare providers and patients and among healthcare providers themselves;
- enable the early diagnosis of acute events and timely intervention for patients treated at home and/or in emergency situations;
- streamline care services in remote or disadvantaged areas, optimizing resources by offering proximity services that enhance appropriateness and therapeutic adherence;
- coordinate interventions for integrated care between the hospital and primary care settings, thereby facilitating de-hospitalization processes;
- promote collaboration among professionals belonging to different hospital and territorial care networks, particularly in contexts where multidisciplinarity is essential for the proper care and management of the patient.

Figure 1 shows the offer of primary care, the facilities envisioned by the new model and their functional connections.

Fig. 1. Scheme of the primary healthcare system in the Liguria Region (Community House, Community Hospital).



Community house

In accordance with the NRRP, Community Houses serve as hubs in a reorganized territorial network, and act as reference points for proximity medicine, reception and orientation to primary care services [10]. Indeed, the overall integration of social, and health care services for the promotion of health and the comprehensive care of the community is enhanced through the implementation of physically identifiable facilities. These serve as points of reference for proximity assistance and as hubs for receiving and orienting citizens to primary healthcare services of a health, socio-health and social nature; they ensure interdisciplinary interventions through the spatial contiguity of services and the integration of professional communities (multi-professional and interdisciplinary teams) that operate according to integrated models, both within healthcare services (territory-hospital) and between health and social services.

The reference standard mandates the presence of at least 1 CdC for every 50,000 inhabitants [1]. These facilities generally offer a range of services, including medical examinations, reception, services for continuity of care, general medicine, polyclinics, first aid, first-line diagnostic services, sampling points, rehabilitation, home care services, primary care paediatricians, vaccination centres, screening, social healthcare services and telemedicine [5].

The mission of the CdCs is multi-faceted, encompassing standardizing healthcare pathways, promoting prevention and health among individuals and in the community, managing chronic conditions, conducting comprehensive assessments of individual needs, and ensuring coordination with local health services for continuity of care [11]. Their activities include inter-professional and multidisciplinary work and the coordination of interventions among General Practitioners (GPs), Paediatricians (PLSs), Outpatient Specialists, Family and Community Nurses, social workers and other healthcare and social professionals. As the multi-professional team involves Family Nurses and GPs and PLSs working in group practices, the skills of these professionals are enhanced, and professional isolation is avoided [12].

In Liguria, the recently approved 2023-2025 regional health and social plan outlines the roles and functions of Hub and Spoke CdCs. One of the main goals is to enhance citizens' access to services by identifying the "doorways" to a unified pathway of health and social assistance. Specifically, the organization of the CdCs envisioned in the Ligurian model aims to ensure the maximum proximity and capillarity and is characterized by the presence of the NHS Hub CdCs and Level I (basic) and Level II Spoke CdCs.

Level I Spokes are individual GP ambulatories; their reference centre within their district is the Hub CdC, with which they are interconnected through the COT. GPs guarantee the availability of services according to the time commitment envisaged by the evolving regulatory framework. Additionally, GPs can negotiate the allocation of the remaining hours directly with the District Director; these hours may be dedicated to district activities, including activities within the Hub CdC. The District Director will evaluate whether to extend the opening hours of the medical practice, or to allocate these hours either to covering neighbouring areas that may be experiencing shortages or to

Tab. I. Regional CdCs envisaged by the NRRP.

Minimum target	30
Maximum target	33
Needs	Regional AGENCY / N° of CdCs to be built / N° of CdCs to be renovated / Total LHA1 0 5 5 LHA2 0 6 6 LHA3 0 13 13 LHA4 0 3 3 LHA5 2 3 5 H EVANGELICO 0 1 1 Total 2 31 33 The need must be detailed in terms of the number of community houses (distinguishing between those to be built and those to be renovated) per referring agency.
Funds allocated	€44,030,926.66 from NRRP to the Region No additional amount is foreseen by the regional budget.

collaboration with other professionals within the CdC. Level II Spoke centres must guarantee the presence of GPs, specialist outpatient services and basic-level home care services. Their aim is to take care of 5% of the over-65s assisted by each GP belonging to the Level II Spoke. Table I reports the regional objectives for CdCs.

Community hospital

Along with the Community House, the Community Hospital will play a pivotal role in the healthcare network by empowering the community to engage in prevention, proximity, and management functions. This approach aims to prevent inappropriate hospital admissions of patients with complex and urgent conditions, while ensuring appropriate responses to their needs [13].

The OdC is an intermediate care health facility designed for short hospital stays. It caters for patients who require a period of clinical stabilization or monitoring and remodulation of therapy after discharge from acute departments, as well as individuals coming from home who present worsening of a chronic pathology and/or the need for a clinical-diagnostic and therapeutic pathway that cannot be managed on an outpatient basis.

Effective networking with other care settings and a functional connection with hospitals and territorial services are thus crucial. Prompt activation of home care services and caregiver training are essential for safe patient transitions home. This necessitates well-defined operational procedures to ensure continuity of care, in which the coordinating role played by the COT is fundamental.

It must be emphasized that the Community Hospital neither duplicates nor replaces existing structures for patient care; it is not one of the residential facilities covered by the essential levels of assistance approved in 2017 (DPCM 12/01/2017) [14]. Instead, it complements other healthcare models.

The reference standard requires the presence of at least 1 Community Hospital with 20 beds per 50,000 - 100,000 inhabitants that operates 7 days a week. One or two further modules, each with 15-20 beds, may be added to ensure consistency with the purposes, recipients, and management methods of the OdC [1].

The OdC is designed to receive those patients who require low-intensity treatments following a minor or acute episode of worsening of chronic pathologies; while these treatments are potentially available at home, the patient is admitted on account of the (structural and/or familial) unsuitability of the home setting. OdCs offer continuous nursing care, including overnight surveillance, that is not available at home [15].

These healthcare facilities are affiliated to the local territorial area and carry out an intermediate function between home/community-based care and hospitalization, catering for short-term admissions for low- to moderate-intensity care. Unlike other health structures, OdCs are territorial facilities where stays should not exceed 30 days. Daily tariffs fall between

those of hospitals and socio-sanitary residential facilities. OdCs are intended to deliver health care for patients with functional deficits and/or stable chronic conditions, who may come from hospitals, residential care facilities, or their own homes. Subjects that may benefit from admission to an OdC include: elderly individuals with multiple chronic conditions who experience a sudden worsening of symptoms at home and require close monitoring and management, but not acute hospitalization, and patients receiving a new therapy (such as those with a spinal cord injury who are discharged home with a urinary catheter and medications for pain management, or those for whom peritoneal dialysis has recently been prescribed) who need training and support in order to adhere to catheter care and medication. In summary, the main categories of eligible patients are:

a) frail and/or chronic patients coming from home who experience worsening of a pre-existing clinical condition and for whom hospital admission is inappropriate;
b) patients (mainly with multiple morbidities) requiring continuous nursing care after being discharged from hospital facilities following acute or rehabilitative treatment;
c) patients requiring assistance in administering medications or managing aids and devices, and who require support and patient and caregiver training before returning home;
d) patients in need of support for rehabilitation/re-education involving assessments and proposals of strategies for maintaining functions and residual capacities; those requiring therapeutic support, and those with motor, cognitive or physical disabilities who need training. Physiotherapy interventions are part of protocols already activated in the department of origin to facilitate return home.

While Community Hospitals constitute a model of Intermediate Care, there remains a need for monitoring and assessment processes, to evaluate patient characteristics and care effectiveness. This will involve the continuous monitoring of the quality of healthcare services and the timely detection of any critical issues that may arise. In this regard, e-health and telemedicine services will be fundamental to improving the quality of care and access to care and will reduce costs by favouring the treatment of chronic diseases outside hospitals, which can then be dedicated to the treatment of acute cases [16].

Table II reports the regional objectives for OdCs.

Territorial operation centre (COT)

The design outlined elucidates the functioning of the organizational model implemented by the Territorial Operations Centre (COT) – a back-office service that facilitates the activation and continuity of care through a common platform integrated with key corporate management applications and interconnected with all entities/structures within the territory. The COT ensures coordination and alignment between the nodes of different networks and professionals; it therefore serves as a crucial "organizational hub" for the efficient management of continuity of care during patients' transition from the hospital to the territory. The COT provides digital and logistical support for healthcare workers, coordinating the various healthcare services

Tab. II. Regional OdCs broken down by LHA.

<table>
<tr><td>Minimum target</td><td>10</td></tr>
<tr><td>Maximum target</td><td>11</td></tr>
<tr><td>Needs</td><td>
<table>
<tr><th>Regional Agency</th><th>N° of CdCs to be built</th><th>N° of CdCs to be renovated</th><th>Total</th></tr>
<tr><td>LHA1</td><td>0</td><td>1</td><td>1</td></tr>
<tr><td>LHA2</td><td>0</td><td>2</td><td>2</td></tr>
<tr><td>LHA3</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>LHA4</td><td>0</td><td>2</td><td>2</td></tr>
<tr><td>LHA5</td><td>0</td><td>2</td><td>2</td></tr>
<tr><td>Total</td><td>2</td><td>9</td><td>11</td></tr>
</table>
The need must be detailed in terms of the number of community hospitals (distinguishing between those to be built and those to be renovated) per referring agency.
</td></tr>
<tr><td>Funds allocated</td><td>€24,016,869.09 from the NRRP to the Region

No additional amount is foreseen by the regional budget.</td></tr>
</table>

offered by the District and integrating social healthcare activities in the various settings. Its activities are linked to the registration of data on health needs and communication with the emergency network.
DM77 specifically suggests the creation of an Operations Centre (*i.e.* 116 117), a regional structure that facilitates the population's access to non-urgent medical care. It provides patients with telephone assistance, directs them to local assistance structures by transferring their calls to the COT, and transmits urgent requests for medical assistance to the emergency number (118). DM 77/2022 designates the unique number 116 117 as one of the channels that will progressively become an ordinary mean of access to the NHS. It serves various purposes, including obtaining information, receiving initial guidance on services, ensuring continuity of care and accessing socio-sanitary services. Regional Government Resolution 715/2023 has approved the "Project for the gradual activation of the Harmonized European Number (NEA) for social purposes 116 117 in the Liguria Region". Table III reports the regional objectives for the COTs, broken down by LHA.

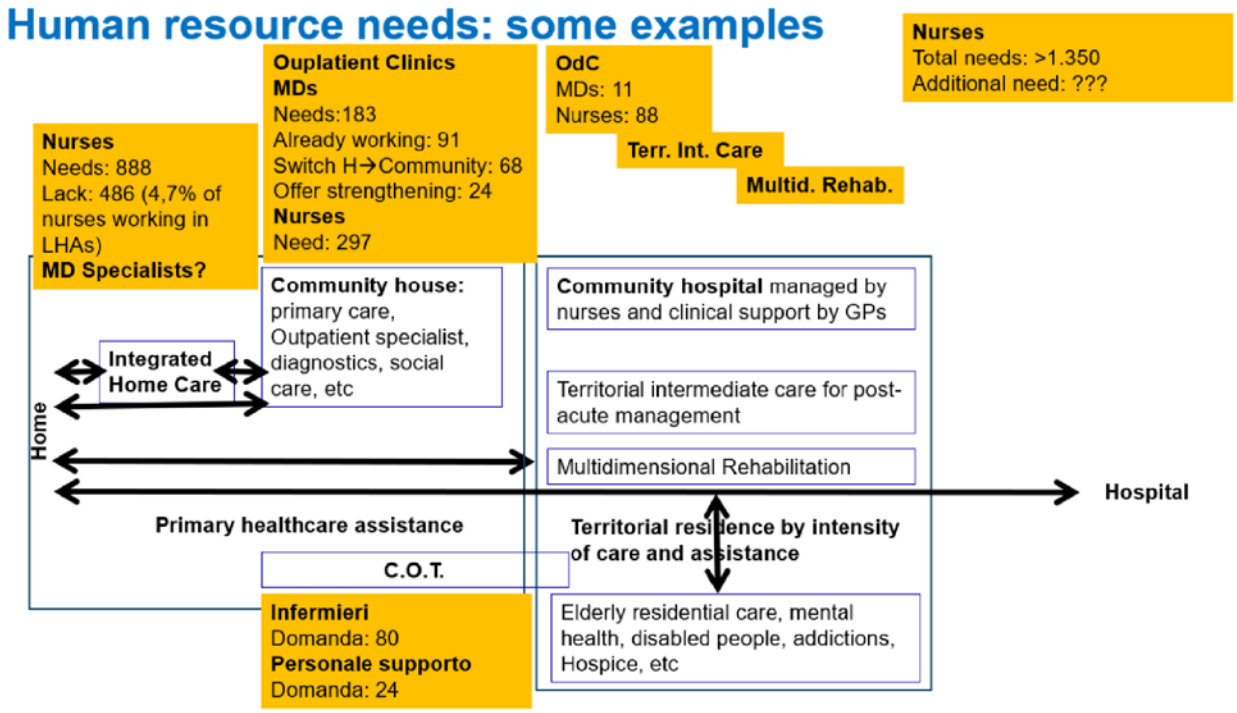
Human resources dedicated to primary care services

The NRRP calls for a substantial transformation of primary and community care, in order to offer patients more accessible services closer to home and to allow hospitals to focus only on acute care. Indeed, expensive technologies and professional expertise need to be concentrated in hospitals to exploit clinical and organizational learning and economies of scale. However, while the new facilities require staff and other resources to become operational, the NRRP lacks provisions for extra funding in this regard, as it only funds capital expenditure (buildings, technologies, digital infrastructure) [17]. The most feasible strategy, despite resistance from most professionals, involves reallocating a portion of the staff working in acute hospitals to these new facilities. Thus, it is very important to decide how to deploy the proximity network workforce and how to specifically coordinate the activities of primary care professionals, hospital professionals, GPs, Paediatricians and new professionals.

Tab. III. Regional COTs, broken down by LHA.

<table>
<tr><td>Minimum target</td><td>15</td></tr>
<tr><td>Maximum target</td><td>16</td></tr>
<tr><td>Needs</td><td>
<table>
<tr><td>Regional Agency</td><td>N° of COTs</td></tr>
<tr><td>LHA1</td><td>2 (n°1 San Remo, n°1 Imperia)</td></tr>
<tr><td>LHA2</td><td>3 (n°1 Savona, n°1 Cairo Montenotte, n°1 Finale Ligure)</td></tr>
<tr><td>LHA3</td><td>6 (n° 6 Genova)</td></tr>
<tr><td>LHA4</td><td>2 (n°1 Sestri Levante, n°1 Chiavari)</td></tr>
<tr><td>LHA5</td><td>3 (n°1 Brugnato, n°1 La Spezia, n°1 Sarzana)</td></tr>
<tr><td>Total</td><td>16</td></tr>
</table>
The need must be detailed in terms of the number of COTs (distinguished between those to be built and those to be renovated) per referring agency.
</td></tr>
<tr><td>Allocated ammount</td><td>€2.596.125 from NRRP to the Region (COT resources)
€1.066.071,88 from NRRP to the Region (interconnection resources)
€1.450.742,83 from NRRP to the Region (devices resources)
No additional amount is foreseen by the regional budget.</td></tr>
</table>

Fig. 2. Some examples of human resource needs.



In this regard, several questions remain unanswered: What is the staffing standard for the new territorial organization? Are there shortages of professionals? What roles and training are required? Is a shift from hospitals to the territory truly feasible?

Figure 2 shows some examples of human resource needs (or workforce requirements).

On average, Italy has a higher number of physicians than other EU countries. The number of practising physicians has steadily increased since the 2000s, reaching 412 per 100,000 population in 2021 (the EU average is 397) [16]. However, the number of public hospital physicians and GPs is declining, potentially leading to future shortages. Notably, shortages are more pronounced in specific sectors, particularly in emergency/urgency/on-call activities. Moreover, it is noteworthy that more than half of the physicians working in the public system are aged over 55 years, a value that is among the highest in the EU. In 2020 and 2021, the COVID-19 pandemic necessitated a rapid increase in the recruitment of medical and other support staff, to meet the needs of the emergency. In Italy, however, comprehensive planning for the training of health professionals, especially physicians and nurses, has generally been suboptimal. In order to tackle the problem of staff shortages, the number of medical specialization contracts for a full cycle of studies (5 years) has been increased by approximately 4200 since the academic year 2020/2021 by allocating funds from the NRRP.

However, the utilisation of NRRP funds for this purpose has sparked a renewed discussion on task-shifting, a concept overlooked for decades in Italy. Indeed, the Italian regulatory framework on the division of tasks among health professions (*e.g.* doctors, nurses, pharmacists) is obsolete and does not reflect changes in technologies and professional training. This regulation should be updated in the light of the best international experiences. Such a shift could also increase the appeal of nursing as a profession and would generate savings for the NHS, given the differences in salaries between nurses and doctors [17].

Primary care services are a fundamental part of the healthcare network of assistance, prevention, and health promotion [18]. Apart from a few regions, the Italian NHS has no functioning CdCs or OdCs yet. Where to carry out 1st and 2nd level outpatient activities remains a pertinent question and could be informed by studies aimed at investigating optimal locations for outpatient services in healthcare systems that face similar challenges.

Discussion and conclusion

The global response to the COVID-19 pandemic presented a unique opportunity to tackle the structural weaknesses of the Italian economy and guide the country towards an ecological and environmental transition. The pandemic highlighted the necessity for preventive and proactive measures, as well as a supply system capable of integrating health and social services.

In this context, implementing new organizational models for territorial health care becomes crucial. Such models ensure a unified socio-health assistance pathway, multidimensional care, and continuity of interventions across various care settings. The recent

reform approved in Italy aims to establish an integrated primary healthcare model nationwide, by transitioning primary care to community care, thereby reducing geographical disparities and enhancing service effectiveness [1].

After years of focusing on cost rationalization and efficiency, the current emphasis is on innovation and new, more integrated, and digital organizational models supported by increased resources and investments. Investing in the health system is seen as crucial to socioeconomic development, although using EU funds, and investment funds in general, presents challenges, particularly as the technical capacities to design and implement sound projects are lacking; it is therefore essential to invest in these capacities [17].

The NRRP has allocated € 2 billion to the creation of 1288 CdCs by the first half of 2026. However, economic resources, especially within the NRRP, do not adequately cover current spending, and general funding will not increase significantly in the future.

A very relevant issue is the need to monitor and assess patient characteristics and the effectiveness of care in the new facilities [19]. Indeed, there is a risk of increasing the inter-regional gap in terms of the ability to provide timely high-quality care, with some regional clinical-organizational models being rewarded and others being penalised, according to how far their outcome/process indicators are from the benchmark.

Further unresolved questions concern the needs of the new territorial organization, potential shortages of healthcare professionals, training requirements and pathways of the shift from hospital to community care. A critical point concerns the number and type of professionals required for the new structures, given the overall shortage of well-trained healthcare professionals. The difficulty of retaining nurses and physicians in service poses potential challenges in implementing the new territorial healthcare model [18].

The current budget allocation might prove insufficient, given Italy's GP shortage and the ageing population of healthcare professionals. Consequently, there may be insufficient personnel to staff CdCs and, especially, OdCs. The economic feasibility of the territorial healthcare reform is therefore questionable unless additional budget expenditures are allocated.

Achieving an equitable distribution of medical practitioners for the entire population is paramount. E-health and telemedicine services will play a fundamental role in enhancing the quality of care, facilitating access to assistance and reducing costs [20]. These services will support the treatment of chronic diseases outside hospitals, thereby allowing hospitals to focus on acute cases [21, 22].

Conflict of interest statement

The authors declare that they have no commercial or financial relationships that could be construed as a potential conflict of interest.

Data availability statement

Not applicable.

Author contributions

FA and DA: conceived and supervised the work. National and regional documents were reviewed by DA and IS. MA, AB, FG, FM and IS: wrote the first draft of the manuscript. DA and IS: had the final responsibility for deciding to submit for publication. All authors reviewed and edited the manuscript, contributed to the article, and approved the version submitted.

References

[1] Mauro M, Giancotti M. The 2022 primary care reform in Italy: Improving continuity and reducing regional disparities? Health Policy 2023:135:104862. https://doi.org/10.1016/j.healthpol.2023.104862.

[2] WHO. Primary health care. Available at https://www.who.int/health-topics/primary-health-care#tab=tab_1 (Accessed on: 8 December 2023).

[3] Rifkin SB. Alma Ata after 40 years: primary health care and health for all-from consensus to complexity. BMJ Glob Health 2018;3(Suppl 3):e001188. https://doi.org/10.1136/bmjgh-2018-001188.

[4] Filippini T, Vinceti SR. Italian National Recovery and Resilience Plan: a Healthcare Renaissance after the COVID-19 crisis? Acta Biomed 2021;92(Suppl 6):e2021463. https://doi.org/10.23750/abm.v92iS6.12339.

[5] European, Commission. National Recovery and Resilience Plan. 2021. http://www.politicheeuropee.gov.it/media/5651/pnrr-definitivo.pdf (Accessed on: 8 December 2023).

[6] Milani C, Naldini G, Baggiani L, Nerattini M, Bonaccorsi G. How to promote changes in primary care? The Florentine experience of the House of Community. Front Public Health 2023;11:1216814. https://doi.org/10.3389/fpubh.2023.1216814.

[7] Gola M, Brambilla A, Barach P, Signorelli C, Capolongo S. Educational challenges in healthcare design: training multidisciplinary professionals for future hospitals and healthcare. Ann Ig 2020;32:549-66. https://doi.org/10.7416/ai.2020.2375.

[8] Roberts E, Mays N. Can primary care and community-based models of emergency care substitute for the hospital accident and emergency (A & E) department? Health Policy 1998;44:191-214. https://doi.org/10.1016/s0168-8510(98)00021-9.

[9] Pinchbeck EW. Convenient primary care and emergency hospital utilisation. J Health Econ 2019;68:102242. https://doi.org/10.1016/j.jhealeco.2019.102242.

[10] Odone A, Saccani E, Chiesa V, Brambilla A, Brianti E, Fabi M, Curcetti C, Donatini A, Balestrino A, Lombardi M, Rossi G, Saccenti E, Signorelli C. The implementation of a Community Health Centre-based primary care model in Italy. The experience of the Case della Salute in the Emilia-Romagna Region. Ann Ist Super Sanita 2016;52:70-7. https://doi.org/10.4415/ANN_16_01_13.

[11] 1Ugolini C, Leucci AC, Nobilio L, Bertè G. Reorganizing territorial healthcare to avoid inappropriate ED visits: does the spread of Community Health Centres make Walk-in-Clinics redundant? BMC Health Serv Res 2020;20:807. https://doi.org/10.1186/s12913-020-05648-x.

[12] Buffoli M, Gola M, Rostagno M, Capolongo S, Nachiero D. Making hospitals healthier: how to improve sustainabil-

ity in healthcare facilities. Ann Ig 2014;26:418-25. https://doi.org/10.7416/ai.2014.2001.

[13] Pianori D, Avaldi VM, Rosa S, Lenzi J, Ialonardi M, Pieri G, Rossi A, Fantini MP. How do Community Hospitals respond to the healthcare needs of elderly patients? A population-based observational study in the Emilia-Romagna Region. Ann Ig 2018;30:317-29.

[14] Ministero della Salute. Servizio Sanitario: i LEA. Available at https://www.salute.gov.it/portale/lea/dettaglioContenutiLea.jsp?lingua=italiano&id=4773&area=Lea&menu=vuoto) (Accessed on: 8 December 2023).

[15] AGENAS. Documento di indirizzo per il metaprogetto dell'Ospedale di Comunità. Available at https://www.agenas.gov.it/comunicazione/primo-piano/2160-documento-di-indirizzo-per-il-metaprogetto-dell-ospedale-di-comunit%C3%A0 (Accessed on: 8 December 2023).

[16] Mauro M, Giancotti M. The 2022 primary care reform in Italy: Improving continuity and reducing regional disparities? Health Policy 2023;135:104862. https://doi.org/10.1016/j.healthpol.2023.104862.

[17] Giulio de Belvis A, Meregaglia M, Morsella A, Adduci A, Perilli A, Cascini F, Solipaca A, Fattore G, Ricciardi W, Maresso A, Scarpetti G. Italy: Health System Review. Health Syst Transit 2022;24:1-236.

[18] Capolongo S, Brambilla A, Girardi A, Signorelli C. Validation Checklist for Massive Vaccination Centers. Ann Ig 2021;33:513-7. https://doi.org/10.7416/ai.2021.2460.

[19] 19. Di Girolamo C, Leucci AC, Sforza S, Moro ML, Berti E. Effectiveness of community hospital post-acute care on mortality, re-admission, institutionalization, and activation of a home care programme in Emilia-Romagna region, Italy. Aging Clin Exp Res 2023;35:367-74. https://doi.org/10.1007/s40520-022-02298-3.

[20] De la Torre-Díez I, López-Coronado M, Vaca C, Aguado JS, de Castro C. Cost-utility and cost-effectiveness studies of telemedicine, electronic, and mobile health systems in the literature: a systematic review. Telemed J E Health 2015;21:81-5. https://doi.org/10.1089/tmj.2014.0053.

[21] Donald M, Jackson CL, Byrnes J, Vaikuntam BP, Russell AW, Hollingworth SA. Community-based integrated care versus hospital outpatient care for managing patients with complex type 2 diabetes: costing analysis. Aust Health Rev 2021;45:42-50. https://doi.org/10.1071/AH19226.

[22] De Marchi F, Contaldi E, Magistrelli L, Cantello R, Comi C, Mazzini L. Telehealth in Neurodegenerative Diseases: Opportunities and Challenges for Patients and Physicians. Brain Sci 2021;11:237. https://doi.org/10.3390/brainsci11020237.

Received on December 13, 2023. Accepted on June 6, 2024.

Correspondence: Irene Schenone, Regional Health Agency of Liguria (A.Li.Sa.), Genoa, Italy. E-mail: irene.schenone@alisa.liguria.it

How to cite this article: Ansaldi F, Astengo M, Battaglini A, Grammatico F, Marchini F, Fiorano A, Allegretti S, Schenone I, Amicizia D. A new organizational model of primary healthcare in Liguria, Italy. Insights and implications. J Prev Med Hyg 2024;65:236-E244. https://doi.org/10.15167/2421-4248/jpmh2024.65.2.3145

© Copyright by Pacini Editore Srl, Pisa, Italy

This is an open access article distributed in accordance with the CC-BY-NC-ND (Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International) license. The article can be used by giving appropriate credit and mentioning the license, but only for non-commercial purposes and only in the original version. For further information: https://creativecommons.org/licenses/by-nc-nd/4.0/deed.en