School of Industrial and Information Engineering

Master of Science in Management Engineering

Task Shifting and Home Care: the evolution of home health care professionals' role – an Italian multiple case study

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LIST OF ACRONYMUS

WHO	World Health Organization
EU	European Union
OSS	Operatore Socio-Sanitario
HCA	Health Care Assistant
GPs	General Practitioner
CdS	Case della Salute
FMG	Fondazione Maddalena Grassi
OSA	Operatori Sanitari Associati
ADI	Assistenza domiciliare integrata
NHS	National health system

ABSTRACT – VERSIONE ITALIANA

L'obiettivo di questa tesi è valutare se e come il task shifting viene implementato a livello domiciliare e come, di conseguenza, il ruolo di infermieri, fisioterapisti ed OSS evolve. L'attuale contesto sanitario è caratterizzato da un invecchiamento della popolazione, un aumento di malattie croniche e una scarsità di personale e di fondi. In risposta, molti paesi europei vedono nell'assistenza domiciliare una soluzione efficiente rispetto all'ospedale. Inoltre, un altro fenomeno sta emergendo: il task shifting, ovvero la ridistribuzione razionale delle attività tra i professionisti sanitari. Anche questo fenomeno è visto come possibile soluzione per ottimizzare le risorse sanitarie e finanziarie. Ma la letteratura riguardo al task shifting si riferisce soprattutto all'ospedale e si sa poco riguardo alla sua implementazione a livello domiciliare. Questo gap è stato investigato tramite un'analisi sistematica della letteratura che ha confermato l'esistenza del task shifting domiciliare e fornito un primo quadro di come tale fenomeno sta avvenendo, in termini di cause scatenanti e fattori abilitanti. Inoltre, è emerso che il ruolo delle figure coinvolte nel task shifting domiciliare sta evolvendo. I risultati emersi, però, sono pochi e frammentati e non si riferiscono direttamente alla letteratura del task shifting. Quindi, è stato eseguito uno studio empirico su 4 providers di servizi domiciliari in Italia attraverso interviste ad infermieri, fisioterapisti ed OSS, che sono i ruoli più coinvolti. Quanto emerso ha permesso di creare un framework teorico che spiega la logica dell'implementazione del task shifting domiciliare, colmando così il gap della letteratura. In particolare, sono state chiarite le cause scatenanti, i fattori abilitanti e le barriere del task shifting domiciliare, e come i ruoli coinvolti stanno evolvendo. I risultati di questa tesi possono essere utili per i service providers e i policy makers per avere maggiore chiarezza del contesto in cui operano, e permettono di guidare e supportare l'introduzione dell'infermiere di comunità nel sistema sanitario.

ABSTRACT – ENGLISH VERSION

The aim of this thesis is to evaluate if and how task shifting is implemented at the home care level and how, as a result, the roles of nurses, physiotherapists, and OSS evolve. The current healthcare environment is characterized by an aging population, an increase in chronic diseases, and a shortage of staff and funding. In response, many European countries see home care as an efficient solution compared to the hospital. In addition, another phenomenon is emerging: task shifting, i. e., the rational redistribution of activities among healthcare professionals. This phenomenon is also seen as a possible solution to optimize healthcare and financial resources. But the literature regarding task shifting refers mainly to the hospital and little is known about its implementation at the home level. This gap was investigated through a systematic literature review that confirmed the existence of home task shifting and provided an initial picture of how this phenomenon is occurring, in terms of root causes and enablers. Moreover, it emerged that the role of the figures involved in home task shifting is evolving. However, the results that emerged are few and fragmented and do not directly refer to the task shifting literature. Therefore, an empirical study was performed on 4 home care providers in Italy through interviews with nurses, physiotherapists and OSS, which are the roles most involved. What emerged allowed the creation of a theoretical framework that explains the logic of implementing home task shifting, thus filling the gap in the literature. Specifically, the root causes, enablers, and barriers of home task shifting were clarified, and how the roles involved are evolving too. The results of this thesis may be useful for service providers and policy makers to gain more clarity of the context in which they operate, and allow them to guide and support the introduction of the community nurse into the healthcare system.

EXECUTIVE SUMMARY

Introduction

The European national health care systems are experiencing an aging of the population, accompanied by a shift from acute events with a higher mortality to a chronicization of patients with multiple morbidities and complex path of treatment[1]. Moreover there is a lack of financial investment and a shortage of health care professionals[2]. To face this situation properly, many European countries are preferring home care to hospital setting, seen it as a cost effective solution and a way of maintaining people's independence[3]. Moreover another trend is emerging: task shifting, that is a rational redistribution of tasks and activities among health professionals[4]; it is seen as a possible solution to optimize and exploit the actual health and financial resources.

Home Care

The term "home care" is a very broad concept that varies across countries and sectors and more generally it aims to address people's health and social needs while in their home by providing appropriate and high-quality home based health care and social services, by formal and informal caregivers, with the use of technology when appropriate, within a balanced and affordable continuum of care[5,6]. Home care services are gaining importance for several reasons: first people that request to be treated at home are increasing, preferring to be cared in their own house rather than in hospitals or clinics; moreover several studies demonstrate that it can help to optimize hospital bed, decrease readmissions and, thus, increase patient satisfaction[7,8,9].

Home care is a labour-intensive activity that involves a mix of **professional and non-professional personnel**[10]. The most present and relevant figure, that will be object of the analysis of this research, are nurse, physiotherapist, and health care assistant. But home care services also comprehend therapists, social workers, physicians, dietitians, pharmacists and all those actors that constitute the informal care, that are caregivers, friends, family members, partners and the patients themselves too.

Management of home care refers to the actual provision of services, it varies a lot across countries and is rich of challenging and controversial aspects. First, by referring to the *nature of home care*, the boundary between health and social care is blurred and varies a lot within countries. Health care systems include rehabilitations, supportive, health-promoting or disease-preventive and technical nursing care for both chronic and acute patients[11], while social services offer household duties (e.g. cleaning, cooking, shopping), socializing activities and personal care (e.g. bathing and dressing) helping or even substituting the informal care that support older people or to the ones living alone[12]. Many times, the term home care refers to both social and health care systems. Then another aspect, connected to the first one, is the *integration of all the home care services*. Such integration can be within the home care services, or between home care and others sectors services[10].

Task Shifting

Task shifting was defined by the World Health Organization (WHO) in 2008 as "*the rational redistribution of tasks among health workforce teams*"[4]. This definition was adopted and expanded by Schalkwyk[13], that proposed a **comprehensive framework** of task shifting. This framework is innovative because it represents the interaction between the home health professionals placing them on the same hierarchical level, in a context of collaboration, opposing to the concept of a linear professional hierarchy with scares communication, now considered outdated[13].

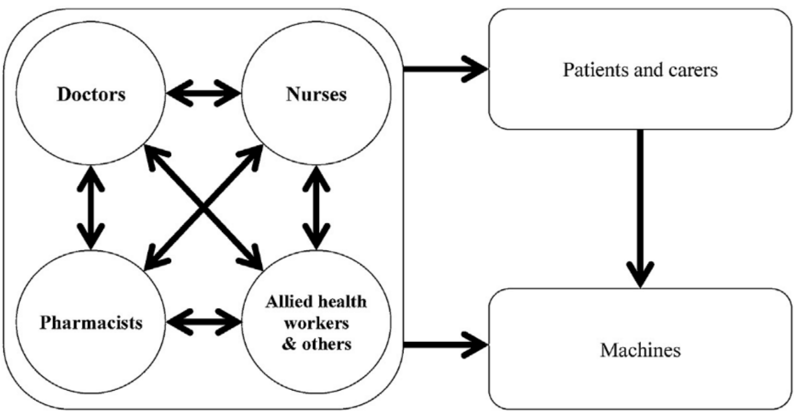


Figure 1: Schalkwyk framework of task shifting in health care

In 2019 the European Commission published a report on task shifting in the health care system[14] in which they resumed and implemented a **taxonomy** proposed by Schalkwyk that categorize task shifting in 3 modalities of implementation:

1. *Enhancement*: increasing the depth of the job by extending the role or skills of a particular group of workers;
2. *Substitution/delegation*: exchanging one type of work from one profession to another profession, breaking traditional professional divides[13];
3. *Innovation*: creating new jobs by introducing a new type of worker (or technology)[13].

Implement task shifting means change the structure of how the system is organized and this cannot happen suddenly but should be part of a process. There are two different ways in which this process can be performed: a planned process, that involves the formal definition of new roles; or an incremental process, more diffused, where tasks are shifted before being formalized by norms[13].

Finally, the European Observatory on Health Systems and Policies has identified the main **enabler and barriers** of task shifting through case studies across EU[14]. The enablers includes factors that incentive the implementation of task shifting; for instance, staff shortages induces operators to take on the role of those figures of which there is a shortage[14]. Barriers instead includes those elements that inhibit task shifting implementation; an example is the backwardness of the laws that can prevent the delegation of even simple activities[14].

However, the literature regarding task shifting refers especially to the hospital setting and little is known about its implementation at the home care level. Being either task shifting and home care useful to better exploit the health resources, it is interesting to understand whether an intersection between task shifting and home care exists, and, if yes, how such intersection is occurring.

Systematic Literature Review

Systematic literature Review Research Methodology

The starting point for this research was to understand whether task shifting is implemented in the home care context; to achieve this objective a query containing the terms "task shifting" and "home care" was launched on Scopus, Web of Science and Pubmed, but the results obtained were almost zero. This finding was commented at the light of the current debates about task shifting and home care: indeed, on newspaper and web sources such as QuotidianoSanità, Intrahealth, Saluteinternazionale, FNOPI and WHO web site, it emerges that there are also shift of tasks and evolution of roles that be attributed to task shifting definition also in home care setting. Therefore, it seems that home task shifting exists in the home care context but there is no awareness in the academic literature.

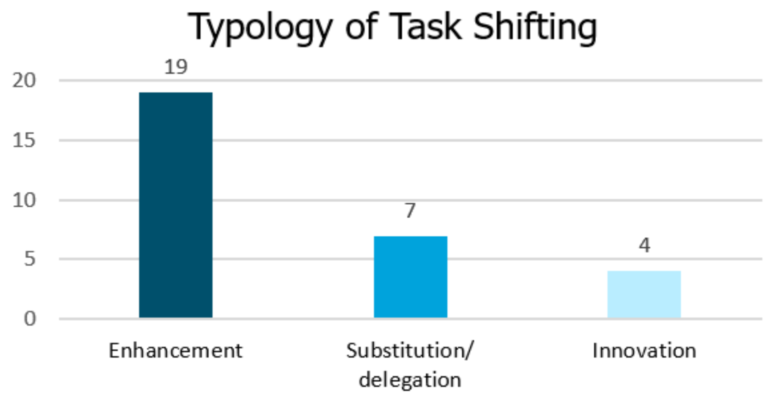
To explore and deepen this gap, a systematic literature review was carried out on Scopus to identify and map cases in which the home care health workers have seen their tasks enhanced, delegated or innovated. All publications since 2008 that referred to a country with a public national health system were included. After this selection, only 140 papers remain and to them was added 1 paper taken from the references, for a total of 141 paper analysed. The titles and abstracts of the papers have been screened according to their effective pertinence to the home care environment and according to the real existence of changes in the management of the tasks that could be reconducted to task shifting according to its definition. The result of this screening phase was 25 records that have been analysed through framework that was built though an iterative approach in Excel where the existing literature regarding task shifting[14] were adapted according to the recurring elements of the selected papers.

Systematic literature review analysis and results

The first result obtained from the literature review is that the majority of the papers are recently published, and there is a peak of interest in 2018, confirming the modernity of these topics. Regarding the **geographical distribution** of the reference

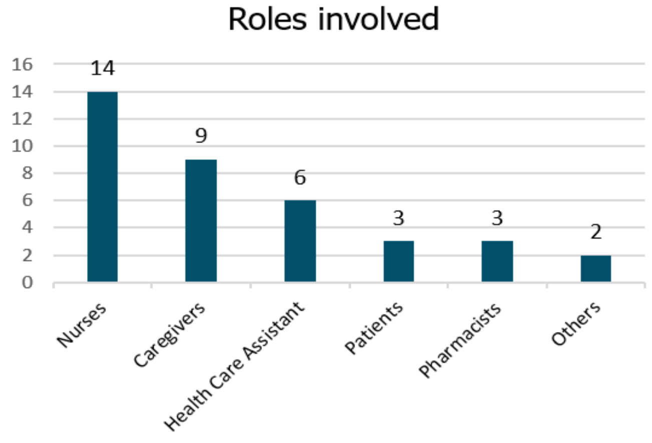
countries, cases of implementation of home task shifting are spread in all the continents, but the biggest concentration is in the north of Europe, particularly in Norway, UK and Sweden.

The first results concern the task shifting typology. Following the taxonomy proposed by the European Commission[14], it was possible to identify the frequency with which each form of task shifting is present in home care setting. Graph 3 shows the results.



Graph 3: Typology of task shifting in home care, number of papers

Another result is the identification of the home health professionals involved: nurses, health care assistants, pharmacists and physiotherapists are involved in the implementation process of task shifting, and thus, their role is actually evolving, being enhanced, delegated or innovated the tasks they are performing. Moreover, task shifting influences also caregivers and patients' role, but they will be not included in the object of research of this thesis.



Graph 4: Roles involved in home task shifting

Then, the activities involved in home task shifting were analysed; the activities involved are those tasks that are performed by practitioners beyond what is formally recognized by their role. These activities were categorized according to a taxonomy proposed in a review run in 2017 on nursing practice in home care settings[15]: interactive, educational, care, and administrative activities. Results regarding the recurrency of activities are shown in table 3.

Activities	%
Care Activities	61%
Administrative Activities	19%
Educational Activities	11%
Interactive Activities	8%

Table 3: Activities, Systematic Literature Review, Frequency (%)

Another analysis performed was devoted to trace those elements that generate and facilitate the implementation of task shifting in home context, which are respectively called **root causes and enablers**. In table 13 is reported the list in decreasing order of occurrence of both the root causes and the enabler identified in the papers.

Root Causes	# papers
Patients' needs	15
Efficiency and Efficacy	14
Staff shortage	13
Caregivers' needs	6
Coordination need	5
Policy	4
Health professionals' needs	2
Technology	2

Enablers	# papers
Training	24
Collaboration	20
Policy	11
Possibility to implement the change	3

Table 13: Root causes and enablers of home task shifting, Systematic Literature Review, Number of Papers

To sup up, from the results of the systematic literature review performed it emerges that implementation of task shifting in home care are already occurring and allow to define a first picture of how this phenomenon is taking place, in terms of activities, root causes and enablers. Moreover, it emerges that the implementation of task shifting in home care is actually evolving the role of those figures that are involved, in particular the health professionals one.

Research question

Looking at the outcomes of the systematic literature review, it is possible to observe that the literature results are few and lack of direct references to the theoretical background proposed by the European Commission[14] or even just to the term "task shifting", highlighting a gap in academic literature about this topic. Moreover, the results obtained are fragmented and limited to the role of the nurse mainly, not allowing to have a complete and clear picture of all home health professionals. For these reasons, this thesis aims at structuring and clarifying the concept of task shifting within home care setting by searching for further empirical evidence investigating multiple Italian case studies regarding home and community care and answering to the following research question:

RQ. How does task shifting occur in the home care setting?

Moreover, taking into account that as seen in the literature[12] nurses, health care assistant and physiotherapist are the health professionals' protagonists of task shifting applications in home care, to answer to the research question, will be investigated the following sub-questions:

RQ. 1. How is the role of nurses, health care assistant and physiotherapist evolving in terms of activities and responsibilities that are shifting from their recognized responsibilities?

RQ. 2. How are the root causes and enablers of task shifting in home care setting linked to the different activities and roles involved?

Methodology

To investigate the research questions a multiple case study approach was adopted, in order to have a broader and deeper view of the phenomena and make it easier to generalize the results[16]. The case studies are all located in Italy; this is because in Italy both the topic of home care and task shifting are much debated[17–22], but also because

it turns out that there is a gap in the literature, as evidenced by the absence of Italian results among the in scope papers of the literature review.

Context

The context in which the empirical analysis was conducted is that of ADI (Assistenza Domiciliare Integrata), within the Italian public health system. The Italian Ministry of Health defines ADI as "integrated set of health and social care treatments provided at the home of the assisted person"[23]. Within this context four Italian organizations have been selected: 3 cooperatives settled in Lombardy – Operatori Sanitari Associati (OSA), Fondazione Maddalena Grassi (FMG), and PAXME – and 6 Case della Salute in Emilia Romagna. All these organization provide home care in the territory, and they have both nurses and physiotherapists and OSS working in, which are the roles that it was decided to investigate, being the protagonists of home care, as emerged also from the literature.

Data collection

The empirical analysis was carried out with a qualitative approach, through 13 interviews and a workshop.

The **interviews** done can be classified in two different typologies, administered to different actors. The first type was prepared to capture the innovative vision of ROCS i.e. the Organizational Managers (Responsabili Organizzativi) of the Case della Salute. These interviews were administered to 6 ROCS, who, for the most part, are nurses with technical skills and managerial-organizational competencies that are also responsible of coordinating the organizational management board[24]. The Case della Salute have been included because they are innovative elements of presence in the territory, which are being built and designed ad hoc to better integrate into local communities. In addition, within the Case della Salute, the emerging role of the community nurse is known; it was therefore considered interesting to investigate their point of view and organizational model.

The second type of interviews was prepared specifically to catch a more traditional view of the role of practitioners in home care settings. A total of 13 interviews were conducted, distributed as follows: CdS (6), OSA (2), FMG (3), Paxme (2). It was decided to interview those directly involved in the evolution of the role, therefore nurses (10, of which 6 ROCS), physiotherapists (2), OSS (1); This choice allows to have a vision as close and direct as possible of the situation and increase the validity of the results.

In addition to the interviews, a **workshop** was held in collaboration with the OSA cooperative. This was organized as part of a project in collaboration with the Health Care research group of Politecnico di Milano. For the preparation of this workshop, questionnaires were drawn up for operators to assess their level of engagement and their propensity for change. Thanks to the results of the questionnaires collected, a workshop was organized and held online on Zoom and supported by the Miro platform lasting 1 hour and 30 minutes. The workshop was attended by two working groups composed of 4 and 5 operators, respectively, both nurses and physiotherapists and administrative staff. The workshop consisted of 4 activities useful both for the purposes of the project with OSA and of this research thesis

Data Analysis

Both the interviews and the workshop were recorded, following the consent of those involved and according to privacy regulations. The recordings were used to have an accurate transcription, which was carried out manually and according to the "verbatim" modality, that is, an integral transcription of what was said[25]. The transcripts were later validated by the interviewees and the text was used as a source for coding analysis. The NVIVO program, which is suitable for qualitative text analysis, was chosen to perform the coding of the contents. This allowed to transform the text from qualitative to quantitative material, identifying the recurrence of themes that emerged.

The starting point of coding was the research question, i.e. how task shifting occurs in the home environment. To do this, an abductive approach was chosen, that is an

intermediate way between a theory-driven and a text-driven approach[26]. Since this is a very broad and complex concept, it was unpacked into sub-objects: task shifting activities, roles involved, root causes and enablers. To identify the occurrence of these themes, categories were identified within which insert the text. These categories were taken from the framework that had been used for the literature review phase but were expanded and detailed with subcategories that emerged from the coded text following an iterative process. Coding rules were established to make the analysis as objective and valid as possible and all the texts of the 13 interviews and the workshop were iteratively analysed according to this process, until quantitative results were obtained about the recurrence of each element, which was finally critically analysed and compared with the recurrence of the elements present in the theoretical framework presented in the systematic literature review.

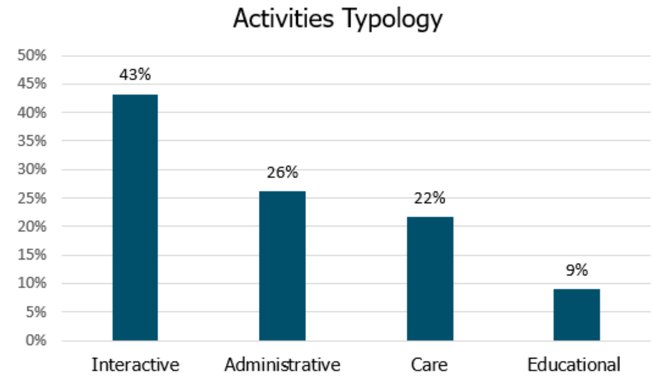
Results and discussions

Task shifting typologies and activities

The first step to answer to the RQ.1 is understand in which form task shifting is present in home care: therefore, the first cluster that has been created on NVivo11 is "Task Shifting Typology"; it embodies the theoretical taxonomy proposed by the European Commission[14]: enhancement, substitution/delegation, and innovation.

It results that all the three **typologies of task shifting** are present in the case studies, but there are both some point of contact and of distance from the systematic literature review results: enhancement is still the most diffused type of task shifting, but innovation is much more diffused than substitution and delegation, differently from the literature review. This difference may be due to the fact that 6 interviews were conducted with nurses in charge of the organization of the Case della Salute, thus influenced by the innovative organization model of such facilities. Moreover, from the interviews it emerged that, in reality, delegating in home care is much more difficult, as you are alone in the patient's home.

Regarding the results of the **task shifting activities**, on NVIVO has been created a node that reflects the classification proposed by Andrade et al. in 2017[15]: care, administrative, interactive, and educational activities. The main difference from what has emerged from the systematic literature review is the exchange of prevalence between the interactive and the care activities. While in the literature the care activities where the most shifted one, in the interviews emerges that the home health professional enhance their role mainly through interaction with the patients, caregivers and home care environment.



Graph 12: Typologies of Activities, Case Studies, Frequency (%)

In order to better understand how the results about the types and activities of task shifting influence and evolve the role of nurses, physiotherapists, and OSS, they were cross-referenced with what emerged from an aggregate analysis of each figure.

From the interviews conducted with the 10 nurses, a first picture emerged of how they currently perceive their role; namely, home care **nurses** perceive their profession as a role that has its own responsibilities and autonomies, quite distinct from the medical profession, but very specific; this, makes their role highly performance-based, and do not allow them to have a holistic approach in caring patients. Moreover, the nursing autonomy in Italy, differently from other countries[27], is still strongly limited by the medical figure both regarding the prescription of drugs and therapies, and regarding the activation of home care itself. Therefore, nurses feel that their professional independence is not enough, and they request that it can be expanded, also because. they believe they have sufficient knowledge and skills to be able to expand the range

of their activities. In particular, they require more autonomy from the physician regarding, for example, the decision to administer certain medications, or to decide independently to activate home care.

Moreover, the interviews confirm that nurses' role is evolving, in particular the *task shifting typologies* most developed is enhancement (82%). This result shows that nurse's evolution of role is increasing and expanding the set of activities they can perform, building up on what they are currently doing and they currently know and not totally innovating and renewing their role.

Then, the second way in which task shifting evolves nurse's role is through innovation. This is true especially for the ROCS of the CdS, in which nurses open clinics totally managed by them and to no longer consider themselves as individual operators, but as part of a team to collaborate with.

Finally, there are two cases of care activities inherent to the delegation by GPs to nurses regarding activities of their competence, such as the evaluation of ADI activation.

Nurse	Enhancement	Sub/Del	Innovation	**Total TS Activity**
Interactive	46%	0%	8%	**39%**
Administrative	21%	0%	83%	**30%**
Care	27%	100%	0%	**25%**
Educational	6%	0%	8%	**6%**
Total TS typology	**82%**	**3%**	**16%**	**100%**

Table 8a: Task shifting activities along nurses, Frequency (%)

There was also the participation of one **physiotherapist** in the workshop with OSA, and of two in the interviews. Physiotherapists, differently from nurses, perceive that they have a role with high professional autonomy, with few limitations and they retain to have the skills to manage their work in a way that is functional in improving patient's lives.

Regarding the distribution of the *task shifting typologies* among physiotherapists the only form that is implemented is enhancement. Thus, the evolution of home-based physiotherapists sees only a deepening and expansion of their role, but no real

innovations. Moreover, being a healthcare role that covers an area of its own competence, and that is very autonomous and independent, as emerged from the interviews reported above, it is explained the absence of substitution and delegation.

Looking in detail the *task shifting activities* that physiotherapists perform it results that the most are interactive activities. Physiotherapists, in fact, often play an important role in communication and relationship with patients, which brings benefits on a psychological and social level, in addition to health. Moreover physiotherapists, in addition to the educational activity that is required to them, often provide information and practical advice on performing daily activities and other services not provided by them.

Physiotherapist	Enhancement	Sub/Del	Innovation	**Total TS Activity**
Interactive	54%	/	/	**54%**
Educational	19%	/	/	**19%**
Administrative	15%	/	/	**15%**
Care	12%	/	/	**12%**
Total TS typology	**100%**	**/**	**/**	**100%**

Table 8b: Task shifting activities along physiotherapists, Frequency (%)

Regarding **OSS**, only one was interviewed, to which are added the results derived from the comments made by the other operators interviewed. What has emerged is that the OSS have a role of great responsibility and support in the home environment, in fact they are responsible for, among other things, hygiene, passive mobilization and support to relatives. All these activities are essential for the care provided by other healthcare professionals to be successful.

The OSS role’s evolution is quite completely related to enhancement task shifting; in particular, interactive activities are enhancing OSS’s role; indeed, OSSs often play an accompanying role in the patient's daily routine, so they often perform empathic and careful communication. Moreover, sometimes OSSs also find themselves performing

basic health care activities that they are not responsible for performing, such as basic medication that are delegated to them by nurses.

OSS	Enhancement	Sub/Del	Innovation	Total TS Activity
Interactive	50%	0%	/	**40%**
Care	25%	100%	/	**40%**
Administrative	25%	0%	/	**20%**
Educational	0%	0%	/	**0%**
Total TS typology	**80%**	**20%**	**/**	**100%**

Table 8c: Task shifting activities along OSSs, Frequency (%)

Root causes and Enablers of home task shifting

The results useful to answer to the RQ.2 are now presented. First of all the main root causes and enablers that generate and facilitate task shifting have been identified from the coding of the interviews. In the table below the list in decreasing order of recurrence is presented.

Root Causes	Frequency (%)
Patients' needs	32%
HSC context*	17%
Individual Performace*	13%
Efficiency and Efficacy	11%
Personal attitude*	10%
Staff Shortage	6%
Caregivers' needs	4%
Coordination need	3%
Policy	2%
Health Professionals' Need	1%
Tot	**100%**

Enablers	Frequency (%)
Collaboration	50%
Training	17%
Experience*	10%
HSC context*	9%
Personal Attitude*	7%
Membership*	3%
Technology	2%
Policy	3%
Tot	**100%**

Table 14: Root causes and enablers of home task shifting, Frequency (%)

It can be observed that can be made is that most of the root causes and enablers that had been found in the EU report[14] and in the systematic literature review have been confirmed, respecting also the order of occurrences, and therefore of relevance; However, thanks to the case studies analysis, it was possible to enrich literature findings, identifying new root causes that are a consequence of the interview's coding results (in the table are identified by the asterisk).

However, what is important is the link between root causes and enablers and the roles involved. Looking at the table 11, some points of discussion emerge.

Root Causes	Nurse	Physioterapist	OSS
Patients' needs	27%	35%	55%
HSC context	24%	5%	0%
Individual Performace	11%	10%	27%
Efficiency and Efficacy	10%	20%	0%
Personal attitude	10%	10%	9%
Staff Shortage	6%	10%	0%
Caregivers' needs	3%	10%	0%
Coordination need	5%	0%	0%
Policy	3%	0%	0%
Health Professionals' Need	0%	0%	9%
Tot	**100%**	**100%**	**100%**

Enablers	Nurse	Physioterapist	OSS
Collaboration	42%	64%	58%
Training	17%	18%	17%
Experience	14%	4%	0%
HSC context	13%	4%	0%
Personal Attitude	5%	7%	17%
Membership	5%	0%	0%
Technology	2%	4%	0%
Policy	3%	0%	8%
Tot	**100%**	**100%**	**100%**

Table 11: Root causes and enablers along home health professional roles, Frequency (%)

First, for all the three professionals, patient's need is the most diffused root cause. Thus, it turns out that the patient is the heart and center of care and that his or her needs are the primary driver of home task shifting. Another important root cause is health, social and cultural context. If it is strong related to nurses, it seems to incentive less physiotherapists and OSS. This can be explained as physiotherapists and OSS are two more autonomous figures and their work is less conditioned by other figures, while the nurse is strongly limited in his professional autonomy by the medical-centric context that influences health care currently. Next, we note that individual work is the other most prevalent common root cause, and it incentives the most the OSSs. In fact, all three figures work at home individually, without carrying out joint access with other figures. And individual job generates for all the three roles home task shifting activities.

Regarding the enablers, the most evident finding is that collaboration and training stand out in terms of prevalence and importance above all other enablers for all three roles. Even before training, all three home care professionals believe that collaboration and integration among home care professionals is necessary. And then they require more training, especially in the communication and interpersonal aspect.

Further results

Further results emerged from the case studies analysis. The following two nodes were not analysed in the systematic literature review, but, coding the interviews and the

workshop, they were considered important because of their recurrence in the texts and because they can help to clarify how task shifting is occurring in home care context.

The first element that is introduced is the **barriers**, so those elements that obstacle the development of task shifting in the home context. Like root causes and enablers, the barriers reflect in part what is described in the EU Report[14], in particular the presence of social and cultural, legal, and professional association barriers were also found in the interviews. To these are added economic and administrative barriers that are specific to the analysis of the interviews.

As for the root causes and the enablers, what is relevant is the link between barriers and home health professionals. The table 3 contains the percentage recurrences of barriers for each home professional.

Barriers	Nurse	Physiotherapist	OSS
SC	52%	8%	0
Professional	24%	31%	100%
Legal	7%	38%	0
Economic	10%	8%	0
Administrative	7%	15%	0
Tot	**100%**	**100%**	**100%**

Table 3: Barriers of home task shifting along health professionals' roles, Frequency (%)

It emerges that *nurses* are mostly limited by social and cultural barriers; this confirms the fact that the enabler "health, social and cultural context" is more requested by nurses as they are more obstructed, compared to physiotherapists and OSS, by the medical-centric context in which they work. On the other hand, *physiotherapists* are hindered primarily by the fact that they are largely freelancers, so this does not motivate them to perform activities beyond the required service. They are also hindered by legal barriers and differences in regulations in the area in which they work. The *OSSs* seem to be obstructed only by professional barriers, but looking at the absolute number, there appears to be only 1 coding, so the result is not reliable enough to understand their profile.

Then, the other element that is added to the analysis are all those set of arguments that operators interviewed have advanced as priorities for **future development** in home and community care setting. These arguments are collaboration with the GPs, collaboration with hospitals, training in universities, training on communication, Initiative medicine, and Community nurse.

Community nurses are defined as "professionals whose privileged setting is the person's living environments and who act proactively, in a network with all the social health services and social actors of the territory for the users who are bearers of health and social needs inextricably linked together"[28]. From the interviews emerges that nurses would like to expand the boundaries of their responsibilities, and this is proved by the fact that almost every interview mentioned the new role of family/community nurse. The figure of the community nurse that emerges from the interviews is in line with what the Piano Nazionale per la Prevenzione 2020-2025[28] describes. In fact, according to the practitioners interviewed, the community nurse should work in proximity to people, have an approach to initiative medicine, playing a proactive role towards the population. Moreover, it should be inserted and integrated in a network, collaborating and interfacing with other services and actors on the territory, especially with general practitioners, local facilities and hospitals. The community nurse should also become both a health and social reference point for citizens, that should know him/her and recognize his/her role. Finally, the community nurse should have specific skills and special training, in order to have a complete vision of what is happening in the structures and in the territory; He/she should be equipped with considerable managerial and relational skills to be able to promptly capture the needs of citizens.

Process of implementation of home task shifting

The previous results confirm the findings advanced by the systematic literature review, according to which task shifting is present at the home level. More precisely, task shifting occurs in the form of enhancement, making nurses, physiotherapists, and OSS's role to evolve in terms of activities and responsibilities. Referring to the implementation models proposed by Schalkwyk in 2020[13], and presented in paragraph

1.2.4 it is possible to observe that home task shifting is spreading incrementally. This is confirmed by the fact that activities are undertaken by health care professionals before they are formalized by laws. This reinforces the argument advanced by Schalkwyk that incremental process is the most widespread form of implementation. If the request of practitioners for the legal recognition of the additional activities they perform over to their role is accepted, it will be possible to implement a systematic change of the traditional role of home care professionals, passing from an incremental to a planned process, introducing new training programs, and increasing the benefits of task shifting[13] described by the European Commission in 2019[14].

Final considerations

To summarize, the main question of this thesis, i.e. *how does task shifting occur in home care?*, can be answered as follow. Task shifting at home care level occurs according to the three modes of enhancement, substitution/delegation and innovation of tasks, thus confirming the taxonomy introduced by the European Union[14] at a general level. These three modes of task shifting occur with different frequency depending on the role involved. More specifically, enhancement of tasks influences all three healthcare professionals; delegation of tasks involves only nurses and OSSs; and innovation of tasks involves only the nurses. These changes of tasks modify, and thus evolve, the role of the professionals involved. In fact, a greater indication of how this evolution is occurring is provided precisely by the typology of activities carried out beyond those traditionally recognized and therefore involved in the process of task shifting implementation. It turns out that all roles are involved primarily in performing interactive and administrative activities; this indicate that the role of a home care workers, especially nurses, is evolving towards a figure that is no longer only healthcare, but also with a profile of social and organizational interest. Furthermore, it appears that the mode of implementation of task shifting, according to those proposed by Schalkwyk[13] is incremental, since the additional activities carried out by the operators are not yet currently recognized. In addition, the findings of this thesis have allowed us to clarify and schematize how task shifting is generated, identifying the

root causes of its implementation process, and defining how this process is facilitated or obstructed by enablers and barriers.

Final Framework

This framework has been implemented starting from the literature and expanded through the case studies' results. This framework collects and unifies in a single scheme the fragmented elements emerging from the practical case studies, that have verified and expanded the results of the systematic literature review. It is a theoretical framework, in fact at present, no practical case has been found in which all the constituent elements of this framework were present at the same time (e.g., all the figures evolve according to all the modes of task shifting that were previously attributed to them); but at the same time, by enclosing all the possible scenarios, it offers a complete and generalized view of how task shifting is implemented at home. The final result is illustrated in the figure 6.

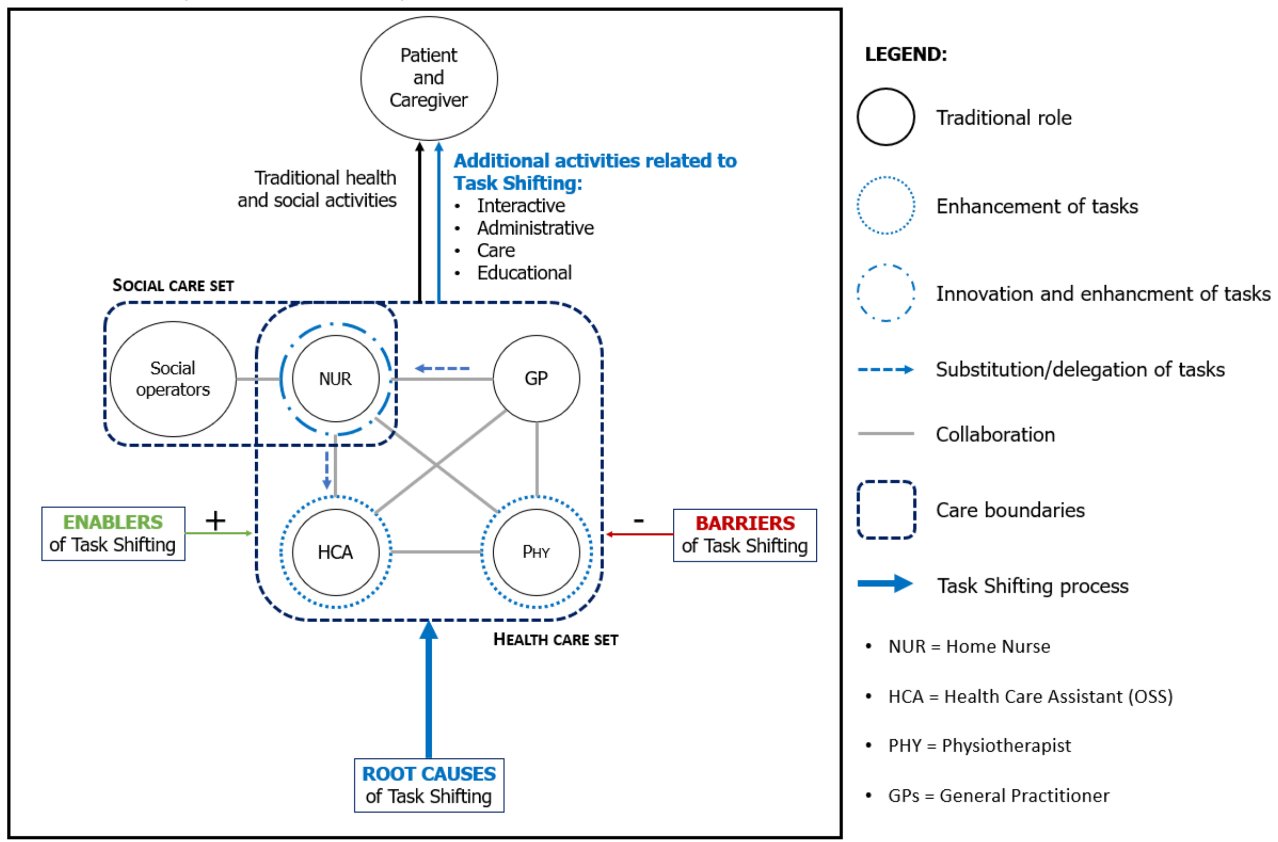


Figure 6: Final Framework of home task shifting implementation process

The context in which this framework is set is that of case studies analysis: ADI in Italy, thus public health system.

The heart of the framework is given by the central rectangle, which represents the health care system, in which there are the main roles of home care: nurses, physiotherapists, OSS and GPs. These are arranged on the same hierarchical level in a climate of mutual collaboration, as suggested by Schalkwyk[4] in his model on task shifting. Each healthcare professional is enclosed in a circle that indicates how their role is evolving, in accordance with what emerged from the interviews. Thus, the role of physiotherapists and HCAs is being enhanced, and the role of nurses is both enhanced and innovated. The thick black arrows refer instead to the direction of delegation of activities. Thus, they refer to the substitution and delegation of tasks that occurs between GPs and nurses, and between nurses and HCAs. Moreover, the health care set is intersected with the social care set through the figure of the nurses; the reason is that, as emerged from the case studies, nurses are evolving towards a

role that will be the health and social reference point for the patients, linking these two worlds. Finally, there are the enablers and barriers that insist on the health care set; in fact, enablers and barriers are elements whose presence, respectively, facilitates or obstructs the implementation of task shifting within the context.

The section at the bottom of the framework reports the root causes that are the starting point for the blue arrow that represents task shifting implementation process. Thus, the task shifting process has its start in the root causes and its impacts on the health care set, evolving the roles within it, in accordance with the modalities visually identified by the circles and described above.

Finally, at the top of the framework are the patients and their caregivers who are the recipients of social and health care. Towards them come two arrows: a black one that indicates the traditional care activities that are carried out by each role, the other blue one that indicates those activities proper to the phenomenon of task shifting, i.e. those tasks that are carried out by the operators outside the recognized boundaries of their role. The activities follow the categorization found in the literature: interactive, administrative, care and educational.

Conclusions

The objective of this research thesis was to assess whether task shifting is present at the home level, and to clarify and investigate how this practice is evolving the roles of home health care workers, particularly nurses, physiotherapists, and health care assistants. To achieve this objective, we identify what are the root causes, enablers, and activities of home task shifting and how these are related to the previously mentioned roles.

The starting point was to identify the existing gap in the literature about the implementation of task shifting in the home environment looking at the current debates among the scientific community. This gap was then investigated through a systematic literature review that allowed us to confirm that task shifting in the home environment

exists and to define a first picture of the roles involved, the root causes and the enablers. However, since these results were few and fragmented and did not directly refer to the literature on task shifting, it was decided to further investigate the topic by seeking to answer to the RQ, How does task shifting occur in home care setting?, through empirical observations.

Insights and empirical evidence were sought through the analysis of 4 case studies. These were conducted through 13 interviews and 1 workshop at 3 Italian ADI cooperatives and 6 Case della Salute in Emilia Romagna.

Thus, it was possible to:

1. Confirm the presence of task shifting in the home care setting and the evolution of the role of home health workers;
2. Clarify and deepen how the root causes and enablers are linked to the shift of tasks they generate respect to the different activities and roles involved;
3. Introduce the figure of the community nurse, who should become both a health and social reference for families.

All of this has led to the implementation of a final framework that can summarize and systematize the logic of home task shifting that is currently occurring, including those aspects, such as nurse as a bridging role between the health and social sectors, that should be implemented in the next future.

Theoretical and Practical Implications

First of all, the confirmation that task shifting is implemented at the home level may *open the path to future research* and new perspectives with which to organize the delivery of home and community care services. However, the major theoretical contribution that is provided is the *home task shifting framework* that describes both the process by which task shifting is implemented at the home level, and how this is evolving the professionals involved and highlights the collaborations that should be implemented. In this way, not only the presence of home task shifting is confirmed,

but its logic of implementation is also clarified, thus filling the gap present in the literature.

In addition, the outcomes of this thesis have practical implications:

- They can have an *informative role for service providers* that can understand how the professionals in their cooperatives are evolving and, consequently, which aspects they should invest in. For example, they should foster collaboration and information exchange or invest in training their employees in communication, work management, and teamwork. This may be valid also for the AUSLs (azienda unità sanitaria locale - local health authority) of Emilia Romagna in order to proceed with the implementation of the Case della Salute in a more informed and conscious way.
- they can be *useful guidelines for policy makers* who are responsible for defining the laws and policies of territorial care. In fact, the lack of legal recognition is highly felt by practitioners, and it obstruct the implementation of task shifting.
- They can *support and guide the introduction of the community nurse.* In fact, being aware of how the role of the nurse is already evolving, what the needs and expectations of practitioners are, can help to understand on which aspects to invest more

Limitations and Future Steps

This thesis contains some main limitations, which may be the pathway for future studies and further research.

The main arguments regarding the systematic literature review are:

- The *query was launched only on Scopus*: in the future, it should be launched on other search engines such as PubMed, WebofScience and Google Scholar, thus obtaining a broader and more complete picture;
- In the framework of analysis *barriers were not included* but were introduced only in the coding of the interviews. This may negatively influence the

outcomes, thus in the it would be appropriate to analyse barriers also in the literature.

Instead, regarding the analysis of the case studies:

- *The context of analysis chosen is narrow and specific*: in Italy, particularly in Emilia Romagna and Lombardy. The same analysis can be extended to other regions in Italy and to other countries.
- *The number of interviews and workshops is not high*, particularly with regard to physiotherapists and OSS (only 2 and 1 interview respectively); the next step could therefore be to include both a greater number of respondents, but also to extend the interviews to other categories of health professionals, such general practitioners.
- *The informal part of care is not included* in this research, even if from the systematic literature review emerged caregivers and patients are subject to task shifting. Therefore in future further studies they should be included in the analysis.

Moreover, being adopted a *qualitative and descriptive approach*, it may be interesting in the future to define which are the KPIs of home task shifting and how much they vary over time and between different roles, thus undertaking a more quantitative approach.

1. INTRODUCTION

1.1 Context and background

The European national health care systems are experiencing a complex period, characterized by many challenging factors. First of all the population ageing index is increasing, and the ratio of elderly to working population in Europe is expected to increase from 29% in 2015 to 51% in 2080[1]. The ageing of the population is accompanied by consequences on the pattern of disease; in particular, there is an evident shift from acute events with a higher mortality to a chronicization of patients with multiple morbidities and complex path of treatment. Chronic diseases, including heart disease, stroke, cancer, diabetes and chronic lung disease, are collectively responsible for almost 70% of all deaths worldwide[29]. In Italy in less than thirty years, one third of the population of our country will be made up of people over 65, that is about 20 million people. Of these, 4 million will be over eighty-five and in 2030, about 8 million Italians will be affected by 3 or more chronic diseases and 8 million will be affected by at least one serious chronic disease[1]. This will lead to serious health, social and financial issues.

To properly face this situation national health care system should move towards prevention and long-term care, shifting the site of care provision from hospitals and long-term facilities to home and community settings, with the "expectation of cost savings, or at the very least, that such substitution might lead to more efficient use of nursing home and hospital beds"[30]. The World Health Organization's Global Strategy and Action Plan on Ageing and Health highlights the importance of delivering home and community-based care to enable older people to 'age in place' with dignity, therefore home care is becoming a national priority in many countries[31]. The same trend is pursued in Europe, that is characterized by changing life-style trends, smaller families and growing labour market participation of women and, therefore, there are less possibilities of providing care informally[3]: growing demand for care, in combination with the diminished potential for informal care, is likely to result in a need to expand formal care services and increase expenditure. Thus, many European countries are developing community living and care, including home care, seen as a cost effective

solution and a way of maintaining people's independence, being also a mode of care preferred by clients[3].

However, there are two more challenges: a lack of financial investment and a shortage of health care professionals. For a variety of historical, economic, and social reasons, European countries devote different percentages of their healthcare spending to long-term care: according to Eurostat data referring to 2014, they range from 0.1% of total healthcare spending in Bulgaria to 26.3% in Sweden. In Italy in 2014, spending on long-term care accounted for 10.1% of healthcare spending, or 14.9 billion euros (public spending + household spending). Of this, only 2.3 billion (1.3% of total health care spending) was provided for the provision of home care and families contributed about 76 million euros (ISTAT 2017). Another point is that health systems in all countries are facing shortages of health workers, with different groups affected to greater or lesser degrees: more specifically, the Global Strategy on Human Resources for Health Workforce 2030[32] reports that shortages can mount up to 9.9 million physicians, nurses and midwives globally by 2030. In Europe, health workforce imbalances and shortages are a big concern: although physicians and nurses are increasing of about 10% over the past 10 years, this number cannot cover the increasing needs of ageing populations[33]. Another point is to get the right skills-mix balance to provide effective and efficient health care practices. Looking in particular to nurses and doctors' ratio, it varies across regions, from below 1 nurse to every physician in Georgia and Greece and between 4 and 5 nurses per physician in Finland and Ireland[33].

In this context, a possible answer is another trend that is emerging: a particular practice called "task shifting", that is a rational redistribution of tasks and activities among health professionals; it is seen as a possible solution to optimize and exploit the actual health and financial resources to face the complex challenges of the system. Task shifting practices have been already used in low-income countries, in particular in Africa, where the staff shortages are tighter[4], but are also being developed in

hospitals and facilities around the world, although finding obstacles in their implementation.

Therefore, two possibilities emerge. On the one hand, there is a strengthening of home care work force that can make care more accessible in terms of space and time to the increasing number of elder patients demanding for it. On the other hand, task shifting started to be highlighted as a possible solution for reorganizing and manage the actual workforce in a better way. Both strategies can positively help to exploit the actual usage of health resources, both human and financial one.

As will be better explained and explored throughout this thesis, task shifting is predominantly defined in the hospital setting and little is known about its implementation at the home level. For this reason in this elaborate will be deepened whether an intersection between the two solutions exists, and, if yes, how it is happening and how it is influencing the home health professionals' activities. All these elements will be deepened in the following paragraphs.

1.2 Task Shifting

This paragraph presents in detail one of the two solutions that are emerging in the actual health care context: task shifting. It illustrates the state of the art of task shifting by giving its definition, taxonomy, its importance and contribution in the health care scenario, process of implementation and its main barriers and enablers, providing some examples.

1.2.1 Definition

Task shifting was defined by the World Health Organization (WHO) in 2008, as "*the rational redistribution of tasks among health workforce teams*"[4]. Therefore, task shifting is the approach through which specific tasks are transferred and moved between different actors of the health care system. The term "rational" refers to root cause behind these shifts: "*specific tasks are moved, where appropriate, from highly qualified health workers to health workers who have fewer qualifications in order to make more efficient use of the available HRH [human resources for health]*"[4].

Anyway, the above mentioned definition of task shifting, according to a position paper conducted by the European Commission Expert Panel on Effective ways of Investing in Health[13] (van Schalkwyk et al. 2020), is simplistic because it is seen only as a mean to promote efficiency. Schalkwyk observed that there are different reasons that makes this definition limited in its nature. First, some tasks could be better performed by health workers with more skills, and higher pay than at present, therefore limiting task shifting only to a shift from highly to lower qualified workers could be not efficient. Second, the above definition sees the health professions in a hierarchical logic where tasks are transferred from the top to the bottom of the pyramid, risking undermining health care, that is moving towards a team approach, where everyone has equal importance and makes a distinctive contribution. Third, patient empowerment is gaining recognition, therefore individuals are becoming more independent and responsible of their own care, and so play an increasing active role and should be included in the definition. Lastly, the boom of technological advancement is offering

many possibilities to shift tasks from humans to technologies. All these considerations are included and described visually by a new framework developed by Schalkwyk that is more comprehensive than the traditional one[13]:

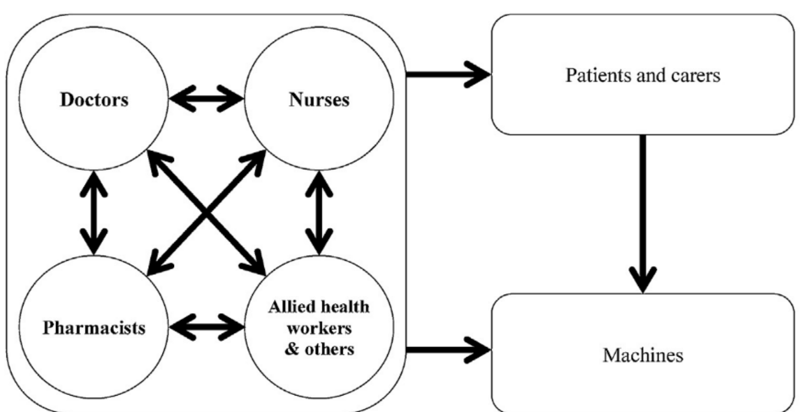


Figure 1: Schalkwyk framework of task shifting in health care

1.2.2 Taxonomy

Task shifting can be classified using different taxonomies. The one proposed by the European Commission[14] and supported by the new framework of Schalkwyk[13], involves three broad sets of changes to roles:

4. *Enhancement*: Increasing the depth of the job by extending the role or skills of a particular group of workers. It means expanding the tasks and the responsibilities of a role that can be a health worker, but also a patient or carer with the acquisition of new skills and competencies[13];
5. *Substitution/delegation*: Exchanging one type of work from one profession to another profession, breaking traditional professional divides. That means transferring responsibilities of a task or role traditionally associated with one type of health worker to another or to a patient or carer[13];
6. *Innovation*: Creating new jobs by introducing a new type of worker (or technology). It involves the introduction of a new set of roles or tasks, for example introducing a new technology that can involve the creation of a new occupational group[13].

Moreover, task shifting involves many different health care professional and also the informal care sector, which includes caregivers and patients[34]. For this reason, the

three main categories of task shifting described above can assume a broad range of forms according to the actors and the tasks that are involved. Below will be presented the most diffused ones[14]:

1. *Enhancing the roles of nurses*: the role of nurses is evolving and changing a lot[35]. However, there are poor and incoherent results regarding the effectiveness of their enhancement of the role of nurses at hospital level, for example, a Cochrane review found that enhancement of nurses was not associated with a reduction of mortality rate, but it is associated with a reduced length of stay and incidence of pressure ulcers reduced[36]
2. *Enhancing the roles of pharmacists*: with the aging of the population there is an increase of the rates of polypharmacy and multiple healthcare providers, and the management of medication has become increasingly complex[37]. Therefore, pharmacists' role has changed, including also the task of helping patients in the management of medicines[13].
3. *Substitution from doctors to nurses*: this is the greatest break of traditional boundaries, because historically the medical profession has tended to guard its privileges[13]. There is lack of uniformity regarding the efficiency and efficacy of such shift of tasks. Some studies advance the thesis that the introduction of nurse-led care may not be cost savings due to an unmet need or the generation of additional demand[38]. While, others studies sustain that nurses can deliver care that achieves comparable outcomes in different fields such as primary care[38], weaning patient from ventilation[39], management of obstructive sleep apnoea[40] and preoperative assessment[41].
4. *Substitution in prescribing*: if supported by protocols, there are many cases of prescribing by non-doctors in primary and secondary care that had the same effectiveness of the care delivered of medical prescribers[42].
5. *Innovation in models of care and other forms of task shifting*: the introduction of new models of care may involve a shift of tasks between professionals or teams[13].

6. *Task shifting to patients:* this typology introduce the concept of self-management that has evolved over time [43], moving from a passive patient, to an active one. If the principles of agency and autonomy are good reasons to enhance this development, there is still lack of evidence that it improves the health outcomes[13].
7. *Task shifting to community health workers*: community health workers in low- and middle- income countries are the ones that provide a range of preventive intervention, especially in maternal and child health[13]. Instead, in high-income countries, community health workers are underutilized and their role is unregulated and unrecognized, highlighting the necessity to develop new training and to integrate them into the health and social care system[44].
8. *Task shifting to machines*: technological advances are innovating the way in which health care is delivered, leading to a shift of tasks from humans to machines[13]. In particular, machines have a potential in the management of physical and mental health problems, even if there is lack of evidence about their effectiveness[45,46]. Attention has been devoted also on the wearable devices that offer continuous monitoring[47] and on the use of artificial intelligence (AI) in supporting and performing diagnosis[48]

1.2.3 Benefit of task shifting

In the actual health care context task shifting plays a key role, and the reasons why its integration in the system is relevant have been presented by the European Commission in 2019 into four main points:

1) Task shifting can contribute to the *sustainability of the health workforce*: this can happen both in addressing the staff shortage issue, and the burnout among health workers, that is growing due to high workload they have to face;
2) Task shifting can contribute to the *financial and social sustainability* of health system that can happen in two different ways. The first one is transferring activities from higher qualified and paid health professionals to lower ones and bringing to a reduction of costs and consequently savings. The second one is

transferring roles from lower to higher qualified resources that can be more expensive, but also more efficient and therefore can achieve better outcomes. This can help in support social sustainability that is the maintenance of a health care system that is trusted and used by the society;

3) Task shifting can be a way to *improve quality of care*: this happen when some activities are performed better by one group than another, and this benefits on the patients' health outcomes;
4) Task shifting can enhance the *resilience* of the health system[14]: this happen because task shifting can contribute to increase the flexibility of the system that can help in case of emergency and when the system is under pressure.

Therefore, in a health world challenged by a staff shortages and a lack of financial incomes and a consequent risk of the decrease of the effectiveness of care, task shifting can help both to optimize the existing resources and to create new working positions involving health workers who receive specific competency-based training[4].

1.2.4 Process

Implement task shifting means change the structure of how the system is organized and this cannot happen suddenly but should be part of a process. There are two different ways in which this process can be performed: 1) a planned process, that involves the formal definition of new roles, the adoption of new training programmes and a programme of implementation; 2) an incremental process, more diffused, where task may be delegated to another health worker in response to staff shortages before being formalized by norms[13].

1.2.5 Enablers and Barriers of task shifting within health care system

Historically, changing roles in the skill mix and the distribution of tasks have been driven by at least five factors, the changing pattern of disease, technological advances, professional norms, including attitudes to hierarchies, shortages of health workers, and the drive for increased efficiency and cost effectiveness[14].

The European Observatory on Health Systems and Policies has identified the main barriers and facilitators to task shifting through case studies of policies across EU[14].

1.2.5.1 Enablers in the health care system

1. *Staff Shortages*: overall staff shortages have been an important driver of changes in clinical responsibilities. An example is in France, where in rural areas a shortage of doctors led to the development of a new policy that introduced new roles such as nurse practitioners or changes to regulatory processes for non-medical professionals[14].
2. *Increasing complexity of care*: changes in pattern disease and in the characteristics of the patients is a driver to implement task shifting. An example is in Denmark where community nurses had the responsibility over patients with conditions that were usually managed in hospitals, like dialysis, management of intravenous chemotherapy and complex palliative care[14].
3. *Changing professional attitudes*: due to feminisation of the medical workforce, the desire of younger doctors to improve their work life balance and the recognition of the benefits of multidisciplinary teamwork especially in the context of the ageing of the population, the traditional model of primary care, based on male doctors in sole practice is disappearing. This trend is an enabler because foster collaboration to task shifting and some cross-sectional research demonstrated that nurses and physicians in context of major skill-mix reforms, were motivated to have a new role and expand their tasks[14]

1.2.5.2 Barriers in the health care system

1. *Legal factors*: the alignment between changes and laws is fundamental, however legislation struggled to keep pace with the changing roles of professions, in particular the emergence of new categories of health workers is not matched by legal changes.
2. *Professional associations*: in many countries professional associations and trade unions are barriers to the changes in responsibilities. An example is in Austria, were the medical profession opposed a legislation in favour of task shifting

activities because they argued that it would threaten the quality of care, reduce the relationship of trust between doctors and patients and weaken the position of profession when negotiating with the social insurance funds[14]. Also in Italy there is a huge opposition from the medical sector, an example is the position of the President of Fnomeceo Filippo Anelli, according to which only physicians with the skills acquired in long years of training can guarantee quality of care, especially in a context of transition such as the current one. Anelli argues that it is necessary that everyone plays his/her own role in the best way, with collaboration and respect, but claiming the autonomy of doctors against the bureaucratization that affects their freedom of action[22].

3. *Pilot projects and experiments*: a barrier to task shifting is the feeling that it is a one direction change, not reversable. This fear can be overcoming through temporal experiments, similar to what happened in Netherlands where it was proposed to carry out new task shifting procedures for up to 5 years and incorporate it into law only if it would be positively evaluated[14].
4. *Capacity to implement change*: it is necessary a huge managerial effort and investment to permit the implementation of task shifting. An example is in Denmark, where general practitioners, even if they accepted to implement task shifting, they were overwhelmed with their workload and unable to invest the necessary time to implement the new practice[14].

1.2.6 Recommendation of implementation

It is important to underline that task shifting alone cannot resolve the health workforce crisis, but it is necessary to integrated it with a more broad and systemic revolution of tasks, starting from the implementation of recommendations and guidelines alongside other strategies developed to increase the total number of health workers [4]. For this reason Schalkwyk proposes a set of recommendations on ways to facilitate the integration of task shifting in the health system[13]:

1. *Governance*: governance refers to the need of transparency and participation of the ones that are impacted by the change. Moreover, the expansion of tasks

for a specific role should be accompanied by an adequate remuneration for the increased workload and responsibilities, and for these clear lines of accountability should be assessed. Therefore, task shifting is a process that should be planned and informed by an assessment of all the potential implications and outcomes to mitigate or react quickly to potential adverse effects.

2. *Research and evaluation*: task shifting is still lacking evidence-base in many areas, in particular, the ones related to costs and benefits are under explored. Therefore, it is necessary to enhance the studies and research in this field and determine critical factors for success and failure to inform knowledge of what works and in what circumstances.
3. *Education and training*: to implement task successfully it is necessary that the ones involved understand the rationale for doing it. Therefore training is needed to 1) give to health workers both the general and the specific technical skills necessary to undertake new tasks 2) share the evidence-based on task shifting and how it can improve the quality of care and 3) foster positive attitudes towards adopting flexible role boundaries and demonstrate the benefits of doing so.
4. *Legal and regulatory frameworks*: regulation of health professions should include sufficient flexibility to allow them to adequate to needs and circumstances. Success in task shifting in achievable only if the legal framework is supportive.

Task shifting has numerous potential benefits, but action should be informed by the evidence and guided by guidelines and goals in order to sustain health and financial sustainability of the system and of the patients[14].

1.2.7 Examples of implementation

Task shifting has already been implemented in many low-income countries where the lack of resources and the staff shortages is much more urgent.

An example is in Uganda, where task shifting has been practiced since a very long time, even if without any kind of recommendations and guidelines[49]. In particular in Uganda there are many people affected by HIV/AIDS, and due to the lack of health personnel they are cared by non-specialist doctors or nurses with the support of the community health workers[4]. Another example is in Sudan, where many surgical operations are performed by a team that consist of a surgeon, a scrub nurse and an anaesthetist, where often the latter are locals trained in basic surgery on the job[50].

Task shifting is very diffused in low-income countries, but there are examples also in many countries similar to Italy, such as England, Ireland, Canada, Australia. In England, for example, is diffused the role of Surgical Care Practitioner, nurses that are authorized to perform minor and limited surgeries with Royal College of Surgeon approval[51], or in different countries such as Australia, Canada, Netherlands is developed the figure of Nurse Practitioner (NPs), that works on the boundaries between traditional nursing and medical professions.

1.2.8 Conclusion

The above literature about task shifting shows that this practice has been studied during the years: a developed definition and a clear taxonomy exists, and it is recognized at European level. Anyway, task shifting is always described at health care system level, without specifying the context of implementation of its guidelines and, as specified by the European Commission[14] there is space to clarify the activities and the task shifting's framework.

1.3 Home Care

The following paragraph illustrates home care, the other solution that is developing as a response to the increasing number of chronicization and requests of the population. First, it presents the definition and a referring framework of home care and its importance in health care system. Second, it deepens the roles that most impact the efficacy of home services. Third, it describes the managerial aspects focusing also on

the upcoming challenges. Finally, it studies the role of nurses, focusing on the evolution of the role in the home care landscape.

1.3.1 Definition

The term "home care" is a very broad concept that varies across countries and sectors and more generally it aims to address people's health and social needs while in their home by providing appropriate and high-quality home based health care and social services, by formal and informal caregivers, with the use of technology when appropriate, within a balanced and affordable continuum of care[5,6]. Also an EURHOMAP study has defined home care as care provided by professional carers within client's own homes[10]. Moreover, EURHOMAP proposes a rephrased conceptual framework of Murray and Frenk (2000) to describe the main elements and actors of home care, as it is illustrated in the figure below:

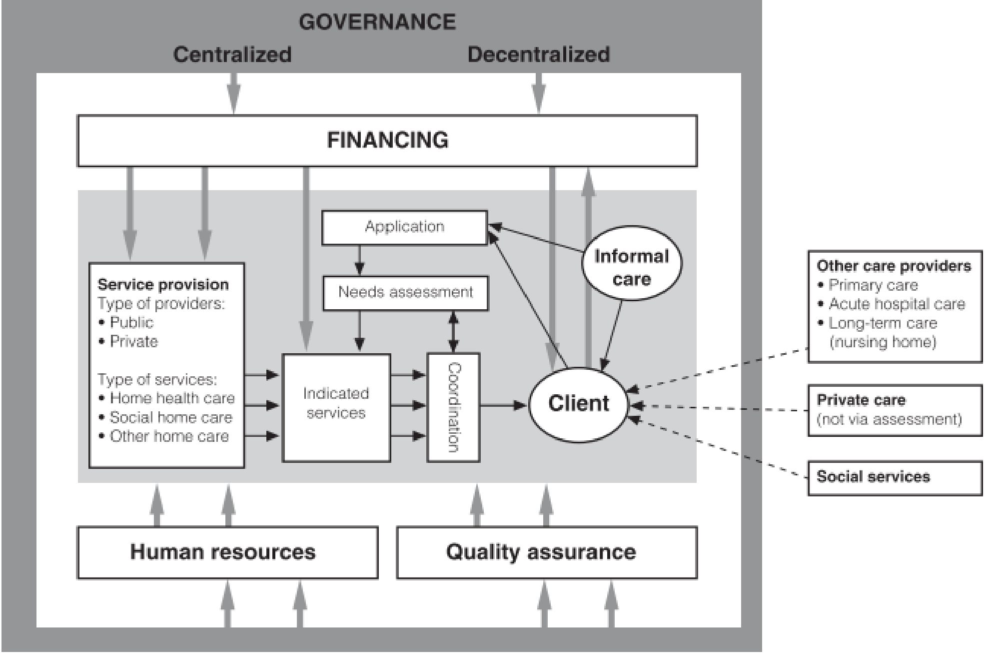


Figure 2: EURHOMAP conceptual framework of home care

Looking at the framework of EURHOMAP[10], the elements that constitute the home care definition are:

- *Governance*: it refers to policy development, supervision of home care systems and regulation. It refers both to health care and social services;

- *Financing*: it refers to collection of funds that are accumulated in funds pools and allocated to cover the costs of home care services. It consists in the remuneration system of providers and can be either based on budget or related to services allocated to clients;
- *Human resources*: it refers to the fact that home care is a labour-intensive activity, and the human resources are the most important. Therefore, the availability of an adequate number of skilled staff is important, and this requires professional development, training, and continuous education;
- *Quality assurance*: it refers to the safeguarding the quality of services, that is an issue due to the fragmented nature and the difficulty of controlling situations in the homes of patients;
- *Service provision*: it refers to the activities organized within public and private owned agencies and institutions that delivers social and health care services in clients' homes. In this context the box "coordination" has a fundamental part because integration and coordination in home care is very challenging and important;
- *Application and needs assessment*: it refers to the procedure required to apply for care and the assessment of clients' needs. Often those people that assess needs, are not the same that provide care, thus in the framework there is a distinction between application and needs assessment and the delivery process;
- *Clients and informal care:* they are the hearth of the framework, and they apply for a need's assessment for the provision of home care services.

1.3.2 Importance of home care

Home care is a term whose importance is continuously increasing and will become an indispensable and integral part for a good health system development in the future. There are several reasons that explain this increasingly importance. First, people, especially the oldest ones, prefer to be cared at home, that is a place that rises emotional factors and maintain the family united in the moment of illness, and this could help to face the disease. Therefore, due to the aging of population, the people that request to be treated at home are increasing. Second, home care can be seen as

an effective and safe alternative to conventional hospitalization and several studies demonstrate that it can help to optimize hospital bed, decrease readmissions and, thus, increase patient satisfaction[7,8,9]. An example is the study about the examination of impact of intensive home-care surveillance on morbidity rates of elderly patients with severe congestive heart failure: the study showed that the home care program was associated with a marked decrease in the need of hospitalization and improved the functional status of patients[52]. As a consequence, it reduces the costs and complication risks related to the hospital environment[53].

1.3.3 Roles involved in home care

Home care is a labour-intensive activity that involves a mix of professional and non-professional personnel such as nurses, home care assistants, therapists, social workers, physicians, dietitians, pharmacists but also companions, volunteers, and others. In the most recent years there are some initiatives that tries to replace human with technologies, but home care remains mostly a physical activity that should be performed by skilled and capable health staff, even because they are linked to interpersonal relationships, to collaborate with patients, family and multi-professionals' teams. Below it will be deepened those figures the health professional that take part in home care mostly.

Nurses are the largest group, and they are the most involved health professional figure in home care service provisions. Nurses provide an essential contribution to achieve optimal outcomes for both patients and their families[54]. Their role comprehend many different activities: they are considered clinical specialists, but also coordinator of care, and case managers responsible for offering various care practices to patients and for performing important leadership roles[55,56,57,58]. Different studies enlist and recognise as home nursing practice performances that spaces from personal care in daily activities to technical nursing care, but also the prevention and psychosocial care[59], and the bridge role with families and multi-professional teams[60,61]. A need of the home care setting is to have nurses always more independent, that can both diagnostic

patient's health status and coordinate and manage care teams to provide better and more advanced procedures[12].

Health care assistants provide a huge range of services: from assisting with therapy and the activities of daily living to preparing food. They are the ones that spend the most time with the patient and revest a key role, but are subject to staff shortages, that will create problems in the future[12].

Physiotherapists helps in managing physical and cognitive limitations. They are important since home-based physiotherapy improves overall physical wellbeing, enhances social functioning, ensures routine monitoring of isolated clients, and reduces the rate of re-hospitalization and future health care service utilization[62].

The last group is the one of *informal carer*, that is traditionally defined as the one "*that looks after family, partners, friends or neighbours in need of help because they are ill, frail or have a disability; the care they provide is unpaid*"[63]. The role of informal carer is fundamental in particular in the southern Europe, for the economic sustainability of home care and in the manage of acute events, that would otherwise remain unattended[64]. Informal caregivers are particularly important as providers of direct care and as managers and coordinators of a range of many support services received by the patients[65,66].

Looking at the composition of the health personnel in home care in Europe, there is a lot of variety in terms of composition and role's tasks. For example, the Netherlands have the highest level of formal care, with little use of informal care, while Italy relied mostly on informal care. Belgian home care differed from other countries in its definition of nursing care, including personal care such as washing, cleaning, and dressing. In Germany, more than half of home care is managed by private organizations, which are also very small[1].

1.3.4 Managerial aspects of home care

Management of home care refers to the actual provision of services, and it varies a lot across Europe. There are many challenging and controversial aspects. By referring to the *nature of home care*, the boundary between health and social care is blurred and varies a lot within EU countries. Many times, the term home care refers to both social and health care systems. Health care systems include rehabilitations, supportive, health-promoting or disease-preventive and technical nursing care for both chronic and acute patients[11], while social services offer household duties (e.g. cleaning, cooking, shopping), socializing activities and personal care (e.g. bathing and dressing) helping or even substituting the informal care that support older people or to the ones living alone[12]. For example, in Italy, like in other countries such as France, Belgium or UK, the organizational model health and social sectors are divided into two different systems[12].

Within home care, there are many services that are provided by both public and private organization, the former depends directly on the governmental institutions (at national, regional or local level), the latter are influenced by policies to guarantee quality and determine a mean of price setting[10]. Therefore, the organisation and the ownership of service provider is a challenging aspect to be managed, particularly in a horizon in which a fundamental aspect to deliver high quality, efficient and complete care is the *integration of all the home care services*. Such integration can be within the home care services, or between home care and others sectors services[10]. This integration can happen in three different ways: 1) the provision of all services is centralized in one single organization or team; 2) there is a coordinator that manage and integrate all the different providers; 3) professionals voluntary decide to contact other professionals and manage the patients together. Thus, the other important aspect is *coordination:* coordination deepen the concept of integration and it is both between the different home care actors and both between hospitals and home care providers[10]. Coordination, together with integration, is very important because a poor coordination and integration between home care and hospital can lead to more frequent hospital readmission, waiting lists, bed-blocking, multiplication of diagnosis, tests and

procedures, and therefore medical errors, suboptimal judgements and low quality of care[67].

In conclusion, it is important to define the nature of home care clearly, clarifying the distinction between health and social services. This clarification can lead to a better management, integration and coordination of the different services provided at home and boost the quality and efficacy of outcomes on the patients and on all the health care system.

1.3.5 Challenges of home care

As described above, home care is a huge and various world, within which there are several different challenges to face. These issues are grouped into different categories, as a WHO report about home care in Europe explains[12]:

- *Serving the right people at the right time with the right mean*: these are three shared general objectives of every modern health and social systems;
- *Service delivery in home care*: as it has been written above, in home care the services provided are many, and therefore the delivery is a complex process, that rely on different aspects:
    - Needs assessment: that means to establish clear eligibility criteria, proper screening, and a multi-dimensional need assessment. In this way care would be directed to those who would benefit the most.
    - Integration: as said before, integration and coordination of the different individual providers units is essential to increase efficiency and efficacy of care, improving the quality and the level of satisfaction of both users and providers of care. To obtain this, is necessary to enhance continuity of care, customizing services and empowering service users.
    - Proper management skills: managerial skills are fundamental in a context where there is lack of coordination and organization. This is relevant at every level: national, regional, and local one. There is the need of developing leading mechanisms for contracting, purchasing, planning,

evaluating, quality assurance mechanisms and producing policies to recruit and retain home care workers, that means also deliver appropriate levels of training and pay.
    - A central service point for advice, information and help is necessary to support clients in clarifying their needs and to improve cooperation[12].

- *Funding home care*: funding reforms should be developed to help to integrate the different funding systems and overcome institutional barriers, especially between outpatient and inpatient care, between health and welfare services and between professional and informal care. Regarding this aspect, there are several other consideration and issues:
    - Availability of reliable information regarding public and private expenditures;
    - Clear criteria to shift resources among levels and components of care to make transparent public funds and private ones;
    - Ensuring the correct use of market mechanisms (e.g. cash payments, care allowances, personal budgets and vouchers).
- *Creating resources in home care*: it has already been written about staff shortages and that this leads often to have untrained personnel that are inadequate for the tasks and roles requested to them, therefore there is a lack of knowledge in home care and there is the need of training[6]. Particularly, it is necessary to 1) train professional home care personnel to become more integrated and multidisciplinary, including skills to establish positive interpersonal relationships; 2) train home care personnel in using technologies with digital skills, recognizing such activities as part of their job; 3) train home care users and their informal carers also through network of support. This education and training can be done only taking investment decisions that are supported and planned together with technological innovation.
- *Roles and responsibilities in home care*: they are intended along three different levels of government:
    - National level: need of policies to guide planning, legislation, and regulation of home care, especially in setting guidelines for allocating

scarce resources and developing human and material resources homogeneously across the country.

- Regional level: responsible for allocating properly the resources based on clearly defined priorities set by the national administration.
- Local level: home care is applied in practice at the community level and community organization, norms, standards, and leadership have a key role. For this reason, strategies should be developed to promote and effective leadership and mobilize community action in planning and implementing home care. For a successful implementation of these strategies all the actors, both formal and informal, should be involved in sustaining the programme[6]

Therefore, for the purposes of this thesis, it is interesting to analyse whether task shifting has application in home care setting. This in-depth study aims at investigating the activities, the root causes and the enablers of task shifting, that means which are the necessary factors that generate and permits a positive implementation of such a phenomenon in home care. Investigate on root causes and enablers is useful to define the cause root of home task shifting, and to define a descriptive framework useful for further studies regarding this topic.

2. SYSTEMATIC LITERATURE REVIEW

2.1 Literature Review Research Methodology

2.1.1 Search strategy and Report Eligibility Criteria

In this paragraph it is illustrated the methodology adopted to analyse the literature review about task shifting implementation in home care setting, as presented in chapter 1.

The starting point is the study of the two solutions identified above: task shifting and home care. In the state of the art, both trends were analysed independently, to define their main features, filed of application and their contribution to the health context. The two solutions are very actual topics, as presented in the paragraphs above and, as task shifting in hospital is very debated by the health community[19,22,68–74], it was decided to investigate whether task shifting is implemented also in the home care context. To do this, the main key words deriving from the literature[4,5,14,75], used to develop the previous paragraphs, were selected: "Task shifting", "Home Care", "Task Revolution" and "Long-term Care". These key words were used on three databases: Scopus, Web of Science and PubMed to find out the most recent news and papers. The result of this research highlighted that the intersection of these worlds is an empty set, showing a gap in the literature, as is shown in Table 1.

Key words: Home care, task shifting

Search Engine	n. results	n. Interesting results
Scopus	130	2
Web Science	12	0
Pubmed	57	0

Key words: Long term care, task shifting

Search Engine	n. results	n. Interesting results
Scopus	109	0
Web Science	42	0
Pubmed	8	1

Key words: Home care, task revolution

Search Engine	n. results	n. Interesting results
Scopus	9	0
Web Science	3	0
Pubmed	2	0

Key words: Long term care, task revolution

Search Engine	n. results	n. Interesting results
Scopus	9	0
Web Science	1	0
Pubmed	1	0

Table 1: Task shifting and Home care intersection's results

These results had been commented under the light of the actual debate regarding these two topics. In particular, looking at different newspaper and web sources such as QuotidianoSanità, Intrahealth, Saluteinternazionale, FNOPI and WHO web site, it emerged that task shifting is developed in hospital setting, but there are also evolutions and changes in the home care context that can be attributed to task shifting definition. Therefore, it seems that home task shifting exists in the home care context but there is no awareness in the academic literature.

Therefore, it was decided to explore and deepen this gap through a systematic literature review, to have a global overview of the situation and describe the as-is situation. To overcome the lack of awareness regarding task shifting practice, it was looked at the definition of task shifting[4] and to the most recurring words in the newspapers' articles[19,21,22,76]; thus, the key words to make the research query were selected: "home care", "role", "responsabil*", "change", "shift", "redistribution" and "advanced". Moreover, it has been decided to investigate the argument in a very specific way, in order to have a focus and a clear vision on the topic of interest, therefore in the query were included also those roles that are the protagonists of home care, that are: "Nurs*", "Home care assistant", "Physiotherapist" and, according to the results founded in literature also the figure of "pharmacist*" was included. These terms were launched on Scopus, finding out 671 results. These papers were filtered according two main criteria:

- *Year of publication*: it was decided to consider only the most recent publication, so all the papers published since 2008, year in which WHO introduced the definition of task shifting[4]
- *Health care system*: it was decided to consider only the countries around all the world that have comparable health care system's structure. Since the case study has been implemented on the Italian system, only countries with a public health care system were selected.

The resulting query launched on Scopus is:

(TITLE-ABS-KEY (nurs*) OR TITLE-ABS-KEY ("home care assistant") OR TITLE-ABS-KEY (pharmacist*) OR TITLE-ABS-KEY (physiotherapist*) AND TITLE-ABS-KEY ("home care") AND TITLE-ABS-KEY (role) OR TITLE-ABS-KEY (responsabil*) AND TITLE-ABS-KEY (change) OR TITLE-ABS-KEY (shift) OR TITLE-ABS-KEY (redistribution) OR TITLE-ABS-KEY (advanced))
AND (LIMIT-TO (AFFILCOUNTRY, "United Kingdom") OR LIMIT-TO (AFFILCOUNTRY, "Canada") OR LIMIT-TO (AFFILCOUNTRY, "Australia") OR LIMIT-TO (AFFILCOUNTRY, "Norway") OR LIMIT-TO (AFFILCOUNTRY, "Sweden") OR LIMIT-TO (AFFILCOUNTRY, "Brazil") OR LIMIT-TO (AFFILCOUNTRY, "Taiwan") OR LIMIT-TO (AFFILCOUNTRY, "Denmark") OR LIMIT-TO (AFFILCOUNTRY, "Italy") OR LIMIT-TO (AFFILCOUNTRY, "New Zealand") OR LIMIT-TO (AFFILCOUNTRY, "Spain") OR LIMIT-TO (AFFILCOUNTRY, "Portugal") OR LIMIT-TO (AFFILCOUNTRY, "Finland") OR LIMIT-TO (AFFILCOUNTRY, "Greece") OR LIMIT-TO (AFFILCOUNTRY, "Iceland") OR LIMIT-TO (AFFILCOUNTRY, "Ireland") OR LIMIT-TO (AFFILCOUNTRY, "South Africa"))
AND (LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016) OR LIMIT-TO (PUBYEAR, 2015) OR LIMIT-TO (PUBYEAR, 2014) OR LIMIT-TO (PUBYEAR, 2013) OR LIMIT-TO (PUBYEAR, 2012) OR LIMIT-TO (PUBYEAR, 2011) OR LIMIT-TO (PUBYEAR, 2010) OR LIMIT-TO (PUBYEAR, 2009) OR LIMIT-TO (PUBYEAR, 2008))

After this selection, only 140 papers remain and to them was added 1 paper taken from the references, for a total of 141 paper analysed. The titles and abstracts of the papers have been screened according to their effective pertinence to the home care environment and according to the real existence of changes in the management of the tasks that could be reconducted to task shifting according to its definition. The result of this screening phase was 25 records.

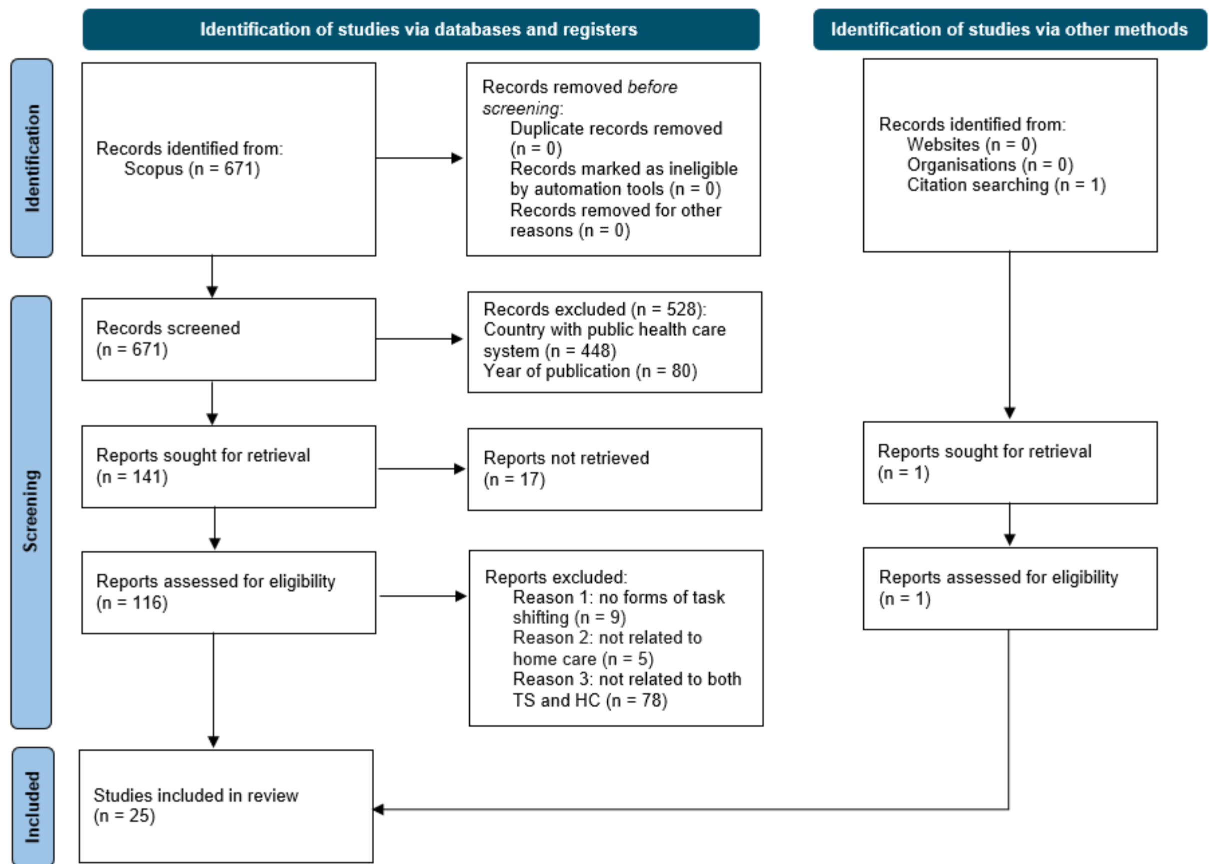


Figure 3: Prisma Diagram. Source: The PRISMA 2020 statement - An updated guideline for reporting systematic reviews

2.1.2 Data collection

The resulting 25 papers have been analysed through framework, build up in Excel looking both at the existing literature and at the recurring elements in the papers. This framework, that is illustrated in the annex 1 is built through an iterative approach. At the beginning, it was built in accordance with the enabler and barriers identified by the European Observatory on Health Systems and Policies[14]. Then, the results were adapted and adjusted based on the findings, limitations and future steps present in the literature review.

The framework has on the rows the "in scope" papers, and on the columns the parameter of evaluation. These parameters are grouped in 6 different categories:

1) *Descriptive features*: in this section, for each paper, is extracted the author/s, the title, the journal, the reference country, the year of publication, the nature of the analysis (quantitative, qualitative or literature review) and the typology of the outcome to understand their distribution in terms of time and space and how the topic of home task shifting was approached till now;
2) *Task shifting typology:* The typologies of task shifting was created using the taxonomy proposed by EU report in 2019[14], which defines the three classes as enhancement, substitution and delegation, and innovation;
3) *Roles involved:* in this section are selected those roles that, as seen in the paragraph 1.3.3, are the most involved in the home care context, that are the nurses, the health care assistant, and the informal carers (caregivers and patients). The addition of pharmacists to the list of roles analysed has been driven by literature findings of some innovative cases in the home setting, where their introduction had a positive impact on patient outcomes;
4) *Root causes*: the starting point of development of this section is the framework proposed by the EU report[14], that was later readjusted in accordance to internal comparison and the most recurring element in the papers analysed. The result is a list of all those elements that are root causes of the implementation of task shifting activities in the home care context. They are:
    - Staff shortages: it refers to the lack of health professionals that is affecting numerous countries, particularly in the home care context;
    - Patient's need: it refers to unmet patient's needs that requires and urgent answer (e.g. a timely diagnosis of the worsening health status of a patient affected by COPD[77], elderly's needs to be cared for multimorbidities[78]);
    - Caregiver's need: it refers to the need of caregivers to be supported and trained in performing their activities with their attendant (e.g. caregiver's need of support to provide care to people living with long-term conditions[79])
    - Health professional's need: it refers to the requests of the different health professionals involved, mainly nurses and health care assistants;

- Need of coordination: it refers to a lack of integration and coordination between the different actors and services performed at home care level; as was seen above in paragraph 1.3.4, this aspect is one of the most important managerial factors in home care context;
- Technology: it refers to the rise of a new technology in the health care context that brings new opportunities also in the home care setting;
- Policy: it refers to the development of new policies and laws regarding home care;
- Need of efficiency and efficacy: it refers to the need to better address the patient's needs, improving the quality of the services delivered and the efficiency with which this quality is achieved, this also as a response to a lack of financial funds;

5) *Enablers*: also in this case the starting point is the framework proposed by the EU report[14], that was later readjusted in accordance to internal comparison and the most recurring element in the papers analysed; the result is this list of elements that should be improved and integrated to positively implement task shifting activities. The elements are:
    - Training: it refers to the necessity to train and educate the actors involved in the task shifting activity due to a lack of knowledge, capabilities, and skills;
    - Collaboration and team approach: it refers to the necessity to connect every actor in a multidisciplinary network based on collaboration, sharing of knowledge and reciprocal support;
    - Policy: it refers to the necessity to develop laws and policy that formally recognize and regulate the changes and the transfer of tasks;
    - Possibility to implement the change: it refers to the necessity to have the concrete possibility to implement the change, referring in particular to an internal organization of the facilities;

The resulting matrix is filled along each row, thus along each "in scope" paper that has been completely read, filling with an "x" if the corresponding element was present, empty otherwise.

After having appropriately completed the framework, the most recurring elements and correlations between the different voices were highlighted. The results are shown in the following paragraph.

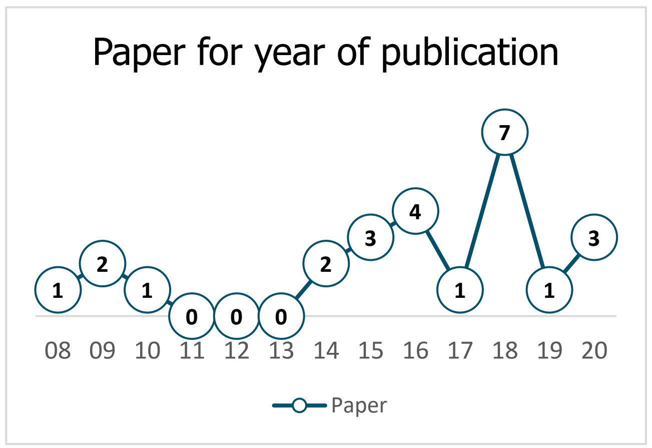
2.2 Literature review analysis and results

This paragraph presents the results of the analysis performed across the papers identified in the literature review described in the previous paragraph.

As it is mentioned above, the papers resulting from the query were 133 and of these 24 were selected and one was added from references. More specifically, it has been selected the ones that refers to home care context and present forms of evolution of roles and tasks that can be reconducted to task shifting's forms based on literature taxonomy[14] (enhancement, substitution/delegation, innovation). Among the papers that were excluded: 9 do not refer to task shifting, 5 do not refer to home care, 78 do not refer to either, and 17 were not accessible. The remaining 25 papers were considered "in scope" and had been analysed through the framework presented above. The results of this analysis is described below.

2.2.1 Article overview

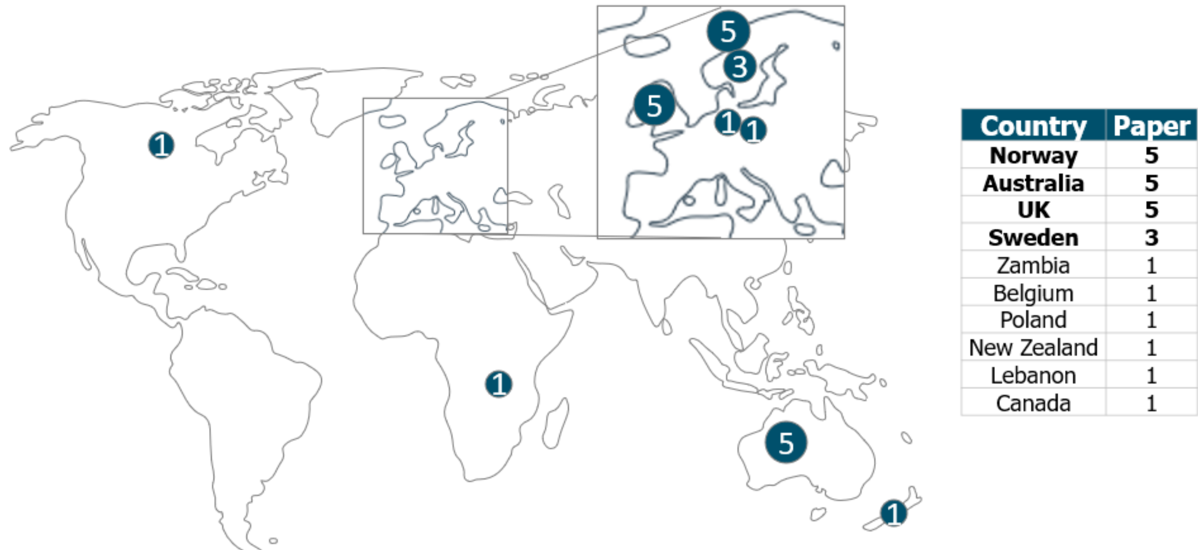
The papers selected are published in a time frame from 2008 and 2020, following the trend presented in the graph 1. The majority is very recent, with a peak of interest in the 2018.



Graph 1: Paper for year of publication

Regarding the geographical distribution of the reference countries, cases of integration are spread in all the continents, but the biggest concentration is in the north of Europe,

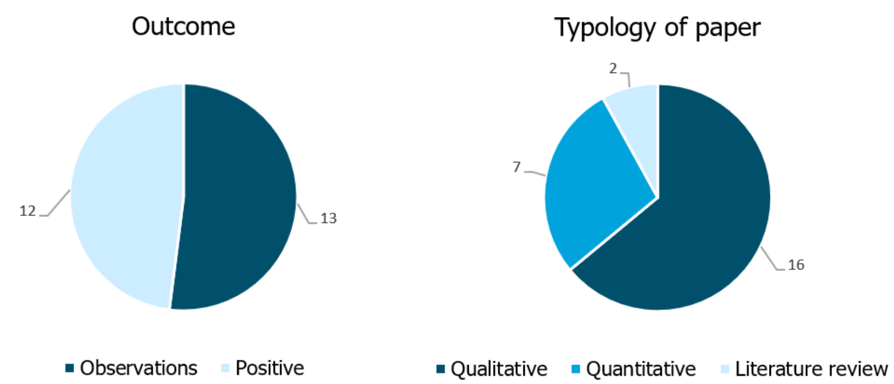
particularly in Norway, UK and Sweden; it is relevant also the concentration in Australia together with the close New Zealand as is shown in figure 4.



Country	Paper
Norway	**5**
Australia	**5**
UK	**5**
Sweden	**3**
Zambia	1
Belgium	1
Poland	1
New Zealand	1
Lebanon	1
Canada	1

Figure 4. Geographical distribution of "in scope" papers

It was also investigated the typology of papers that approaches this theme. The results are presented in the graph 2, and it shows that the majority of the resulting paper adopted a qualitative method, while the number of quantitative research or literature reviews is limited. Therefore, findings are devoted to describing empirical cases mainly, while the quantitative evaluation of the related outcomes is under investigated. This fact gives a lens to read the results of the typology of the outcomes of the papers: the outcomes are mainly qualitative observations and recommendations, and most of those papers that express positive outcomes in applying task shifting in home care context, address it only in a qualitative way. Moreover these qualitative outcomes are fragmented and inhomogeneous, and don't refer to any theoretical framework. Therefore, the first step for the research should be to understand and deepen the mechanism and structure of home task shifting implementation.



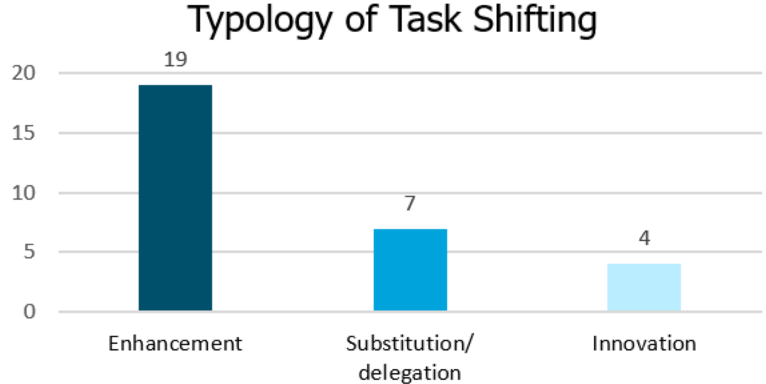
Graph 2: Graphs of outcomes and typology of "in scope" papers

A last point regarding the features of the paper is that in 21 cases out of 25 they address the contextual problems of the health care system scenarios, therefore confirm the topicality and appropriateness of the issues addressed.

2.2.2 Task Shifting typologies

In this section it is reported the results regarding the distribution of the three existing types of task shifting; to derive these results, we associated the activities described in each paper to the theoretical definitions of enhancement, substitution/delegation and innovation proposed by the European Commission[14].

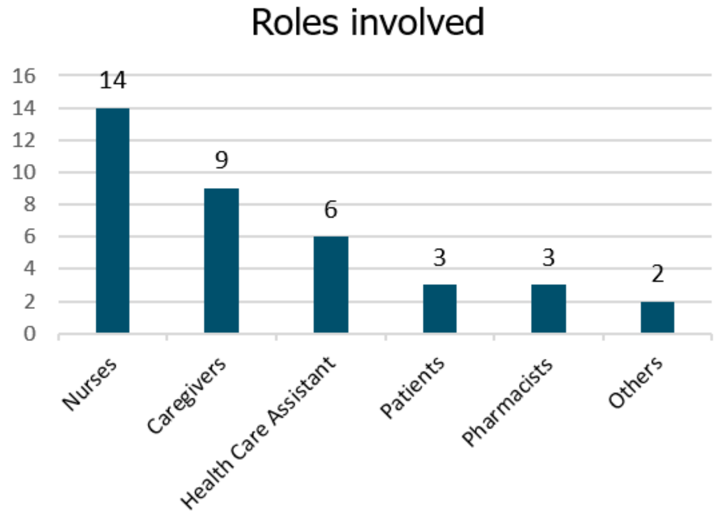
The results are that the most diffused form is enhancement (19), then substitution and delegation (7), and lastly innovation (4). In three cases are present simultaneously two kinds of typologies (i.e. enhancement and substitution: two cases; enhancement and innovation: one case) and in one study all three kinds are present. Results revealed that task shifting practice is present in home care setting in the form of enhancement of role, that means that the actors involved see an enlargement of their role and a professional development.



Graph 3: Typology of task shifting in home care, number of papers

2.2.3 Roles involved

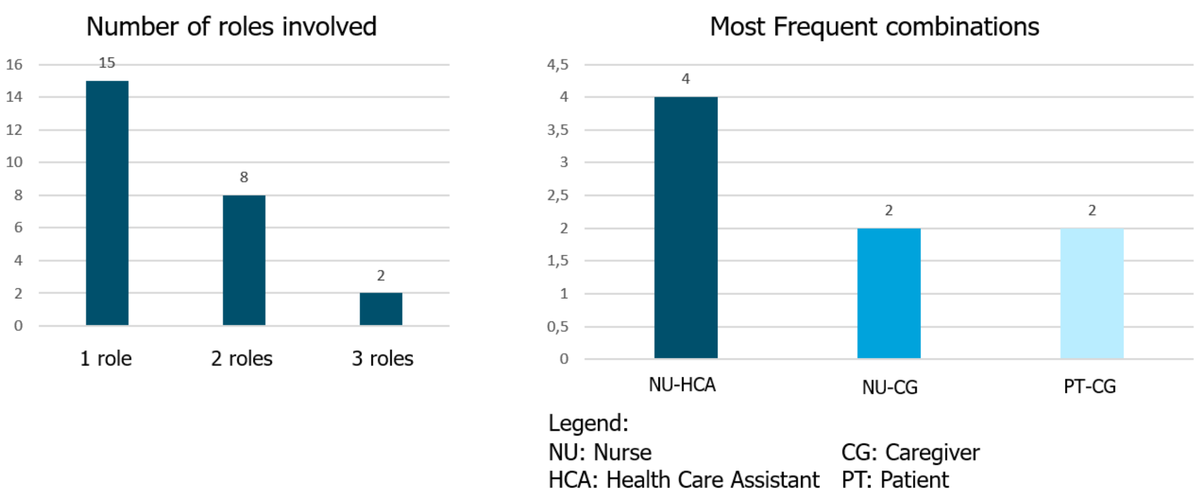
Home nurse is the most involved role in home task shifting: in 14 out of 25 cases nurses are the protagonist of change. Also caregivers (9) and health care assistant (6) are quite involved in a change of their role. Patients (3) developing self-care activities, and pharmacists and other health professional figures (physiotherapists and midwives) are under investigated in the home care setting.



Graph 4: Roles involved in home task shifting

Another aspect to consider is that many roles are contemporaneously involved in a case of home task shifting. The following analysis gives an insight regarding how the home care actors are linked and how they collaborate. As it can seen in graph 5, it results that in 15 cases just 1 role is involved, in 8 cases 2 roles, and in 2 cases 3 roles; moreover, the main combination is the association of nurses and health care assistant

(4 cases), nurses and caregivers (2 cases) and caregivers and patients (2 cases). Therefore, even if the most of papers describe task shifting activities as individual performances, it is actually a multirole concept. In particular, nurses, who are the main character, need a collaboration with HCA and caregivers that are the closest figures to the patients.



Graph 5: Number of roles involved and of most frequent combinations

2.2.4 Activities

The analysis of the activities was performed listing all the activities involved in the task shifting process, and organizing them according to a theoretical taxonomy proposed in a review run in 2017 on nursing practice in home care setting[15], which provide the following classification: 1) *interactive actions;* 2) e*ducational actions; 3) care actions; 4) administrative actions.* In this thesis, the activities that are associated to:

1) *interactive actions,* refer to communication tasks and capability to manage relational situations between the different actors. (e.g. communication with caregivers and patients[80])
2) *educational actions*, refer both to the training and educational support from one more skilled figure to another one and to the increased knowledge and capabilities to perform new activities (e.g. increased knowledge regarding drugs management, learning of health skills by caregivers[81])

3) *care actions*, refer to all the new health activities performed, including self-care practices and the performance of advanced tasks (e.g. diagnosis of health status[77], medication treatment[78])
4) *administrative actions*, refer to all the organizational and managerial aspects (e.g. supervision and control[82], take part in decisional process[83])

The list and the classification of the activities is visible in table 2.

Activity	Role	Category
Diagnosis and observations	Nurse	Care
Negotiating the level of care and type of care the patient will receive	Nurse	Administrative
Coordination of care across health care and non-health care stakeholders	Nurse	Administrative
Advanced clinical practices	Nurse	Care
New assignment: cognitive-behavioral therapy (CBT) in palliative care	Nurse	Care
Expansion of skills	Caregivers	Educational
Expansion of skills	Patient	Care
Training and assistance to caregivers regarding the management of HF	Caregivers	Educational
Training and assistance to patients regarding the management of HF	Patient	Care
Diagnosis and observations	Caregivers	Care
Specialized tasks to verify that patients are performing therapy	Caregivers	Care
Communication with nurses	Health Assistant	Administrative
Wound dressing, diagnosis	Health Assistant	Care
Supervision and organization	Nurse	Administrative
Advanced clinical practices	Health Assistant	Care
Advanced clinical practices	Nurse	Care
New assignment: cognitive-behavioural therapy (CBT) in palliative care	Nurse	Care
New role in HC	Pharmacist	Care
New role in HC	Pharmacist	Care
Introduction of paediatric activities	Nurse	Care
Expansion of tasks using new technology	Nurse	Care
Increased awareness of your disease and self-management	Patient	Care
Communication and training with caregivers	Nurse	Interactive
Ability to understand context and develop different strategies	Nurse	Interactive
Supervision and organization	Others	Administrative
Communication and training with caregivers	Health Assistant	Interactive
Increased knowledge regarding medication management	Nurse	Educational
Management of tracheostomies or enteral feeding	Caregivers	Care
Caregivers take an active role in decision making and take responsibility for their loved ones	Caregivers	Administrative
Nutritional support	Caregivers	Care
Drug Prescription	Nurse	Care
Drug Prescription	Others	Care

Table 2: List and classification of activities of "in scope" papers

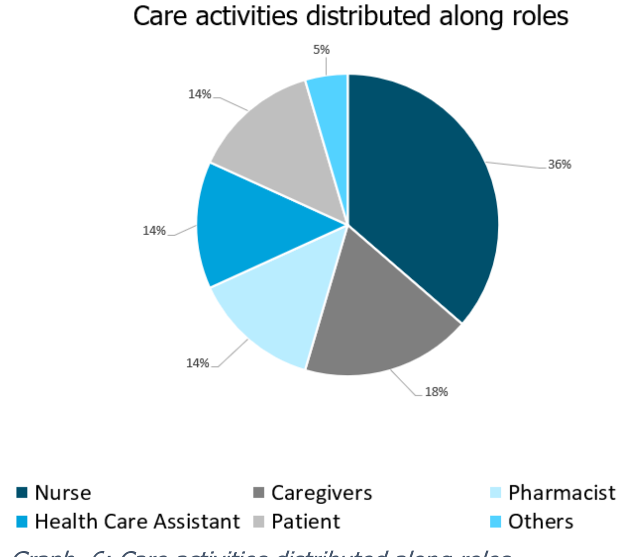
The result of the analysis are presented in table 3: these results show that the tasks shifted regards mainly health activities, where the operators/caregivers enlarge the set of caring

Activities	%
Care Activities	61%
Administrative Activities	19%
Educational Activities	11%
Interactive Activities	8%

Table 3: Activities, Systematic Literature Review, Frequency (%)

activities they deliver to the patient, overcoming their recognized responsibilities and capabilities.

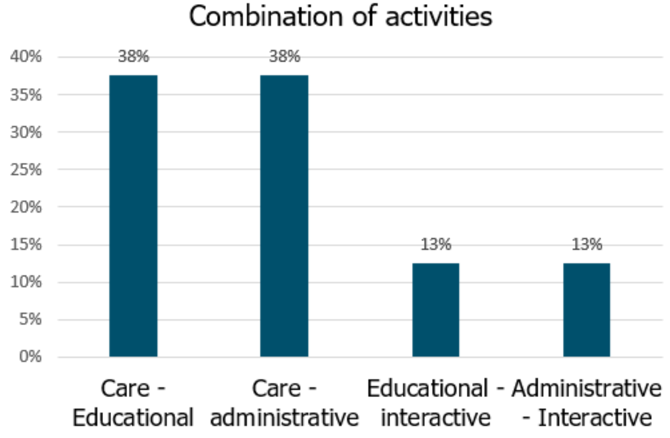
Therefore, being the care activities the most diffused ones in task shifting, it was interesting to deepen the actors supplying the activities. Therefore, it was performed a focus splitting the 61% of care activities along the different roles and was found that nurses are the most involved ones (36%), than caregivers (18%) and then at the same level health care assistant, patients and pharmacists (14%).



Graph 6: Care activities distributed along roles

Moreover, it was analysed which are the roles most involved in the educational activities. Results revealed that caregivers (75%) are the actors more frequently involved in educational activities, this probably happens because being the caregivers the least formed about health care, they are the ones who require the most training.

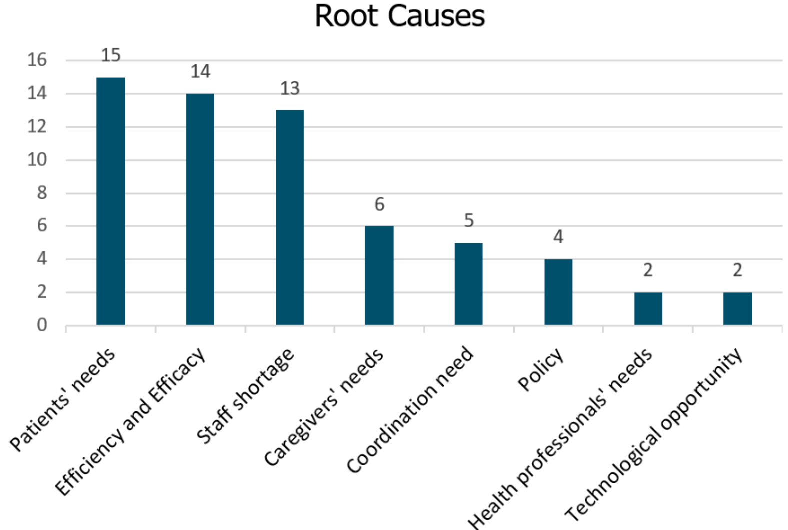
It was also looked at the coexistence of different types of activities in the same paper, and it was found that the activities that most frequently combine are those: care-educational and care-administrative. The first because often the care activities performed in beyond the recognized role require training; the second because often to be able to perform additional care activities requires the performance of administrative and managerial activities. Indeed, it results that nurses are responsible of the 57% of the administrative actions, that means that their role sees also an evolution in terms of organizational responsibilities, being the most involved health professional in home care.



Graph 7: Combination of activities related to home task shifting

2.2.5 Root causes

The analysis of the root causes is interesting because it gives an overview regarding which are the elements that generate task shifting activities. The main cause is the patient's needs (15 cases). Therefore, task shifting seems to be a first response to the rise of needs and emergence of the home care patients. The second recurring root cause is the need of increase efficiency and efficacy of care (14 cases). The issue of the staff shortages is the other important root cause (13 cases). These three factors are the most recurrent ones, and stand out from the others, as it is possible to see in the graph 8.



Graph 8: Root Causes of home task shifting; Systematic Literature Review, Numbers of papers

2.2.6 Root causes and Activities

A further analysis is to understand which is the link between the root causes and the activities, to catch all the possible correlations between them. The results are the one in the table 4 and brings to the following observations:

Root Causes	Care	Administrative	Educational	Interactive
Staff Shortage	53%	80%	25%	0%
Patients' need	63%	40%	75%	33%
Caregivers' need	21%	0%	75%	33%
Health Professional's need	11%	0%	25%	0%
Coordination's need	21%	40%	25%	0%
Technology	11%	0%	0%	0%
Policy	11%	40%	0%	33%
Efficiency and Efficacy	68%	80%	50%	67%

Table 4: Root Causes and Activities, Frequency (%)

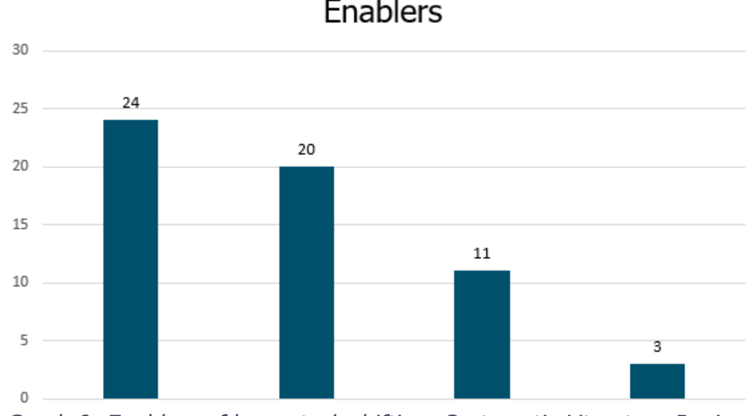
- Care activities are mainly linked to the need of efficiency and efficacy, secondly are a response to patient's need. This shows that there is the intention to answer to patient's need in the most effective way and high quality of care, and also to increase efficiency reducing the impacts on the health care system;
- Educational activities are mainly linked to the need of patients and caregivers. This means that patients and caregivers, that are having a more active and participative role than in the past, need educational programmes and training to better perform this new active role;
- Interactive activities are connected to the patients and caregivers' needs; this is interesting because, as supported by many scholars[15] interaction among nurses and patients, family members, and/or caregivers is a fundamental aspect of the home context, and these results suggest that the root causes of such relationships are the patients and caregiver's needs.

Analysing the table horizontally and focusing on the most recurrent root causes, it is possible to observe that:

- Efficiency and efficacy root cause is the most transversal one: it is correlated, with high recurrence, to all the activities. This could mean that home task shifting, in all its forms, can improve efficiency and efficacy;
- Staff shortage relates to the most practical activities (i.e. care and administrative ones); this happens because the lack of personnel is a pragmatic issue that, thus, generates equally pragmatic tasks;
- Patients' need is related to care activities, being the receivers of care, and also to educational activities, as they are increasingly becoming active participants in their own health.

2.2.7 Enablers

The analysis of the enablers shows an interesting result: in 24 out of 25 cases is required training. This means that it is difficult to obtain positive results without an appropriate training. Thus, to optimize and best manage the human resources is necessary to teach them how to perform the new activities required to them, and this confirms what had been found in the literature above[14]. Moreover, the second most recurrent enabler is collaboration, present in 20 cases: this means that task shifting it is not an individual performance, but rather it is a team approach and the creation of a collaborative network. The other relevant aspect that emerges is the need to develop appropriate policies, in 11 cases; this means that it is necessary that the legislative world goes at the same pace of the operative one. The results are shown in the graph 9.



Graph 9: Enablers of home task shifting; Systematic Literature Review

2.2.8 Enablers and Activities

n analysis similar to the one run for the root causes was performed also for the enablers: identify the existing links between activities and enablers. Results are shown in the table 5.

Enablers	Care	Administrative	Educational	Interactive
Training	100%	100%	100%	100%
Collaboration	74%	100%	75%	100%
Policy	42%	40%	25%	33%
Possibility to implement the change	16%	20%	25%	0%

Table 5: Enablers and Activities, Frequency (%)

It is interesting that all the activities mirror the trend of the activities at aggregate level, that means that:

- It is always required education and training of the figures involved to overcome the knowledge gap;
- Collaboration is connected to all the activities too; therefore, every typology of task requires a team approach. This is another evidence of how task shifting should be a systemic practice that do not change only a single role, but it requires to change all the actors involved under many different aspects;

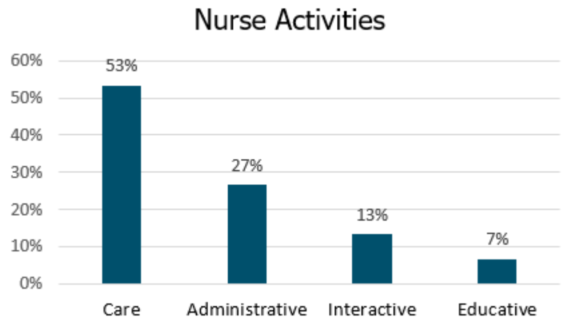
2.2.9 Focus on home nurses

The results presented above refer to all the actors involved. Since both literature and the result of the analysis show the predominance and importance of home nurses in home care landscape, this paragraph aims at addressing more specifically the home nurses. Therefore, below will be redefined the results of some analyses already performed but considering only the 14 papers that refer to nurses.

First, it has been analyses the most diffused form of task shifting among nurses The results agree with the one seen before: Enhancement (93%); Substitution and delegation (29%); and innovation (14%). This means that it is not only an enrichment

of their tasks, but on the one hand there is the possibility to substitute other health figures for reasons of lack of staff or knowledge, on the other hand an innovation of their activities, for example with the possibility of prescribing drugs.

A vertical analysis on the activities performed by nurses leads to the result that nurses are engaged in all the 4 types of activities, therefore the evolution of their role is multidimensional and very broad.



Graph 10: Activities, focus on nurse's role

Here are the results regarding root causes and enablers linked to home nurses. The results completely mirror the general ones, showing the same trends and priorities as it is possible to see in the two graphs below. This because, being the most predominant actor they influence the most the general trend.

Root Causes	%
Efficiency and Efficacy	29%
Patients' need	26%
Staff Shortages	17%
Policy	11%
Coordination's need	9%
Caregivers' need	3%
Health professionals' need	3%
Technologies	3%
Tot	**100%**

Enablers	%
Training	47%
Collaboration	33%
Policy	10%
Possibility to implement the change	10%
Tot	**100%**

Table 6: Root Causes and Enablers, focus on nurse's role

2.2.10 Examples

In this paragraph are presented some explicative case studies, others examples are present in the annex section; They are the ones in which the most predominant roles are involved, and they provide at least an example for each type of task shifting typology, activity, root cause and enablers.

Year: 2020

Paper: Qualitative

Norway

Roles involved:

- Nurse

Task Shifting:

- Enhancement

Looking for Deviations: Nurses' Observations of Older Patients With COPD in Home Nursing Care

Objective: Exploring and describing home care nurses' observations of elderly patients with COPD

Task Shifting Activity: Care Activities

Activity Description: Nurses caring for COPD patients are not trained in the management of disease degeneration and often find themselves helpless in front of the patient. They do not use a systematic approach to assess the patient's health status and possible worsening, but rely on their experience and intuition. Therefore, is supposed that the introduction of standardization (guidelines and tools to guide the assessment of the patient's health status) together with a facilitation of communication and reflection among nurses can increase the validity and effectiveness of the work of nurses themselves.

Enablers:

- Patient's Need: that the worsening of patient's health condition is diagnosed in time so that he/she does not experience acute crises

Requirements :

- Training: Train nurses in diagnostic skills and provide guidelines, standards, and communication options to support their work

Outcome: Observations

Description of the nursing situation in this case and emergence of need factors

Year: 2018

Paper: Qualitative

Norway

Roles involved:

- Nurse

Task Shifting:

- Enhancement

"We Tie Up the Loose Ends": Homecare Nursing in a Changing Health Care Landscape

Objective: Describe and discuss aspects of the work of home care nurses, with a specific focus on nurses who "organize the work"

Task Shifting Activity: Care and Administrative Activities

Activity Description:

- Administrative Activities: (1) negotiation of the level of care and, consequently, the type of care the patient will receive with the hospital; (2) coordination among the various health care actors active in home care
- Care Activities: Advanced clinical evaluations and procedures (e.g., post -operative wound drainage)

Enablers:

- Staff Shortage
- Efficiency and Efficacy Need: due to the scarcity of public resources
- Coordination Need: due to poor coordination at the health system level

Requirements :

- Collaboration:
  - With Hospital
  - Among professionals
- Training: Need to train nurses regarding both organizational activities and advanced clinical practices.

Outcome: Observations

Description of the nursing situation in this case and emergence of need factors

Year: 2009

Paper: Quantitative

UK

Roles involved:
- Nurse

Task Shifting:
- Enhancement

A cluster randomized controlled trial of cognitive behaviour therapy for common mental disorders in patients with advanced cancer

Objective: Determine whether home care nurses specializing in palliative care could be trained to provide basic cognitive behavioral techniques and thereby reduce symptoms of anxiety and depression

Task Shifting Activity: Care Activities

Activity Description: A group of palliative care nurses were trained to integrate cognitive behavioral psychotherapy into their activities on patients; their ability to perform these activities was subsequently evaluated and positive effects were found

Enablers:
- Efficiency and Efficacy Need: To aim to improve symptoms of anxiety and depression in palliative care patients as had been seen to occur in oncology patients
- Patient Need: to be supported and helped in the terminal phase of his life also in the fight against anxiety and depression

Requirements:
- Training: Targeted training to expand knowledge and teach CBT activities to nurses

Outcome: Positive – Scale: Hospital Anxiety and Depression Scale (HADS)

Nurses can learn how to integrate basic CBT methods into their clinical practice, and this training may be associated with better outcomes for anxiety and depression symptoms

*Cognitive Behavioural Therapy = procedures aimed at modifying not only the manifest behaviors, but also the emotions, attitudes, expectations and beliefs of the subject

Year: 2018

Paper: Qualitative

Norway

Roles involved:
- Health assistant
- Nurse
- Physiotherapist
- Others

Task Shifting:
- Enhancement
- Substitution

Reablement teams' roles: A qualitative study of interdisciplinary teams' experiences

Objective: Explore and describe the roles of interdisciplinary teams in rehabilitation services in a Norwegian context

Task Shifting Activity: Administrative and Interactive Activities

Activity Description: health care professionals (nurses, nutritionists, therapists, educators) undertake organisational roles (planning rehabilitation services) supervision and delegation of tasks (practicing daily rehabilitation) to home care personnel. Home care personnel (healthcare assistants) undertake a supportive and understanding role (encouraging and supporting older adults to carry out daily activities by conveying a sense of security) and a personal trainer role (e.g. physical therapy activities).

Enablers:
- Policy: Dissemination of reforms that increasingly promote people's independence and self -care by focusing on home -based rehabilitation
- Efficiency and Efficacy Need: need to respond better and better

Requirements:
- Collaboration: Increasingly strengthen the interdiscilinary work and collaboration between different professions to assist the elderly
- Training: Need to develop communication and soft skills as well as health care skills

Outcome: Positive;

Shifting roles seems to be motivating and reinforces the professional identity especially of health care personnel

3. RESEARCH QUESTION

From the systematic literature review conducted in the previous chapter it emerges that implementations of task shifting in home care are already occurring and allow to define a first picture of how this phenomenon is taking place, in terms of activities, root causes and enablers. But the results currently present in the literature are few (only 25 in scope papers out of 141) and also lack direct references to the theoretical background proposed by the European Commission[14] or even just to the term "task shifting", thus showing a gap in academic awareness about this topic.

Moreover, the results obtained are fragmented and limited mainly to the role of the nurse, not allowing to have a complete and clear picture of the current situation also of the other home health professionals.

For these reasons, this thesis aims to structuring and clarifying the concept of task shifting within home care setting by searching for further empirical evidence investigating multiple Italian case studies regarding home and community care and answering to the following research questions.

Task shifting has been defined as "the rational redistribution of tasks among health workforce teams". This thesis aims to answer to the question:

RQ: How does task shifting occur in the home care setting?

To answer to this question, will be investigated the following sub-questions:

As seen in the literature[12] nurses, health care assistant and physiotherapist are the health professionals' protagonists of task shifting applications in home care.

RQ. 1. How is the role of nurses, health care assistant and physiotherapist evolving in terms of activities and responsibilities that are shifting from their recognized responsibilities?

In the literature about task shifting[14] some generators and facilitators of task shifting have been mentioned, and in the systematic literature review the presence of part them has been found, but there is still a lack of information to have a more complete picture in home care setting. Thus, in order to investigate more in detail regarding the occurrence of task shifting in home care, the following sub-question about root causes and enablers that generate and facilitate home task shifting emerges:

RQ. 2. How are the root causes and enablers of task shifting in home care setting linked to the different activities and roles involved?

4. METHODOLOGY

4.1 Context

This chapter will explain the methodology used to investigate the research questions. In particular, a multiple case study approach was adopted, in order to have a broader and deeper view and make it easier to generalize the results[16]. The case studies are all located in Italy; this is because in Italy both the topic of home care and task shifting are much debated[17–22], but there turns out to be a gap in the literature, as evidenced by the absence of Italian results among the papers in scope of the literature review in chapter 2.

4.1.1 Home Care in Italy

Italy is the oldest country in Europe and the prevalence of chronic condition is becoming always more impending: there are almost 170 elderly (over 65 years old) every 100 young people (0-14 years) and 39.9% of Italian residents reported being affected by at least one chronic disease and the 20.9% affected by two or more[23]. It is necessary to face this situation, and the best solution is to adopt both a preventive and long-term approach: these are the cornerstones of a health care system that promotes healthy aging, but at the same time effectively takes on the health and social aspects of the multimorbid and disabled person, still looking to the economic sustainability. For this reason, since 1998 was developed a Piano Sanitario Nazionale and was introduced the "assistenza domiciliare integrata (ADI)", considered as one of the fundamental services in the assistance network of elderly people. The Italian Ministry of Health define ADI as "integrated set of health and social care treatments provided at the home of the assisted person"[23].

The ADI ensures the coordinated and continuous provision of health services (medical, nursing and rehabilitation) and social welfare (personal care, provision of meals and home care) at home[23].

The clinical responsibility lies with the GP or Primary Care Paediatrician who is in charge of the patient, while the multidisciplinary team, which has its organizational headquarters in the Health District of the patient's residence, is made up, depending on the case, of a professional nurse, a physiotherapist, a social worker, a socio-assistance worker and medical specialists necessary for the patient's pathology. All these figures contribute to the multidimensional assessment of clinical needs that allows to take charge of a person and the definition of the "Progetto di assistenza individuale" (PAI) integrated with social-health.

The main objectives of ADI are:

1. Assistance to people with pathologies that can be treated at home, to avoid inappropriate recourse to hospitalization or other residential facilities
2. Continuity of care for those discharged from health facilities with the need for continuation of care
3. Support for the family
4. Recovery of residual capacity for autonomy and relationships
5. Improvement of the quality of life, even in the terminal phase.

The pathologies that allow the inclusion of patients in ADI are those for which home care represents a valid alternative to hospitalization, as well as progressively disabling diseases that require complex interventions, acute vascular accidents, severe fractures in elderly patients, acute psychotic forms, terminal illnesses, rehabilitation in certain patients, acute disabling diseases in the elderly and protected discharges from hospital facilities. In relation to the clinical, functional and social needs of the patient, ADI interventions can be identified with increasing levels of intensity and complexity of care. These levels of care define different profiles of home care differentiated from each other according to: Complexity (Giornate effettive di assistenza - GEA) also related to the different figures involved in the provision of care; Nature of need and intensity defined through CIA (Coefficiente di Intensità Assistenziale).

The number of Italians receiving home care continues to grow: in 2019, there were 378,041 over-65s receiving ADI, 84% of whom were over 75[84].

ADI across Italy is fragmented: The characteristics and operations of the services vary a lot depending on the territorial context in which they are located. This heterogeneity is also present on the European scene. This is certainly due to the different needs of patients and the availability of the territory in which they operate, but it is also linked to the weight of the different overall structure of the health and social offer and the different management styles that inevitably end up impacting on the heterogeneity of the choices of the ATS, Districts and Municipalities, especially regarding social-health integration and the role of the private sector.

4.1.2 Roles involved in home care

In this sub-paragraph are presented the main home care professional seen under the perspective of the Italian context, because it is the one of application of the collaborating entities.

Nurse

The figure of the nurse in Italy is defined by the Code of Ethics approved by the Consiglio Nazionale in 2019, which after 10 years renews the set of rules and principles that guide the behaviour of nursing care. In particular, the nurse:

- It has ethical values and principles that guide professional action; in particular, we speak of the care relationship, therefore the nurse is the guarantor that the patient is never abandoned, involving also his or her reference figures, as well as other professional and institutional figures;
- It is required to carry out training, knowledge and updating, research and experimentation, information, promotion and health education for citizens;
- It is expected to collaborate and cooperate with other healthcare professionals, so interaction and integration, knowledge sharing, advocacy and honesty are key concepts;

- It is required to establish a relationship of respect and trust with the caregiver and the person must be listened to and valued throughout the care process;
- Holds responsibilities in the organizational setting, specifically participates in clinical governance and is responsible for nursing clinical documentation.

Moreover, the Act of 2016, outlines the competencies for which the nurse is responsible[85]:

- The competence to independently identify necessary nursing care using current theoretical and clinical knowledge as well as to plan, organize and deliver nursing care in the treatment of patients, based on acquired knowledge and skills, with a view to improving professional practice;
- Competency to work effectively with other health care professionals, including participating in hands-on training of health care professionals based on acquired knowledge and skills;
- The expertise to guide individuals, families, and groups toward healthy lifestyles and self-therapy;
- The authority to independently initiate immediate life-sustaining measures and to intervene in crisis and disaster situations;
- The competence to independently provide advice, guidance, and support to persons in need of care and their support persons;
- The competency to independently ensure the quality of nursing care and evaluate it;
- The competency to communicate comprehensively and professionally and to cooperate with members of other health professions;
- The competency to analyse the quality of care from a perspective of improving one's professional practice as a general care charge nurse.

Initially, nurses were trained to carry out their duties within hospitals, nowadays, however, especially due to the evolution of the social, economic, demographic and health context, figures are emerging over time that are directed to the application of nursing knowledge and skills in the community.

In particular, as supported by Andrade et al.[15], home nurses should have specific skills: on the one hand advanced clinical skills, to be able to respond promptly to the needs of the patient even in a context without the standardization typical of the hospital; then relational skills, necessary to provide complete and quality services; educational skills, to help patients and families to follow a path of autonomy and self-management of self-care. In fact, the nurse who currently works in the community, finds himself operating in a changing context in which the contribution of the nursing profession is increasingly required. The role that the nurse can play in the territory is so important that within the Patto per la Salute 2019-2021, approved by agreement at the Conferenza Permanente Stato-Regioni on December 18, 2019 has provided for the definition of guidelines to introduce benchmarks to regulate in a uniform manner in the national territory the professional figure of the family/community nurse. In addition, the Piano Nazionale della Prevenzione 2020-2025, adopted on August 6, 2020 with an agreement in the Conferenza Stato-Regioni, made reference to the figure of the family or community nurse stating that: "for the realization of appropriate processes of prevention and health promotion, it is necessary to implement multi-professional interventions also with the involvement of proximity figures, such as family and community nurses, i.e. professionals whose privileged setting is the person's living environments and who act proactively, in a network with all the social health services and social actors of the territory for the users who are bearers of health and social needs inextricably linked together"[28]. The family nurse/community nurse is assigned skills of a clinical-assistance nature and of a communicative-relational sphere; the same is provided within the services and facilities of the district and guarantees its activity in coherence with the regional and territorial organization, based on a standard of 1 community nurse for every 2,000/2,500 inhabitants, introduced by the cited law no. 77/2020.

Physioterapist

As defined by the Act of 1994[86], the physiotherapist is the health care professional who performs independently, or in collaboration with other health care figures, the interventions of prevention, care and rehabilitation in the areas of motor, upper cortical

functions, and visceral ones resulting from pathological events, with various etiologies, congenital or acquired.
With reference to the diagnosis and prescriptions of the doctor, within the scope of its competence, the physiotherapist:

- Elaborates, also in multidisciplinary team, the definition of the rehabilitation program aimed at identifying and overcoming the health needs of the disabled person;
- Independently practices therapeutic activities for the functional re-education of motor, psychomotor, and cognitive disabilities using physical, manual, massage, and occupational therapies;
- Proposes the adoption of prostheses and aids, trains their use and verifies their effectiveness;
- Verifies the correspondence of the rehabilitation methodology implemented to the objectives of functional recovery;
- Performs scholarly, educational, and professional consulting work, in health services and those where his or her professional skills are required;

The physical therapist, through complementary training, integrates the basic training with specialization addresses in the field of psychomotricity and occupational therapy:

- Specialization in psychomotricity allows the physical therapist to also perform both mental and physical rehabilitative care of developmental age subjects with neurosensory or mental deficits;
- the specialization in occupational therapy allows the physiotherapist to operate also in the functional translation of residual motor skills, in order to develop functional compensation for disability, with particular regard to training to achieve autonomy in everyday life, relationships (study-work-leisure), even for the purpose of using various types of equipment supplied to the person or the environment.

- In addition, as for the nurse, the figure of the community physiotherapist is emerging, a figure that will make territorial rehabilitation care more accessible, even for the most fragile people. In Italy, a bill has been presented in 2020[87] at the Chamber that provides for the establishment of the family physiotherapist, a figure who, in collaboration with general practitioners and district services, will be responsible for the home physiotherapy care of the patient. In addition, among the objectives there will also be to educate and instruct families about potentially manageable manoeuvres in the family, in order to support self-care and active participation in patient care.

Health Care Assistant

The Health Care Assistant, called Operatore Socio-Sanitario (OSS) in Italy, is the operator who responds to the primary social and health needs of the person, promoting the well-being of the user, his autonomy and social integration.

Carries out activities of care and assistance to persons in conditions of discomfort or non-self-sufficiency on a physical and/or psychic level, collaborating with other operators in charge of health care and social assistance.

The OSS strives to stimulate the expressive and psycho-motor skills of the assisted and encourage the maintenance or recovery of relationships with relatives and friends. Tidies up the living and care environments of the assisted and proceeds to their sanitization and disinfection; carries out the disinfection, sterilization and decontamination of instruments and sanitary devices; reduces and controls the professional and environmental risk factors of the users.

He/she carries out care activities through the use of simple medical devices and helps in the assumption of medicines; he/she detects the vital parameters of the assisted and is able to perceive the common alterations; he/she proceeds to the collection and storage of waste, to the transport of biological and sanitary material and of samples for diagnostic examinations; he/she carries out simple dressings or other minimum performances of sanitary character. Supports and facilitates the user in personal

hygiene, dressing, mobility, and food intake; strives to maintain the motor skills of the assisted person and to have them assume correct postures.

4.1.3 Collaborating entities

The following section will outline the entities that collaborated for the research purposes of this thesis. These organizations were selected because they are all entities that provide home care in the territory, and in which both nurses and physiotherapists and OSS work. All these organizations operate on the Lombardy territory, but each district has different regulations, and each organization has a different organizational model: this allows author to have a wider and more holistic vision of the context and of the opinion of the operators themselves.

OSA – Operatori Sanitari Associati

OSA - Operatori Sanitari Associati is a health cooperative that provides, since 1985, services in different Italian regions: Lombardy, Lazio, Abruzzo, Puglia, Sardinia and Sicily. OSA is particularly committed to proximity medicine, understood as continuity between hospital and territory in a collaboration between the hospital system and primary care, providing 5 types of services:

- Home Care: sector in which the cooperative has been working for a longer time, it offers health, rehabilitation and social services aimed at the elderly and people who are not self-sufficient or suffering from particular diseases that require advanced levels of care and technology at home. Involves a professional team consisting of medical specialists, nurses, physiotherapists, speech therapists, neuropsychomotricists, occupational therapists, OSS (Operatori Socio Sanitari), for a total of 1600 people involved.
- RSA: 5 residential facilities for the elderly, rehabilitation communities for psychiatric patients, health and social welfare residences
- Rehabilitative health care: functional recovery and re-education activities carried out through a comprehensive treatment of the disability condition

- Social-assistance services: OSA carries out social-assistance and socio-educational activities aimed at minors, the elderly and people with disabilities to almost 3000 people
- Hospital services: OSA is also involved in the implementation of management models for nursing and auxiliary services in entire hospital wards and complex operating units (UOC) of major hospital companies

Nurseitalia

Nurseitalia® has created in Milan the first outpatient clinic exclusively for nurses with health authorization to operate. It is a project designed to offer free-lance nurses the opportunity to create a neighbourhood nursing clinic, a reference point on the territory for nursing services, health education and prevention activities, and multidisciplinary home care services.

Nurseitalia outpatient clinics are located in large cities, where the elderly population, numerous single-person households and low income are combined with a less receptive support network, emphasizing the need for quality care services and easy access.

Nurseitalia offers the following services: integrated home care; nutritional counselling; nursing clinic, obstetrical consulting; physiotherapy outpatient clinic; speech therapy; osteopathic outpatient clinic; teleconsultation nursing.

A.D.I. PAXME

Paxme Group is a group of social cooperatives active since 2002 on the territory of Lombardy, each with its own operational specialization in the field of social and health care to the person.

With a team composed of nurses, physiotherapists, OSS, psychologists, and medical specialists provide their social and health services both at home and in residential facilities for people who are not self-sufficient, disabled, suffering from chronic diseases that cannot go to the clinics.

They offer the following services:

- Integrated home care; Protected Hospital Discharge, that guarantees continuity in the process of care and assistance started in the hospital through the activation of ADI; Palliative Home Care, to accompany patients with oncological diagnosis, dementia, ALS and Parkinson's disease.

Casa della Salute

The Case della Salute, as defined by the 2007 Decree, represent the point of first access to basic primary care in the territory and outpatient problems, manage the network of home care, strengthen the integration between general practitioners and the continuity of care hospital-territory, take charge of chronic diseases, organize information and training activities, develop prevention programs aimed at the individual, the community and specific target population, enhance the participation of citizens by promoting health education and healthy lifestyles.

In addition, Case della Salute can be potential places of urban and social regeneration, not only as facilities providing care and assistance services but also as potential builders of new social relations in intersection with voluntary work, associations, educational and cultural structures.

In Italy, in 2020, 493 were established. The region that has the most is Emilia Romagna, which has 124, 6 of which were involved in this thesis project; followed by Veneto (77), Tuscany (76), Piedmont (71), Sicily (55), Latium (22), Marche (21), Sardinia (15), Calabria (13), Umbria (8), Molise (6), Liguria (4) and Basilicata (1). In Lombardy, Valle d'Aosta, Pa Bolzano, Pa Trento, Abruzzo, Friuli-Venezia Giulia, Puglia and Campania there are no principals.

4.2 Data Collection

Following the results of the literature review, it was decided to seek empirical confirmation of what had been obtained through a study of multiple cases in Italy. The

analysis was carried out with a qualitative approach, through interviews and a workshop.

4.2.1 Interviews

Two types of interviews, administered to different actors, were used for data collection. The first type of interviews was prepared for the Coltivare_Salute.com project, proposed by the Polisocial Award 2020 within 6 of the Case della Salute of Emilia Romagna, in which, as part of a multidisciplinary work team, the Department of Management Engineering of the Politecnico di Milano participated. For the purposes of this project, interviews were written by the group directly involved in the project, of which the author of this thesis is not a member, constructed with reference to the Primary Care model published in 2020 by Senn[88]. The interviews are structured into 6 sections, but for the purposes of this thesis only 2 sections were taken into consideration: the part inherent to Human Resources and Management and the part related to Patient Engagement. The first section refers to the management of human resources inside and outside the Case della Salute and to the evolution, replacement or innovation of nursing and social-health roles. The part related to patient engagement is considered as it brings out information inherent to communication and relationships between health professionals and patients. These interviews were administered to 6 ROCS, i.e. the Organizational Managers (Responsabili Organizzativi) of the Case della Salute in Emilia-Romagna, who, for the most part, are nurses with technical skills and managerial-organizational competencies that are also responsible of coordinating the organizational management board[24]. The Case della Salute have been included because they are innovative elements of presence in the territory, which are being built and designed ad hoc to better integrate into local communities. In these facilities, nurses have a fundamental role, both within the nursing clinics and integrated management of chronic conditions, and in covering the role of ROCS (59% of cases). This allows them to expand their responsibilities and autonomy. In addition, within the Case della Salute, the emerging role of the community nurse is known; it was therefore considered interesting to investigate their point of view and organizational model. Six

ROCS were interviewed online, through Zoom and Microsoft Teams in June and July 2021, the questions are available in the annex section.

The second type of interviews was prepared specifically to collect useful data to explore further the issues addressed by this thesis. The text of the interview is composed of 7 questions aimed at investigating:

1) their perception of their role and how is evolving in terms of activities not formally recognized that they perform,
2) the elements that generate such activities (Root causes)
3) the elements that could help to perform them better (Enablers)
4) their opinion about how the roles will evolve and what elements they should include.

These interviews, lasting approximately 40 minutes, were all conducted online via Zoom or Microsoft Teams in July 2021, and were administered to nurses, physiotherapists, and OSS belonging to the OSA, Paxme, and Fondazione Maddalena Grassi cooperatives.

A total of 13 interviews were conducted, distributed as follows:

Cooperative	# Interviews
Casa della Salute	6
Fondazione Maddalena Grassi	3
OSA	2
PAXME	2

Table 7: Cooperatives involved in the interviews

It was decided to interview those directly involved in the evolution of the role, therefore the operators themselves. This choice allows author to have a vision as close and direct as possible of the situation and increase the validity of the results; therefore, depending on their availability and in order to have a sample of respondents consistent with their numerical prevalence in the home care context, were interviewed: nurses (10, of which 6 ROCS), physiotherapists (2), OSS (1).

4.2.2 Workshop

In addition to the interviews, a workshop was held in collaboration with the OSA cooperative. This was organized as part of a project in collaboration with the Health Care research group of Politecnico di Milano, aimed at analysing innovative solutions for the organization of internal processes and for the provision of services and identifying the most appropriate ones to be tested and evaluated, with particular reference to the area of ADI services. For the preparation of this workshop, questionnaires were drawn up for operators to assess their level of engagement and their propensity for change. Thanks to the results of the questionnaires collected, a workshop was organized and held online on Zoom and supported by the Miro platform lasting 1 hour and 30 minutes. The workshop was attended by two working groups composed of 4 and 5 operators, respectively, both nurses and physiotherapists and administrative staff. The workshop consisted of 4 activities:

1) Prioritization of critical activities: to identify and map all critical issues, internal, external and with the patient;
2) Value Added Mapping: to map and identify the activities that the operators would like and would not like to perform;
3) Brainstorming: to stimulate creativity and identify improvement proposals for the most critical areas;
4) Proposals' matrix: to map the proposals that emerged within an effort-benefit matrix.

In both working groups, for reasons related to lack of time, the fourth activity was not carried out, but the results that emerged from the previous activities, in addition to being useful for the purposes of the project with OSA, were useful to collect data and information from operators related to this research thesis.

4.3 Data Analysis

Both the interviews and the workshop were recorded, following the consent of those involved and according to privacy regulations. The recordings were used to have an accurate transcription, which was carried out manually and according to the "verbatim" modality, that is, an integral transcription of what was said[25]. The transcripts were later validated by the interviewees and the text was used as a source for coding analysis. The NVIVO program, which is suitable for qualitative text analysis, was chosen to perform the coding.

For coding, a content analysis was performed, allowing the text to be transformed from qualitative to quantitative material, identifying the recurrence of themes that emerged.

The starting point of coding was the research question, so it was wanted to understand how task shifting occurs in the home environment. To do this, an abductive approach was chosen, that is an intermediate way between a theory-driven and a text-driven approach[26]. Initially, the object of research was defined: task shifting. Since this is a very broad and complex concept, it was unpacked into sub-objects: task shifting activities, roles involved, root causes and enablers. To identify the occurrence of these themes, categories were identified within which insert the text. These categories were taken from the framework that had been used for the literature review (described in chapter 2) phase but were expanded and detailed with subcategories that emerged from the coded text following an iterative process. This resulted in an expanded task shifting analysis framework integrated with what emerged from the interviews and the workshop. Coding rules were established to make the analysis as objective and valid as possible:

- The texts were entirely coded, but only the parts pronounced by the interviewees, but not by the interviewers;
- For the interviews conducted with OSA, Paxme, and Fondazione Maddalena Grassi, all responses were coded;

- For the interviews conducted with CdS, only the responses inherent to Human Resources management and Patient Engagement were coded;
- For the workshop, only the parts inherent to the activities and pronounced by health care and non-administrative workers were coded;
- Unambiguous and mutually exclusive definitions were given to the different categories, which will then be explained individually within the results chapter.

All the texts of the 13 interviews and the workshop were iteratively analysed according to this process, until quantitative results were obtained about the recurrence of each element, which was finally critically analysed and compared with the recurrence of the elements present in the theoretical framework presented in paragraph 2.1.2. The results of this analysis are described in the next chapter.

5. RESULTS AND DISCUSSIONS

In this chapter are illustrated the results of the interviews and of the workshop coding and they will be discussed at the light of the previous literature review in order to address the main research question: *How does task shifting occur in the home care setting?*

5.1 Task shifting typologies and activities

The following paragraph is dedicated to present the results useful to answer to the first sub-research question: *How is the role of nurses, health care assistant and physiotherapist evolving in terms of activities and responsibilities that are shifting from their recognized responsibilities?*

5.1.1 Task Shifting Typologies

The first step to answer to the RQ.1 is understand in which form task shifting is present in home care: therefore, the first cluster that has been created on NVivo11 is "Task Shifting Typology"; it embodies the theoretical taxonomy previously explained and proposed by the European Commission[14]: enhancement, substitution/delegation, and innovation.

All the three typologies of task shifting emerges from the case studies, and, as in the literature review analysis, enhancement is the most diffused type of task shifting (93 codes); differently from the literature presented in chapter 2, innovation (12 codes) is the second form of task shifting that is implemented and thirdly substitution and delegation (2 codes). This difference regarding the prevalence of innovation versus substitution and delegation may be due to the fact that 6 interviews were conducted with nurses in charge of the organization of the Case della Salute. Since an innovative organizational model directed toward initiative medicine was already active in these facilities, the role of nurses had already been greatly innovated and this influenced the results obtained. Moreover, from the dialogue with the operators during the interviews it emerged that, in reality, delegating in home care is much more difficult, as you are

alone in the patient's home. Rather, activities are not performed, but hardly delegated to someone else.

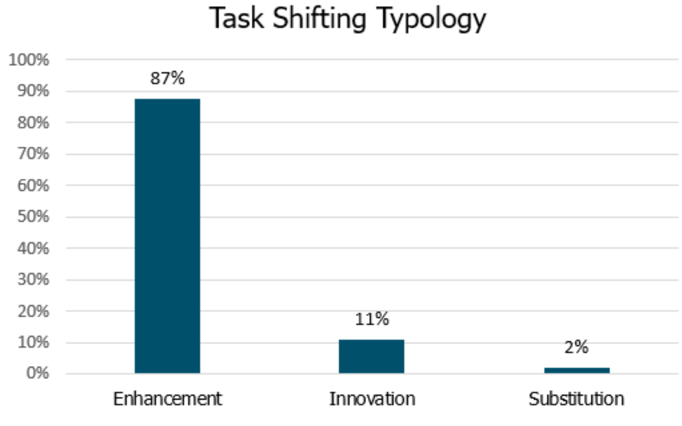
"In ADI delegating is difficult, because when you're at home alone... You're alone. There is no colleague to ask to do something for you" (Nurse, OSA)

To better address the categorization of these results, below are reported some references as examples.

"It's like when you go to make a medication that two days before was perfectly dispensed with blood and two days later it's black necrotic, something is wrong, and you have to ask why; but in reality, nobody tells you anything: there are some colleagues who go, do the service and leave, they don't think twice about it. But you're not giving what you could give" (Nurse; Enhancement)

"Nursing outpatient clinics were opened for full and direct management by nurses" (Nurse; Innovation)

"I was contacted by a GP that told me: "I got a call from a patient who wants to activate home care" I said: "Doctor, have you seen her yet?" "No, you go then tell me what to do" (Nurse; Delegation)

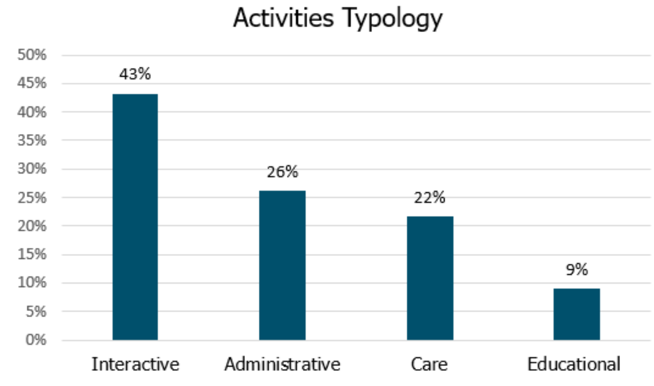


Graph 11: Typology of Task Shifting, Case Studies, Frequency (%)

5.1.2 Task shifting Activities

The taxonomy and the definition of the activities mirrors the one proposed by Andrade et al. in 2017[15], and used also in the literature review (paragraph 2.2.4): care, administrative, interactive, and educational activities. What has been found are the following results: interactive activities are the most diffused one (43%); administrative (26%); then care (22%) and finally educational activities (9%).

The main difference from what has emerged from the literature in chapter 2 is the exchange of prevalence between the interactive and the care activities. While in the literature the care activities where the most shifted one, in the interviews emerges that the home health professional enhance their role mainly through interaction with the patients, caregivers and home care environment.



Graph 12: Typologies of Activities, Case Studies, Frequency (%)

These results will be deepened now along the roles involved, understanding better how they are evolving nurse, physiotherapist and OSS's tasks.

5.1.3 Roles Involved in Home Task Shifting

In this paragraph are reported the results of the analysis about task shifting typologies and activities regarding the roles involved.

Home Nurse

A total of 10 nurses were interviewed, 4 who provide only home care services and 6 who are organizational managers (ROCS) of the Case della Salute in Emilia Romagna.

First, the interviews submitted to them provided a picture of how they perceive their current role, in terms of responsibilities, professional autonomy, skills and activities they perform.

What has emerged is that home care nurses perceive their profession as a role that has its own responsibilities and autonomies quite distinct from the medical profession.

"Our role should not be that of a doctor, but it is that of a professional figure who has his own autonomy" (Nurse, OSA)

However, they feel that their formal responsibilities are very specific, making their role highly performance-based, and do not allow them to have a holistic approach in caring patients.

"I find that the role of the nurse in home care is a performance one, that means we have a very specific role. [...] You take care of a person, but not at 360 degrees, but looking at a very specific problem, so sometimes many aspects are left out." (Nurse, PAXME)

Moreover, the nursing autonomy in Italy, differently from other countries[27], is still strongly limited by the medical figure both regarding the prescription of drugs and therapies, and regarding the activation of home care itself.

"Compared to other countries such as England, where nurses have been able to prescribe certain things independently for many years, here in Italy we are still bound by medical prescriptions" (Nurse, OSA)

Although home care nurses recognize that they have gained more autonomy than in the past – especially compared to the hospital setting where the figure of the physician is very present and greatly limits their autonomy – they feel that their professional independence is not enough, and they request that it can be expanded. This request is not made for reasons related to cultural claims between professions, but rather to

the skills that nurses know they have: in fact, they believe they have studied and have sufficient knowledge to be able to expand the range of their activities.

"You can't make as many decisions as you would know how to make" (Nurse, PAXME)

In particular, they require more autonomy from the physician regarding, for example, the decision to administer certain medications, or to decide independently to activate home care.

"Because if I go in for a blood draw and I see that this patient has a decubitus, rather than a vascular ulcer I have to go through someone else and I can't activate it on my own?" (Nurse, OSA)

The distribution of the ***task shifting typologies*** among nurses follows.

The first result is that the most developed category of nursing task shifting is enhancement (82%). This result shows that nurse's evolution of role is increasing and expanding the set of activities they can perform, building up on what they are currently doing and they currently know and not totally innovating and renewing their role.

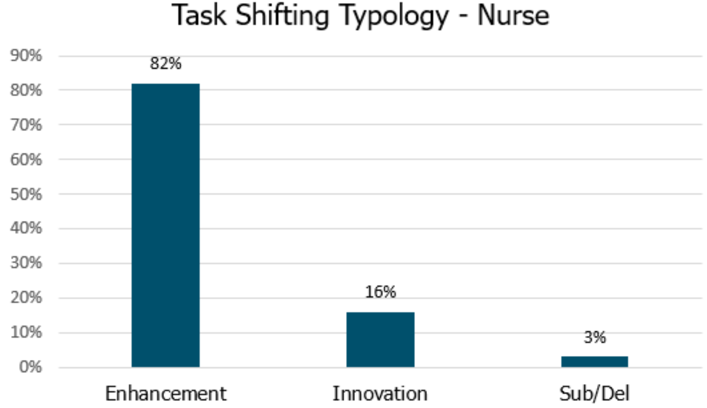
Then, the second way in which task shifting evolves nurse's role is through innovation. As also mentioned above, the interviews with the ROCS of the CdS introduced a new organizational model that has led nurses to open clinics totally managed by them and to no longer consider themselves as individual operators, but as part of a team to collaborate with. This leads to nurses assuming new roles with attached new responsibilities that innovate their figure.

"Nursing outpatient clinics were opened for full and direct management of nurses" (Nurse, Cds; innovation)

"We are no longer health care workers there by accident: but I know what's going on in the next room, I know what's going on outside my square foot of outpatient clinic" (Nurse, Cds; innovation)

Finally, at the level of substitution and delegation there are only two cases of care activities inherent to the delegation by GPs to nurses regarding activities of their competence, such as the evaluation of ADI activation. Indeed, as we saw in the precedent paragraph, delegating in home care is much more difficult than in hospital setting.

"The doctor calls me and says: come with me to this patient and you tell me whether to activate ADI or not" (Nurse, OSA, delegating)



Graph 13: Task Shifting Typology – Nurse, Frequency (%)

In order to deepen how concretely the role of nurses is changing, the results regarding the most common categories of ***task shifting activities*** are reported below.

It results that nurse's role changes primary introducing in their tasks interactive activities (39% of codes). In fact, nurses more and more often find themselves having to communicate, manage the relationships between different actors, give advices and capture even the social and unmet needs of the patient, performing the role of reference point for families without this being recognized at the regulatory level.

"There is a part of what we do that is not formalized, which is the part related to the relational aspect, to communication, to the management of aggressiveness, to interpersonal relationships. For example, it is difficult to formalize "I went shopping because the patient needed milk and the family member was not there." (Nurse, FMG; Interactive activities)

The second kind of additional activities performed by the nurses are the administrative one. Indeed, often nurses are in charge of managing patient priorities, organizing patient care also by contacting other figures and services active on the territory acting as a bridge role between the different entities present. This happens especially within CdS, with nursing management of outpatient clinics that innovates a lot, from an administrative point of view, the role of nurses.

"The accesses between different figures must be coordinated because otherwise it's a useless job that we do in two. But it's your initiative to decide to contact and manage the accesses, it's very individual this thing, it's not coordinated by anyone otherwise" (Nurse, OSA; Administrative activity)

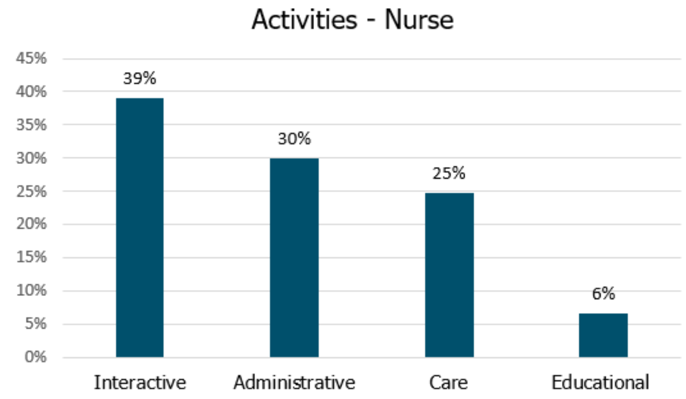
Then, care activities enhance the role of the nurse. Indeed, they often make their own health care decisions and do health care activities that were not prescribed by the physician or that are not within their scope of practice, such as patient hygiene.

"I saw a patient that needed an IV aflebo; he is an elderly, cardiopathic and dehydrated patient, so I decided to measure his pulse: 150 beats. I immediately said, "I'm not going to put an aflebo on a patient like that. Let's call the ambulance or the GP!" But I could have just put the aflebo and left" (Nurse, PAXME; Care activity)

Finally, although the code of ethics requires the nurse to educate the patient and the caregiver, in some cases these activities are carried out going beyond what they should do, providing information and advice even when they do not directly affect the performance of the nurse.

"If you go there and you only want to perform, it takes 10 minutes; if in addition to the performance, you want to add the educational aspect, i.e., explain what to eat to

a diabetic, how to wash... then you take a bit longer." (Nurse, PAXME; Educational activity)



Graph 14: Activities of Nurses, Case Studies, Frequency (%)

Physioterapist

There was participation of one physiotherapist in the workshop with OSA, and of two in the interviews. As with nurses, the analysis of the evolution of the role of physiotherapists has its starting point in collecting the current perception of their role.

Physiotherapists, differently from nurses, perceive that they have a role with high professional autonomy, with few limitations.

"I am autonomous in the choices I make, in the type of patient I take care of, there is no figure that imposes anything on me" (Physioterapist, FMG)

They retain that they have the skills to manage their work and access in a way that is functional in improving patient's lives.

"Do you have to do 8 accesses? You don't do 4 a week for 2 weeks [...] This is what I ask: seriousness and organizational capacity. Also because the physiotherapist has a degree and must have this ability to manage his work." (Physioterapist; OSA)

Physiotherapists see their role as improving the physical state of a patient, but also as maintaining it and finally helping the patient to accept the new status, which

sometimes can no longer be improved, helping the patient to live the best in the new conditions in which he/she finds him/herself.

"Physiotherapy may have the goal of improvement if it is an acute event that can be resolved, but most of the time physiotherapy is a phase of maintenance and accompaniment to the acceptance of a new condition of life and learn to live it in the best way possible" (Physioterapist; OSA)

Regarding the distribution of the ***task shifting typologies*** among physiotherapists, interesting results arose from the filed observation. In particular, the only form of task shifting associated with physiotherapists is enhancement. Thus, the evolution of home-based physiotherapists sees only a deepening and expansion of their role, but no real innovations. Moreover, being a healthcare role that covers an area of its own competence, and that is very autonomous and independent, as emerged from the interviews reported above, it is explained the absence of substitution and delegation.

Looking in detail the ***task shifting activities*** that physiotherapists perform it results that the most are interactive activities. Physiotherapists, in fact, often play an important role in communication and relationship with patients, which brings benefits on a psychological and social level, in addition to health.

"Beyond the qualification, [...] especially in a home context, I must have an important empathic ability to be able to enter into a relationship and get certain messages across." (Physioterapist, OSA)

"Of course, when you find yourself dealing with the 15 year old girl who jumped off the balcony you also have to be a bit psychologist" (Physioterapist, OSA)

Other interactive activities they perform are related to creative search for how to leverage resources in the home for patient care, going beyond the simple environmental assessment that is required from them.

"In the facility it doesn't take any imagination, you have it all there; instead, at home you have to find the wall where you do the sport, and it becomes fun to do it. For example, you can do the weights with a sock stuffed with rice." (Physioterapist, OSA)

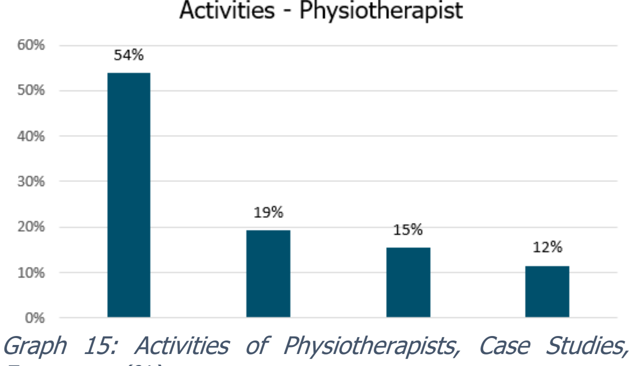
Other task shifting activities that are performed are educational; indeed, physiotherapists, in addition to the educational activity that is required to them, often provide information and practical advice on performing daily activities and other services not provided by them.

"We help them to answer questions such as: "how can I go on vacation and then make use of these aids and be as independent as possible?", we suggest and plan together" (Physioterapist, FMG)

"Patients often don't know what is available to them with home care. There are a whole range of disability-related benefits provided by the municipality as well, and I also inform them about this" (Physioterapist, OSA)

Then there are administrative activities (15%), which are when physiotherapists, without being asked, are involved in organizing access even between different agencies.

"On Friday I made the request for patient aids. On Monday the message came back that the patient had passed away. So I picked up the phone and called the district and the prosthetic department to inform them and have the supply stopped." (Physioterapist, OSA)



Graph 15: Activities of Physiotherapists, Case Studies, Frequency (%)

Health Care Assistant (OSS)

Only one OSS was interviewed, to which are added the results derived from the comments made by the other operators interviewed.

What has emerged is that the OSS have a role of great responsibility and support in the home environment, in fact they are responsible for, among other things, hygiene, passive mobilization and support to relatives. All of these activities are necessary for the medical care carried out by health professionals to be successful.

"For some patients, access is made by the OSS who, by job description, may perform passive mobilization of a patient" (Nurse, OSA)

"These things are so trivial that sometimes they are not given the right importance [e.g. personal hygiene], but that is where care starts. These are basic things that we need to respect and know how to do because very little is needed on a fragile patient to create serious damage." (Nurse referring to an OSS, OSA)

Although the OSS should maintain a role of detachment with the patient, it is also true that they are a figure that enters into a great intimacy with the assisted.

"You should maintain a certain detachment with the patient, but it's natural that when you go a few times it becomes difficult. [...] There it is you and him and you empathize a lot, you enter into his intimacy." (OSS, FMG)

The OSS role's evolution quite completely related to enhancement task shifting. Looking in detail to the tasks, the interactive activities are enhancing OSS's role. OSSs often play an accompanying role in the patient's daily routine, so they often perform empathic and careful communication.

"This is a very important thing: respect when you enter the patient's home. Understand and respect how they are used to, without being arrogant or presumptuous. Then it is clear that we take charge of the situation, but with respect" (OSS, FMG; Enhancement, Interactive activities)

The role of the OSS is enhanced also by administrative activities, taking the initiative to organize and manage healthcare situations with other professional in addition to their interest and duties.

"Or maybe you pick up the phone and call the nurse, obviously it depends on the cases, because the operator couldn't" (OSS, FMG, Administrative)

However, sometimes OSSs also find themselves performing basic health care activities that they are not responsible for performing, such as basic medication and that are delegated to them by nurses.

"Yes, it takes a lot of responsibility. A lot of times you get into these situations where the nurse has already been there and done this medication and maybe the patient gets pretty dirty and the OSS comes in and has to scramble to do a medication, sometimes that can happen" (OSS, FMG; Delegation, Care activities)

In table 8 are synthesized the results described since now.

Nurse	Enhancement	Sub/Del	Innovation	Total TS Activity
Interactive	46%	0%	8%	**39%**
Administrative	21%	0%	83%	**30%**
Care	27%	100%	0%	**25%**
Educational	6%	0%	8%	**6%**
Total TS typology	**82%**	**3%**	**16%**	**100%**

Physiotherapist	Enhancement	Sub/Del	Innovation	Total TS Activity
Interactive	54%	/	/	**54%**
Educational	19%	/	/	**19%**
Administrative	15%	/	/	**15%**
Care	12%	/	/	**12%**
Total TS typology	**100%**	**/**	**/**	**100%**

OSS	Enhancement	Sub/Del	Innovation	Total TS Activity
Interactive	50%	0%	/	**40%**
Care	25%	100%	/	**40%**
Administrative	25%	0%	/	**20%**
Educational	0%	0%	/	**0%**
Total TS typology	**80%**	**20%**	**/**	**100%**

Table 8: Task shifting activities along home health professional roles, Frequency (%)

5.2 Root causes and Enablers of home task shifting

This paragraph presents the results useful to answer also to the second research question: *How are the root causes and enablers of task shifting in home care setting linked to the different activities and roles involved?*

5.2.1 Root causes

The results regarding the root causes, that are the factors that have generated task shifting activities in home care, are explained below.

Patient Need

Patient needs refer to the entire set of needs that are expressed by the patient. These are of a health, social or family context-related nature. These needs are both imminent needs which surprise the operator on the place and needs which have persisted for some time, but which have never been satisfied.

It is a root cause because home health care workers recognize that they have as a priority helping the patient, so being faced with a patient in need pushes them to perform activities even beyond what they are recognized for.

"All begins to help patients, which is our goal in the end" (Nurse; PAXME)

Moreover, it results that most of the activities generated by the patient's need are the interactive ones. The reason is that many times the patient's necessities have social nature, rather than health one, and thus the health operators have to interact and relate with others figures (family members, other professionals, etc.) to be able to respond to these needs.

"But since that's the only way for the service to be activated, you do it. Because you know the patient needs that thing there and so rather you do it" (Nurse; OSA)

In line with the literature review results, the patient need is the most recurrent root cause, with a recurrence pair to 33% on the total root causes.

Efficacy and Efficiency

In line with the literature review, this enable refers to the need to address lower costs or deliver higher quality of care to patients. Home care professionals are aware that delivering quality care is good for the patient, their cooperative, and the health care service, and that this may sometimes require them to give more than their assigned responsibilities.

"It makes a difference if I give a more complete quality service [...] it's not a question of performance, but of quality performance [...] because I give that something extra. Then we, in my opinion, have to play on giving that additional something that makes the difference" (Physioterapist, OSA)

The "something extra" mentioned in the previous quotation, turns out to refer in most cases to administrative and interactive activities. The search to improve efficiency and efficacy goes therefore to modify the role of home care workers, leading them to perform management activities and interact with different actors to find out a solution.

Staff Shortage

Refers both to a lack of personnel and to too heavy workload of the operators. Staff Shortage, as in the literature of chapter 2, is considered a root cause because in order to compensate for staff shortages, operators find themselves performing administrative activities that are not their own.

"There has always been workload. Yes, it increased with the pandemic, but there would have been high workload anyway. The further you go, the higher it is" (Nurse, OSA)

"I need new figures, more figures" (Physioterapist, OSA)

Caregiver Need

Caregiver need emerged also in the literature review, where it referred only to the need of caregivers to be supported and trained in performing their activities with their attendant. Empirical results reveal that it also refers to the fact that caregivers are

increasingly becoming present when the practitioner delivers the service to the patient and are making requests and observations about how that service should be delivered. This evolves the role of the operators, who must show themselves to be much more professional, competent and able to manage the situation in a broader way, thus performing interactive activities.

"The caregiver is much more astute, smarter and more competent, watching you and observing you; therefore, you can't think you can get away with it: you have to be competent, professional, sensitive, empathetic; you can't pretend." (Nurse, FMG)

Coordination Need

Coordination need refers to the necessity to improve integration and coordination between the different health professionals and services performed at home care level.

"If the nursing staff, OSS or any other type of operators working within the Health House would see this opportunity to be able to work together in integration, this can evolve their figure" (Nurse, CdS)

The evolution generated by the need of coordination is related to both interactive and administrative activities. The health operators prefer to avoid working alone, working as part of a system with which they can integrate, collaborate, and interact. This leads them to be professionals with a broader perspective than the specific service they are required to provide.

Policy

Policy refers to changes at legal level. Its recurrence is equal to 2%.

"Before the bureaucratic part was more complex, now it has become a bit simpler, now the time has been reduced a bit" (Nurse, FMG)

Policies generate a change at administrative and organizational level; such change allows home health professionals to expand and better perform their tasks.

Health Professional Need

Health professional need generate task shifting because the necessity of operators to be supported leads a colleague to substitute them in their tasks. Its recurrence is equal to 1%.

"Because if the nurse doesn't have time to do certain things, he or she will delegate them to the OSS" (Nurse, OSA)

The root causes presented up to this point are the same ones that were referred to in the EU report[14] and in the systematic literature review. It is interesting that what has emerged perfectly mirrors the situation identified in the empirical analysis: all the root causes present in the literature has been individualized, with the same prevalence order, also in the interviews and in the workshop. However, thanks to the case studies analysis, it was possible to enrich literature findings, identifying new root causes that are a consequence of the interview's coding results.

Health, Social and Cultural Context

Health, social and cultural context refers at all those elements bounded to the context for examples changes in the view of roles, changes in the concept of health and medicine, work environment, and cultural conceptions related to the health professions.

"The change means to change one's own perspective, also in function of a reorganization that takes place in function of a time that is evolving" (Nurse, CdS)

"There has been an evolution in all figures because the patient and caregiver has changed" (Nurse, FMG)

These contextual changes are shifting the perception of the roles from an individual approach towards a team's one; this means that each individual is not seen alone, but as a part of an enlarged and integrated system in which he/she covers broader tasks, in particular the administrative one, as it emerges from the interviews.

"The change is certainly also driven by changing the vision where the nurse is only the one who detects the pressure or gives the injection; it means getting out of a purely performance dimension and understand that health is a much broader good" (Nurse, CdS)

Individual Work

Individual work refers to the fact that home operators work alone, unlike in the hospital where it is always possible to immediately ask to another health professional for advice and support. Thus, in certain situations, the operator, who cannot ask for the immediate support of a colleague, have to decide the activities to perform, even if they are not of his/her direct competence.

"But of course if you're there alone at home, desperate times call for desperate measures. Do you understand? We try to do in the best way" (OSS; FMG)

"When you're home alone, you're alone. There's no colleague so you say "look I don't have time to do this, you do it" because you're there. Sometimes we do things that are not part of the pure home care activity that we're responsible for" (Nurse, OSA)

Personal Attitude

Personal Attitude refers to the fact is the operator that personally decide to overcome the boundaries of his/her duties, there is not another professional or a law that specifically request to do so.

"Going above and beyond depends on what you want from your role." (Nurse, FMG)

Personal attitude is a root cause because it pushes a home health professional to interact more with the patient, to communicate with other professionals with caregivers, to take initiative and thus cross the threshold of his or her own duties.

"I establish a very strong relationship with my patients, even a friendship; we talk often. But this is my personal choice." (Physiotherapist, FMG)

Root Causes	Frequency (%)
Patients' needs	32%
HSC context	17%
Individual Performace	13%
Efficiency and Efficacy	11%
Personal attitude	10%
Staff Shortage	6%
Caregivers' needs	4%
Coordination need	3%
Policy	2%
Health Professionals' Need	1%
Tot	**100%**

Table 9: Root Causes of Home Task Shifting, Case Studies, Frequency (%)

5.2.2 Enablers

Another purpose of this thesis is finding out the elements that are considered relevant in order to easier implement the tasks that have been shifted. Therefore, the following nodes has been coded.

Collaboration

Collaboration refers to collaboration, integration, communication, and networking both internal and external the cooperative. This node refers to the operators' request to create a multidisciplinary network by increasing collaboration and networking among the various professionals, especially physicians, and the integration of the various home services as well. Collaboration is required to better perform all the typologies of task shifting activities.

"In home care, the basis for everything is the team" (OSS, FMG)

Indeed, the comparison and collaboration with other figures helps the different healthcare professionals to evolve in the direction of a broader role, with a more holistic vision, as already emerged from the root causes.

"I see home care as a job that, beyond the moment in which I am in the home, requires me to compare, a lot of comparisons, with other figures" (Physioterapist, OSA)

Training

Training refers to the need of education both in the universities and updating courses during the job. It comprehends formal courses that aims to develop the knowledge of the attendants. Training is a key enabler because the professionals involved sometimes realize that they do not have the necessary skills to perform task shifting activities to the best of their ability, particularly the interactive and care ones.

"What is certain is that training is key" (Nurse, CdS)

Policy

Policy can support and facilitate home task shifting, introducing law that increase the recognition of additional tasks and responsibilities, and foster collaboration and professional autonomy.

"These responsibilities, we have the skills to assume them, we have the professionalism, but we must also have a recognition, not economic, but a recognition at the level of laws" (Nurse, FMG)

As happened for the root causes, the enablers presented till now are the one that emerges from the EU report[14] and from the systematic literature review. The only exception is that the enabler "possibility to implement the change", that it is inherent mainly to the organizational part, doesn't emerge. Instead, the following enablers arise from the results of the empirical analysis conducted.

Experience

Experience refers to the training and the learning that are consequence of years of work and to the direct experience of the operators, that can belong both from hospital and home care setting. Therefore, differently from the training previously explained,

this kind of learning is not formalized, but demanded to the capability of the professional to learn from what happens during the work. Such experience is an enabler because the skills and the capabilities learned on different field change and expand the forma mentis of the health professionals, that see many different things and are prone and able to replicate them in home care setting, overcoming their recognized tasks. In particular experience facilitate the initiative to perform extra care activities.

"Change happens through learning in the field." (Nurse, CdS)

"The hospital gives you this management of priorities, because in the hospital you learn the steps you have to do and [...] you need these things for later [at home]. You learn them from experience, because you learn a lot from books, but when you are in front of the patient you apply what you know." (Nurse, PAXME)

Health, Social and Cultural Context

Health, social and cultural context refers to the same elements described in the root cause paragraph, but in this case these elements don't generate task shifting, but positively support its correct implementation. In particular a supportive context is required for the managerial and administrative aspects of task shifting.

"Certainly you have to have the cultural assumptions and work to make sure that change can happen, this certainly" (Nurse, CdS)

Personal Attitude

Personal attitude is not only an root cause, but also a enabler, that if present facilitate the professionals to perform, in particular the additional communicative and interactive activities.

"Training is your nature, you have to be driven to do certain things. One can have all the training they want, but you have to have it in your soul, especially at home, maybe in hospitals and RSAs you can fool, but at home you can't" (OSS, FMG)

"You also have to be good. This is a skill, every nurse must have a sensitivity, you have to be a person who is not only empathetic, but a person who goes beyond that, who has a very clear idea of who the patient is, the man" (Nurse, FMG)

Membership

Membership refers to the sense of belonging of an operator to his/her cooperative. Membership is a enabler because it reduces the feeling of loneliness of the professional that is more prone to engage readily unrecognized but necessary activities.

"Then for the time being, the role of the nurse has changed from the standpoint of personal identification with the institution more than with the individual service" (Nurse, CdS)

Technology

Technology is an enabler because digital devices or new technology can help the operators in saving time and have more possibilities in perform additional activities; moreover technology can be a support in the management and administrative activities.

"Let's digitize! Let's do the same things, but in a different format. It seems trivial but if I have some cells in which I have to write numbers and if I did it with a touch it would take at least one fifth of the time." (Nurse, OSA)

Enablers	Frequency (%)
Collaboration	50%
Training	17%
Experience*	10%
HSC context*	9%
Personal Attitude*	7%
Membership*	3%
Technology	2%
Policy	3%
Tot	**100%**

Table 10: Enablers of Home Task Shifting, Case Studies, Frequency (%)

5.2.3 Root cause and Enabler's comparison between roles involved

An analysis was conducted to understand what linkage exists between root causes and enablers and the different roles involved. Having previously clarified how root causes generate task shifting and how enablers facilitate its implementation, we now go on to compare how these are related to nurses, physical therapists, and OSS. We refer to the results presented in Table 11.

Root Causes	Nurse	Physioterapist	OSS
Patients' needs	27%	35%	55%
HSC context	24%	5%	0%
Individual Performace	11%	10%	27%
Efficiency and Efficacy	10%	20%	0%
Personal attitude	10%	10%	9%
Staff Shortage	6%	10%	0%
Caregivers' needs	3%	10%	0%
Coordination need	5%	0%	0%
Policy	3%	0%	0%
Health Professionals' Need	0%	0%	9%
Tot	**100%**	**100%**	**100%**

Enablers	Nurse	Physioterapist	OSS
Collaboration	42%	64%	58%
Training	17%	18%	17%
Experience	14%	4%	0%
HSC context	13%	4%	0%
Personal Attitude	5%	7%	17%
Membership	5%	0%	0%
Technology	2%	4%	0%
Policy	3%	0%	8%
Tot	**100%**	**100%**	**100%**

Table 11: Root causes and enablers along home health professional roles, Frequency (%)

The first result is that all the three professionals are mainly pushed to perform additional activities because of the patient's need. Thus, it turns out that the patient is the heart and center of care and that his or her needs are the primary driver of home task shifting.

"Exactly, it all starts with the patient's need" (Nurse, PAXME)

Another motivation that encourages nurses to overcome their recognized role is the health, social and cultural context. If it is strong related to nurses, it seems to incentive less physiotherapists and OSS. This can be explained as physiotherapists and OSS are two more autonomous figures and their work is less conditioned by other figures, while the nurse is strongly limited in his professional autonomy by the medical-centric context that influences health care currently.

Next, we note that individual work is the other most prevalent common root cause, and it incentives the most the OSSs. In fact, all three figures work at home individually,

without carrying out joint access with other figures. And individual job generates for all the three roles home task shifting activities.

Another point of similarity is personal attitude, with the spread around 10% for all three actors, showing how this root cause generates task shifting regardless of profession.

Regarding the enablers, the most evident finding is that collaboration and training stand out in terms of prevalence and importance above all other enablers for all three roles. Even before training, all three home care professionals believe that collaboration and integration among home care professionals is necessary. And then they require more training, especially in the communication and interpersonal aspect.

Two other notable points are how experience and learning in the field help nurses more than other figures; while for OSS, a personal attitude is more important, requiring their role to have a more pronounced empathic and relational component than that of nurses and physical therapists.

"Going into people's homes requires empathy, we're faced with people that someone maybe says, 'But he's gone with his mind by now,' no, that's never the case!" (OSS; FMG)

5.3 Further Results

In the following paragraphs will be illustrated the barriers and some arguments for future development. These two nodes were not analysed in the literature review, but, coding the interviews and the workshop, they were considered important because of their recurrence in the texts and because they can help to clarify how task shifting is occurring in home care context.

5.3.1 Barriers

Barriers are defined as those elements that obstacle the development of task shifting in the home context. As with root causes and enablers, the barriers reflect in part what is described in the EU Report[14], in particular the presence of social and cultural, legal, and professional association barriers were also found in the interviews. To these are added economic and administrative barriers that are specific to the analysis of the interviews.

Social and Cultural Barriers

These barriers refer specifically to all those social and cultural elements that stiffen the healthcare structure, particularly a hierarchical view of healthcare roles, with physicians at the top. As a matter of fact, the medical-centric vision in healthcare obstacles task shifting, in that it is very tied to and rigidly focused on the tasks of each figure and does not contribute to a climate of collaboration and communication, which, as we have seen, is fundamental to facilitating task shifting.

"I have to admit that, as a professional category, we are a bit behind, because we are children of a physician-centric, hospital-based organization" (Nurse, CdS)

"A very bad thing is when the doctor tells you "You do this because I tell you to" and does not leave room even to reply, you may reply but afterwards you pay for it." (Nurse, PAXME)

Professional Associations

Professional Boundaries refers to those barriers linked to the single health profession, to the type of labour agreement and the single approach to the profession. In particular, it emerges the different approach of the freelancers compared to corporate employees. In fact, it is more common for freelancers not to go beyond what the prescription requires, as their income is linked to the number of patients they can cover. And this element not the spread of task shifting.

"Freelancers are more performance-based; that is, they do what you tell them, what they have to do, they do it, they do it well and that's it, no more" (Nurse, OSA)

Legal Barriers

Barriers related to regulations governing home care, bureaucratic and legal aspects. In fact, there are currently widespread regulations that, because of the way they structure the ADI access model, severely limit the possibility of collaboration and the creation of synergies by the various healthcare figures, obstructing any kind of task shifting.

"There are important organizational limitations: for example, two different figures cannot go to the same patient on the same day. [...] it's very difficult for us to organize ourselves in this way." (Nurse, FMG)

Economic Barriers

Economic factors, when they are lacking, create financial barriers that lead to a lack of activation of the ADI service or of certain more expensive, but necessary, professional figures, such as physiotherapists. As a result, there is a lack of a more multidisciplinary approach to the patient, which, once again, hinders home-based task shifting.

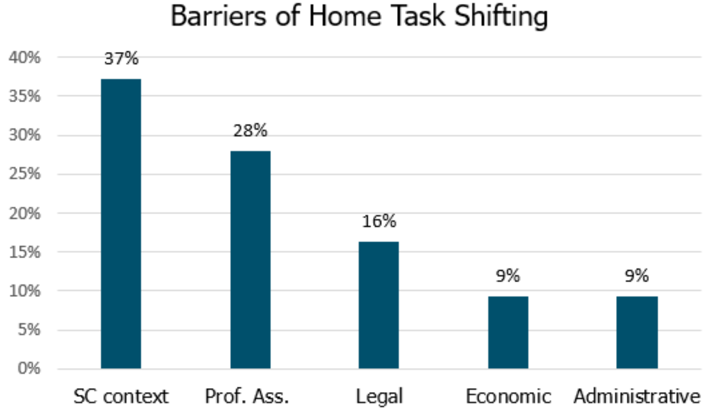
"Sometimes you go in for renewals and the manager says, 'I'm not renewing the physiotherapist!' even though they need the physiotherapist more than the nurse at the time. They don't renew it, and there's an economic reason behind it" (Nurse, PAXME)

Administrative Barriers

Administrative barriers are all those organizational and managerial inefficiencies and obstacles. This refers above all to the bureaucratic part of the ADI that is very heavy and still very much tied to paperwork, which slows down processes and takes time away from operators who could dedicate themselves to other activities, even beyond their role.

But it also refers to the difficulty of changing organizational direction towards more technological solutions due to the lack of willingness of operators and to an adequate development of technologies.

"We have the app to report access and we have the computer to score on the ASL program from home, so it doubles the work instead of simplifying it. At least that's how it is for now, that's the part I can't stand" (Physioterapist, FMG)



Graph 16: Barriers of Home Task Shifting, Frequency (%)

The table 12 contains the percentage recurrences of barriers for each home professional and it follows the findings of a brief exploration of how barriers obstruct the various health care professionals.

Barriers	Nurse	Physiotherapist	OSS
SC	52%	8%	0
Professional	24%	31%	100%
Legal	7%	38%	0
Economic	10%	8%	0
Administrative	7%	15%	0
Tot	**100%**	**100%**	**100%**

Table 12: Barriers of home task shifting along health professionals roles, Frequency (%)

It emerges that nurses are mostly limited by social and cultural barriers; this confirms the fact that the enabler "health, social and cultural context" is more requested by

nurses as they are more obstructed, compared to physiotherapists and OSS, by the medical-centric context in which they work.

On the other hand, physiotherapists are hindered primarily by the fact that they are largely freelancers, so this does not motivate them to perform activities beyond the required service. They are also hindered by legal barriers and differences in regulations in the area in which they work.

The OSSs seem to be obstructed only by professional barriers, but looking at the absolute number, there appears to be only 1 coding, so the result is not reliable enough to understand their profile.

5.3.2 Future Development

Future developments include the set of arguments that operators interviewed have advanced as priorities for home care development in the coming years.

These arguments are:

- *Collaboration with the General Practitioners:* the difficulties and the inefficiencies in the communication and collaboration with the general practitioners are often mentioned. To face this situation, operators ask to strengthen the collaboration and the relationship with the physicians.

  "I think it's important to create closer relationships within GP practices." (Nurse, PAXME)

- *Collaboration with hospitals:* it was proposed to strengthen collaboration with hospitals in order to provide more comprehensive and continuative care to patients and to increase nurse's role and importance recognition.

  "A network should be created between the territory and the hospital so that patients are cared very well. In addition, if we were able to do this, our role would be much more recognized: because if when the patient leaves the

hospital you tell him to go to the nurse to do the treatment, and to come back only for the check-up, it is as if you were recognized that nurses do not need the doctor to tell them how to do it, but they can do it by themselves." (Nurse, PAXME)

- *Training in universities:* it is proposed to insert and strengthen, where already present, training courses on ADI in universities.

  "The ADI in my opinion should be included as an integral part of an internship during university, which is something that here in Italy there is not." (Nurse, PAXME)

- *Training on communication:* Practitioners realize that they are increasingly performing interactive activities and are aware that their skills are often inadequate to perform these tasks; thus, they require more training in communication and interaction.

  "What we need is communication training" (Nurse, FMG)

- *Initiative medicine:* Practitioners are aware of the growing importance that home care will have in the near future, and believe that it is necessary to move towards a more structured organizational model directed towards initiative medicine.

  "I believe that we are moving towards a home-based hospitalization that has lower costs than the hospital-based one. With the increase in the number of elderly people and chronic diseases, home care will be the future, I don't see any other way." (Physioterapist, FMG)

  "I hope that on the population we work through initiative medicine, because it is necessary" (Nurse, CdS)

Moreover, a highly debated topic that is often mentioned is that of the community nurse, to which the next section is devoted.

Community Nurse

This paragraph is dedicated to the figure of the community nurse. This figure has already been discussed in chapter 4.1, referring to them as "professionals whose privileged setting is the person's living environments and who act proactively, in a network with all the social health services and social actors of the territory for the users who are bearers of health and social needs inextricably linked together". We will now go to see how the interviews submitted to the health workers also revealed the need for the figure of the community nurse and what is expected from this role.

From the results emerged that the role of nurses expects to continue to evolve, and nurses demand that the extra activities they are performing should be recognized as part of their role at the legislative level, also proposing the increase of home care training already starting from university.

"I believe that ADI should enter the universities, because it all starts from there: once it's inside the university, it's as if there was already recognition." (Nurse; PAXME)

Thus, nurses would like to expand the boundaries of their responsibilities. This is proved by the fact that almost every interview mentioned the new role of family/community nurse. Especially in the CdS, where the nurse as organizational manager has already seen a recognition of the broadening of his or her competencies, the introduction of the community nurse as described by the Piano Nazionale della Prevenzione 2020-2025[28] is highly expected. But also the nurses who work in the other cooperatives (OSA, PAXME and Fondazione Maddalena Grassi) believe that in the future the role of the nurse should have a broader approach, as a case manager

"The nurse should be a case manager and must enter the life, the daily routine of the chronic patient with a holistic approach" (Nurse, CdS)

The figure of the community nurse that emerges from the interviews is in line with what the PNP describes. In fact, according to the practitioners interviewed, the community nurse should work in proximity to people, have an approach to initiative medicine, playing a proactive role towards the population. Moreover, it should be inserted and integrated in a network, collaborating and interfacing with other services and actors on the territory, especially with general practitioners, local facilities and hospitals. It should also become both a health and social reference point for citizens, who should know it and recognize its role.

"The ideal would be the following: you have a territory on which there is an attending physician and a territory nurse occupying the same territory; so that the patients of that attending physician are the same as the ones you follow at home, and you can refer to the attending physician: you create so like a network. Same thing with the physical therapist, everything can be done together" (Nurse; PAXME)

"The family nurse is not the one who does the services, but he is the support of the family, he becomes the reference of the family from the social and health point of view." (Nurse; FMG)

The role of this nurse is not intended to replace or overlap the figure of the general practitioner, or even social workers, but only to integrate with each other's and become a bridge between all the health figures for users in the area, making health care more accessible to many.

"It is not the same thing, on the contrary: we need the social worker, because when there is a particular situation [...] we need a relationship with the social worker. Because who goes to feed them? is this service activated? Then all the sanitary part is ours. In short, it would be necessary to activate a formal network with the general practitioner, the social worker and the nurse". (Nurse, FMG)

The community nurse as described by the ROCS of the Case della Salute is nurse who should be a linchpin of social and the health support for users. Therefore he/she will not have a specific role, but an extended one. He or she should have specific skills and

special training, in order to have a complete vision of what is happening in the structures and in the territory; He/she should be equipped with considerable managerial and relational skills to be able to promptly capture the needs of citizens.

"The community nurse will be a figure with very specific skills and with a particular training, he will really be a point of contact between the health structure and the whole social part" (Nurse, CdS)

"Because when I think of a community nurse, I think of someone who is on the front line in the reception and orientation phase, but they also have to be familiar with all the corporate pathways and they have to have remarkable interpersonal skills to capture needs. (Nurse, CdS)

5.4 Process of Implementation of Home Task Shifting

A final consideration that can be made concerns the implementation process of task shifting at home. The previous results confirm the findings advanced by the systematic literature review, according to which task shifting is present at the home level. More precisely, task shifting occurs in the form of enhancement, making nurses, physiotherapists, and OSS's role to evolve in terms of activities and responsibilities. Referring to the implementation models proposed by Schalkwyk in 2020[13], and presented in paragraph 1.2.4 it is possible to observe that home task shifting is spreading incrementally. This is confirmed by the fact that activities are undertaken by health care professionals before they are formalized by laws. This reinforces the argument advanced by Schalkwyk that incremental processing is the most widespread form of implementation. If the requests of practitioners for the legal recognition of the activities they perform in addition to their role are accepted, it will be possible to implement a systematic change of the traditional role of home care professionals, passing from an incremental to a planned process, introducing new training programs, and increasing the benefits of task shifting[13] described by the European Commission in 2019[14] and mentioned in the paragraph 1.2.3.

5.5 Final Considerations

This section summarizes final considerations that clarify how the main research question, i.e. *How does task shifting occur in home care settings?* was addressed:

Starting with the first sub research question RQ.1. *How is the role of nurses, health care assistant and physiotherapist evolving in terms of activities and responsibilities that are shifting from their recognized responsibilities?* it can be said that:

- The role of the nurse is evolving in a very broad way, indeed, task shifting occurs in all forms: enhancement, innovation and delegation of activities from GPs. This set of activities that is performed by nurses over their recognized responsibilities are mainly interactive and administrative, but also care and educational tasks. Therefore, the evolution of the nurse is manifested in the enhancement, innovation and delegation of the entire spectrum of activities[15], emphasizing the multidimensional character that nurses will have to assume in the future;
- The role of physiotherapist is enhanced by including interactive, administrative educational and, in a small way, care activities that are added to the ones that are formally recognized;
- The role of the OSS is evolving too. Mainly, as the other two roles there is an enhancement of OSS's activities, especially introducing interactive activities that are not recognized. Moreover, in some cases OSSs perform care that are delegated by the nurse.

By addressing the RQ.2, i.e. *How are the root causes and enablers of task shifting in home care setting linked to the different activities and roles involved?* it emerged that:

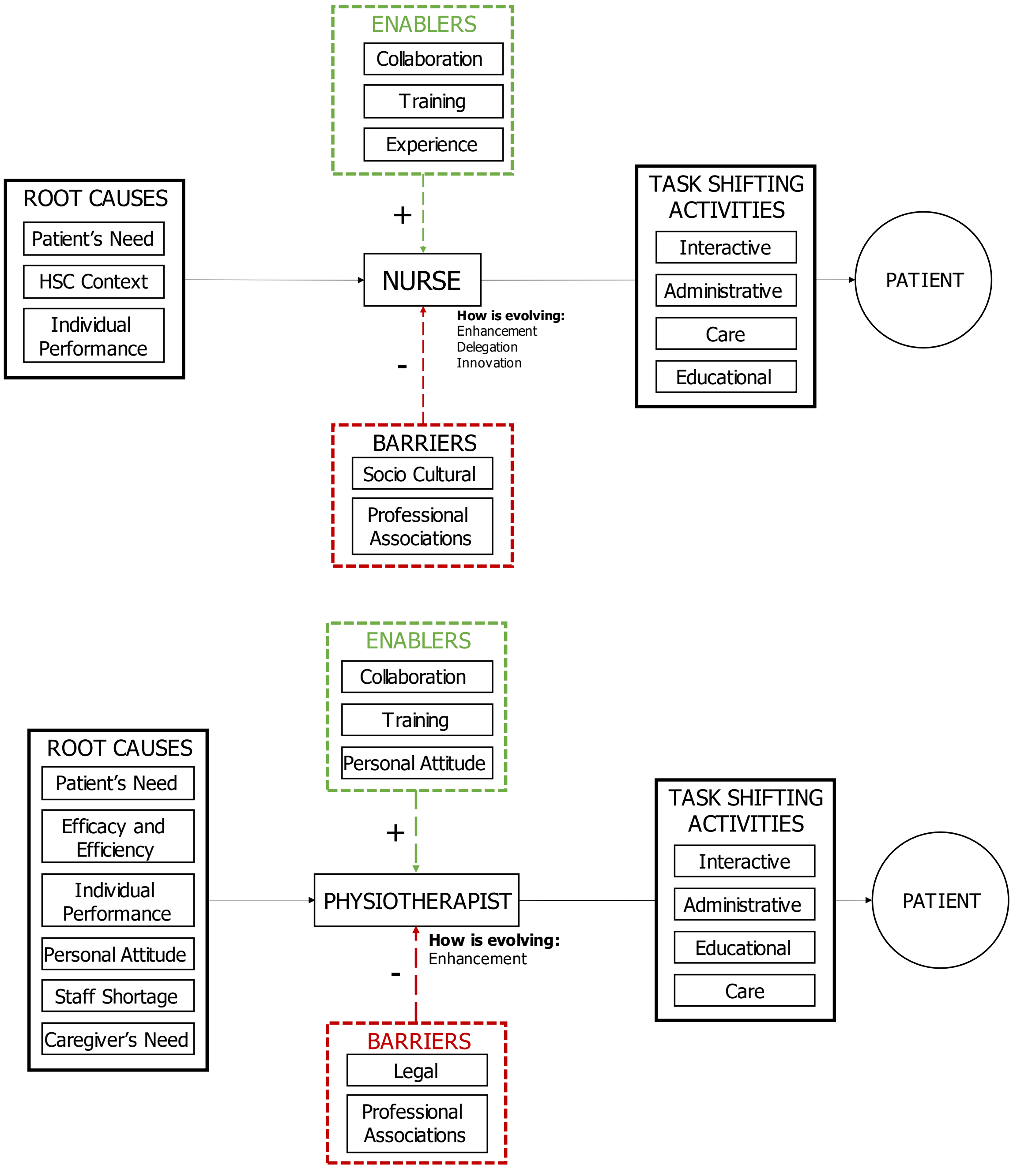
- Patient's needs and individual performance are two root causes that most generate a phenomenon of task shifting that highly induce all the three roles to perform additional tasks. Indeed home health professionals, consider a priority

helping the patient, and thus being alone in front of a patient in need, they are pushed to perform activities even beyond what they are recognized for.

- Collaboration and training are the two most important enablers that facilitate the shift of tasks. In fact, it has been found that in a climate of collaboration and where practitioners have received more training, they are more likely to perform tasks that are not traditionally related to their role. These enablers are equally valid for both nurses, physiotherapists and OSS.

In conclusion, the main question of this thesis, i.e. how does task shifting occur in home care?, can be answered as follow. Task shifting at home care level occurs according to the three modes of enhancement, substitution/delegation and innovation of tasks, thus confirming the taxonomy introduced by the European Union[14] at a general level. These three modes of task shifting occur with different frequency depending on the role involved. More specifically, enhancement of tasks is valid for all three healthcare professionals; delegation of tasks involves only nurses and OSSs; and innovation of tasks involves only the nurses. These changes of activities modify, and therefore evolve, the role of the professionals involved. In fact, a greater indication of how this evolution is occurring is provided precisely by the type of activities carried out beyond those traditionally recognized and therefore involved in the process of task shifting implementation. It turns out that all roles are involved primarily in performing interactive and administrative activities; this indicate that the role of a home care workers, especially nurses, is evolving towards a figure that is no longer only healthcare, but also with a profile of social and organizational interest. Furthermore, it appears that the mode of implementation of task shifting, according to those proposed by Schalkwyk[13] is incremental, since the additional activities carried out by the operators are not yet currently recognized. In addition, the findings of this thesis have allowed us to clarify and schematize how task shifting is generated, identifying the root causes of its implementation process, and defining how this process is facilitated or obstructed by enablers and barriers.

The main findings are schematized and collected in the following images that provide a summary of what has emerged for each specific home health professional. On the left are reported the most common root causes that generate task shifting for that specific role, and on the left the task shifting activities performed, in order of decreasing frequency. In the dashed boxes are the enablers and barriers, that are those elements that, if present, facilitate or obstruct the implementation of task shifting.



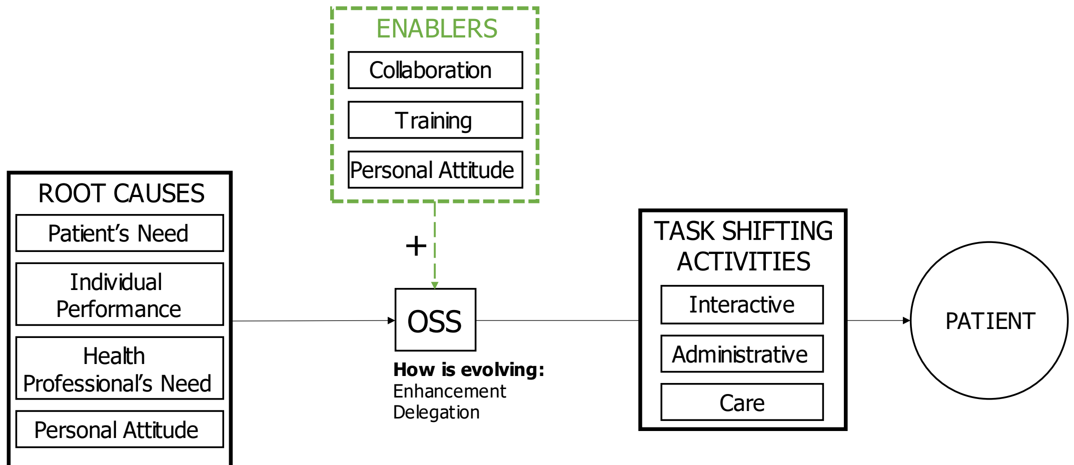


Figure 5: Home task shifting implementation process along nurses, physiotherapists and OSSs

6. FINAL FRAMEWORK

In this paragraph is illustrated a final framework that allows to summarize what has been described so far, in particular it illustrates the answer to the main research question of this thesis: how does task shifting occur in home care?

6.1 Home Task Shifting Framework

The starting point for the implementation of this framework was the task shifting model proposed by Schalkwyk[13] and presented in the literature review. This model was then expanded according to what was studied and obtained from the coding of the interviews and the workshop. This framework collects and unifies in a single image the many fragmented elements that have emerged from the systematic literature review and the practical case studies. It is a theoretical framework, in fact at present, no practical case has been found in which all the constituent elements of this framework were present at the same time (e.g., all the figures evolve according to all the modes of task shifting that were previously attributed to them); but at the same time, by enclosing all the possible scenarios, it offers a complete and generalized view of how task shifting is implemented at home. The final result is illustrated in the figure 6.

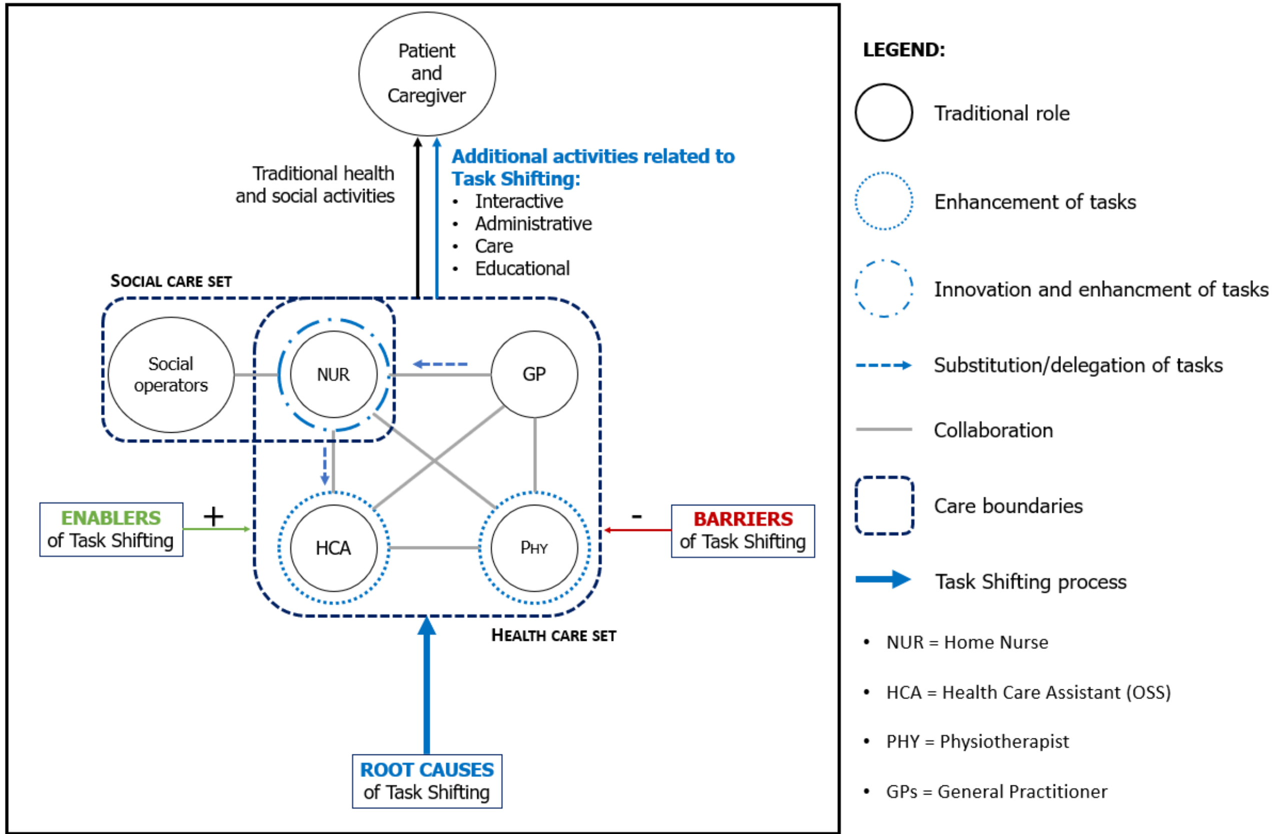


Figure 6: Final Framework of home task shifting implementation process

The starting point for the description of this framework is the context in which it is inscribed: indeed, reference is made to ADI in Italy, a branch of home care, and to a national public health system.

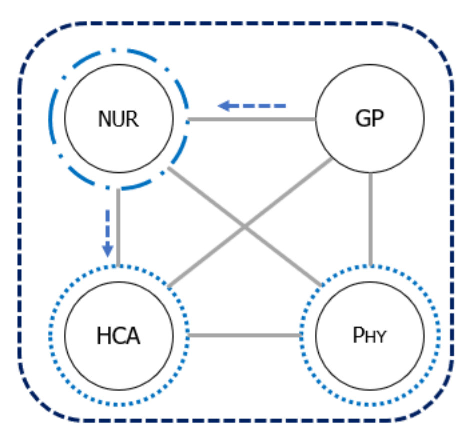


Figure 7: Framework - health care set

The heart of this framework is presented by the central square (figure 7) containing the 3 home health professionals who were the object of study, and the General Practitioners, who are the role with which every practitioner would most like to increase their collaboration. These actors, differently from the current healthcare context[13], are not positioned in a rigid hierarchical structure with the physician at the top, but are placed on the same level, in a climate of

collaboration and exchange of information, which promotes a multidimensional and multiprofessional approach to the patient. This decision was made by referring to the model of Schalkwyk[13], who was the first to move towards a team approach to define task shifting, as explained in section 1.2.1. Each healthcare professional is enclosed in a circle that indicates how their role is evolving, in accordance with what emerged from the interviews. Thus, the role of physiotherapists and HCAs is being enhanced, and the role of nurses is both enhanced and innovated. The thick black arrows refer instead to the direction of delegation of activities, thus referring to the substitution and delegation of tasks that occurs between GPs and nurses, and between nurses and HCAs. Finally, the borders of the square that encloses the roles has the dashed boundaries, indicate that this group must remain open to the collaboration and sharing of information also with the other sectors outside of the health one and above all, with the social one. For this reason, health care set is connected with the social care group, through the figure of the nurse (figure 8). Indeed, as it has emerged from the case studies, nurses are moving towards and enhanced and innovated role, that will also have to act as health and social reference point for the patients. Thus, the nurse, is located in the intersection of the two groups.

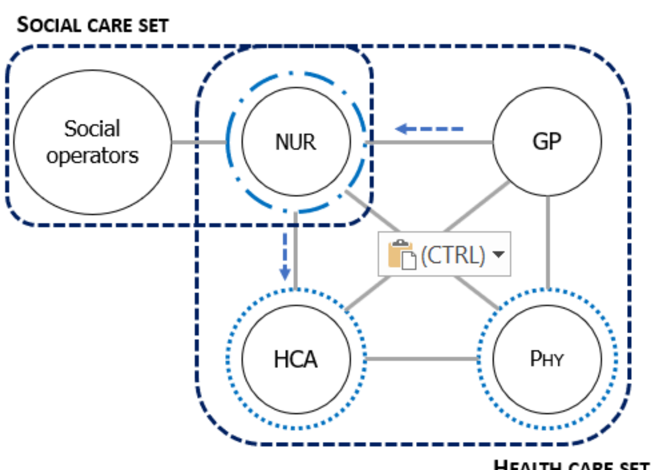


Figure 8: Framework - Social care set

Then the last two element that have to be described in the central part of the framework are the enablers and barriers that insist on the health care set; in fact, enablers and barriers are elements whose presence, respectively, facilitates or obstructs the implementation of task shifting within the context (for the list, make reference to paragraph 5.2).

The section at the bottom of the framework reports the root causes, i.e. what generates task shifting implementation process. The root causes are the starting point for the blue arrow that represents task shifting implementation process. Thus, the task shifting process, has its start in the root causes and it impacts on the health care group, evolving the roles within it, in accordance with the modalities visually identified by the circles and described above (figure 9).

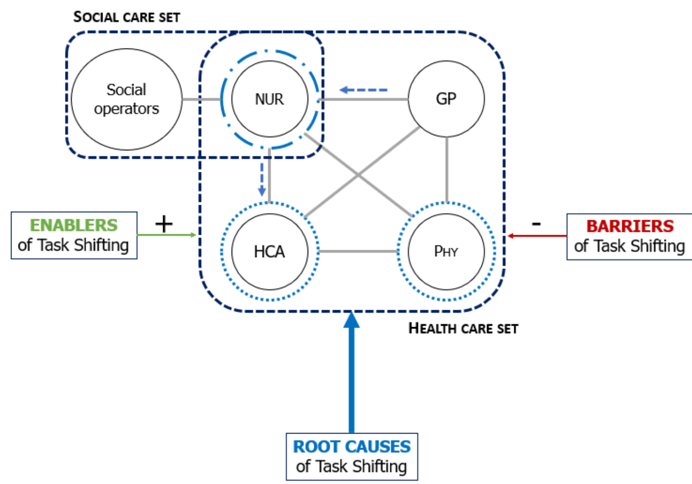


Figure 9: Framework - Root causes, Enablers and Barriers of home task shifting

Finally, at the top of the framework we have the recipients of social and health care: patients, and their attached caregivers. It is observed that within the set containing the patients and caregivers come two arrows: the first black one represents the health and social activities that are traditionally recognized and provided by the professionals mentioned above; the second is the blue one that refers to task shifting, which indicates the set of all those activities that are performed by nurses, physiotherapists, and OSS and that enhance, delegate and innovate their roles. Such activities follow the categories reported by the review on nursing practice in home care setting[15] and are placed in decreasing order of occurrence: interactive, administrative, care and educational.

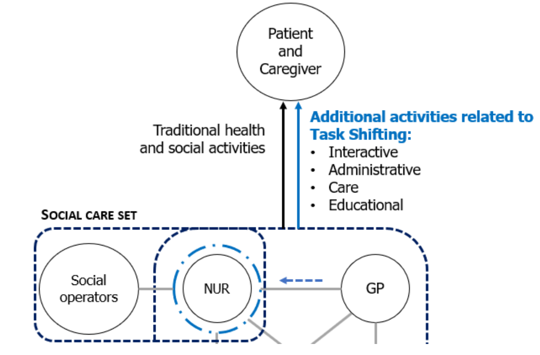


Figure 10: framework: Activities and recipients of care

7. CONCLUSIONS

This chapter will provide a final summary of the objectives, the method used, the results obtained, and the practical and theoretical implications.

The objective of this research thesis was to assess whether task shifting is present at the home level, and to clarify and investigate how this practice is evolving the roles of home health care workers, particularly nurses, physiotherapists, and health care assistants. To achieve this objective, we identify what are the root causes, enablers, and activities of home task shifting and how these are related to the previously mentioned roles.

From the existing literature regarding task shifting, it has emerged that this topic is currently much debated, because it can be a valid response to the needs of the current health context, but that the scenario in which it is studied and known is the hospital one. Thus, it emerged a need to investigate the implementation of task shifting in the home environment, which is where we decided to investigate task shifting. This choice is corroborated by the fact that home care is currently a great resource to address the aging population and chronic diseases.

To achieve this goal, a systematic analysis of the literature was first carried out, launching a query on Scopus in order to find all those cases in which the health workers has seen their tasks enhanced, delegated or innovated. All publications since 2008 that referred to a country with a public national health system were included. From the screening of 141 results, 25 in scope papers emerged. These were then analysed according to a framework implemented from the literature on task shifting, and the results are the main roles involved, the activities, the root causes and enablers of task shifting.

Literature findings confirmed the presence of task shifting in the home care setting, and the consequent evolution of the home care professionals' roles involved. However, findings resulted few and fragmented. To address this under investigated area of

research, an empirical study was carried out. More precisely, the empirical study aims at investigating the RQ. *How does task shifting occur in home care setting?*.

To address this main RQ, the empirical research has been divided into two sub-questions that structured the main body of this thesis:

RQ. 1. *How is the role of nurses, health care assistant and physiotherapist evolving in terms of activities and responsibilities that are shifting from their recognized responsibilities?*

RQ. 2. *How are the root causes and enablers of task shifting in home care setting linked to the different activities and roles involved?*

Insights and empirical evidence were sought through a multiple case study that analysed 4 home care service providers. These were conducted through 13 interviews and 1 workshop at 3 Italian ADI cooperatives and 6 Case della Salute in Emilia Romagna.

From the empirical findings, it was possible to:

4. Confirm the presence of task shifting in the home care setting and the evolution of the role of home health workers;
5. Clarify and deepen how the root causes and enablers are linked to the shift of tasks they generate respect to the different activities and roles involved;
6. Introduce the figure of the community nurse, who should become both a health and social reference for families.

All of this has led to the implementation of a final framework (figure 6) that tries to summarize and systematize the logic of home task shifting that is currently occurring, including those aspects, such as nurse as a bridging role between the health and social sectors, that should be implemented in the next future.

7.1 Theoretical and Practical Implications

This section presents the theoretical and practical implications that the outcomes of this thesis may have for both scholars and service providers.

First of all, the confirmation that task shifting is implemented not only at the hospital level, but also at the home care level. This finding may open the path to future research and new perspectives with which to organize the delivery of home and community care services. However, the major theoretical contribution that is provided by this paper is the creation of a framework that is able to capture and schematize all the aspects that have emerged, describing both the process by which task shifting is implemented at the home level, and how this is evolving the professionals involved and highlighting the collaborations that should be implemented. In this way, not only the presence of home task shifting is confirmed, but its logic of implementation is also clarified, thus filling the gap present in the literature.

In addition, the outcomes of this thesis have practical implications, especially they have an informative role for service providers. In fact, service providers can use the results of this thesis to understand how the professionals in their cooperatives (nurse, physiotherapists, and OSS) are evolving and, consequently, which aspects they should invest in and leverage for the future. In particular, they should create a work environment that fosters collaboration and information exchange, at least internally; they should invest in training their employees, particularly regarding communication, work management, and teamwork; and they should implement technology tools that support, simplify and enhance the work of their employees.

The same practical implications may be valid for the AUSLs (azienda unità sanitaria locale - local health authority) of Emilia Romagna in order to proceed with the implementation of the Case della Salute in a more informed and conscious way.

In addition, the outcomes of this thesis can be useful guidelines for policy makers who are responsible for defining the laws and policies of territorial care. In fact, it has been

seen that the legal aspects, especially regarding the lack of recognition of their role, are highly felt by professionals. Moreover, as described above, this thesis highlighted the presence of many legal barriers that obstruct the implementation of task shifting. A greater awareness and a clearer outline of what is happening can support policy makers in reducing these obstacles. In particular, it is important that future legislation does not look at professionals as individual performers, but instead facilitates the creation of a single, integrated system in which all parties are interconnected. In fact, task shifting is not a one-time event, but a phenomenon that affects the entire home care system.

Finally, the outcomes of this study can support and guide the introduction of the community nurse, which has emerged as a much needed and desired figure, both within the Case della Salute and within the various cooperatives that collaborated for this thesis. Being aware of how the role of the nurse is already evolving, what the needs and expectations of practitioners are, can help to understand on which aspects to invest more. In fact, the community nurse is expected to be a transversal figure, with specific training, high relational and collaborative skills, very present on the territory, able to play the role of health and social reference for families and patients.

7.2 Limitations and Future Steps

This section presents the main limitations of this research thesis, which may be the pathway for future studies and further research in the area of home task shifting implementation.

The first considerations concern the execution of the systematic literature review. In particular, the main limitation is that the research query was launched only on Scopus, and this may have provided only part of the results actually existing. In the future, the same research query could also be implemented and launched on other search engines such as PubMed, WebofScience and Google Scholar, thus obtaining a broader and more complete picture. Moreover, another limitation of the systematic literature review concerns the fact that in the creation of the framework of analysis the column inherent

to the barriers was not included, analysis that was instead introduced later in the coding of the interviews. This may negatively influence the outcome of the barriers that emerged; therefore, it would be appropriate in the future to analyse the existing literature also with a view to identifying the barriers present.

The other limitations of this thesis concern the analysis of the case studies. First of all, the context of analysis chosen is very narrow and specific: ADI - which is a specific sector of home care - in Italy, particularly in Emilia Romagna and Lombardy. The choice of this context is linked both to the fact that in these places the theme of task shifting and role evolution is a very actual topic, and to factors inherent in the willingness of operators to participate to the interviews. In the future, the same analysis can be extended to a broader context, both by including other regions in Italy and by including other countries, in order to make the figure of task shifting as complete as possible.

In addition, due to time constraints and Covid-19 pandemic, the number of interviews and workshops is not high, particularly with regard to physiotherapists and OSS (only 2 and 1 interview respectively). The next step should include both a greater number of respondents, but also to extend the interviews to other categories of health professionals, who are present at home even if in smaller numbers, such as midwives and nutritionists. In addition, the figure of the general practitioner could be included, as it is a role often mentioned by the interviewees and has a key role in the services that are provided at home.

Finally, a final consideration regarding the limitations of this research must be made regarding the qualitative and descriptive approach adopted. In fact, while a clear and schematic framework emerged from this study, capable of explaining how task shifting occurs in home care settings, there is a lack of analysis that is able to measure its impact. It may therefore be interesting in the future to define which are the KPIs of home task shifting and how much they vary over time and between different roles, thus undertaking a more quantitative approach.

ANNEX 1: FRAMEWORK OF SYSTEMATIC LITERATURE REVIEW

Below there are 3 fragments of a single framework used to analyse the 25 "in scope" papers of the systematic literature review. These 3 images are to be viewed side-by-side and report all of the criteria described in section 2.1.2.

Literature	Root Causes								Enablers			
Paper	Staff Shortage	Patient's need	Caregiver's need	Health professional Need	Coordination's need	Technology	Policy	Efficiency and Efficacy	Training	Collaboration	Policy2	Possibility to implement the change
1		x							x			
2	x				x			x	x	x		
3		x						x	x			
4		x	x					x	x		x	
5	x								x	x	x	
6		x	x						x	x		
7			x						x	x	x	
8	x								x	x	x	
9	x	x			x				x	x	x	
10	x						x	x	x	x		x
11		x						x	x	x		x
12	x	x		x				x	x	x		
13	x							x	x	x	x	
14		x						x	x	x	x	
15		x			x	x		x	x			
16			x						x	x		
17		x						x	x	x	x	
18							x	x	x	x		
19	x	x		x	x			x	x	x		x
20	x					x			x	x	x	
21	x	x					x		x	x		
22	x	x						x	x	x	x	
23			x		x					x	x	
24		x	x						x	X		
25	x	x					x	x	x			

Literature	Task Shifting Typologies			Roles Involved					
Paper	Enhancement	Substitution/ delegation	Innovation	Patients	Caregivers	Health Assistant	Pharmacist	Others HP	Nurses
1	x								x
2	x								x
3	x								x
4	x			x	x				
5		x			x	x			x
6	X			x	x				
7	X				x				
8	X				x				
9		x				x			
10	X	x	x			x			x
11	X								x
12			x				x		
13			x				x		
14	X								x
15	X			x					x
16	X				x				x
17	X								x
18	X	x				x		x	x
19	X		x				x		x
20		x			x				
21	x	x				x			x
22		x				x			
23	x				x				
24	x				x				
25	x							x	x

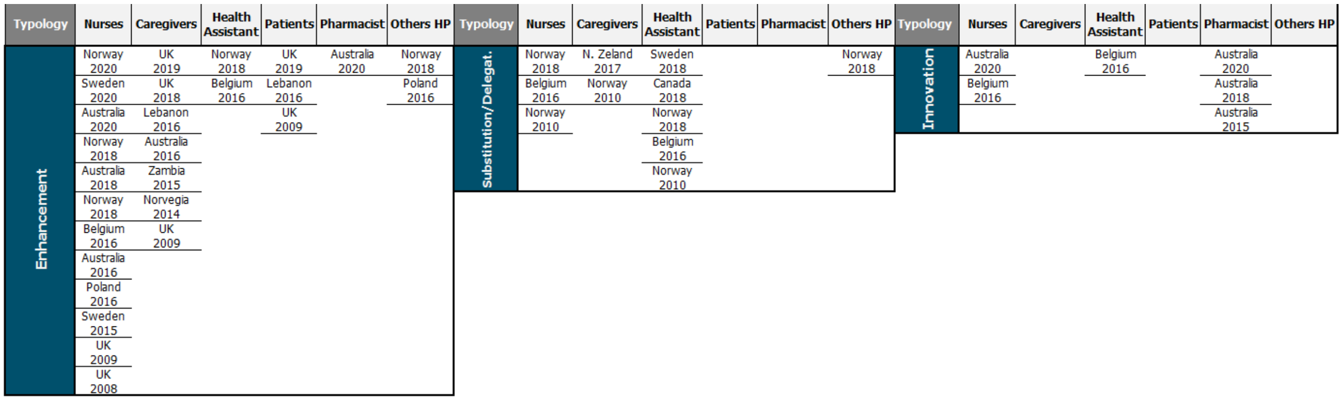
Literature	Descriptive Features			
Paper	Outcome	County	Typology	Year
1	Observation	Norway	Qualitative	2020
2	Observation	Norway	Qualitative	2018
3	Positivo	UK	Quantitative	2009
4	Observation	Lebanon	Qualitative	2016
5	-	Norway	Literature Review	2010
6	Positive	UK	Quantitative	2019
7	Observation	UK	Qualitative	2009
8	Pos; Observ.	Zambia	Qualitative	2015
9	Observation	Sweden	Qualitative	2018
10	Positive	Belgium	Qualitative	2016
11	Positive	Australia	Quantitative	2018
12	Positive	Australia	Quantitative	2018
13	Positive	Australia	Qualitative	2015
14	Observation	Sweden	Qualitative	2015
15	Positive	UK	Quantitative	2008
16	Positive	Australia	Quantitative	2016
17	Positive	Svezia	Qualitative	2020
18	Positive	Norway	Qualitative	2018
19	Observation	Australia	Quantitative	2020
20	Observation	New Zealand	Qualitative	2017
21	-	-	Literature Review	2014
22	Observation	Canada	Qualitative	2018
23	Observation	Norway	Qualitative	2014
24	Observation	UK	Qualitative	2018
25	Positive	Poland	Qualitative	2016

ANNEX 2: LIST OF IN SCOPE PAPERS

1	"Looking for Deviations": Nurses' Observations of Older Patients With COPD in Home Nursing Care[77]
2	"We Tie Up the Loose Ends": Homecare Nursing in a Changing Health Care Landscape[89]
3	A cluster randomized controlled trial of cognitive behaviour therapy for common mental disorders in patients with advanced cancer[90]
4	A family-focused intervention for heart failure self-care: Conceptual underpinnings of a culturally appropriate intervention[91]
5	An investigation of the role nurses play in Norwegian home care[92]
6	Caregiver outcomes of the REACH-HF multicentre randomized controlled trial of home-based rehabilitation for heart failure with reduced ejection fraction[79]
7	Caring for a person in advanced illness and suffering from breathlessness at home: Threats and resources[93]
8	Deep down in their heart, they wish they could be given some incentives: A qualitative study on the changing roles and relations of care among home-based caregivers in Zambia[34]
9	Experiences of home care assistants providing social care to older people: A context in transition[78]
10	Health Care Assistants in Home Nursing: The Holy Grail or the Emperor's New Clothes? A Qualitative Study[82]
11	Hospital in the Home nurses' recognition and response to clinical deterioration[94]
12	Improving medication safety for home nursing clients: A prospective observational study of a novel clinical pharmacy service—The Visiting Pharmacist (ViP) study[37]
13	Medication reviews are useful, but the model needs to be changed: Perspectives of Aboriginal Health Service health professionals on Home Medicines Reviews[95]
14	New kid on the block? Community nurses' experiences of caring for sick children at home[96]
15	Nurse's perceptions and experiences of using of a mobile-phone-based Advanced Symptom Management System (ASyMS©) to monitor and manage chemotherapy-related toxicity
16	Outcomes for family carers of a nurse-delivered hospital discharge intervention for older people (the Further Enabling Care at Home Program): Single blind randomised controlled trial[81]
17	Palliative care nurses' strategies when working in private homes—A photo-elicitation study[97]
18	Reablement teams' roles: A qualitative study of interdisciplinary teams' experiences[80]
19	Simplifying medication regimens for people receiving community-based home care services: Outcomes of a non-randomized pilot and feasibility study[98]
20	The 'wayfinding' experience of family carers who learn to manage technical health procedures at home: a grounded theory study[99]
21	The Activity Profile of Home Nurses: A Systematic Review[35]
22	The evolving role of the personal support worker in home care in Ontario, Canada[83]
23	The indispensable intermediaries: A qualitative study of informal caregivers' struggle to achieve influence at and after hospital discharge[100]
24	The Nourishing Role: Exploratory Qualitative Research Revealing Unmet Support Needs in Family Carers of Patients with Advanced Cancer and Eating Problems[101]
25	Writing Prescriptions by Nurses and Midwives in Poland[102]

ANNEX 3: IN SCOPE PAPERS CLASSIFICATION

In the following table the 25 in scope paper are classified according time and country of reference along typology of task shifting and roles involved.



Typology	Nurses	Caregivers	Health Assistant	Patients	Pharmacist	Others HP
Enhancement	Norway 2020	UK 2019	Norway 2018	UK 2019	Australia 2020	Norway 2018
	Sweden 2020	UK 2018	Belgium 2016	Lebanon 2016		Poland 2016
	Australia 2020	Lebanon 2016		UK 2009		
	Norway 2018	Australia 2016				
	Australia 2018	Zambia 2015				
	Norway 2018	Norvegia 2014				
	Belgium 2016	UK 2009				
	Australia 2016					
	Poland 2016					
	Sweden 2015					
	UK 2009					
	UK 2008					

Typology	Nurses	Caregivers	Health Assistant	Patients	Pharmacist	Others HP
Substitution/Delegat.	Norway 2018	N. Zeland 2017	Sweden 2018			Norway 2018
	Belgium 2016	Norway 2010	Canada 2018			
	Norway 2010		Norway 2018			
			Belgium 2016			
			Norway 2010			

Typology	Nurses	Caregivers	Health Assistant	Patients	Pharmacist	Others HP
Innovation	Australia 2020		Belgium 2016		Australia 2020	
	Belgium 2016				Australia 2018	
					Australia 2015	

ANNEX 4: EXAMPLES OF HOME TASK SHIFTING OF SYSTEMATIC LITERATURE REVIEW

Below some additional examples of implementation of task shifting in home care setting are presented, in addition to the one present in paragraph 2.2.10.

Year: 2018
Paper: Qualitative
Sweden

Roles involved:
- Health Assistant

Task Shifting:
- Substitution and delegation

Experiences of home care assistants providing social care to older people: A context in transition

Objective: the objective was to describe the experiences of home care aides (HCAs) in providing social care in the homes of the elderly
Task Shifting Activity: Care and Administrative Activities
Activity Description: HCAs have become responsible for health care activities such as dressing and managing wounds, diagnosing the patient's health status, communicating with nurses, going beyond the activities that should be required of them i.e. personal hygiene and dressing/dressing the patient
Enablers:
- Staff Shortage
- Patient Need: Desire to be cared for at home and need for complex and multiple care that is not answered by the health care system
- Coordination Need: mismatch between health system offerings and patient needs

Requirements:
- Policy: The need for health assesstants to be recognized as a key element in home care and for their role and responsibilities to be defined
- Training: Need for a long -term plan to train HCAs to assist older adults with multiple needs
- Collaboration: Collaboration with healthcare professionals required

Outcome: Observations;
Needs emerge, and it is hypothesized that HCAs can narrow the gap between patients and the health care environment

Year: 2016
Paper: Qualitative

Belgium

Roles involved:
- Health Assistant
- Nurse

Task Shifting:
- Enhancement
- Substitution
- Innovation

Health Care Assistants in Home Nursing: The Holy Grail or the Emperor's New Clothes? A Qualitative Study

Objective: Identify what home health workers' experiences are with delegation of nursing tasks, supervision of health care assistants (HCAs), and the impact of these changes on the work of home health nurses (HNs)
Task Shifting Activity: Care and Administrative Activities
Activity Description: Health care assistants are introduced at the home level with duties to perform nursing activities delegated by and under the supervision of a nurse
Enablers:
- Staff Shortage
- Policy: Introduction of a legal basis for integrating HCAs into home care
- Efficiency and Efficacy Need: need to improve the quality of care

Requirements:
- Capacity to implement the change: change is hindered by organizational barriers, as shifting activities to a new role risks losing the overview of the patient's clinical picture and thus reducing positive effects
- Training (nurse): Need to increase nurses' knowledge of the more advanced health care activities they go into and organizational skills in delegating tasks and supervising HCAs
- Training (HCA): Need to adequately train HCAs on the health care activities they are going to perform
- Collaboration: Need to collaborate between HCAs and nurses in a coordinated way

Outcome: Positive;
integration of HCAs positively helps to suppress understaffing and provide better care

Year: 2018

Paper: Quantitative

Australia

Roles involved:
- Nurse

Task Shifting:
- Enhancement

Hospital in the Home nurses' recognition and response to clinical deterioration

Objective: Gain an understanding of how Hospital in the Home (HITH) nurses recognize and respond to clinical deterioration in patients receiving care at home or in their usual place of residence

Task Shifting Activity: Care Activities

Activity Description: Development of nurse competencies regarding assessment, measurement, and interpretation of clinical data for early recognition of and response to patient clinical deterioration

Enablers:
- Patient's Need: need to respond promptly to degenerating diseases
- Efficiency and Efficacy Need: Need to improve patient outcomes

Requirements:
- Collaboration: Need for collaboration with other stakeholders in the health care system
- Training: Need for training for nurses regarding the required activities
- Capacity to implement the change: Home hospital nurses are an integral part of a sustainable health care system that must be responsive to dynamic changes in public health policy and meet the health needs of the community

Outcome: Positive; Scale: Questionnaire; 5 -point Likert scale;
HITH plays a critical and positive role in patient care

Year: 2015

Paper: Qualitative

Sweden

Roles involved:
- Nurse

Task Shifting:
- Enhancement

New kid on the block? Community nurses' experiences of caring for sick children at home

Objective: To study the experiences of Swedish community nurses in caring for sick children at home, a growing category of patients in home care

Task Shifting Activity: Care Activities

Activity Description: Home care nurses care for children despite not having pediatric expertise

Enablers:
- Patient's Need: Children's need to be near their parents
- Efficiency and Efficacy Need: Desire to improve patient outcomes by allowing patients to stay home with their parents

Requirements:
- Collaboration: Between the referring pediatric clinic and the community nurse; Collegial support and opportunities for nurses to receive professional guidance to reduce their infidence with the patient and the situation
- Training: Need to increase pediatric knowledge in nurses caring for sick children at home
- Policy: Develop formal transmural collaborative policies to train and support home health nurses to provide appropriate care for sick children and their families at home and safeguard good outcomes

Outcome: Observation;
Emerging of requirments and needs

Year: 2020

Paper: Qualitative

Sweden

Roles involved:
- Nurse

Task Shifting:
- Enhancement

Palliative care nurses' strategies when working in private homes—A photo-elicitation study

Objective: Exploring the work experiences of palliative care nurses caring for patients at the end of life in private homes

Task Shifting Activity: Interactive Activities

Activity Description: nurses who travel to the home to provide palliative care must be able to relate appropriately to the patient and their family members, must be able to understand the context and adapt according to the environment and circumstances, then adopt different strategies depending on the context so as to support the balance between self -care, independence and safe care.

Enablers:
- Patient's Need: Patients are increasingly requesting home care in order to find answers to their need for attention and care in the terminal phase of life
- Efficiency and Efficacy Need: need to provide quality care

Requirements:
- Training: nurses should be trained to develop different strategies depending on family and patient contexts
- Policy: Need to develop clinical practice that includes strategies that can facilitate nurses to find their own way to work in the home to provide quality palliative care
- Collaboration: need for collaboration and communication between nurses and patients

Outcome: Positive;
It emerges that the nurse's ability to develop different strategies has positive patient outcomes, but the different points of need also emerge

Year: 2020

Paper: Quantitative

Australia

Roles involved:
- Nurse
- Pharmacist

Task Shifting:
- Enhancement
- Innovation

Simplifying medication regimens for people receiving community-based home care services: Outcomes of a non-randomized pilot and feasibility study

Objective: Determining the feasibility of a multicomponent intervention to simplify medication management for home care patients

Task Shifting Activity: Care and Educational Activities

Activity Description: pharmacists are introduced into home care to collaborate with nurses on the pharmacological management of patients

Enablers:
- Patient's Need: to be helped with medication management
- Health Professional Need: Of nurses to be assisted in the pharcologic management of patients
- Efficiency and Efficacy Need: need to improve efficiency in the management of multicomorbidities
- Coordination Need: coordination and communication between the different actors
- Staff Shortage

Requirements :
- Possibility to implement the change: necessità di reclutare le persone, fattore che ostacola l'implementazione del cambiamento
- Collaboration: need to strengthen the collaboration between different actors in drug management
- Training: nurses expand and consolidate their knowledge through collaboration with nurses

Outcome: Observation;
Barriers to implementation emerge

Year: 2018

Paper: Qualitative

Canada

Roles involved:
- Health Assistant

Task Shifting:
- Substitution/ delegation

The evolving role of the personal support worker in home care in Ontario, Canada

Objective: Describe and examine the roles played by health care assistants in home care

Task Shifting Activity: Care Activities

Activity Description: the role of health care assistants (PSWs) is shifting from providing primarily personal and supportive care to include care activities previously provided by regulated health care professionals (RHPs) (e.g., medication management)

Enablers:
- Efficiency and Efficacy Need: The need to reduce costs (i.e., outsource certain activities that were being performed by more expensive figures to less expensive ones)
- Staff Shortage
- Patient's Need: Older patients required more continuous and appropriate care

Requirements :
- Policy: need to develop policies to regulate the role of PSWs
- Training: Additional necessary skills to best perform the new health care activities
- Policy: development of consistent policies across regions and organizations would improve certainty about the provision of additional skills by health care providers in the home care setting.
- Collaboration: Need for collaboration and mutual review among different health care stakeholders

Outcome: Observations ;
Emergence of different needs and recommendations

ANNEX 5: INTERVIEW'S TEXT

The text of the interview administered to nurses, physiotherapists, OSSs of OSA, PAXME and Fondazione Maddalena Grassi is presented below.

Obiettivi:

Studiare come il ruolo dell'infermiere/fisioterapista/OSS sta evolvendo per i servizi di assistenza domiciliare. Per fare ciò si identifica:

- Come viene percepito il ruolo dell'infermiere, dell'OSS, e delle altre figure sanitarie (farmacisti, ostetrici, terapisti, nutrizionisti) all'interno dell'assistenza domiciliare; in particolare se vengono percepiti come prestazioni individuali o come lavoro di equipe
- Quali attività vengono svolte da infermieri domiciliari, OSS e altre figure sanitarie (farmacisti, ostetrici, terapisti, nutrizionisti) che non sono tradizionalmente legate e riconosciute al loro ruolo;
- Quali sono i fattori che spingono un infermiere, OSS o un'altra figura sanitaria (farmacisti, ostetrici, terapisti, nutrizionisti) a svolgere mansioni non tradizionalmente legate al loro ruolo
- Quali sono i requisiti necessari che potrebbero essere implementati maggiormente per poter facilitare questo cambiamento di ruolo?

Domande:

1. Come percepisce il ruolo dell'infermiere/fisioterapista/OSS a domicilio? Come prestazioni a domicilio individuali, o come parte di un team? Ci sono ruoli con cui collabora spesso o con cui vorrebbe collaborare di più e perché (es. MMG, OSS, caregiver, pazienti)?
2. Ha notato se il ruolo dell'infermiere/fisioterapista/OSS sta cambiando nel corso del tempo e se le mansioni che gli vengono affidate sono state ampliate, delegate o sostituite con attività non tradizionalmente affidate a lei? Se sì, di che attività si tratta e quali sono le figure coinvolte?

3. Ha notato se altri ruoli domiciliari stanno cambiando nel corso del tempo e in che modo ciò avviene?
4. Quali sono i motivi e le necessità che la spingono a svolgere queste attività non formalmente riconosciute, o che esulano dalla sua formazione professionale? Concretamente, come queste necessità hanno modificato il tradizionale svolgimento di queste attività?
5. Come vive e cosa ne pensa di questa evoluzione dei ruoli domiciliari?
6. Ritiene che ci siano dei requisiti necessari, degli elementi che potrebbero essere implementati maggiormente per poter facilitare questo cambiamento di ruolo? Se sì, in che modo?
7. Come ritiene che continuerà ad evolvere in futuro il ruolo dell'infermiere? E quello degli altri professionisti domiciliari? Quali tendenze e quali sfide pensa si dovranno affrontare?

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