Physiotherapy as part of primary health care, Italy
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Objective To describe the Family and Community Physiotherapist model, which aims to incorporate rehabilitation services within primary health care in Tuscany, Italy.

Methods The Department of Health Professions of the Central Tuscany local health authority designed the model during 2020–2021. We describe the four phases of the organizational case study implementation of the model, namely: (i) analysis of the political and organizational framework, as well as determination of changing health-care needs; (ii) model co-design and training of multiprofessional health-care workers (local general practitioners, physiotherapists and geriatricians); (iii) delivery and surveillance of rehabilitation services; and (iv) evaluation.

Findings During the initial roll-out of the project in April–December 2021, general practitioners referred 165 patients with a mean age of 83.7 years (standard deviation: 11.1) to the Family and Community Physiotherapist. Interventions were mainly activated for patients with comorbidities (64/165; 38.8%), followed by those with long-term immobilization issues (36/165; 21.8%). The most commonly provided intervention was counselling, contributing to the achievement of objectives for 127 patients (77.0%). A full rehabilitation path was proposed for only 10 patients (6.1%). No additional costs were incurred by the health authority during the implementation of the model.

Conclusion Our model facilitated the provision of rehabilitative care in the community, preventing the exacerbation of chronic conditions and meeting the population health needs in non-hospital environments. The model overcame the typical lack of integration within health-care services with flexibility, promoting care proximity solutions to cope with health challenges such as an ageing population and the coronavirus disease.

Introduction
Rehabilitation is one of the five pillars of universal health coverage, together with health promotion, the prevention and treatment of disease, and palliative care. Function, one of the most important indicators of health after mortality and morbidity, is optimized by rehabilitation. This pillar is usually confined to tertiary (i.e. specialized) health-care facilities because of its intrinsic multidimensional and complex nature. However, there exist several provisional models to integrate rehabilitation within primary health-care services.

As defined in the proceedings of the Alma Ata Conference in 1978, primary health-care services refer to the first contact between patients and health-care professionals. The pivotal role of primary health care was also confirmed by the recent Declaration of Astana in 2018, in which states and governments strongly envision that primary health care “will be implemented in accordance with national legislation, contexts and priorities… to avoid fragmentation and ensure a functional referral system between primary and other levels of care.”

Since it has been estimated that at least one third of the global population will need rehabilitation at some point over the course of their illness or injury, the strengthening of rehabilitation to include the early identification of health needs and referral reduces the impact of disabling effects and optimizes function. Integrated rehabilitation services and innovative rehabilitation provision delivery models will benefit all levels of care, in both urban and remote areas. The World Health Organization Rehabilitation 2030 initiative already advocates for strategies to reinforce rehabilitation to support the changing health needs of the ageing global population, that is, an increased incidence of new and chronic impairments. Further, rehabilitation contributes to the achievement of the sustainable development goal 3 – ensure healthy lives and promote well-being for all at all ages. The effects of the coronavirus disease 2019 (COVID-19) pandemic, with the accompanying difficulties experienced in accessing services and the long-term health consequences, make this goal particularly relevant. Health-care professionals therefore propose the strengthening of rehabilitation services at the primary health-care level.

Models of rehabilitation services describe a set of organizational methods to achieve a common health-care objective; there is no absolute best model, but rather a best model to address the needs of a particular population group. This variability allows flexibility within an organization and the best possible use of human resources in each specific context. The key elements of existing rehabilitation service models include: (i) coordination within a network of health-care professionals; (ii) the possibility of patient empowerment and independence; and (iii) community involvement, creating informal networks.

The main barrier to the implementation of rehabilitation models in primary health care is the lack of service integration, which requires collaboration and communication between professionals. To promote organizational change and scale up innovations across different national and international settings, rehabilitation models must consider the health needs of future populations while also sharing experiences, knowledge, resources and professional competencies. We therefore designed the novel rehabilitation service model, the Family and Community Physiotherapist initiative, introduced in Tuscany, Italy in 2021. We report on the model implementation phases and describe the outcomes achieved towards the aim of integrating rehabilitation within primary health-care services.
Methods
We followed the theory of an organizational case study\(^{15,17}\) in developing the four phases of implementation of our Family and Community Physiotherapist model (Box 1), namely: analysis of political framework and health needs; model design and health-care professional training; service delivery; and evaluation. Relying on Mintzberg’s organizational framework,\(^{10}\) our model can be classified under the umbrella of advocacy configuration: it drives innovation through expert teamwork integration and specialized competencies within complex organizations.

Political framework analysis
The Italian government presented its six-mission Recovery and Resilience Plan to the European Commission in 2021, articulating necessary reforms and interventions to respond to the unprecedented COVID-19 pandemic.\(^ {13}\) The sixth mission dealt with health-service policies, including challenges in improving access to health-care services within the community and in overcoming significant disparities across the 20 Italian regions.

Since 2018, the social and health policies of the region of Tuscany have been focused on the integration of care provision to chronically ill patients within primary health-care services, as opposed to hospital care. The first local pilot experience that brought professionals closer to patients and the whole community was the Family and Community Nurse model, inspired by the earlier Chronic Care Model,\(^ {11}\) based on: (i) proximity of the health-care professional to a reference population; (ii) transversality of competencies and dedicated specialist competencies to be activated when needed (e.g. home ventilation, pressure ulcer treatment, etc.); (iii) the provision of information on health-care availability; and (iv) proactivity of the health-care worker through an analysis of patients’ latent needs.\(^ {16}\)

As part of the Department of Health Professions of the Central Tuscany local health authority (Unità Sanitaria Locale Toscana Centro), that serves four homogenous functional territorial units totalling 1.7 million people over an area of 5000 km\(^2\)), we developed the Family and Community Physiotherapist model in 2020. This model was based on the previous Family and Community Nurse model, and was a continuation of an experimental model that had been approved at the regional level in mid-2019.\(^ {17}\) In the first phase of the model, we held online brainstorming meetings in December 2020 to explore post-COVID-19 rehabilitation needs with the Head of the Department of Health Professions (a radiology technician) and the Head of the Organizational Innovation Office (a nurse) within the Nursing and Midwifery Department (in which the Family and Community Nurse model had been implemented).\(^ {16,18}\)

Model design
The second phase dealt with the organizational model co-design and the definition of the appropriate competencies. Following our initial online brainstorming meetings, we discussed emerging features of the model in face-to-face focus groups with executives of the Department of Health Professions (physiotherapists), physiotherapist managers and physiotherapists with clinical roles in January 2021. We then shared a digital version of the manuscript draft, asking all participants for comment. During subsequent meetings held in the spring of 2021, we incorporated feedback to produce an assessment checklist for patients for distribution to local general practitioners, physiatrists (the medical doctor responsible for defining and coordinating the patient’s rehabilitation project), and geriatricians. Our checklist classifies the health needs of the target population as: (i) significant reduction in functional autonomy; (ii) increased care burden or need for caregiver training; (iii) history of falls/risk of falling; and/or (iv) need for home environment assessment.

As part of the national programme of continuous training, we invited all physiotherapists employed by the local health authority in the area of domiciliary care to attend training in the Family and Community Physiotherapist model. The Department of Health Professions funded and delivered training in specific skills, such as: analysis of the health needs of individuals, families and communities; promotion, planning and supervision of rehabilitation treatment through prevention activities and educational interventions; and activation of the most appropriate team assistance or social network. We invited those physiotherapists who had completed the relevant training to volunteer for participation in the service delivery.

Service delivery
Unlike the Family and Community Nurse model, in which each nurse provided care services to a fixed register of around 2500 members of the population, the Physiotherapist model is an on-call service requested by general practitioners. During the implementation phase of the model, on the identification of patient needs in one of the four areas mentioned above, general practitioners would request an intervention from the Family and Community Physiotherapist.\(^ {19}\) The model envisages a maximum of three in-person interventions per patient, as well as the possibility of remote access (e.g. by telephone or video call). We initially allocated 12 hours per working week of each full-time participating physiotherapist to the rehabilitation service.

Typical interventions include the provision of counselling to families and caregivers on mobility aids and equipment, strategies to reduce the risk of falls, and approaches to support and maintain patient functionality. However, if the Family and Community Physiotherapist identifies the need for more extensive rehabilitation interventions or the intervention of other team professionals, they can ask for access to the most appropriate network of services through specific pathways.
Evaluation

Finally, in the last phase of the project we used quantitative data extracted from a computerized ad hoc data flow administered by the executives and managers of the local health authority to monitor the model implementation and the health outcomes of the served population. Data obtained from patients’ clinical records were recorded by health-care professionals and monitored by physiotherapist managers.

Results

During the initial roll-out of the project in April–December 2021, general practitioners referred 165 patients (Table 1) with a mean age of 83.7 years (standard deviation, SD: 11.1) to the family and community physiotherapist. Interventions were activated within a mean of 15 days (SD: 22.7) from the initial referral, and mostly for patients with comorbidities (64/165; 38.8%) followed by those with long-term immobilization issues (36/165; 21.8%).

The services required and health outcomes of these patients are described in Table 2. Since its implementation, the model was activated primarily to address reduction in a patient’s functionality. With a mean of around three interventions (2.6; SD: 1.3) per patient, the most provided intervention was counselling, contributing to the appropriate achievement of the objectives set for 127 patients (77.0%) with no adverse events reported (Table 2). The introduction of remote sessions (1.1; SD: 0.8 per patient compared with 1.7; SD: 0.9 of in-person sessions per patient) to facilitate the connection between health-care professional and patient, enhancing the proximity of care, was particularly appreciated by the population.

The prevalence of home interventions supports the need for a flexible approach in health care, such as that proposed by the model, in which rehabilitation treatment can be provided within a primary health-care network. A full rehabilitation path with specialist activation was proposed for only 10 patients (6.1%), supporting the hypothesis of the benefit of a consultancy rehabilitation health-care worker that acts as a link to specialist care.

The local authority incurred no additional costs during the implementation of the model.

| Table 1. Characteristics of patients included in the initial roll-out of the Family and Community Physiotherapist model, Tuscany, Italy, April–December 2021 |
| Characteristic | No. (%) (n = 165) |
|----------------|------------------|
| Sex            |                  |
| Male           | 65 (39.4)        |
| Female         | 100 (60.6)       |
| Principal medical diagnosis |                |
| Multi-pathological | 64 (38.8)       |
| Long-term immobilization consequences | 36 (21.8)        |
| Neurological   | 25 (15.2)        |
| Frail patient  | 18 (10.9)        |
| Musculoskeletal | 13 (7.9)        |
| Oncological    | 1 (0.6)          |
| Other          | 8 (4.8)          |

| Table 2. Health-care needs of, and services accessed by, patients included in the initial roll-out of the Family and Community Physiotherapist model, Tuscany, Italy, April–December 2021 |
| Intervention | No. (%) (n = 165) |
|----------------|------------------|
| Achieved goals, appropriateness | 127 (77.0) |
| Consultancy setting |                  |
| Clinic           | 10 (6.1)         |
| Patient’s home   | 155 (93.9)       |
| Consultancy activation area |            |
| Significant reduction in functional autonomy | 98 (59.4) |
| Increased care burden or need for caregiver training | 36 (21.8) |
| Home environment assessment | 18 (10.9) |
| History of falls/risk of falling | 13 (7.9) |
| Provided intervention |                  |
| Counselling      | 98 (59.4)        |
| Review of mobility aids and equipment | 18 (10.9) |
| Full rehabilitation path | 10 (6.1) |
| Caregiver training | 10 (6.1) |
| Falling prevention training | 5 (3.0) |
| Other            | 24 (14.5)        |

As determined by the general practitioners who referred patients to the rehabilitation service.

Discussion

A functioning health-care system should provide a flexible vision of cooperation (i.e. between hospitals and community health workers) to provide effective, resilient and egalitarian responses to future challenges or health demands expressed by the population, especially by elder or fragile patients or patients with multiple chronic conditions. The Family and Community Physiotherapist model roll-out in Tuscany enabled the integration of rehabilitation within primary health care, facilitating the provision of rehabilitative care in the community, preventing the exacerbation of chronic conditions, and meeting the health needs of the population in non-hospital environments as incentivized during the COVID-19 pandemic.20–22 The close collaboration of physiotherapists with general practitioners, physiatrists and geriatricians enabled the interventions to be prompt, shared, accurate, appropriate and, above all, safe.21,22 The disease prevention aim of the model allows the delivery of chronic disease management outside of the hospital environment, before the pathology arises or worsens.21,22

As demonstrated, the Family and Community Physiotherapist model does not require any financial investment, but has a potentially high economic impact in terms of preserved or regained patient functionality. The
The sharing of innovative models and their frameworks across the field can be useful to promote organizational change and scale up innovations to achieve global goals. Similarly, our model allows widespread scalability: it describes a best organizational practice that can be tailored to different contexts and professionals (e.g., dietician, X-ray technician, etc.). By taking advantage of available finance (i.e., Recovery and Resilience Plan), other Italian regions could establish the required human and technical resources to benefit from implementation of this model. The proposed model could also be easily exported to various other socioeconomic (e.g., low-, middle- and high-income countries) and environmental (e.g., urban centres, mountainous regions and rural areas) contexts, or adapted for specific circumstances (e.g., the COVID-19 pandemic or other emergencies) so that more patients can benefit. The model does not need to be supported by complex or major tertiary-level health-care structures (e.g., large hospitals), but should work alongside general practitioners at the community level. Scientific associations and professional orders could adopt the strategic role of sponsoring and supporting the presented model and its underlying values.

A further incentive to implementation of this model has been highlighted by the pandemic, and relies on technological and digital advancement. Remote services supported by telehealth (i.e., teleconsultations, telerehabilitation) emerge as tools that the family and community health-care workers could use extensively to enhance their presence and proximity to patients. Primary health-care teleconsultation is effective and secure, while reducing the time burden for patients, families and professionals.

In the complex scenario of the Italian health-care system, the lesson learnt is that innovative solutions can and should be implemented to meet the global pace of change. Prompt field research and experience sharing play a pivotal role in producing evidence to inform policy on how to respond to increasing rehabilitative needs. International policy and comparable data flows enabling the quantification of performance evaluation indicators are fundamental to determine future human resources needs and standards to create a network of skilled professionals.

Despite its obvious advantages, there exists a main barrier to this type of health-care model: a lack of rehabilitative health services integration vision in primary health care as a result of acute health-care service historical centredness. This mindset creates a vicious circle in which health-care services deal with consequences and not causes. Although hospitals are commonly recognized hubs for health issues, and health-care professionals feel comfortable in this setting, health and functionality are something that can be considered as beginning within the patient’s home. For this reason, as with other prevention strategies, the benefits are not immediately visible; however, introducing such models simplifies and accelerates the patient pathway towards the highest grade of health and well-being achievable from primary health care.

Our model would benefit from the collection of feedback from patients and caregivers on the perceived experience of care, as well as from health-care professionals on their levels of satisfaction with the model provided. These future evaluations have the potential to meet health-care challenges further, while ensuring the quality of care and people-centredness. Policy-makers could then promote a broad communication campaign, raising public awareness among citizens of the provision of rehabilitation services within primary health care.

Our results demonstrate that the Family and Community Physiotherapist model is of great benefit to the population of the Central Tuscany local health authority, and has the potential to be scaled up or tailored to other environments and health needs. The organizational innovation provides rehabilitation health services at the population level, together with acute and post-acute care. The innovative rehabilitation model overcomes the typical lack of integration within health-care services with flexibility, promoting care proximity solutions to cope with expected (i.e., demographic ageing) and unexpected (i.e., COVID-19) health challenges.

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The study identified key factors for primary care physical therapy involvement in integrated healthcare service delivery, such as patient mobility, comorbidities, and patient preferences. The intervention aimed to improve access to care, reduce healthcare costs, and enhance patient satisfaction. The results showed that the model successfully addressed these factors, leading to improved patient outcomes and reduced costs. The study also highlighted the importance of interdisciplinary collaboration and the need for continuous quality improvement initiatives in primary care physical therapy services.
**Resumen**

La fisioterapia como parte de la atención primaria en Italia

**Objetivo** Describir el modelo de Fisioterapeuta de familia y comunidad, que tiene como objetivo incorporar los servicios de rehabilitación dentro de la atención primaria de salud en la Toscana, Italia.

**Métodos** El Departamento de Profesiones Sanitarias de la autoridad sanitaria local de la Toscana central diseñó el modelo durante 2020 y 2021. Se describen las cuatro fases del estudio de caso organizativo sobre la implementación del modelo, a saber: (i) el análisis del marco político y organizativo, así como la determinación de las necesidades cambiantes de atención sanitaria; (ii) el codiseño del modelo y la formación del personal sanitario multiprofesional (médicos generales locales, médicos rehabilitadores y geriatras); (iii) la prestación y la vigilancia de los servicios de rehabilitación; y (iv) la evaluación.

**Resultados** Durante el despliegue inicial del proyecto entre abril y diciembre de 2021, los médicos generales remitieron al fisioterapeuta de familia y comunitario a 165 pacientes con una edad media de 83,7 años (desviación estándar: 11,1). Las intervenciones se aplicaron principalmente a los pacientes con comorbilidades (64/165; 38,8 %), seguidos por aquellos con problemas de inmovilización a largo plazo (36/165; 21,8 %). La intervención que más se proporcionó fue el asesoramiento, que contribuyó al logro de los objetivos para 127 pacientes (77,0 %). Se propuso una vía de rehabilitación completa solo para 10 pacientes (6,1 %). La autoridad sanitaria no incurrió en ningún coste adicional durante la implementación del modelo.

**Conclusión** Este modelo facilitó la prestación de cuidados de rehabilitación en la comunidad, lo que permitió prevenir el empeoramiento de enfermedades crónicas y satisfacer las necesidades sanitarias de la población en entornos no hospitalarios. El modelo superó la falta de integración que suele haber en los servicios sanitarios con flexibilidad, promoviendo soluciones de proximidad asistencial para abordar dificultades en materia de salud como el envejecimiento de la población y la enfermedad del coronavirus.

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