European Agency for Safety and Health at Work

Home care workers – a comprehensive overview of their occupational safety and health

Report

European Agency for Safety and Health at Work

Authors: Juan Arasanz, Maria Caprile, Rebecca Tildesley (Notus), Clara Llorens (Fundación 1º de Mayo - ISTAS), Fieke Margaretha van Dijk, Aleksandra Morozovaitė and Grėtė Veronika Gedutytė (Visionary Analytics).

Project management: Lorenzo Munar and Kate Palmer (EU-OSHA).

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Executive summary

This report provides a comprehensive overview of the occupational safety and health (OSH) challenges faced by home care workers in the EU. It explores the current evidence on the most prevalent OSH risks and health and safety outcomes faced by home care workers and to identify relevant strategies and interventions for OSH risk management and prevention in home care settings. The study is based on a mixed methods approach, encompassing desk research, field research through interviews with relevant stakeholders, and the identification of examples of good practices, some of which are elaborated as case studies (published as stand-alone documents[1] and linked in the report).

Home care work is defined as care or assistance provided within the recipient's private home to adults who suffer disability or long-term dependency. However, the delimitation of the home care sector is challenging due to the complexity of care provision, which involves a range of medical and personal assistance with different levels of qualification, but also due to the diversity of employment arrangements, including private and public organisations and direct employment by households, along with the extent of informal and undeclared work.

The report examines the structural features and the main challenges faced by the sector with an impact on the employment and working conditions of home care workers. The home care sector is experiencing rapid growth due to ageing populations and increasing demand for long-term care (LTC) services. **Despite growing employment levels, home care work is among the lowest paid occupations in the EU. This, combined with highly demanding physical and psychosocial working conditions, contributes to persistent staff shortages and an increasing reliance on international mobility of home care workers, many of whom face additional vulnerabilities because of their migrant and employment status.** Over the last decades, cash-for-care schemes adopted in many Member States (MSs) often resulted in the extension of a market for low-paid home care workers, which is reflected in the growing share of informal workers and domestic workers directly employed by households. This has resulted in growing fragmentation of employment conditions with gaps in legal and social protection. In some MSs, domestic workers directly employed by a household are not covered by certain legal protection, including OSH regulation, social security benefits or standard working time provisions. On the other hand, reforms in the public financing and provision of home care services driven by budgetary pressures have resulted in growing marketisation and increased competition among service providers and, in some cases, resulting in employment practices with little protection.

This study has identified different strategies and interventions that focus on the professionalisation and the formalisation of home care work, reflecting a growing awareness of the need to improve employment and working conditions of home care workers and to address the increasing demand for quality home care services across the EU. A first set of strategies consists of legal reforms or policy initiatives aimed at establishing professional standards in service delivery and improving training and career and wage progression opportunities to enhance the professional status and appeal of home care work and to improve the quality and safety of home care services. These initiatives also include efforts to address regulatory gaps and extend social and employment protection rights to domestic workers. A second group of strategies focuses on different initiatives addressing the prevalent issue of undeclared work in the home care sector. Significantly, the report presents different initiatives in support of cross-border home care workers and their need for standardised skills and qualifications, reflecting their growing role in the sector and the specific challenges they face.

The home care work environment presents unique challenges for OSH compared to residential care facilities. Working in private homes exposes workers to specific risks and makes it difficult

[1] More information is available at:
https://osha.europa.eu/en/publications/barcelona-social-superblocks-initiative-proximity-home-care-services
https://osha.europa.eu/en/publications/kobra-collaborative-approach-improving-osh-care-and-nursing
https://osha.europa.eu/en/publications/mitigating-exposure-musculoskeletal-risks-siun-sote-ergonomics-model
https://osha.europa.eu/en/publications/multi-country-burnout-prevention-initiative-based-mentoring-and-training-case-procare
https://osha.europa.eu/en/publications/frances-carers-cared-programme-improves-quality-care-and-life-both-caregivers-and-care-recipients
https://osha.europa.eu/en/publications/improving-domestic-care-worker-wellbeing-through-training-and-professionalisation-case-ebincolf

to implement standardised risk prevention and management strategies. The physical environment of clients' homes may lack proper equipment or have unsuitable conditions, increasing the risk of overexertion, trips, falls and injuries. Additionally, the social environment of home care work exposes workers to complex interpersonal dynamics with clients and their families, potentially leading to emotional strain and risks of abuse and harassment. Home care workers often work in isolation and lack of immediate support from colleagues and supervisors, further exacerbating these risks. Furthermore, the work schedules in the organisation of home care services, characterised by fragmented hours and time pressure, combined with large workloads and the often unpredictable nature of care tasks, expose workers to conflicts of a professional nature and make it challenging to implement risk prevention solutions.

The study presents three main categories of OSH risk factors and related health outcomes in home care work.

First, **home care workers are exposed to significant musculoskeletal (MSK) risks primarily due to the physically demanding nature of their tasks and the ergonomic challenges present in private homes**. These risks entail handling heavy physical workloads, engaging in patient handling activities, working in awkward and static postures, and performing repetitive motions, often without proper equipment or in confined and inadequate spaces. Such conditions can lead to overexertion, strain or injuries in various body areas. Musculoskeletal disorders (MSDs) such as low back pain, shoulder pain and neck pain are highly prevalent in this sector. These MSDs can result in chronic pain conditions, reduced work ability, increased sick leave and even early retirement among home care workers. The prevalence of MSDs is influenced by both physical demands and psychosocial factors, such as high work demands and low job control.

Second, **psychosocial risks in home care work mostly arise from high quantitative demands, including excessive workloads and time pressure, caused by understaffing and inflexible and fragmented scheduling practices**. These patterns of work intensification often result in unpaid overtime and reduced control over the work, potentially leading to conflicting situations due to home care workers' inability to care for patients according to professional or ethical standards. This is compounded by emotional demands arising from complex interpersonal relationships with clients and their families, often in emotionally charged situations. Additionally, research highlights prevalent psychosocial risk factors stemming from the gendered composition of the home care workforce and the sexual division of domestic work and care, particularly the challenges of work–life conflict (intensified by irregular and fragmented work schedules), as well as the risks of violence and harassment intensified by isolation and lack of colleagues and superiors' immediate support. Moreover, some studies highlight job insecurity stemming from undeclared work or from lack of stable working hours, leading to worries and difficulties to make ends meet. Mental health outcomes among home care workers are a significant concern, with several studies indicating wide prevalence of anxiety, stress, burnout and emotional exhaustion. However, there is limited evidence on the extent of these mental health outcomes compared to MSDs.

Third, **home care workers face a range of physical, chemical and biological risks**. Physical risks arise from the physical environment within and outside of clients' homes, including risks of slipping, tripping and falling due to unsafe home conditions, as well as accidents associated with commuting between clients' homes. Biological risks primarily involve exposure to infectious diseases through various modes of transmission, including needle punctures and contact with bodily fluids. Poor hygiene conditions in clients' homes can exacerbate these risks. Chemical risks stem from handling cleaning and disinfecting substances, as well as exposure to medications or second-hand smoke. These risks can lead to various health outcomes, including injuries from falls, MSDs, respiratory issues and potential infections, but specific prevalence data for these risks and outcomes are scarce in the EU context.

Addressing OSH challenges in the home care sector requires a multifaceted approach. **This report emphasises the need for improved risk assessment procedures tailored to the home care environment.** Examples of innovative strategies for improving risks assessments in the home care sector include collaborative approaches bringing together different stakeholders, and a combination of workplace inspections and safety training programmes for home care workers, covering ergonomics, infection control and strategies for managing psychosocial risks. Digital applications and ICT tools are increasingly being used for risk assessment in the home care sector, offering more consistent and standardised evaluations across different locations and assisting workers in addressing identified risks.

Additionally, some interventions focus on involving patients in the risk assessment and prevention processes.

This study has identified different approaches for OSH risk prevention and management at workplace level. These are classified into organisational and individual interventions. Organisational interventions involve changes in work organisation practices to reduce risk exposure at their source. Individual interventions, on the other hand, aim to improve workers' ability to deal with OSH risks through training programmes and the promotion of safety behaviours and skills.

Organisational interventions addressing psychosocial risks in the home care sector focus on enhancing worker autonomy on the job and functional colleagues' support through the implementation of self-managed working teams, as exemplified by the Buurtzorg model from the Netherlands. This model consists of the organisation of small work teams of home care workers that allow them to organise their work according to their professional criteria, with positive impacts on reducing risks and increasing job satisfaction and providing workers with control and colleagues' support. Another key area for organisational intervention is the management of working time. Examples in this regard include the implementation of flexible scheduling systems, which grant workers greater control over their working hours, thereby enhancing opportunities for a better work–life balance.

Individual-level interventions primarily focus on equipping workers with enhanced competences and skills to address risks arising from complex interpersonal relationships and to cope with emotional stress. Examples of workplace violence prevention programmes include training programmes and behavioural interventions to develop carers' ability to deal with different stressful situations. Other examples of intervention addressing professional burnout in LTC settings (including home care) focus on training managers to act as mentors for care workers.

Organisational interventions specifically addressing MSK risks and MSDs in home care work focus on the distribution of physical workloads and the adoption of ergonomic solutions. A notable example of restructuring of work organisation practices is provided by the 'Goldilocks paradigm' that allows for a more balanced distribution of physical workloads and rest periods among home care workers. The adoption of assistive devices, such as lifters, sliding shits or lumbar supports, along with specific ergonomic training has also shown to be an effective organisational intervention for reducing low back pain among home care workers.

Individual-level interventions primarily aim to enhance workers' knowledge and skills in safe patient handling techniques, ergonomic practices and risk awareness. Some examples identified in the study focus on developing internal trainers on various safety areas who will assist and support their colleagues in implementing safety practices in the workplace.

On the other hand, the study provides limited examples of interventions specifically addressing physical, biological and chemical risks in home care settings in the EU context, highlighting the need for more research and protective measures addressing these risks in home care settings.

Overall, **the examples of initiatives presented in the report highlight the importance of comprehensive approaches combining organisational changes with individual skill development to effectively address risk prevention and management strategies in home care settings. The study also shows the need for home care workers' involvement in designing and implementing OSH interventions to ensure their effectiveness and contribute to health and safety work cultures.**

1. Introduction

The health and social care (HeSCare) sector is among the sectors with the highest employment growth since the 2000s and with greatest expectations for future demands due to population ageing. A growing proportion of the demand for long-term care (LTC) services is being met in the recipient's home, which is often the preferred option due to personal and cultural preferences, but also because home care is a more cost-effective solution than institutional care. The ongoing trend of deinstitutionalisation of LTC in the EU has significant implications for the employment and working conditions of home care workers and their occupational safety and health (OSH). Overall, care workers in non-residential care settings represents around a third of total employment in the LTC sector in the EU. Home care work is a female-dominated sector characterised by precarious employment conditions and a high-demanding physical and psychosocial work environment. Work in private homes presents unique challenges for the OSH of caregivers due to space constraints, inadequacy of users' homes as workplaces and the limited availability of ergonomic equipment in residential care settings. Furthermore, legal uncertainties in the application of OSH risk management and prevention strategies in private homes adds further challenges to the OSH of home care workers (EU-OSHA, 2024).

This study is part of a major research initiative carried out by EU-OSHA in the HeSCare sector.[2] The study aims to explore the current evidence on the most prevalent OSH risks and health and safety outcomes faced by home care workers, and to identify relevant strategies and interventions for risk management and prevention of OSH in home care settings.

The specific objectives of the project are to:

- Answer the general question: What are the current and emerging OSH risks and issues for home care workers and how will these issues affect their OSH and influence the overall service that they provide?
- Provide a broad-focus scoping study to identify the most salient issues when it comes to OSH in the sector with the aim of guiding OSH risk prevention, the adoption of policy measures and future research.
- Provide and develop new knowledge or information on the most prevalent risk factors as well as health and safety outcomes in the sector.
- Increase visibility and awareness of new and emerging risks.
- Equip policymakers, social partners, OSH practitioners and researchers with a better understanding of and a comprehensive, cross-national insight into the state-of-the-art of home care sector services when it comes to OSH in general.
- Contribute to identifying gaps in research on the OSH of home care workers.
- Provide data and information to support the preparation of the forthcoming European-wide Healthy Workplaces Campaign (HWC) 'Together for Mental Health at Work' (HWC 2026-2028).

In order to achieve the above-mentioned objectives, a list of research questions was elaborated with the goal of developing the contents and design of this report (and related case studies). The main research questions addressed in the study are the following:

1. What are the main characteristics of the home care sector in the EU that have a direct or indirect impact on the OSH of home care workers? What are the most important variations across countries and employment models and workers' characteristics?
2. What are the most prevalent OSH risks in the home care sector? What are the main emerging risks? How does exposure to OSH risks vary across different groups of home care workers?
3. What are the prevailing measures and strategies for risk prevention and management in the home care sector? What are the main challenges for the enforcement of OSH regulations? What kind of policy initiatives have been implemented at different levels to improve the OSH of home carers? What kind of good practice preventive interventions have been implemented at the workplace level?

[2] More information is available at: https://osha.europa.eu/en/themes/health-and-social-care-sector-osh

Methodological approach

The study employed a mixed methods approach, encompassing desk research, interviews and case study research.

Firstly, a scoping literature review was conducted to provide an overview of the current state of the research evidence regarding OSH risks and preventive strategies in the home care sector. In contrast with systematic reviews, a scoping literature review provides more flexibility to address broad research topics such as those addressed in this study, iteratively refining the search criteria and using snowballing for specific topics of interest. An initial set of search queries was defined, based on relevant keywords and eligibility criteria, and then applied to scholarly and scientific research databases (PubMed, Scopus and Web of Science). In addition to academic literature, desk research also expanded to cover grey literature publications from relevant stakeholders, including research reports and statements from EU-level social partners and other European and national institutions.

The process of screening and analysing the references included in the report was facilitated using Zotero, a reference management software, and Elicit, an AI-assisted research tool, to enable the examination of a large number of publications. The initial selection resulted in a total of 243 relevant academic publications. A substantial number of references were finally excluded because they focused on psychosocial risks of informal (non-professional) carers or because their geographical scope fell outside Europe. In addition to these academic sources, desk research uncovered a significant number of recent publications and ongoing research initiatives that focus on various aspects of working and employment conditions of home care workers, highlighting the growing interest in this sector.[3] The Elicit AI software eases the extraction of data from publications according to a variety of categories and specifications set by the research team. A key feature of this tool is that it allows users to double check the accuracy and reliability of the extracted data, providing direct access to original text, thereby ensuring researchers remain actively involved throughout the analysis.

To complete the inputs of the literature review and guide the search for examples of good practices, the methodology was refined to involve interviews with relevant stakeholders in the home care sector. The purpose of these interviews was twofold. First, a set of exploratory interviews were conducted with a list of representatives from different EU-level institutions and agencies and social partner organisations. These interviews yielded relevant insights into the sector's general trends, the prevalence of OSH risks, and risk prevention and management approaches. Interviewees were also invited to provide additional contacts for other potential interviewees involved in initiatives that could be covered as examples of good practices. Second, another group of interviews focused on representatives of organisations and institutions directly involved in the initiatives included as good practices. The list of total interviews conducted in the study is presented in Table 1.

Table 1. Stakeholders interviewed for this study

Stakeholder category	Organisation
EU-level institutions and agencies	European Commission, DG EMPL, Health and Safety at Work, EU-OSHA (C2)
	European Foundation for the improvement of living and working conditions (Eurofound)
	European Institution for Gender Equality (EIGE)
Social partners and organisations representing the sector at EU level	Federation of European Social Employers
	European Federation for Services to Individuals (EFSI)

[3] More information can be accessed in project websites: CARE4CARE project (https://www.care4care.net/the-project/), Job Quality and Industrial Relations in the Personal and Household Services Sector (https://aias-hsi.uva.nl/en/projects-a-z/phs-quality/country-reports/country-reports.html).

Stakeholder category	Organisation
	European Federation for Family Employment and Home Care (EFFE)
	European Federation of Food, Agriculture and Tourism Trade Unions (EFFAT)
	European Public Services Union (EPSU)
Representatives of organisations included as examples of good practices	UKBW – die Unfallkasse Baden-Württemberg (Germany)
	BGW – Die Berufsgenossenschaft für Gesundheitsdienst und Wohlfahrtspflege (Germany)
	Siun sote (Finland)
	University of Florence (Italy)
	EBINCOLF (Italy)
	Barcelona Local Institute for Social Services (Spain)
	Carsat Aquitaine (France)

The identification and selection of good practices presented in this report involved examining different sources and included a range of initiatives at different levels targeting critical aspects of the home care sector. While the focus of the study is OSH risk prevention and management strategies in the physical and psychosocial work environment of home care workers, research highlights that the OSH challenges faced by home care workers are interconnected with structural issues with implications for their employment and working conditions and the quality of care. Consequently, the initial selection criteria were broadened to cover relevant initiatives and policy strategies in two areas that have been drawing significant attention from social partners and national authorities in recent years, namely those targeting the extension of undeclared work in the context of increasing cross-border mobility of the care workforce, and efforts aimed at professionalising the sector through improved training and career opportunities and other measures to improve working conditions and social recognition of care workers. These initiatives not only address the persistent staff shortages in the sector but also contribute to raising the overall standard of care, ensuring better outcomes for care recipients, and eventually reducing the reliance on undeclared or informal care arrangements.

The final selection of good practices included in this report builds on a comprehensive assessment of their geographical scope, ensuring a balanced distribution across diverse EU countries and regulatory landscape. It also considers the specific inputs and outcomes of the interventions, with a focus on those that offer high transferability across different settings and those that present significant learning potential or innovative approaches to OSH risk prevention. These include efforts at the sectoral, national or EU level aimed at formalising and professionalising home care work, along with other workplace-level measures, such as preventive solutions addressing different sources of risk in home care environments. The selected initiatives are presented within text boxes in the relevant sections of the report.

Six of these cases identified in the framework of the study were developed more in depth and are published as stand-alone documents.[4] These cases have also been included in the wider overarching analysis provided in this report.

- **Overview of the structure of the report**

Following this general introduction to the report, Chapter 2 provides an overview of the home care work sector, including its scope and main structural trends. It begins by defining the sectoral and occupational boundaries of home care work, acknowledging the challenges in delineating this sector due to the inherent complexity of tasks involved in the provision of home care services, with different qualification requirements, but also because of the diversity of employment arrangements involved in the provision of these services. The chapter delves into the structural features of the home care sector across EU countries with implications for the working conditions and OSH of home care workers. It examines the influence of institutional factors in the structure and composition of the home care workforce, highlighting the role of national policy approaches in the extension of informal work and direct employment by households in the provision of home care services in many Member States (MSs). The chapter also discusses other factors relating to the fragmentation of employment status and the resulting gaps in the employment and social protection of home care workers, along with other cross-cutting issues, including staff shortages and the extent of undeclared work in the context of increasing international mobility of care workers, with the attendant challenges for enforcement of labour law and OSH regulations. The chapter explores different policy initiatives and strategies aimed at professionalising the sector and improving working conditions, as well as efforts to tackle undeclared work.

Chapter 3 provides an overview of the research on the working environment in home care services, focusing on OSH risks and health and safety outcomes faced by home care workers. The chapter is structured around the main categories of risks: musculoskeletal (MSK), psychosocial, physical, biological and chemical risks. It begins by highlighting the unique challenges posed by home care work environments as compared with other LTC settings, due to their unpredictable nature and the difficulties for the implementation of standardised safety measures in private homes. The chapter gathers insights into the exposure, causes and impacts associated with these risks factors on workers' health and welfare, including musculoskeletal disorders (MSDs), mental health issues, and work-related injuries and sick leave.

Chapter 4 addresses risk prevention and management strategies at the workplace level. It begins by discussing the challenges of carrying out risk assessments in home care settings, noting the difficulties in standardising assessments across varied home environments. This chapter then explores various initiatives aimed at addressing different risk factors, including MSK risks, psychosocial risks, and physical, biological and chemical risks. These initiatives are categorised into organisational strategies and individual approaches. The report provides examples of interventions, discussing their implementation and, where available, their effectiveness. However, it also highlights the limited evidence underpinning many of these interventions, emphasising the need for more research in this area.

Finally, the report sets out conclusions and policy pointers. These conclusions are firmly rooted in the evidence presented and contain a selection of policy pointers for improving the health and safety of home care workers.

[4] These six more in-depth case studies are available at:
https://osha.europa.eu/en/publications/barcelona-social-superblocks-initiative-proximity-home-care-services
https://osha.europa.eu/en/publications/kobra-collaborative-approach-improving-osh-care-and-nursing
https://osha.europa.eu/en/publications/mitigating-exposure-musculoskeletal-risks-siun-sote-ergonomics-model
https://osha.europa.eu/en/publications/multi-country-burnout-prevention-initiative-based-mentoring-and-training-case-procare
https://osha.europa.eu/en/publications/frances-carers-cared-programme-improves-quality-care-and-life-both-caregivers-and-care-recipients
https://osha.europa.eu/en/publications/improving-domestic-care-worker-wellbeing-through-training-and-professionalisation-case-ebincolf

2. Home care work: sectoral and occupational scope and main structural trends

This section aims to define the scope of the research and describe the main structural features and trends of the home care sector across EU MSs. The first section provides a comprehensive description of the main activities and occupational profiles involved in the provision of home care services in different settings. The second section addresses the main structural factors with an influence on employment and working conditions in the sector with a view to identifying the main implications for the OSH of home care workers and the most important variations across countries.

2.1 Sectoral and occupational definitions

The delimitation of the home care work is made challenging by its blurred boundaries with related activities and its inclusion within broader sector aggregates, such as LTC, social services, or 'personal and household services' (PHSs), as well as by the diversity of existing employment arrangements with public and private employers (including the widespread practice of undeclared work). This section elaborates on the different concepts in use by the research and policy analysis with a view to clarifying sectoral and occupational definitions to ensure consistency and clarity in their use throughout the report (Table 2). This study defines home care work based on two main criteria: the nature of tasks involved in the provision of LTC services at recipients' homes, and its recognition as a formal, paid service, regardless of the workers' employment status or circumstances. The formal home care workforce encompasses a set of occupational profiles typically considered as part of the HeSCare workforce (EU-OSHA, 2024). In addition to these main categories, and in accordance with the recent approach by the European Social Policy Analysis Network (ESPAN), the scope of the study extends to domestic workers directly or indirectly employed by client households (Ghailani et al., 2024).

Home care work is defined as care or assistance provided within the recipient's private home to dependent adult people due to disability, illness or old age (EU-OSHA, 2024). The sector is classified under NACE code 88.10 (Social work activities without accommodation for the elderly and disabled). Nevertheless, home care may be understood very differently across countries and there is no consensus definition of this concept. Some studies include LTC provided for dependent adults and children with disabilities (EIGE, 2021), while others also include short-term care provided at home following hospitalisation (Genet et al., 2012). In addition, some definitions also include the use of other non-residential institutions on a temporary basis to support independent living at home, such as community-based social services or day centres for respite care (OECD, 2024). Ultimately, differences in the definitions can be understood as a result of growing complexity in demand for home care services and the general trend towards the deinstitutionalisation of HeSCare services (ESN, 2024).

In this study, home care work consists of a range of medical and personal care and assistance services provided to individuals with functional limitations or long-term dependency. Personal services involve support in activities of daily living, such as dressing, washing and toileting, as well as assistance for instrumental activities of daily living (such as shopping, housekeeping, cooking, transportation or medication) (Genet et al., 2012). The provision of home care services involves three main occupational profiles classified in terms of ISCO classification (Table 2), with different qualification and registration requirements. In most countries, medical services are the responsibility of registered nursing professionals or community nurses, whereas indirect care tasks in support of personal and instrumental activities of daily living are provided by roles with lower qualification requirements, such as personal carers, care helpers or nursing assistants. Nevertheless, there is no uniform definition of LTC workers across MSs (ECE, 2024). The terminology and professional regulation of roles in formal home care services, as well as the division of tasks, differ across countries and have evolved over time. Nurses typically complete individual needs assessments, design care plans, deliver complex care tasks, and oversee the work of other home care support workers and assistants who carry out delegated nursing tasks (Murphy et al., 2022). In many countries, the role of lower qualified professionals (personal carers, assistants, etc.) is expanding to include different tasks formerly provided by nurses (stoma care, medication management, tube feed administration, etc.). However, these workers often lack adequate training, professional support and compensation for these expanded duties (Saari et al., 2018).

The focus of this research is placed on formal home care services provided by paid professionals at recipients' homes. This criterion leads to the distinction of two main employment models in the home

care sector. First, the 'organisation-provider model' corresponds to the typical employment relationship in which the home care worker is employed by a public or private organisation providing the service at a recipient's home. The beneficiary of the service either purchases this service on the market or receives the service from public entities. Alternatively, the organisation can act as a 'third party' or an intermediary agency between users and self-employed carers, as is also the case of many digital care platforms (EESC, 2021). Second, another group in the formal home care workforce comprises 'direct employment' arrangements between private households and domestic workers. These employment arrangements in which the beneficiary of the service is also the employer (user-employer), are typically classified in the NACE 97 category of activities of the household as employers. However, it should be noted that different studies (and interviewees) have stressed the limitations of existing classifications to establish the share of home care workers directly employed by households. A main limitation is that NACE 97 only includes workers working within households as their main activity, while many workers involved in household work (cleaners, personal helpers and home care workers) are usually employed in other jobs in non-domestic settings (Eurofound, 2020b).[5] Another limitation is the high prevalence of undeclared work in the sector, which further complicates efforts to identify and estimate its size (EFSI, 2018; ELA, 2021a).

While acknowledging statistical limitations, most studies and policy approaches to 'domestic work' or 'personal household services' draw on the ILO (2011) definition as 'work performed in or for a household or households', therefore including all workers within a paid relationship for households, either directly or through a third party (Ghailiani et al., 2024). Estimates indicate that employment by a service provider organisation is the most prevalent model, while direct employment by households account for 30% of declared employment of domestic workers (EFSI, 2018). Although most domestic workers are employed in activities supporting household chores, they usually perform multiple tasks that include direct caregiving. This diversity is illustrated by a large-scale survey (N=4,000) conducted in the sector by the EU social partners across 26 EU MSs. Around half of workers surveyed performed care-related tasks within clients' households — 15% exclusively provided direct care for children or elderly people (such as feeding or bathing) while around 32% combined the performance of direct and indirect tasks (cleaning, ironing and cooking) (PHS Monitor, 2024).

Challenges in identifying and defining home care services have been raised around the recent initiative for the establishment of a new EU-level sectoral social dialogue working group for 'Personal and Household Services' (Table 2). This initiative is aimed at promoting the recognition of domestic workers as part of the HeSCare workforce, with a view to creating an equal playing field for all providers involved in the provision of home care services. Social partners in the PHS sector emphasise the need to acknowledge the existing diversity in the professional and skill profiles of the home care workforce, as well as the coexistence of different provision models. The conceptual distinction between direct and indirect care provision not only fails to reflect the current reality of the sector but also poses a risk of inequalities within the LTC sector.[6] As an employer representative interviewed put it:

> *What we see is that when there's a top-down approach, it doesn't work because it's not adapted to the reality on the ground. This means that making the clear distinction between care workers, home care workers and domestic workers doesn't work because it depends on who is receiving the service. In some countries, if you're doing cleaning for a regular family and cleaning for a dependent person, it's the same task, but you are not in the same category. And one day a person can do cleaning for a dependent person and another day for other family. And it's totally different. It's recognised as totally different. But in reality, they are doing the same task. (Employer representative)*

[5] Indeed, the data in NACE 97 only describe the number of individuals who employ a domestic worker and workers who have no other economic activity. Thus, NACE 97 does not provide data on the number of employees in this employment model, although it is used as an order of magnitude of direct employment in the sector (EFSI, 2018).

[6] EFFAT, EFFE, EFSI, Uni-Europa (2022). *PHS Social Partner statement on the European Care Strategy*. https://www.uni-europa.org/wp-content/uploads/sites/3/2022/09/20220913_EU_Care_strategy_PHS_social-partners.pdf

Some trade union organisations involved in the sector hold different views regarding the recognition of domestic workers as part of the LTC workforce. This reluctance is explained by concerns that this inclusion could lower employment and professional standards for skilled professionals, such as registered nurses.

> *We are really against mixing those two categories because they are quite offensive for qualified care workers or qualified nurses … . The cleaner carries out this role, and it's entirely separate from caregiving. These are two completely different professions, you see. We should not use it because it's really derogatory … . So it's completely different. And therefore, if you want to professionalise the people doing this job, we should not mix those categories because there's no such thing as personal household services. (Worker representative)*

Conversely, these divisions are less evident on the employers' side, as organisations representing employers in both the direct employment model and service-provider organisations have come together to support the PHS initiative to ensure fair competition.

The distinction between these two types of employment is of interest for the purpose of this study as it has significant implications for the regulation of employment and working conditions of the home care workers concerned, and particularly to the extent to which OSH regulations are applied and enforced. Home care workers employed by service-provider organisations typically fall under general labour law and enjoy equivalent protection rights as workers in other sectors. In contrast, the regulation of domestic work differs across countries, as in some MSs they are excluded from the application of specific laws or are covered by special regulations, resulting in different employment and social protection gaps compared to other home care workers (Ghailani et al., 2024; ECE, 2024).

Formal care within households is usually complemented by informal care provided by friends or relatives, mostly women, which still plays a pivotal role in the EU MSs (European Commission, 2021a). Indeed, the availability of informal care is a determinant factor for a patient or client staying at home or being institutionalised. Informal caregivers are generally excluded from the home care workforce and therefore are not considered for the purposes of this study. However, boundaries between informal and formal care tend to blur in the context of 'cash-for-care' schemes, wherein informal carers benefit from care allowances provided for dependent people. The allocation of cash benefits is often subject to requirement to pay for formal services, either from licensed service providers or for domestic workers. Cash benefits can be also used to pay the informal carer under certain conditions, such as a long-standing relationship with the care recipient (as in Spain), while in other cases closer relatives are ineligible for care benefits (e.g. spouses in France) (Spasova et al., 2018). Some MSs provide for the possibility of formalising informal care provided by family members as LTC workers, namely in Denmark, Finland and Sweden, as well as in the Netherlands, Ireland and Slovenia. In these cases, informal carers also fall under the labour law applicable to all employees (Pavolini and Merlier, 2024). Despite formal requirements, in many countries cash benefits are frequently used by care-dependent individuals and their families for the hiring of a domestic worker, usually on an undeclared basis (EQUINET, 2021; Spasova et al., 2018).

Table 2: Glossary of sectoral and occupational terms delineating home care services

Terms	Definition (references and statistical categories of reference)
Personal and household services	PHSs cover a broad range of activities that contribute to the wellbeing at home of families and individuals: childcare (CC), LTC for the elderly and for persons with disabilities, cleaning, remedial classes, home repairs, gardening, ICT support, etc. (European Commission, 2012). PHSs include a mix of direct and indirect care as well as household-related services. Their distinctive feature is that another person's household becomes a workplace (PHS Monitor, 2024).

Terms	Definition (references and statistical categories of reference)
Community care	Community care refers to any form of support and care provided in the local community that enables people to overcome or manage any condition, disability or life difficulties, while living alongside others in their local communities, instead of in segregated institutions (ESN, 2024).
Formal home-based long-term care	LTC services for adults with disabilities or chronic illness provided by professional carers in clients' homes and carried out by public or private providers (NACE 88.10 Social work activities without accommodation for the elderly and the disabled).
Nursing professionals	Nurses provide treatment, support and care services for people who are in need of nursing care due to the effects of ageing, injury, illness, or other physical or mental impairment, or potential risks to health. They assume responsibility for the planning and management of patient care, including supervising other healthcare workers, working autonomously or in teams with medical doctors and others in the practical application of preventive and curative measures (ISCO 2221).
Home-based personal care workers	Personal carers provide routine personal care and assistance with activities of daily living to persons who are in need of such care due to effects of ageing, illness, injury, or other physical or mental conditions, in private homes and other independent residential settings. (ISCO 5322).
Home care aides	Home care aides provide personal assistance and promote autonomy, on a daily basis to individuals who are unable to take care of themselves due to illness, ageing or disability. They assist them with personal hygiene, feeding, communication or medication according to the healthcare professional's instructions (ISCO 5322.1).
Social workers	Social workers assist users and families in accessing community support. They are not directly involved in indirect or direct personal care activities, but in other 'community-based care' services and other forms of deinstitutionalisation of social services. (NACE 88.9).
Domestic workers	For the purpose of the Domestic Workers Convention, 2011 (No.189): (a) the term domestic work means work performed in or for a household or households; (b) the term domestic worker means any person engaged in domestic work within an employment relationship; (c) a person who performs domestic work only occasionally or sporadically and not on an occupational basis is not a domestic worker (ILO, 2011).
Live-in carers	Live-in carers are domestic LTC workers who live in the care recipient's household and provide LTC (ECE, 2024).
Informal carers	Individuals providing care outside an employment relationship (e.g. by a relative — usually wives, daughters, mothers or, less frequently, a friend). Boundaries with formal care tend to blur in the context of cash-for-care schemes.

2.2 Structural features of the home care sector in the EU

This section aims to identify the main structural features and trends in the home care sector and their implications for the employment and working conditions of the different groups of home care workers, with a focus on most vulnerable groups of workers. Employment and working conditions in the home care sector are generally characterised by high levels of precariousness along with a highly demanding physical and psychosocial environment. Home care workers are among the lowest-paid and lowest-valued professions in the EU. The extension of non-standard forms of employment (part time jobs, fixed-term and temporary agency work) along with pervasive low wages leads to in-work poverty risks,

especially among personal care workers, who on average earn lower wages than nurses (Pavolini and Marlier, 2024; OECD, 2023). According to 2020 EU Labour Force Survey (LFS) estimates, 52% of workers in social work without accommodation activities are low-paid workers (those in the three lowest deciles of total wage distribution), with an overrepresentation of women (54%) (Eurofound, 2024). This situation is more pronounced among domestic workers directly employed by households, 81% of whom are in low-paid jobs (and 83% of whom are women) (Eurofound, 2024).

Different reasons can explain the prevalence of low wages and poor working conditions in the sector despite ongoing labour shortages. The provision of formal home care work is generally perceived as an extension or substitution of informal care work in the household, which results in the reproduction of existing gender and social inequalities (EIGE, 2021). Gendered norms around care work tend to downplay skill requirements in the provision of formal home care services, undermining recognition and valuation of care work. Women with low and medium education levels with migrant backgrounds are more likely to work as personal carers due to lower qualification and certification requirements. However, over-qualification is also rather common among skilled migrant women working in the care sector (home nurses) given difficulties in validating their qualifications or unfair recruitment practices. In addition, the demand for care services is highly sensitive to market costs, and the availability of informal care, mostly unpaid, or the recourse to undeclared work is often seen as a more affordable alternative for less affluent households. These factors contribute to explaining low wages in the sector, as they contribute to undermine the bargaining position of formal care workers (OECD, 2023).

The structure of this section 2.2 is as follows:

The first subsection focuses on institutional factors and on how differences in the extent of state intervention in the financing and provision of home care services has influenced the composition of the home care workforce. The structural features of the home care labour market exhibit some differences and similarities across MSs that are largely the reflection of how national policymakers have coped with the related challenges in the development of LTC systems. Over the last decades, LTC reforms adopted in many countries have promoted informal care through ‘cash-for-care’ schemes as substitute or complement for the formal provision of service for cost-containment reasons (Pavolini, 2022). These policies are aimed at addressing increasing demand for LTC services and have implications for the employment structure and working conditions of the home care workforce. Some studies argue that the development of care employment through ‘cash-for-care’ schemes often follows a ‘low road’ path characterised by less formalised and low-status jobs. This is reflected in the growing share of informal carers and domestic workers in the provision of home care services in some countries (Da Roit and Moreno-Fuentes, 2019).

The second subsection analyses the protection and enforcement gaps resulting from the fragmentation of the employment status of home care workers, with particular emphasis on the special situation of domestic workers employed directly by households.

The third subsection focuses on organisation and governance of home care systems and how employment and working conditions of home care workers are affected by general trends towards privatisation and marketisation of public services.

The fourth and fifth subsections focus on cross-cutting challenges with implications for employment and working conditions in the home care workforce. First, staffing shortages represent a persistent issue in the home care sector, resulting from growing difficulties in attracting and retaining qualified employees. These shortages can lead to increased workloads for existing staff, compromising the OSH and wellbeing of home carers. Second, increasing reliance on international mobility in response to staff shortages has raised concerns about the extension of undeclared work in the home care sector. Many user households and organisations resort to irregular employment practices to circumvent labour regulations or reduce costs, including unregistered employees, bogus self-employment and bogus posting of cross-border workers between EU MSs.

2.2.1 Public financing and the structure of the home care labour market

Comparative research has shown that EU MSs have responded differently to similar challenges faced by LTC services. Most of the studies that map LTC systems in the EU point to a north–south gradient in the extent of public investment, with northern countries showing more comprehensive publicly funded home care systems compared to southern and eastern European countries. Differences in the level of

public investments and in whether these are channelled through cash benefits or in-kind services are associated with different degrees of coverage of home care services and prevalence of informal work (Pavolini, 2022). Overall, countries characterised by higher levels of public investment (in terms of % of GDP) and that prioritise service provision over cash benefits mostly adopt a universalistic approach to eligibility criteria that are associated with higher coverage rates of home care services. Countries clustered in this group include Denmark, the Netherlands, Sweden, Belgium, France and Finland. In contrast, in countries where state intervention is more affected by financial constraints, services are mostly channelled through cash benefits and are associated with lower coverage rates and a higher reliance on families and informal carers (Pavolini, 2022). Research by Carrieri et al. (2017) reveals significant income-related inequalities in the access to home care services across countries linked to the adequacy of public expenditure levels, particularly in the access to less qualified care workers (domestic aides), among southern and eastern countries compared to countries in north-western. Findings indicate that informal care often acts as a substitute for, or complements, formal unskilled workers among less affluent households.

The case of Spain illustrates how government intervention through cash-benefit strategies to address competing pressures for cost reduction and expanded coverage is heavily reliant on the extent of informal care. The Spanish LTC system underwent significant changes following the implementation of the 2006 Promotion of Personal Autonomy and Care for Dependent Persons Act (SAAD in Spanish). The reform introduced a new system of care allowances that resulted in the expansion of informal care by household members instead of formal care services. A study on the effect of the introduction of these caregiving allowances revealed that the probability of informal caregiving increased by 20% upon receiving a caregiving allowance, and that the effect of informal caregiving is concentrated among low-income households, as it provided incentives for non-previous caregivers at recipients' homes to become carers and contribute to sustain household income (Costa-Font et al., 2022).

A recent study (European Commission, 2021a) provides a comprehensive overview of the incidence and main characteristics of informal carers in Europe based on different statistical sources. The study shows a high prevalence of informal care, as it is estimated that 14.4% of the adult population aged 18-74 provide informal care. However, most informal care is provided at low intensities. At EU-level, only 10% of informal carers provide help on a full-time basis. Countries with above EU average, medium-to-high intensities of informal care are southern countries (France, Spain, Greece and Italy), while countries with the lowest medium-to-high intensities are north-western countries (Denmark, the Netherlands, Sweden and Germany). The study also found a negative correlation between formal and informal care, which highlights the crucial role of informal carers in alleviating the demand for formal care services.

Overall, women represent around two-thirds of the total number of informal carers in the EU, a gender imbalance that increases with age. Women not only provide informal care more often than men, they also more often provide intense informal care. The gender imbalance with respect to the intensity of informal care is strongest in Italy and Spain. The study estimates that women are also more likely to stop working and or work reduced hours when providing informal care, contributing to a significant loss of income. Larger employment gaps are found in Ireland and countries in southern and eastern Europe, with higher income loss from work in these countries. The option of informal care is also more prevalent among lower income households, reproducing pre-existing inequalities. It is also worth noting that many informal carers do not receive care allowances. A total of 13 EU MSs pay care allowances directly to care providers and nine to care recipients, which may be spent on either formal or informal care. In all countries, conditions apply regarding the degree of disability or the relationship between the carer and care receiver.

The European Commission study also reviews existing evidence on the health status of informal carers. Findings reveal that informal care generally has a significant negative impact on mental health, but not on physical health. However, spousal care provision tends to have a negative impact on both mental and physical health, which may be partly explained by unobserved age effects, the lack of additional support, as some spouses are likely to be sole caregivers, or emotional stress. Crucially, the impact of health effects increase with the intensity of informal care, with noticeable impacts from 20 hours per week, and strong negative effects from 40 hours per week. Efforts to mitigate these impacts would require an expansion of formal services for both caregivers and recipients, not only in the form of financial aid but also respite care (European Commission, 2021a).

Another critical aspect that characterises differences of the structure of home care labour market across MSs is related to the role and presence of **domestic workers**, with a major impact on working conditions and the professionalisation of home care work. **Domestic (and live-in) workers have attained a prominent presence in the LTC workforce of some MSs, particularly in southern Europe (Italy, Greece, Malta, Cyprus, Portugal and Spain), as well as in Austria and Germany.** Most of these countries are characterised by medium-low levels of public expenditure on LTC and relatively generous and less restrictive requirements apply to the use of cash benefits (Pavolini and Marlier, 2024). Some researchers have shown that the implementation of cash-for-care schemes has contributed to the **growth of employment due to the demand for low-paid home care workers by households, but also to the development of precarious employment in both public and private service-provider organisations** (Da Roit and Moreno Fuentes, 2019). In Italy, a country characterised by a familistic approach with limited residential care capacities, the expansion of cash allowances originally intended for severely disabled adults (*Indennità di accompagnamento*) led to the growth of a vast market of domestic workers dominated by migrant workers, largely in undeclared employment. In Spain, legislation aimed to expand coverage and create formal employment. However, the economic crisis and public budget cuts resulted in a predominance of cash benefits over direct service provision. In contrast, the introduction of cash benefits in Austria and Germany aimed to support informal carers and not explicitly to formalise care employment. However, their introduction resulted in the rise of a market for live-in migrant care work for private households along with an increased segmentation of employment and working conditions in the formal care labour market. Similar impacts are reported for France and the Netherlands, where the introduction of cash benefits responded to different aims (professionalisation of the LTC work and containing public expenditure) but resulted in the extension of precarious employment conditions.

Different sources point to the vulnerable situation of domestic workers, in particular, those in live-in settings (Eurofound, 2020a; Ghailani et al., 2024; Rogalewski and Florek, 2020). These studies point to **the extension of irregular and undeclared work among this group of workers in many MSs**. This is due to the migrant status of many domestic workers that makes them vulnerable to exploitation but also to the regulatory and enforcement gaps that deprive domestic workers of basic labour and social protection rights that are applicable to the LTC workforce (addressed below). These workers, predominantly migrant women, are usually employed without formal contracts and often face long working hours, frequently performing 24/7 care without adequate rest periods or breaks and not compensated accordingly. They are paid wages well below the legal minimum or rates applicable to the care sector. Many are expected to perform duties beyond care, including cleaning and cooking for the entire household, without additional compensation. In addition, payment in kind is often deducted from wages in a way that does not reflect the actual costs of the accommodation and food provided for workers. Accommodation does not always meet even minimum standards. The isolation of live-in care work along with the migrant status of most live-in carers further exacerbates their vulnerability to sexual and physical abuse (Rogalewski and Florek, 2020; Sagmeister, 2023). Despite some countries having formal frameworks or agreements for domestic workers, these often fail to adequately protect live-in carers or are poorly enforced. The private household setting makes inspection and enforcement of regulations challenging.[7]

2.2.2 Fragmentation of employment status and protection gaps

The characterisation of employment and working conditions of home care workers is particularly challenging due to the diversity and fragmentation of employment statuses and their regulation. The legal status of home care workers across MSs may vary depending on their employer (public or private organisations, or direct employment by households) and the type of employment contract or lack thereof (self-employment or undeclared work). This fragmentation of employment status can result in different 'protection gaps' that are particularly salient in the regulation of domestic workers directly employed by households. While home care workers working in service-provider organisations through an employment contract are generally considered regular employees and covered by general labour law, the situation of domestic workers differs because of specific legal frameworks entailing exceptions from the regular

[7] European Union Agency for Fundamental Rights (2018). *Out of sight: migrant women exploited in domestic work*. https://fra.europa.eu/sites/default/files/fra_uploads/fra-2018-migrant-women-labour-exploitation-domestic-work_en.pdf#page=7.51

legislation. Furthermore, in several countries there are specific rules in legislation and collective agreements that set specific rights and conditions for live-in carers (ECE, 2024).

In some countries, domestic workers directly employed by households are excluded from the protection granted to regular employees. In Spain, domestic work is classified as a 'special employment relationship' that until 2023 had been excluded from the scope of OSH regulation due to the difficulties of applying clients' duty of risk prevention as employers. Consequently, while domestic workers were eligible for social benefits in cases of accidents or work-related illnesses, court decisions have frequently determined that the families in question did not breach any duties, as the health and safety regulations were not applicable to them. The new legislation passed in 2024 aligns the rights of domestic workers with those of regular employees and requires households employing them to comply with OSH regulations, ensuring safe working conditions at home (see Box 7 in next section) (Camas Roda et al., 2024; Mercader Uguina, 2020). Similarly, in Germany, the Occupational Safety and Health Act explicitly excludes domestic workers from its provisions, meaning they do not benefit from the same health and safety protections as other workers. However, following a 2021 Federal Court Ruling, they are partially covered by statutory regulations on working hours. This ruling established that on-call time must be considered as working time and compensated at minimum wage rates. Currently, there is ongoing debate as to whether certain provisions of labour protection for live-in workers should apply, particularly concerning the exemption from Sunday work restrictions (Podgornik Jakil et al., 2024). Specific rules on working time and rest periods are established by national-level sector agreements, which apply to domestic workers either directly employed by households or by employment agencies. Yet, a major limitation is the low coverage of collective agreements, which are restricted to those cases where both parties are members of their signatories' organisations.

Similarly, in France, the Labour Code provides some protections for domestic workers employed by private individuals such as moral harassment, paid leave and medical surveillance, but it excludes other protective provisions (e.g. working time) because the employers are considered as the strong party to the employment contract. Nevertheless, the National Collective Agreement for individual employers and home-based employment includes some provisions of the Labour Code and makes them applicable to all domestic workers, thereby bringing their status closer to that of employees under regular law and in some areas even improving statutory provisions (Ledoux and Krupka, 2020). In Italy, collective bargaining has traditionally played a significant role in the regulation of domestic work. However, collective agreements often fail to sufficiently address OSH protocols for domestic workers. At best, these agreements may require employers to inform workers of potential risks, but they typically lack provisions for training workers in health and safety procedures (Vallauri et al., 2024).

In other cases, protection gaps are rooted in general regulatory exemptions that are also prevalent in other sectors, such as the reliance on self-employment, which allows users to avoid the applicability of existing legislation. For instance, in Denmark, OSH legislation only applies to domestic cleaners in private households as long as they are employed by a public or private organisation. Self-employed cleaners or those working as independent contractors for digital platforms are not covered by the act and the self-employed must arrange their own health and safety insurance. Many fail to do so, leaving them unprotected in case of work-related accidents. Some digital platforms offer private accident insurance to their workers, sometimes requiring them to sign up before providing services. This regulatory gap leaves many home care workers without adequate OSH protection (Mailand and Larsen, 2020). Similarly, in the Netherlands, current legislation provides limited social security rights for part-time domestic workers, particularly for those working less than four days a week in direct employment relationships with a private household or through an intermediary. These workers fall under particular schemes (known as RDHA) that recognise them as having limited social security rights and makes private actors (household and workers) responsible for enforcement. Thus, access to social security is further limited as part-time domestic workers are often reluctant to request certain protections, due to their discomfort in raising the issue with their household employer or to avoid negative consequences, with some exceptions occurring when public intermediaries are involved (de Kort and Bekker, 2024). Likewise, in Germany, workers in part-time jobs (mini-jobbers) in private households are not entitled to the full set of social security protections that are granted to regular employees. In addition, although they are in principle entitled to equal pay and equal treatment, there is evidence of widespread non-compliance with regard to paid holidays and sick pay, as well as for the practice of paying them only for the hours they actually work (Jaehrling and Weinkorpf, 2020).

The case of Belgium stands out as a case of good practice for the social protection of domestic workers providing household services (e.g. cleaning, laundry, ironing). The Belgian Voucher System creates a triangular employment relationship in which the client hires the worker from the voucher company, which is made responsible for the payment and social security contributions and ensuring OSH conditions in the workplace. This came following the ratification of the 189 ILO Convention on Domestic Work, a 2014 legal reform provided for the extension of full social security coverage to all domestic care workers as regular workers, irrespective of their working hours (previously, domestic workers employed for less than 24 hours were not required to register for social security) (Caner et al., 2022).

The main gaps in the enforcement of OSH regulations for the domestic workers sector are largely attributable to the lack of professionalism of individual employers, and to difficulties monitoring compliance with formal obligations in private households. In some instances, circumvention strategies also align with domestic workers' interests to avoid social security and tax obligations for low-paid part-time domestic workers or for migrant workers with difficulties to obtain a work permit. Despite considerable efforts made in many countries towards formalising employment arrangements in the sector into regular employment relationships, significant protection gaps remain also due to the lack of enforcement and compliance with minimum rights. Home care work is often excluded from the inspection mandates of enforcement agencies due to the self-employment status of domestic workers and the lack of recognition of private households as workplaces (ELA, 2021). Other gaps relate to ambiguity in the attribution of liability in case of accidents, and the general absence of case law in this field, possibly due to domestic workers being discouraged from pursuing legal action against their employers (Caner et al., 2022). Studies indicate that introducing a third party in the management of the employment relationship between domestic workers and their household employers could be an effective strategy for enhancing compliance. In Spain, widespread cultural aversion to the use of placement agencies in the domestic service sector has led to a comparatively unfavourable situation compared to other EU countries (Ramos and Munoz, 2020).

2.2.3 Governance, marketisation and privatisation

The financing and provision of formal home care services is highly fragmented and involves different levels of governance, rendering country comparisons challenging (Genet et al., 2013). In most countries, long-term responsibilities are split between the HeSCare systems in terms of regulation, funding and service provision, with different degrees of integration and coordination. In addition, in many countries, these competences are further distributed across national, regional and local governments. The responsibilities for management and provision of home care services are rather decentralised at the local level in many countries. Trends towards the decentralisation of responsibilities of funding and provision towards regional governments and municipalities are often driven by budgetary pressures, resulting in differences in provision, access and the extent of co-payments, while in some cases they has also made possible the development of more innovative service delivery approaches (Spasova et al., 2018).

European MSs differ in the extent to which home care services are provided by public or private providers (European Commission, 2021b). Publicly owned providers fall under the direct control of governments at national, regional or local level. Private providers can be funded by public authorities on a commission basis, indirectly funded through care allowances, or directly hired by households or clients. Over the last three decades, the number of private for-profit and non-profit organisations has increased significantly, predominantly as a result of a general tendency towards the extension of procurement and contracting of services from public to private providers with the assumption that increased competition can contribute to enhanced cost-efficiency and service quality. Shortages in the public supply of formal care services have also contributed to the development of the private commercial sector in many countries (Spasova et al., 2018).

Research on the effects of privatisation and marketisation on the provision of home care services shows similar impacts on employment conditions of home care workers in different contexts. In Ireland, a country in which public provision of home care has been traditionally residual, the implementation of cost-containment measures along with competitive tendering processes over the last decade has resulted in the expansion of private provision and a growing concentration of ownership by large multinational operators. Findings from a survey-based study (N=350) show that care workers employed in private-for-profit organisations perceive their employment working conditions as being significantly

worse than for those employed in public providers, with a higher prevalence of zero-hour and 'if and when' contracts, as well as fewer benefits, such as pension entitlements, lower rates for travel times and extra pay for unsocial hours worked (O'Neill et al., 2023).

Another study found similar implications from the introduction of market-oriented reforms and for-profit private providers in Sweden, a country with a long tradition of public funding and provision of home care services. Results based on a survey of a sample of unionised workers between 2005 and 2015 (N=371) point to changes in job content, with a significant increase in administrative tasks along with a reduction of the time spent on household tasks (cooking, shopping). The study also reveals deterioration in working conditions, including increased workload, mental exhaustion and weaker support from supervisors and colleagues (Strandell, 2020).

Other studies provide insights into the implications of cost-efficiency measures introduced by service provider organisations working as subcontractors on procurement contracts with public authorities. Some studies reveal that the use of strict time monitoring and registration rules are associated with reduced autonomy on the job and increased work intensity (Oomkens et al., 2015; Moore and Hayes, 2017). Some providers make use of digital apps to monitor and track workers' activities, which places additional time pressure on workers, and those apps do not fully take into account the unpredictable and relational nature of care, potentially compromising the quality of service provided to clients. Workers adapt to these time pressures usually by working unpaid overtime, exposing them to high quantitative demands and work–family conflict (Strandell, 2023). An analysis of the implementation of similar practices to streamline services among a sample of non-profit service providers found increased stress in connection with increased flexibility demands and concerns regarding technological rationalisation of services (Bensliman et al., 2022). In contrast, a study focused on local provider organisation in Denmark by Tufte and Dahl (2016) shows that home care workers enjoyed more autonomy in the organisation of their work schedules to adapt to specific users' demands, or when dealing with unexpected issues, reprioritising visits and altering allocated times within the overall time frame of their working day, although sometimes exceeding allocated time limits. Crucially, the authors note that workers' increased control is enabled by the organisation of the Danish care system. This system grants elderly individuals access to specific care services without allocating a fixed amount of time, thereby allowing for greater flexibility in care provision. These findings suggest that commissioning practices imposed on service providers have varying implications for the organisation of home care work.

2.2.4 Staff shortages, recruitment and retention

Staff shortages in both the healthcare and LTC sector have been a longstanding concern in most EU countries (OECD, 2024; SEPEN, 2021; ELA, 2021b). Despite the general growth of employment levels over the past two decades, research and policy debates have highlighted a widening disparity between the rapidly increasing need for LTC services and existing workforce capacity. A relevant factor involved in these projections is related to the ageing workforce in the sector, which is reflected in the high share of HeSCare workers close to retirement in many EU countries (OECD, 2024).

Major structural challenges identified with regard to staff shortages are the rapidly increasing demand for LTC services in non-residential settings along with the increased complexity of care needs because of population ageing. However, poor employment and working conditions and the lack of appropriate human resources practices also significantly impact the sector's attractiveness and staff retention and contribute to this lack of qualified staff (Cavanagh et al., 2024; Murphy et al., 2022). European social partners in the healthcare subsector and in the PHS sector have placed increased emphasis on the need to address staff shortages by increasing pay, improving working conditions, and increased training and upskilling of home care workers (HOSPEEM and EPSU, 2022; EFFAT et al., 2024). The European Care Strategy issued by the European Commission (2022) has advocated for improving working conditions and providing adequate staffing levels as a means of tackling labour shortages and improving the quality of care.

The study conducted by EU social partners in PHSs based on a large-scale survey reveals that retention issues and staff shortages are among the primary concerns (PHS Monitor, 2024). Some 64.9% of provider organisations surveyed pointed to high turnover rates as a major problem for their operations. On the other hand, 56.9% of workers surveyed stated that they do not believe their jobs are sustainable until retirement. Significantly, more than 70% of PHS workers in the age range of 18-34, and 60% of those aged between 45 and 53, do not believe their jobs are sustainable until retirement. In addition,

nearly 60% of PHS workers reported having considered leaving PHS work over the past three years. The main reasons alleged by workers for quitting the sector are low pay and overwork. The majority of PHS workers reported their jobs as mentally exhausting, and these feelings increase along with the number of hours worked. Among those working 40 hours or less per week, 54.5% of workers pointed to the jobs as a source for stress, anxiety or burnout, while the figure rises to 66.5% among those working more than 40 hours per week. Work intensification and related stress levels in the PHS sector are both the result of long working hours and the wide range of tasks that PHS workers are often required to perform. Results show that self-employed and directly employed workers are more likely to report working more than 40 hours a week (62.7% and 37.3%, respectively) than those working for a company or other organisations (7.5%). Time pressure is also a prevalent risk factor among workers in more standard work weeks, as shown by respondents from a sample of Belgian workers, mostly household cleaners working part-time under the voucher system.[8] These responses highlighted excessive expectations of clients as to what they were expected to accomplish in short time slots as a cause of frustration and dissatisfaction with the job, which is also reflected in higher intentions to leave the sector (PHS Monitor, 2024).

A recent study on the regulation and the challenges related to recruitment and retention of home care workers in Germany, Sweden and the Netherlands (and Scotland) points to similar issues linked to working conditions and the professionalisation of home care work (Murphy et al., 2022). Firstly, home care workers are increasingly faced with poor and stressful working conditions, including employment instability, low pay, and increased workload and time pressure, which result in high turnover rates, absenteeism due to sick leave and intentions to quit the sector. Differences in working conditions between home care and residential care services are evident in Germany, the Netherlands and Sweden. Part-time jobs are more common in home care than in residential care (Germany and Sweden), and differences in public funding for recruitment have led home care workers to seek employment in residential care (the Netherlands). Second, the lack of adequate professional regulation and training and career development opportunities also appear as significant challenges for the management of the home care workforce, particularly among ancillary occupations with no minimum requirements in terms of qualifications (nursing and personal assistants in Sweden).

2.2.5 International mobility and undeclared work

To address domestic staff shortages, healthcare systems in Europe have become increasingly dependent on the international mobility of workers from within and outside the EU (Williams et al., 2020). The 2019 EU-LFS estimates indicate that the overall composition of foreign workers in the LTC in the EU are close to those for the overall workforce (around 8%). Some 4.5% of the LTC workforce consists of migrant workers from non-EU countries, while 3.4% are intra-EU mobile workers, predominantly from central and eastern Europe. However, distribution varies significantly across countries, reflecting distinct positions in cross-national mobility patterns. Some countries serve as destination countries for foreign LTC workers, such as Austria, Germany, Italy, Norway and Sweden. In contrast, others function as sourcing countries, with virtually no migrant workers in their LTC sectors, including Bulgaria, Romania, Poland, Portugal and Slovakia (Eurofound, 2020a).

The growing demand for personal care services along with the lack of available or affordable formalised public services drives demand for third-country nationals or EU mobile workers, either regular or irregular. While the real figure is likely to be much higher, according to estimates by the European Labour Authority (ELA), the number of undeclared workers in 2019 was 2.1 million in the home care sector (NACE 88), with a further 4.7 million directly employed by households (NACE 97). The proportion of undeclared work ranges from 34% in the home care sector to almost 70% in direct household employment (ELA, 2021a).

Undeclared work in the home care sector takes different forms, the most prevalent type being unregistered employment, particularly in the context of direct employment by households (ELA, 2021a). This form of employment is more prevalent in southern European countries, where the role of public provision is weak (Spain, Italy, Greece and Portugal), but also in other countries such as France, Germany, Austria and the Netherlands. Households have incentives for relying on undeclared work

[8] The service voucher (Titres-Services) is used by private individuals to purchase a service provided by a company approved by authorities. This includes private for-profit or non-profit organisations. The individual or household gives the cheque to the employee, who has a work contract with the registered company.

because of lower labour costs and no administrative burden compared to a regular employment relationship. Another prevalent form of undeclared work is undeclared self-employment, where self-employed workers provide undeclared services to households or companies. This includes bogus self-employment, where workers are formally registered as self-employed but actually work under conditions of dependent employment, usually to avoid tax and insurance obligations, or employers' responsibilities. In contrast, employment by service-provider organisations or intermediary agencies is associated with a lower incidence of undeclared work in the home care sector, as it imposes the burden of evidence of employment on firms, which is easier to control than households. However, there is still a risk of under-declared employment where both the employer and the employee have incentives to not declare full wages (ELA, 2021a).

The prevalence of undeclared work is particularly salient in the context of cross-national mobility of care workers, which entails significant challenges for the enforcement of labour laws and OSH regulations (ELA, 2021a, 2025; ECE, 2024). Despite data limitations, available sources indicate that most undeclared workers in the home care sector are women from foreign countries, either from EU or non-EU countries. These women are mostly working as domestic workers directly employed by households, and especially as live-in carers, an occupation that is largely filled by migrant workers in many MSs (Eurofound, 2020a, 2025; EQUINET, 2021). The overrepresentation of foreign workers in domestic work is due to specific qualifications and language requirements, which act as barriers to more formal care settings (Eurofound, 2020a). In some countries, intermediary agencies have a significant role in facilitating the cross-border mobility of care workers from eastern and central European MSs and third-country nationals. These agencies can contribute to the formalisation of the relationship on behalf of the employer household. However, their activities are also associated with bogus self-employment (ELA, 2021a). In Austria, the provision of publicly subsidised 24-hour live-in care is dominated by personal carers mostly from Romania, Slovakia and Bulgaria, who are hired on a self-employed basis through intermediary employment agencies, although most meet the criteria to be classified as employees. These workers are often exposed to abuses on the part of these intermediaries and end clients, such as charging undue recruitment fees or infringements of social security contributions. Furthermore, self-employment excludes the carer–client working relationship from the scope of labour law (Sekulová and Rogoz, 2019).

Similarly, most of the live-in carers in Germany are from Poland and other central and eastern European countries, such as Czechia, Hungary and Romania. These workers can be employed on a salaried or self-employed basis by care agencies acting as intermediaries in the country of origin or directly employed by the private household. Both classifications have been criticised for their inadequacy for care work, and the prevalence of bogus self-employment is considered to be very high (ECE, 2024). Nevertheless, a study on the employment conditions and wellbeing of Polish migrant live-in carers in Berlin (N=222) points to some differences between these two employment arrangements (Hipp et al., 2024). Non-agency live-in care workers usually work without having formal written contracts and typically engage in bogus self-employment, but they are more likely to earn higher wages than agency workers. In contrast, agency workers benefit from longer breaks and more regular days off, which is reflected in higher levels of satisfaction and overall wellbeing. These results indicate that care agencies can play a role in reducing dependency on a particular client and providing social and legal support. However, their profit-driven nature limits the wage compensation care workers receive (Hipp et al., 2024).

The home care workforce in southern and eastern EU MSs is characterised by a higher presence of undeclared domestic workers with migrant status (Eurofound, 2025; ECE, 2024). Given the high levels of informality and low skills requirements, domestic work often serves as an entry point into the labour market and administrative regularisation for migrant workers (Toc and Gutu, 2021; Del Rey et al., 2019). In Italy, most domestic care workers (commonly known as *badanti*) are women from Romania, Moldova and other eastern MSs. During the pandemic, Italy's migrant worker regularisation revealed the extent of undeclared work, with 85% of applications from domestic workers. However, the effectiveness of this procedure was questioned by the fact that most of the applicants were men, which contrasts with the gendered composition of the sector's workforce. This discrepancy suggests potential misuse of the scheme, with male migrants likely declaring domestic work roles while planning to work in other sectors not targeted by the initiative (Eurofound, 2025). A similar regularisation procedure in Spain in 2005 resulted in a massive increase in the number of registered domestic workers of migrant background. By 2006, foreign workers, primarily from Latin American countries, made up 70% of the regular domestic workforce. However, different sources indicate a decline in domestic employment in Spain since 2012,

attributed to the effect of the economic crisis and the implementation of new legal obligations for social contributions for the employment of domestic workers. Legal instruments face significant limitations as they do not address the main drivers of the demand for undeclared work. Most households employing domestic workers lack incentives to formalise these employment arrangements as they still provide a cost-effective solution to the scarce availability of affordable formal home care services (PHS Monitor, 2024). In addition, some workers may prefer to not be registered within the social security system in exchange for higher wages, although in the case of irregular migrant workers this often results in increased dependence on employers for legal status, exposing them to potential abuse and exploitation by clients (Eurofound, 2025).

The migrant status of many domestic workers further exacerbates the challenges they face, significantly impacting their physical and mental health, especially for those in irregular legal situations and live-in arrangements. A qualitative study among a group of migrant live-in carers (N=22) in Spain points to different physical and psychosocial issues resulting from exploitative working conditions, such as irregular schedules, insufficient rest periods and wages set at the employer's discretion. These conditions result in feelings of general exhaustion, physical pain, and fatigue-related accidents such as bumps, slips and falls. Other work-related issues include skin conditions (allergies, herpes, dermatitis), headaches and migraines, and cardiovascular diseases. Some of these issues also result from pre-existing conditions and difficulties to access regular checks due to their work situation. Furthermore, many neglect their own health and welfare due to financial insecurity and fears of losing their job and potential deportation. Some workers report serious risks to their physical integrity, including instances of sexual and physical aggression. Mental health challenges such as stress, anxiety and depression are prevalent, often exacerbated by isolation and separation from family (Parella et al., 2024).

Labour intermediation in the home care sector is further compounded by the advent of digital platforms for domestic care services. Digital labour platforms in the care sector typically act as placement agencies (EESC, 2020). Their increasing role in the sector is perceived as both a risk and an opportunity with respect to undeclared work, depending on their role in the intermediation and organisation of the work. On the one hand, digital platforms can contribute to declared work by assisting users in meeting their obligations as employers. For instance, in France digital platforms are used as an incentive for the formalisation of employment relations under service voucher schemes (CESU, *Chèque emploi service universel*) for household and domestic tasks, which has simplified the registration process for private employers through the platform (ELA, 2021a). On the other hand, digital platforms can contribute to the perpetuation of invisibility and informality of domestic care work, undermining existing regulations and shifting costs and risks onto workers both through the misclassification of their employment status and the subsequent loss of employment and social protections of regular employees, in the form of unpaid working time (Pulignano et al., 2023). In Spain, digital platforms providing both care and household services operate under the special regulation of domestic work that exempts them from any responsibility for their service intermediation, as the responsibility for the registration of the employment contract and any infringement of labour law rests with the client household (Galí, 2022). Although Spanish legislation on platform work does not apply to home care work, as the rebuttable presumption of employment is limited to delivery services, recent court decisions have determined that these platforms are indeed functioning as employers.[9]

2.3 Initiatives addressing home care sectors' structural issues

This section presents two main areas of intervention addressing critical challenges in the home care sector that have an impact on the quality of the jobs in the sector and on the health and safety of home care workers. The first subsection provides insights into ongoing strategies and interventions aimed at professionalising home care work and enhancing working conditions. These include legal reforms establishing professional standards in the service delivery and labour protections, as well as training initiatives and career progression pathways aimed at boosting the professional status and appeal of home care work. Additionally, there is a growing recognition of the need for cross-border standardisation of skills and qualifications, as well as efforts to address regulatory gaps in social and employment

[9] Eurofound (2023). *The Social Court in Barcelona, Spain, rules Clintu Online and the workers are in an employment relationship* (Court ruling), Record number 4276, Platform Economy Database, Dublin. https://apps.eurofound.europa.eu/platformeconomydb/barcelona-labour-court-rules-clintu-online-and-the-workers-are-in-an-employment-relationship-110039

protection rights for domestic workers. The second subsection discusses different approaches in addressing the prevalent issue of undeclared work, as well as other initiatives in support of cross-border home care workers.

2.3.1 Initiatives aimed at professionalisation and improving working conditions

Recent developments in different EU MSs point to the professionalisation of care work and the improvement of working conditions as a strategic response to address structural challenges in recruitment and retention in the LTC sector (Murphy et al., 2022). In Germany, such interventions include the 'Concerted Action for the Care Workforce' (*Konzertierte Aktion Pflege*), a joint action plan agreed by the German government with social partners and relevant stakeholders in the LTC and hospital sector. Launched in 2018, this approach involved different legal reforms aimed at enhancing training and career opportunities in the sector and ensuring effective collective bargaining coverage. The Care Professions Reform Act (*Pflegeberufereformgesetz*) was enacted in 2020 to enhance the appeal of nursing careers in LTC through the introduction of a three-year generalist vocational training programme for 'nursing specialists'. In addition, a new law for better wages in the social care sector introduced in 2019 provided for the possibility of social partners concluding generally binding sector-level agreements. Additionally, under the 2019 Care Wages Improvement Act, new sector-specific minimum statutory wages were established for care assistants and qualified nurses. These reforms have set the basis for raising wages in the LTC well above the average across other industries (Murphy et al., 2022; Jaerling and Weinkopf, 2020).

In Sweden, recommendations from the 2019 inquiry into the nursing assistant profession commissioned by the Swedish government led to a significant reform of this job role, which was characterised as a low status profession with the absence of regulation. From 2023, the title 'nursing assistant' has been regulated, ensuring vocational training aligns with the required competencies and qualifications to guarantee safe personal care to clients. These reforms aim to enhance the status and appeal of nursing assistant careers and improve the quality and safety of home care services. In support of this initiative, participants in the training programme to become a nursing assistant or nurse's aide are offered a full-time permanent position and paid education and training during working hours, with the costs incurred by municipalities being funded by the national government (Murphy et al., 2022).

In the Netherlands, staff shortages are less pronounced than in other MSs. However, many workers still wish to leave the sector due to a lack of incentives for skill development within their current roles, and organisations are facing increasing staffing challenges due to high turnover rates. To support recruitment and retention efforts, different measures have been adopted to improve the visibility and appeal of careers in the community care sector. A noteworthy initiative for the improvement of working conditions of nursing assistants in residential and home care settings include the sector-level collective agreement reached in March 2022. This agreement introduces important measures to alleviate pressure on workers through two key provisions: firstly, it grants care workers a form of 'right to disconnect', allowing them to be unreachable outside their scheduled work hours; and secondly, it stipulates that employees cannot be scheduled to work more than five days a week unless they consent (Murphy et al., 2022).

A more recent example of the trend towards the professionalisation of home care work is found in Ireland, where current draft legislation aims to introduce a new regulatory framework for the service-provider organisations. This legislation seeks to establish a licensing system to ensure consistency and quality in care provision across territories by setting and enforcing minimum standards. The legal amendment will expand the role of the Health Information and Quality Authority (HIQA) to provide independent monitoring of the minimum standards by conferring on HIQA's Chief Inspector the authority to grant, amend and revoke licenses to home care service-provider organisations that fail to meet minimum standards (Box 1).[10]

[10] gov.ie. (2024, 16 May). *General Scheme of the Health (Amendment) (Licensing of Professional Home Support Providers) Bill 2024*. https://www.gov.ie/en/publication/a3ef4-general-scheme-of-the-health-amendment-licensing-of-professional-home-support-providers-bill-2024/

Box 1: Ireland: Regulatory changes in home care

In 2021, the Irish HIQA published a report that outlines recommendations to establish a statutory framework for home care services in Ireland. The report emphasises the implementation of quality standards and the importance of stakeholder involvement.

Before 2021, the system in Ireland was unregulated, which led to variation in the quality and accountability of care across companies and regions. There was no independent formal oversight of the sector and the training requirements for carers were also inconsistent. While acknowledging the need for professional regulation to address challenges in the home care sector, the report stresses that regulation should be viewed as one component of a broader strategy involving stakeholder engagement. To improve these factors, HIQA recommended the following:

- creation of a **legal framework** with clear definitions of services and providers;
- **mandatory national standards**;
- **registration and monitoring** of all home care providers;
- **stakeholder engagement**: inclusive consultations with patients, families, caregivers and regulators in designing a new system;
- **data collection and reporting** on service delivery, outcomes and the workforce; and
- **training, support and potential regulation** of homecare workers to professionalise the sector.[11]

As of 2025, while the recommendations have not yet been fully implemented, significant progress has been made towards establishing a statutory framework for home care services in Ireland. The professionalisation of the home care sector and establishment of national quality standards are included in the 2024 draft bill for the amendment of the General Scheme of Health: Licensing of Professional Home Support Providers. The implementation of this bill will be gradual as it brings many changes to the system. It sets a good precedence for the professionalisation of the home care sector.[12]

The Romanian national strategy for LTC and active ageing (2023-2030) represents a comprehensive approach to addressing the challenges associated with an ageing population and increasing demand for home care services. A crucial component of the strategy is the emphasis on workforce development within the home care sector, including initiatives to enhance the skills and competencies of existing care professionals through specialised training programmes and continuous education opportunities (Box 2).

Box 2: Romania: Reform of LTC services for older people 2023-2030

The **National Strategy on LTC and Active Ageing for 2023-2030** in Romania is part of Romania's post-COVID-19 **National Recovery and Resilience plan (PNRR)**. The strategy is designed to address the challenges posed by a rapidly ageing population and improve access to quality medical care, especially for people living in rural areas. The main problems to be solved are:

- rapidly increasing LTC needs for the older population;
- insufficient and underdeveloped community-based LTC services; and
- current LTC solutions for older people are focused on residential care instead of home care and community-based care.

[11] Health Information and Quality Authority (HIQA). (2021). *Regulation of Homecare: A Position Paper.* https://www.higa.ie/sites/default/files/2021-12/Regulation-of-Homecare-A-Position-Paper.pdf.

[12] Department of Health. (2024). *Minister Butler introduces further safeguards for Older People*. gov.ie. https://www.gov.ie/en/department-of-health/press-releases/minister-butler-introduces-further-safeguards-for-older-people/.

The strategy aims to create a sustainable, high-quality LTC system that respects the autonomy and dignity of older adults by focusing on promoting healthy ageing, expanding access to community and home-based care, and strengthening support for caregivers.

- **Increasing home care capacity:** Increasing the capacity of home care services, assistance, recovery services and respite care services to support informal caregivers. It aims to develop a policy and funding framework that accelerates the development of community care services compared to residential services, as well as aiming to provide more localised care options, especially for people living in rural areas.
- **Addressing staff shortages:** Because of the shortage of care staff, the strategy is developing special on-the-job training programmes and other career incentives to help retain formal caregivers (e.g. digital tools) and social protection and support for informal caregivers. Respite care services should help protect the mental and physical health of informal caregivers by temporarily relieving them of their responsibilities.
- **Improving the quality of care:** The strategy seeks to focus on person-centred care and systemic quality improvement by developing care-specific standards and monitoring systems, establishing financial and non-financial incentives to encourage high performance and encouraging innovation in the home care sector.
- **Build a sustainable financing model:** The strategy aims to address financial caps on home-based healthcare services and build a sustainable financing model for LTC in Romania. This is to ensure that individuals with care needs can receive adequate support in the community, aligning healthcare entitlements with social care provisions.[13]

According to recent information, the strategy has helped create plans for 71 day care and assistance centres throughout Romania, and efforts are being made to promote community-based care through local-level programmes and awareness campaigns. However, the strategy is still in its early phases, and it is too early to evaluate its successes thoroughly.[14]

Some initiatives aimed at enhancing the professional status of home care workers through training programmes and certified qualifications extend beyond national borders, reflecting a growing recognition of cross-border mobility of home care workers and the need for standardised skills across EU MSs. The development of such cross-national standards and qualifications may also contribute to enhancing the professional status of home care work (Boxes 3, 4, 5 and 6).

Box 3: Inter-industry framework agreement on health at work – PRODOME (France, Spain, Italy, Belgium)

The PRODOME project was co-funded by the Erasmus+ Sector Skills Alliances programme and brought together partners from France, Italy, Spain and Belgium. The EU-level project aims to professionalise domestic workers in Europe by developing a training programme and promoting European certification standards. Between 2016 and 2019, extensive research was conducted to understand the current state of domestic work across Europe. After extensive research, the following steps were taken:

- **A training curriculum** was developed and tailored to the needs of domestic workers. The training includes nine modules totalling 300 hours of learning: 180 hours of blended learning and 120 hours of work-based learning.[15]
- The curriculum advocated for the recognition of the skills of domestic workers via

[13] The World Bank. (2022). *Romania's way forward in Long Term Care: Technical inputs to the 2023-2030 LTC Strategy.* https://thedocs.worldbank.org/en/doc/d2cb0447d0b49637a8e9f17035970349-0080062023/original/EN-LTC-brochure-2022.pdf

[14] China-CEE Institute. (2023, 3 March). Romania social briefing: Pensions and active aging. *Weekly Briefing, 59(3) (RO).* https://china-cee.eu/2023/03/03/romania-social-briefing-pensions-and-active-aging

[15] European Commission. (2020). European training pathway for domestic housekeepers. *EPALE – Electronic Platform for Adult Learning in Europe.* https://epale.ec.europa.eu/en/resource-centre/content/european-training-pathway-domestic-housekeepers

certification and professionalisation. A roadmap was developed to promote European certification for domestic workers, aiming to provide them with transferable skills recognised across member countries.[16]

- **By addressing the lack of regulation and recognition in this sector**, PRODOME contributed to enhancing the quality of domestic services and improving working conditions for domestic workers throughout Europe.[17]

The PRODOME project highlighted the need for political awareness and supportive policies to bring domestic workers out of invisibility and ensure their access to decent work and social rights.[18]

This initiative provides a valuable framework for understanding current challenges and allocating resources to the development of the domestic care sector. In comparison, other local initiatives have been more effective in delivering impactful results, often due to stronger national policies and support systems.[19]

Box 4: The CARESS Erasmus+ project (Finland, Spain, Italy)

The CARESS Erasmus+ project ran between 2015 and 2018 and was a unique endeavour to improve vocational education and training (VET) in the field of home care. The growing needs brought on by demographic changes and rising numbers of innovative ways to provide care were the drivers of this project.

The main aim of the project was to map current curricula and competences of home care professionals in Europe and create a comparable EU-wide framework. This EU-wide framework includes information from most EU countries on:

- professionals involved in home care, their role, skills and competencies;
- needs and challenges in the home care sector;
- home care professionals' training needs in Italy, Spain and Finland, and some other EU countries; and
- existing curricula, VET and career pathways for home care professionals in Italy, Spain and Finland, and some other EU countries.[20]

For three years, educational institutions and other partners from Finland, Spain and Italy sketched out the main needs for professional and transversal skills in the sector, created specific and common learning modules, and launched a Virtual Community of Practice to help professionals sharing their promising practices.[21]

Box 5: European Care Certificate (cross-national)

The European Care Certificate (ECC) is developed by the European Association of Service providers for Persons with Disabilities (EASPD) and provides a basic qualification for workers in social and health care across Europe. The aims of training under the ECC are to:

- provide a basic understanding of care principles;
- minimise risks for workers (chemical, biological, physical);
- OSH training for carers of different kinds;

[16] PRODOME. (2019). *PRODOME Deliverable 7 "Roadmap: professionalising domestic work in Europe".* FEPEM. https://www.effe-homecare.eu/wp-content/uploads/2022/10/PRODOME_D7_Roadmap_publication-1.pdf
[17] Iperia. (2016). *PRODOME*. https://expertise.iperia.eu/en/collaborate/projects/prodome
[18] PRODOME. (2019). *PRODOME Deliverable 7 "Roadmap: professionalising domestic work in Europe".* FEPEM. https://www.effe-homecare.eu/wp-content/uploads/2022/10/PRODOME_D7_Roadmap_publication-1.pdf
[19] Iperia. (2016). *PRODOME*. https://expertise.iperia.eu/en/collaborate/projects/prodome
[20] Project CARESS, *EU Framework*: https://project-caress.eu/home/results/eu-framework.html
[21] AGE Platform, *CARRESS*: https://www.age-platform.eu/project/caress/

- provide carers with proof that they have covered the Basic European Social Care Learning Outcomes (BESCLO), which are recognised across the ECC partner countries; and
- simplify joining the social and health care sectors in all ECC partner countries.[22]

The ECC project is active in 17 EU countries and mostly covers the central and eastern Europe region. Furthermore, training material is available in all partner countries' languages to make it as accessible as possible for workers. Workers can learn in *any way* over *any period of time* in *any language* and *any country covered by the ECC*.[23]

The ECC is designed to be transferable within the EU as VET, and universities, trainers and employers can take the BESCLO and make sure their own local training or qualification covers all the points in the BESCLO. The ECC offers to check these courses/trainings and allow them to be promoted as being 'ECC compliant' or 'covering the ECC'.[24]

Box 6: Web Nurse (Hungary)

WebNurse was developed by the Hungarian Charity Service of the Order of Malta (HCSOM) as a pilot of the HELPS project in the Central Europe Programme in 2014. The pilot was successful and continues to be used by informal caregivers.

The WebNurse website supports informal carers in their everyday care and nursing tasks in its online internet portal,[25] which contains video training material and other information sources for free. Videos on a multitude of topics and needs are available, such as preventing burnout and physical injuries as a caregiver, providing professional help to carry out voluntary work, simplifying everyday errands with an easy-to-search database, and building up and enhancing capacities of informal carers. The fact that this information is easily accessible benefits both carers and recipients and improves the safety and quality of care by those without formal training or guidance.[26]

Another crucial aspect of the formalisation of home care work involves addressing regulatory gaps in social and employment protection rights for various groups of home care workers. While domestic workers have become increasingly important in providing home care services across many MSs, they often face exclusion from certain legal provisions that apply to the general workforce or are subject to specific legislation that does not guarantee equal rights. A prime example of such gaps is the Spanish regulation on domestic work. Despite recent legal amendments aimed at extending standard employment rights and social security obligations to domestic workers, they have, until recently, been excluded from unemployment benefits and health and safety regulations (Box 7).

Box 7: New legislation for the regulation of OSH of domestic workers (Spain)

In September 2024, the Spanish government passed Royal Decree 893/2024 regulating OSH of domestic work in alignment with general risk prevention measures for regular employees.[27] The new law was presented as a crucial step for the improvement of working conditions of domestic workers. These workers have long been excluded from employment and social protection rights granted to employees due to their classification as a 'special employment regime'. This measure expands on the 2022 legislation that established equal employment protection rights and social security obligations following the ratification of the 189 ILO Convention on Domestic Work.

[22] European Care Certificate, *The European Care Certificate in brief*: https://www.europeancarecertificate.eu/choose-a-country/about
[23] European Care Certificate, 2020: https://www.europeancarecertificate.eu/united-kingdom
[24] European Care Certificate, *The European Care Certificate in brief*: https://www.europeancarecertificate.eu/choose-a-country/about
[25] More information is available at: https://webnover.hu/
[26] Interreg Europe. (2018). *WEBNURSE: about this good practice*. https://www.interregeurope.eu/good-practices/webnurse.
[27] Royal Decree 893/2024, of September 10, regulating the protection of safety and health in the field of family domestic service: https://www.boe.es/buscar/act.php?id=BOE-A-2024-18182

The new legislation recognises the specificities of domestic work and sets out the employers' obligation to conduct risk assessment and adopt necessary preventive measures. Employers shall provide adequate protective equipment, when necessary, without any cost for employees. Domestic workers have the right to receive information and training on workplace risks and risk prevention. Employers can personally assume the preventive functions, designate workers for these tasks or contract an external prevention service. Domestic workers also have the right to health surveillance, which may include free medical exams by the National Health System.

In order to assist household employers in meeting their new obligations, the Ministry of Employment will issue specific guidelines within the coming year. The law includes specific provisions addressing sexual harassment and violence within households, including a protocol against violence and harassment in the context of domestic work. Additionally, it ensures coverage for work-related accidents and occupational illnesses affecting domestic workers.

On the other hand, the law has raised some controversies among social partners' organisations in the home care sector, as it includes an additional provision concerning OSH risk prevention for home care services provided by organisations in the framework of the Dependency Act. In particular, the law establishes the obligation to conduct a risk assessment within the households and the adoption of the necessary preventive measures, both organisational and technical, upon consultation with workers' representatives. These measures included the use of mechanical devices for load handling, increased staffing levels, extending rest periods between services or the use of personal protective equipment. Any changes at the client's household will require approval from the property owners.

The Public Services Federation of the General Workers Union (UGT-Servicios Públicos) has expressed concerns on this specific legal provision that includes domestic work under the same regulation of home care work, as it fails to acknowledge the distinct nature of these two activities, and ignores existing legislation and collective bargaining agreements already in place in the home care sector.[28] The union points out that this measure may undermine the professionalisation of the home care sector that has been pursued since the introduction of the Dependency Act. However, a study issued by the same union organisation already acknowledged limitations of risk prevention and management strategies and interventions by service-provider companies, as well as lack of supervision by contracting public administrations.[29] It remains to be seen how the implementation of the new regulation will address the critical issue of conducting effective risk assessment at users' homes.

Sectoral social partners play an active role in modernising and professionalising the sector through collective bargaining and social dialogue, although this is yet to be the norm in most countries. This is largely due to the fragmented representation of employers and domestic workers, along with the prevalence of undeclared work and existing legal limitations on inspections of private homes as workplaces. Moreover, the exercise and enforcement of basic labour and collective rights can be challenging for many migrant domestic workers, due to financial difficulties, irregular residency status or their dependency on employers for their visa (ELA, 2021a, 2022; EFFAT, 2015).

The exclusion of legal protections of domestic workers along with the lack of adequate statistical information further complicates social partners' attempts to organise the sector, as noted by representatives interviewed. However, survey results from PHS Monitor (2024) reveal that a significant 42% of users employing domestic workers expressed a preference for representation through employers' organisations capable of collective agreements. Indeed, an employers' representative interviewed pointed to the case of France, where the prevalent use of a legal extension mechanism has allowed the implementation of binding national collective agreements even without significant membership of social partner organisations, extending protection for domestic workers, despite the persistence of some gaps for those directly employed by households (Ledoux and Krupka, 2022). Yet,

[28] EPSU. (2024). *Spain: Government regulation threatens home care sector*. https://www.epsu.org/epsucob/2024-september-epsu-collective-bargaining-newsletter-no17/spain-government-regulation

[29] Franco Rebollar, P., & Ruiz, B. (2018). El trabajo de ayuda a domicilio en España. Vicesecretaría General de UGT y la FeSP UGT. https://www.ugt.es/sites/default/files/el_trabajo_de_ayuda_a_domicilio_ugt_fesp_sep_2018_def_0.pdf

examples of interventions presented below (and in the next section) show that social partner organisations employ a range of strategies to represent and support domestic workers (Boxes 8 and 14).

Along with France, Italy has a long-standing collective bargaining process for domestic workers that has contributed to the regulation and formalisation of the sector. The National Collective Bargaining Agreement on Domestic Work (CCNLD) has helped address shortcomings in legislation and improve working conditions for domestic workers. The agreement provided for the establishment of the National Bilateral Agency of the Section of Employers and Family Collaborators (EBINCOLF), a bipartite body tasked with assessing the implementation of the collective agreement and the professionalisation of the sector (Box 8). The organisation promotes training activities at various levels, including special training programmes on safety at work. Since 2021, EBINCOLF has been accredited to provide certification to domestic workers after they complete the training course (Seiffarth, 2023; Caner et al., 2022). In parallel, social partners advise employers and inform workers about their rights in cooperation with the support of the National Institute for Insurance against Accidents at Work (INAIL), with guides on OSH for domestic workers and on safety for domestic workers, and addressing employment irregularities and foreign worker challenges.

Box 8: National Bipartite Agency of the Section of Employers and Family Collaborators (Italy)[30]

EBINCOLF (*Ente Bilaterale Nazionale del Comparto Datori di Lavoro Collaboratori Familiar*) oversees the National Collective Bargaining Agreement for Domestic Work (CCNLD) in Italy, focusing on enhancing professional standards and supporting both employers and domestic workers. It provides training, professional certification and resources on workplace safety specific to domestic work environments. Through these initiatives, EBINCOLF fosters a fair, informed and safe working environment in the domestic sector.[31]

The European Care Strategy acknowledges the critical contribution of informal care in LTC systems of MSs faced with financial constraints and growing demand, and has called on MSs to take action in support of informal carers (Wieczoreck et al., 2022). In this regard, formalising employment relationships or legally recognising informal carers, and providing them with training, social security benefits and fair compensation can contribute to mitigating negative impacts on their health, wellbeing and employment prospects (Boxes 9 and 10). Other examples gathered in the study include digital tools connecting informal carers with nurses for professional support and other community-based solutions (Box 11).

Box 9: Employment model for family carers (Austria, Burgenland)

Since October 2019, the federal state of Burgenland has spearheaded the development of a model that permits family carers to be hired as home carers. The carers must be physically, health-wise and personally suitable for the job. In addition, basic training with 100 theory units is mandatory, unless they have already completed training in the care sector. The employment is organised by *Pflegeservice Burgenland* GmbH (PSB), a subsidiary of Soziale Dienste Burgenland, and enables relatives to care for their family members at home while being fully insured and supported by the province.[32]

The employment model applies to children and adults with care levels 3 to 7, which indicates the required care of the family member that is being cared for. Some 332 people (81% female) were using it in Burgenland in 2024, earning a minimum wage of €2,200 net for full-time carers. Furthermore, these caregivers also receive full social security coverage, accumulate a pension, receive vacation leave and can get a replacement when they are sick. The free basic training can

[30] More information is available at: https://osha.europa.eu/en/publications/improving-domestic-care-worker-wellbeing-through-training-and-professionalisation-case-ebincolf

[31] EBINCOLF website: https://ebincolf.it/

[32] Radlherr, J., & Österle, A. (2024). The formal employment of family caregivers: Reinforcing the familialisation of long-term care responsibilities? *International Journal of Care and Caring*, 1-17. https://doi.org/10.1332/23978821Y2024D000000073

form the basis for new career opportunities in the care sector when family caregiving is not necessary anymore.[33]

The pilot of this model was successful and is still ongoing after its evaluation in 2022. Since 2024, it is no longer necessary for the carer and patient to have a family connection; a close family friend is also eligible. This initiative helps the home care sector, especially LTC, with staff shortages, alleviates financial problems of informal family care and allows the older generation to live at home for as long as possible.

Box 10: Personal Assistance Act (Bulgaria)

The Personal Assistance Act in Bulgaria, introduced in January 2019, is a key piece of legislation designed to support disabled individuals in need of LTC by providing them with access to personal assistance. The personal assistants are usually family members or community members who are officially registered with local authorities.

The care tasks that most of the personal assistants were already doing before this legislation passed are now formalised and provide the assistants with a salary. Personal assistants can undergo training if they wish to ensure safe working conditions, such as help with daily activities, mobility support, healthcare access and other training aimed at improving the quality of life of the personal assistants.

There has also been criticism of this legislation as there are certain parameters that keep some necessary care tasks informal:

- The ceiling of the possible hours that a person/child with a disability can use is a maximum of eight hours per day and only on working days.
- There are only four disability categories (according to severity) and the legislation sets a lower and upper limit of the possible hours of assistance per group.
- The hourly rate is 1.2 times the minimum wage, which is perceived as low, especially among parents who cannot have a job along with their care tasks for their disabled child(ren).
- The personal assistant cannot be used outside the municipality where the beneficiary lives.

However, the Personal Assistance Act is an important measure that modernises LTC and recognises the informal care given by close family and community members. It supports families and provides caregivers with work experience, social security and income, while ensuring basic rights and taking care of the daily needs of people with a disability in Bulgaria.[34]

Box 11: Summary of interventions targeting informal carers in different EU MSs

INGE – integrate4care is a digital integrated health and home care tool with IT-supported in-home care consultancy. The core component of the initiative is the INGE app, which serves as a **digital assistant for informal caregivers** by connecting them with professional nurses to assess a home care situation, document the results and propose tailored interventions. The online support aims to stabilise home care and empower informal caregivers by providing personalised advice from an expert. Improving or maintaining the wellbeing of both the care recipient and caregiver is the most important function of the tool.[35]

[33] Kronen Zeitung. (2024). *Run on employment for family caregivers*. https://www.krone.at/3510600

[34] Nikolov, M. (2023). *The history of the adoption of the Personal Assistance Law in Bulgaria and its subsequent controversial effect – 2009-2023*. Independent Living Institute. https://www.independentliving.org/drd/Personal-Assistance-Law-Bulgaria.html

[35] Fraunhofer Institute for Applied Information Technology FIT, *INGE – integrate4care:* https://www.fit.fraunhofer.de/en/business-areas/digital-health/projects/inge.html

Beyond this, the INGE app utilises machine learning to assist nurses in suggesting suitable support measures, if feasible, proactively and to analyse the status of a home care situation in comparison to similar care settings for risk assessment. It can also serve as an early warning tool and prevent further harm to both care recipients and caregivers, thereby effectively supporting informal caregivers in coping with their care tasks to maintain an acceptable care situation also long-term.[36]

The project HELPS 'Housing and home care solutions for elderly and persons with disabilities and local partnership strategies in Central European cities' was set up with the support of the European Regional Development Fund and ran between 2011 and 2014. HELPS aimed to help older citizens transition from institutional care to family-based and community-based alternatives. The project was a response to Europe's ageing population and looked closely at the kind of changes that urban areas need to make in the future, such as becoming more open, accessible, connected and inclusive.[37]

The project was set up to encourage more long-term grassroots and community-based initiatives in creating innovative housing and care solutions for the elderly. Two pilot projects that were implemented under HELPS are:

WebNurse (Hungary), which was developed by the HCSOM – see **Box 6** for more information.

A pilot project focused on the integrated management and financing of housing and home care in Trieste, Italy.

At the conclusion of HELPS, recommendations and a toolkit for decision-makers aimed at transferring the projects' activities to an EU level were published. The focus of these recommendations and activities were on accessibility, independent living, education, community-based care and technology innovation.[38]

Housing for Help (*Wohnen für Hilfe*) has been running over 30 years in several German, Austrian and Dutch cities. The principle of Housing for Help is that young people looking for rentals (mostly students) can stay at an elderly person's home either free of charge or for little money, in return for offering care for an agreed-upon time per week. Typically, the tenant provides the landlord with one hour of assistance per month for each square metre of personal living space provided.

The students help the elderly with everyday tasks such as cooking, sleeping, shopping, accompanying or other necessary activities. These tasks never include caregiving or medical services, which are excluded from the initiative. The organisations in each city also offer workshops for the elderly and students to prevent conflicts and promote the health and safety of the caregivers.[39]

This practice promotes intergenerational solidarity, reduces living expenses for young people, alleviates isolation for seniors and makes for more efficient use of existing housing resources. It offers a model of non-professional care with attention to safety and wellbeing. Lastly, it exemplifies a sustainable approach to using community-based solutions to address multiple pressing societal problems at once, in this case, housing shortages and the needs of an ageing population.[40]

[36] Gappa, H., Mohamad, Y., Heiba, N., Zenz, D., Mesenhöller, T., Zurkuhlen, A., … & Schmidt-Barzynski, W. (2022). A step forward in supporting home care more effectively: Individually tailored in-home care consultancy utilizing machine learning. In *Proceedings of the 10th International Conference on Software Development and Technologies for Enhancing Accessibility and Fighting Info-Exclusion (DSAI 2022)*, August 31 to September 02, 2022, Lisbon, Portugal, 31-36. https://doi.org/10.1145/3563137.3563159

[37] Czibere, I., Marosszéki, E., & Rácz, A. (2014). Practice of providing Voluntary home care to Elderly and Disabled people: model project in Debrecen. *International Research Journal of Social Sciences, 3*(12), 41-45.

[38] European Commission. (2014). *Providing housing and home care for the vulnerable in Central European Cities through HELPS.* https://ec.europa.eu/regional_policy/en/projects/czech-republic/providing-housing-and-home-care-for-the-vulnerable-in-central-european-cities-through-helps?utm_source=chatgpt.com

[39] Bundesministerium für Familie, Senioren, Frauen und Jugend, *Generationenübergreifende Wohnprojekte: Wohnen für Hilfe.* https://www.serviceportal-zuhause-im-alter.de/wohnen/spezielle-wohnformen/wohnen-fuer-hilfe.html

[40] Studierendenwerk Osnabrück, *What is* "*Wohnen für Hilfe*" *about?* https://www.studentenwerk-osnabrueck.de/en/housing/wohnen-fuer-hilfe-programme.html

2.3.2 Initiatives addressing undeclared work

EU MSs have addressed undeclared work in the PHS sector through a combination of direct and indirect approaches (ELA, 2021a; Eurofound, 2025). Direct policy interventions aim to modify the incentives to participate in undeclared work by either raising the associated costs or reducing the benefits. These include various initiatives designed to deter undeclared work through penalties and enhanced inspection capabilities, while also encouraging compliance through subsidies or tax incentives. Indirect policy measures target underlying social norms and institutional foundations of undeclared work through awareness-raising campaigns and regulatory changes to address social and employment protection gaps in the home care sector. In this regard, the most notable development is provided by the ratification of the ILO Domestic Workers Convention and other legal reforms to bring labour and social protection rights of domestic workers into line with those of other employees (ELA, 2021a).

Recent publications by Eurofound (2025), the ELA (2021a, 2025), and the OECD (2021), along with earlier research by the European platform against undeclared work (Williams, 2019), already provide extensive insights and numerous examples of direct and indirect policy approaches and measures aimed at reducing the extent of undeclared home care work in EU MSs. One of the main limitations for the enforcement of legal standards in the home care sector are the legal restrictions faced by labour inspectors in accessing private homes. The ratification of the ILO Domestic Workers Convention has not led to the establishment of a new basis for conducting inspections in private dwellings (see Box 7). Instead, national authorities have explored alternative approaches to ensure OSH compliance, focusing on training, awareness campaigns and relying on reporting mechanisms rather than direct inspections (Cáner et al., 2022).

In some cases, labour inspectorates have adopted innovative methods to conduct inspections that minimise intrusiveness and ensure protection of more vulnerable workers (Sagmeister, 2023). In Ireland, the Workplace Relations Commission (the Irish labour inspectorate) implemented a pilot programme involving inspections to tackle undeclared work and improve compliance in domestic work settings in cooperation with the Migrant Rights Centre Ireland, a civil society organisation for the advancement of migrant workers' rights and police services. This initiative used data from a variety of state sources (tax and revenues) and information from other stakeholders to identify domestic work arrangements. Inspectors also required owner permission to get access to domestic premises through a standard appointment letter including a code of practice to minimise refusal risks. The strategy proved largely successful, with 70-80% of inspection requests granted and various labour law breaches being detected from 2011-2016, most related to working time regulation. However, questions remain about its effectiveness in tackling undeclared work, since state sources only allow for the identification of cases in the formal domestic care sector.[41]

Social service vouchers are widely acknowledged as a paradigmatic example of proactive strategies aimed at the formalisation of domestic work by subsidising the costs of these services and making them more affordable to households (OECD, 2021; Williams, 2019). In Belgium, service vouchers (*titres services*) were introduced in 2004 with positive results in reducing undeclared work, creating new formal employment opportunities and providing a pathway for workers to transition from the undeclared to the declared economy (Box 12). Crucially, the Belgian voucher system operates in a triangular employment relationship in which private households acquire vouchers from an authorised provider organisation, which also acts as the employer of the domestic worker. The system provides these workers with access to social security benefits comparable to standard employment, including unemployment benefits, pension benefits and health insurance. Since 2014, the management of the service became a responsibility of regional governments, which has added some variability in different features of the system (Williams, 2019).

[41] Hastings, T. (2018). Best practice fiche: Inspections of private households as places of employment: Ireland (The European Platform tackling undeclared work). https://ec.europa.eu/social/BlobServlet?docId=20736&langId=en

Box 12: Service vouchers and workers' occupational health and welfare (Belgium)

Service vouchers are public subsidies that enable households to pay for domestic services such as cleaning, laundry, ironing and assistance with other daily living activities. Domestic workers are employed by approved service voucher companies, facilitating the formalisation of employment relationships.

In 2016, social partners in the Belgian service voucher sector reached a sectoral collective agreement that provided for the creation of a Sustainability Fund, given that the sector was facing challenges due to increasing numbers of long-term users and increased difficulties in finding new workers. In this context, a study was commissioned by the sectoral training fund to assess the health and welfare of domestic helpers and to contribute to improving the 'viability' of work in the service voucher sector.

The study is based on a large sample of domestic workers (N=3,896) from 33 service-provider organisations across the country.[42] The findings showed mixed results about the characteristics of this work scheme and its implications for workers' health and welfare. On the one hand, the study found high levels of job satisfaction among service voucher workers (89%) over how their work is organised, specifically with regard to autonomy on the job (95%), good and trustworthy relationships with clients (95%), and working hours (94%). Most domestic helpers work on a part-time basis as a desired option to better cope with work and family responsibilities.

On the other hand, the study found a significant prevalence of health issues associated with the highly demanding and unpredictable nature of domestic work. In particular, the service voucher sector is characterised by high rates of sickness leave (69% of surveyed workers over the last year, with 16% of those workers being absent for more than a month). About half of the participants suffered from stress (16% on daily basis). Home helpers experience various physical complaints, with back pain (68%), arthritis and muscle pain (67%), and neck or shoulder pain (62%) being the most common, as well as other issues, such as headaches (43%), skin irritations (26%) and respiratory problems (17%). As a result, more than a half of respondents believe that it is not possible to continue working in this job until retirement age.

The study proposes a set of recommendations and proposals aimed at improving the sustainability of working in the sector, drawing on insights from focus groups with workers and expert workshops. The recommendations include identifying and standardising appropriate personal protective equipment, ergonomic tools and cleaning products through expert collaboration. The proposals also include better information for both clients and home helpers about sector regulations, permitted tasks and products, and recommended practices. Strengthening supervision and control by service voucher companies is suggested, along with enhanced coaching and training programmes for home helpers. The recommendations also include implementing good practices, such as planning feasible schedules, limiting commuting and allowing sufficient rests times, or offering greater task variation and considering working in pairs.[43]

The present study has uncovered some relevant initiatives by social partners and public authorities in support of foreign home care workers (Boxes 12, 13 and 14). Cross-border mobility is a growing phenomenon in some countries, such as Germany, Austria and Italy, where the demand for live-in care workers has become increasingly reliant on workers from central and eastern European countries. Cross-border mobility results in labour shortages in the sending countries' HeSCare sectors while also entailing significant challenges in ensuring decent working conditions due to fraudulent practices by some placement agencies in the posting of cross-border workers. In Germany, it is common for

[42] Goffin, K., Schoorel, T., & Valsamis, D. (2018). Travail faisable et maniable dans le secteur des titres-services : Étude sur le bien- être des travailleurs titres services. IDEA Consult. https://form-ts.be/fileadmin/media/FR/1.FORM_TS/Rapport_final__Travail_faisable_et_maniable_dans_le_secteur_des_titres-services__FR_-_zonder_kruistabel.pdf

[43] Additional information on the Belgian service voucher system is provided in EU-OSHA (2022): Well-being at work in the service voucher sector in Belgium and OSHwiki (2022): Initiatives to improve the well-being at work and training of workers in the Service Voucher sector in Belgium.

placement agencies to hire foreign live-in workers as independent self-employed individuals. This practice is used to bypass statutory minimum wage requirements and other regulations by obscuring the fact that the primary work is conducted in German households. Instead, they establish minor service obligations, such as recruiting other home care workers, as the main contractual activity in the worker's home country (Jaehrling and Weinkopf, 2020). Similar challenges concerning the cross-border mobility of care workers emerged in the Austrian live-in care sector, leading to the 2007 reform that regularised 'bogus self-employment'. The reform provided a legal framework that excluded workers from basic employment and collective rights (ELA, 2021a). Placement agencies operating in both Austria and the sending countries, primarily Romania and Slovakia, have faced criticism for engaging in abusive practices (Sekulová and Rogoz, 2019).

In this context of legal and practical complexities surrounding cross-border labour mobility and market intermediaries, different initiatives have been developed by stakeholders and trade union organisations in support of cross-border home care workers in the EU. In Austria, the CuraFAIR programme addresses these challenges by providing legal and practical advice and assistance to cross-border caregivers from eastern and central MSs (Romania, Slovakia and Hungary) in their national languages through different channels and a network of consultants distributed in different cities.[44] This programme followed a 2018 campaign launched by the Slovak Trade Union of Healthcare and Social Work (SOZZAS), in partnership with Austrian counterparts, aimed at raising awareness about labour market rights among Slovak caregivers employed in Austria. Similarly, IG24, a self-organised group representing the interests of live-in carers in Austria, provides personalised services to caregivers to combat undeclared work and ensure that actual working conditions comply with Austrian law[45] (ELA, 2021a). Similar initiatives in support of cross-border domestic workers have been pursued in Germany and Poland (Boxes 13 and 14).

Another example of comprehensive and innovative intervention in the promotion of formal employment opportunities for migrant domestic workers comes from the Italian region of Tuscany. As explored in the study by Seiffarth and Aureli (2022), the *Pronto Badante* project (emergency workers) aimed to better integrate migrant care workers, who are often employed directly by Italian households. The voucher system sought to ensure formal employment, provide training courses to professionalise care work, coordinate regional teams and local non-profit organisations, foster collaboration between public and third-sector stakeholders, and adapt the service delivery during the COVID-19 pandemic with phone calls and an app for remote communication. These interventions aimed to tackle a host of risks related to informal employment as well as to improve service delivery efficiency. However, despite the socially innovative nature of the project, the authors point to its limited reach to potential beneficiaries and the temporary nature of the intervention, limiting its long-term impact as well as a lack of systematic pathways to effectively tackle informal employment of migrant care workers (Seiffarth and Aureli, 2022).

Finally, it is worth highlighting the development of digital solutions for live-in carers, like 24h QuAALity in Austria (Box 14), characterised by its comprehensive approach to addressing the various needs and challenges in the 24-hour home care settings (Box 15).

Box 13: CariFair Programme (Germany)

The CariFair programme organised by Caritas Paderborn, Soest and Opole addresses the precarious working conditions faced by migrant caregivers, particularly from eastern Europe, in German private households. Initially launched in Paderborn (Germany) and Opole (Poland), the programme has since expanded to various cities in Germany and Poland, now supporting over 500 caregivers working in 350 families across Germany.

Many caregivers who provide round-the-clock assistance in Germany are migrants and often work in legally grey areas. CariFair provides support, counselling and resources to both caregivers and care recipients, promoting fair contracts, social insurance and transparent working conditions. The programme also offers both the caregiver and employer a bilingual coordinator. These coordinators speak German and Polish fluently and provide ongoing support, help build the employment

[44] See: https://www.volkshilfe-ooe.at/en/service/curafair/
[45] See: https://ig24.at/en/ig24-history-goals/#pll_switcher

relationship and help resolve any conflicts that may arise. This provides both the caregiver and employer with a central point of contact.[46]

The contracts of caregivers under the CariFair programme stipulate regulated working hours (typically 38.5 hours per week), social insurance contributions and paid leave. Further entitlements include at least one free day per week and 36 days of paid vacation annually.[47]

The model has good potential for transferability to different organisations and environments to improve employment conditions and address informal working arrangements.

Box 14: Domestic Workers' Committee (Poland)

The Domestic Workers' Committee, established in 2021 as part of the Workers' Initiative Union (*OZZ Inicjatywa Pracownicza*), is Poland's first trade union dedicated to domestic workers. Founded by Ukrainian in-home care workers and nannies, the committee aims to empower domestic workers through collective action, education and advocacy.

Domestic work in Poland had hardly been officially recognised as work before the establishment of *OZZ Inicjatywa Pracownicza*. The informality of the work was widespread and widely accepted, and exploitation was common. In comparison, Ukrainian domestic workers were much more coordinated, serious about their career and had a strong network. Thus, with more Ukrainians entering the Polish domestic care sector in 2021, Ukrainian and Polish domestic workers combined forces and set out to change the Polish domestic sector.

The committee provides mutual support to members facing exploitation or unfair treatment by employers or agencies. It offers education on workers' rights, Polish labour laws and strategies to avoid scams. Additionally, the committee collaborates with organisations, policymakers and other trade unions both in Poland and internationally to advocate for improved working conditions for domestic workers. Regular meetings foster a supportive community where members can share experiences and learn from one another.[48]

Box 15: 24h QuAAlity (Austria)

The 24h QuAAlity project was run in Austria between 2019 and 2021, to develop and evaluate a user-friendly, accessible and multilingual software application designed to support and ensure quality in 24-hour home care services. Recognising that more than 32,000 service users rely on paid live-in caregivers, predominantly migrants facing language barriers, social isolation and legal uncertainty, the project delivered a distributed client–server software solution via tablets.

The results of needs assessments aimed to ensure quality in 24-hour care and support caregivers in their daily care routine in the following areas:

- Information and training portal. The e-learning platform addresses training needs of caregivers who often perform nursing tasks without being qualified, by allowing caregivers to learn at their own pace.
- Electronic care documentation. The e-documentation system allows for more detailed and organised record-keeping, potentially saving time and resources compared to traditional paper-based methods. It also provides remote access for registered nurses and compatibility with

[46] Caritasverband für das Erzbistum Paderborn, *Für Pflegebedürftige und Angehörige*: https://www.caritas-paderborn.de/beraten-helfen/alter-pflege/carifair/unterstuetzung-finden-hilfe-durch-carifair/unterstuetzung-finden-hilfe-durch-carifair

[47] Caritasverband für das Erzbistum Paderborn, *Für Haushalts- und Betreuungskräfte*: https://www.caritas-paderborn.de/beraten-helfen/alter-pflege/carifair/betreuungskraft-werden-beschaeftigung-bei-carifair/betreuungskraft-werden-beschaeftigung-bei-carifair

[48] Rosińska, A.M. (2021, 16 November). Mutual support across the ocean: Domestic workers share their struggles and successes. *Transforming Society*. https://www.transformingsociety.co.uk/2021/11/16/mutual-support-across-the-ocean-domestic-workers-share-their-struggles-and-successes/

electronic health records, which can improve overall care coordination and quality management.
- Networking opportunities for participants. The initiative addresses the isolation and communication challenges faced by caregivers through a communication platform and an emergency management system.[49]

To make the digital solution accessible and easy to understand for caregivers, the application software is available in four languages (German, Slovak, Hungarian, Romanian). In an Austrian randomised trial, 100 households assessed the effectiveness of the project. The study found that caregivers using the application reported better preparedness for emergencies, improved documentation practices, and a greater sense of support and encouragement in their roles.[50]

The trial demonstrated that brief, accessible digital interventions can mitigate the isolation and burden experienced by 24-hour home caregivers. By offering multilingual e-learning modules and a moderated networking platform, the initiative reinforced caregivers' sense of support and preparedness without imposing lengthy training sessions. The lack of incremental benefit from electronic documentation suggests that peer learning and knowledge resources may be the most critical levers. Importantly, integrating these digital tools into caregivers' workflows via supplied tablets facilitated high engagement even amid fluctuating household placements and pandemic restrictions.

3. The working environment in home care services: OSH risks and outcomes

The HeSCare sector is characterised by a high level of exposure to a wide range of concomitant risks, namely MSK, physical, biological, chemical and psychosocial (EU-OSHA, 2023, 2014). While many of these risks are present in home care work, this sector poses unique health and safety challenges because the work is done in private homes of recipients and mostly in relative isolation (EU-OSHA, 2014, 2024; Ravenswood and Douglas, 2018). In contrast to an institutional healthcare setting where hazards can be controlled and standardised, and protocols, supervision and safety measures readily implemented, each private home presents specific challenges with respect to the household hazards encountered and difficulties in foreseeing, assessing and preventing risks. The fact that the work is carried out mostly in relative isolation, without immediate assistance or support from peers or supervisors, exacerbates these challenges.

Home care work presents unique health and safety challenges due to its location outside institutional settings (Ravenswood and Douglas, 2018). OSH concerns in the home care sector have a multidimensional and intersectional character. The conceptual framework by Craven et al. (2012) depicted in Figure 1 provides a good basis for framing and understanding the complex relationship between different risk dimensions in the home care sector. Firstly, **the physical environment of home care work** poses significant challenges due to lack of standardisation of clients' homes as workplaces. These risks stem from the lack of assistive devices or equipment, as well as the unsuitable conditions of clients' homes, such as poor lighting and tight spaces or obstacles that make it difficult to work safely, leading to overexertion and increasing the risk of trips, falls and injuries (Hignett et al., 2016). Nevertheless, research on the safety and accessibility of home environments from the perspective of home care workers remains limited (Pettersson et al., 2020).

A second relevant dimension is the **social environment of home care**, arising from the interactions with clients and their families, as well as the organisation of social support. The interpersonal dimension of home care work is arguably the most distinguishable aspect of this occupation compared to similar roles in institutionalised care settings (Gazzaroli et al., 2020). The relational dynamics of home care work expose workers to physical and emotional vulnerabilities that demand a specific mix of

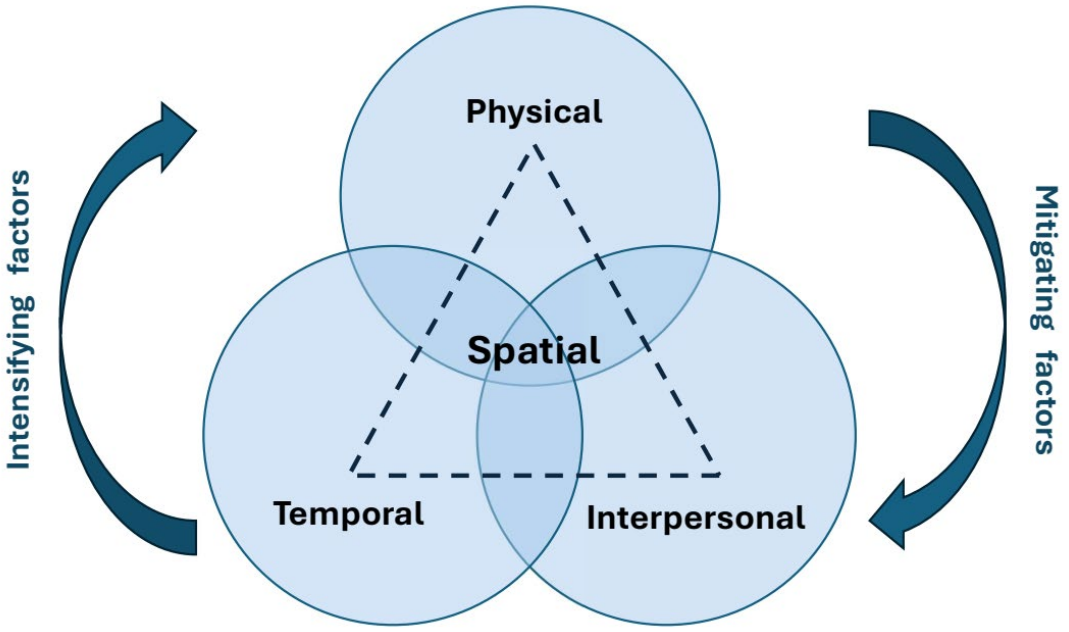
[49] FH Campus Wien, *24h QuAALity: Quality assurance in 24h-caregiving at home by means of digital support*: https://www.readkong.com/page/fullscreen/24h-quaality-quality-assurance-in-24h-caregiving-at-home-by-1762104

[50] Haslinger-Baumann, E., Putz, P., Hauser, C., Kupka-Klepsch, E., Sturm, N., & Werner, F. (2023). Digital support for quality assurance in 24-hour caregiving at home: A randomized controlled trial investigating the effects on quality of life and professional skills of paid 24h-caregivers. *BMC Geriatrics*, *23*(1), 750.

performance related to relational skills for their effective management. Home care workers can be exposed to users' mistreatment or other forms of abuse or harassment. In addition, they are often required to perform tasks that are not initially planned or that fall outside of their job description due to patients or family members' expectations exposing them to low role clarity, high role conflict, and increased quantitative and emotional demands. Conversely, positive social relationships with users, and especially with supporting colleagues and supervisors, act as a resource to cope with stressful and highly demanding situations (Schilgen et al., 2020). Claims for the professionalisation of the sector highlight the need to increase awareness of the profession's social value and develop resources to support workers in managing the demands of their role. These include further development and recognition of professional and practical technical skills but also interpersonal skills (flexibility, empathy, mediation, negotiation) that are often neglected and undervalued. Furthermore, the building of a professional identity requires the strengthening of social support networks at the organisational level, deemed essential to leverage know-how and self-protection (Gazzaroli et al., 2020).

The **temporal aspect of home care work** has been extensively discussed in numerous publications as a crucial factor in managing home care services, with significant implications for the OSH risks faced by home care workers. Concerns arise from work intensification patterns due to the timing of services and atypical schedules (Burns et al., 2023; Bensliman et al., 2022; Strandell 2023; Atkinson and Crozier, 2020; Tufte and Dahl, 2016; McDonald et al., 2019). Home care is a highly labour-intensive service sector that attempts to curb costs or raise productivity through standardisation of services that are likely to impact on the quality of service and add pressure on workers. Compared to institutional LTC, home care services do not replace informal care but typically complement informal caregiving. This means that actual service provision is to some extent unpredictable and determined by negotiations between care providers and the preferences of care recipients and their relatives, which entails risks of conflicts. Research on staffing in home care services highlights the complexities of measuring workload and staffing requirements or time estimates for specific interventions, given the heterogeneity of factors involved in planning these interventions (Gruber et al., 2021; Jönson et al., 2024).

Figure 1: OSH risks in the home care sector



Source: Adapted from Craven et al. (2012)

The following sections explore the various OSH risks faced by home care workers and examine the potential outcomes associated with these risks based on the review of research evidence. Before delving into results, it is worth noting that most of the studies in the field focus on experiences of home care workers employed in service-provider organisations, and in particular home nurses. There is more

limited evidence on domestic care workers directly employed by households. This research gap mirrors the existing regulatory gaps concerning the employment and social protection rights of domestic workers in many MSs. As mentioned above, domestic workers are often excluded from the scope of OSH regulations when directly employed by households. In addition, the extent of undeclared work, along with the employers' and workers' general lack of awareness about their rights and obligations, further contributes to the invisibility of the specific OSH risks and outcomes of these groups of home care workers. Indeed, one of the main initiatives implemented by EU-level social partners in the PHS sector consisted of the implementation of a large-scale survey (PHS Monitor, 2024) to get a clear picture of a highly diverse sector and its challenges from the perspective of workers, service users and employers.[51]

3.1 MSK risks

Work-related MSK risks include physical and biomechanical factors that alone or in combination with psychosocial risks can lead to injuries, disorders or conditions affecting muscles, bones, joints, nerves and connective tissues known as MSDs (EU-OSHA, 2024). For home care workers, these risks are primarily handling high physical workloads linked to physically demanding care tasks in conjunction with ergonomic challenges, such as lifting or transferring patients without ergonomic aids (or inadequate aids), such as lift-assist devices, adjustable beds or non-slip floors (EU-OSHA, 2024). Home care workers may also be required to move furniture or carry other heavy objects within the home, which have been cited as contributing to MSK strain (Carneiro et al., 2017; Hignett et al., 2016; Pulkkinen and Lindholm, 2023). Other MSK risks identified in reviews of literature on occupational hazards faced by home care workers include moving or lifting patients in awkward postures, prolonged periods of sitting or standing, and repetitive movements (Bien et al., 2020; Hignett et al., 2016). MSK risks have been found to be strongly associated with shoulder, neck and back injuries and pain, including among home care workers (Andersen and Westgaard, 2013a; Ganer, 2016).

Additionally, physically demanding tasks are often performed alone in home care settings, unlike in hospitals where team support and specialised equipment are more accessible (Arlinghaus et al., 2013; Hignett et al., 2016; Riccò et al., 2017; Pulkkinen and Lindholm, 2023). The combination of different interrelated factors, such as high heavy physical workloads, repetitive movements, awkward postures, forceful movement, fast-paced work, static postures and strenuous tasks, solitary work, unpredictable patient needs, and varied home environments and social relationships with clients, increases the physical strain on home care workers and their risk of injury.

While data specific to the home care work subsector across European MSs are not available, European Working Conditions Telephone Survey (EWTCS) data show that exposure of social workers (NACE 88) (including home care workers, NACE 88.1) to the risk of repetitive hand or arm movements is 64%, exposure to tiring or painful positions is 43%, while exposure to moving heavy loads is 33%.

Stakeholders interviewed identified ergonomic challenges as the primary source of MSK risks. This is due to the performance of highly demanding tasks, such as lifting and assisting patients in their homes, which are often poorly adapted and too costly and challenging to modify. These risks are exacerbated by the lack of structured prevention systems and the difficulty in implementing standardised safety measures across varied home settings. Additionally, home environments present unique hazards like uneven surfaces, clutter and potentially unfriendly pets that may cause problems for workers. The lack of ergonomic equipment, such as lifting devices, along with an ageing workforce and working in isolation further adds increased risks due to the physically demanding nature of the job.

Before detailing the different risk factors, it is worth noting that recent research on MSK risks for home care workers has several limitations, including as regards sample size and representativeness. Many studies are constrained by small sample sizes that fail to capture the broader population of home care workers (Carneiro et al., 2017), while geographical limitations restrict findings to specific locations, thereby limiting their generalisability (Carneiro et al., 2017). A lack of diversity in study samples, with more studies being carried out in northern European contexts, also does not reflect the entire workforce composition across Europe. The reliance on self-reported data may also introduce self-reporting and

[51] The PHS Monitor is a key component of the PHS Dialogue project that aims to promote social dialogue and collective bargaining in the personal and household services (PHS) sector. The survey was conducted in 2024 and is currently the largest of its kind in the EU, with a total of 6,523 responses from workers, users/employers and service-provider organisations from 27 countries (but mostly from Belgium and France). More information is available at: https://phs-monitor.eu/

recall biases, which can distort the accuracy of reported disorders (Bien et al., 2020), while many studies do not report on the severity of different exposures to MSK hazards.

Lastly, many studies do not differentiate between different types of home care workers, such as agency-hired versus patient-hired workers, which may have different risk profiles. Also, the unique environmental challenges posed by clients' homes complicate standardised assessments of MSK risks (Quinn et al., 2021), and the lack of formal worksite assessments undermines the validity of worker-reported hazards (Bien et al., 2020). Addressing these limitations in future research and at the policy level could yield a more comprehensive understanding of the MSK risks faced by home care workers and inform more effective prevention strategies.

3.1.1 Handling high or heavy physical workloads

Heavy physical workload refers to a high level of physical demand in a job or job tasks, characterised by frequent or intense and generally physically strenuous tasks that require strength or endurance and that put considerable strain on the body. Studies in several contexts, particularly Nordic countries, indicate that home care workers frequently experience high physical workloads or demands, and provide exposure levels based upon self-reported data. For example, a mixed methods study in Finland — a survey (N=160, 85% women) and semi-structured interviews (N=55) — found that 30% of HeSCare workers providing in-home services reported a heavy physical burden, with 49% reporting that either monthly or more frequently they felt their occupational safety to be compromised due to physical workloads (Pulkkinen and Lindholm, 2023). However, it is important to note that the research participants in this study were not limited to home care nurses, but also included personal assistants and supervisors, as well as heads of home care and safety organisations.

Another small-scale quantitative study carried out by Mänttäri et al. (2023) in the Finnish context found that 53% of the home care worker participants (N=95, 91% women) in the study reported frequently or very frequently engaging in heavy physical labour and that older workers face relatively greater physical demands. This study identifies an association between increased physical workload and reduced recovery from work, without which negative health effects can develop (Mänttäri et al., 2023). Finally, Otto et al.'s (2019) quantitative questionnaire study (N=242, 90% women) found the nursing staff in home care in their study (20% of the sample) carried out in Germany to be burdened by heavy physical tasks (70%), lifting heavy loads (55%) and holding heavy loads (60%).

3.1.2 Patient handling

The most important source of high or heavy physical workload is patient handling. These activities represent one of the most prevalent MSK risk factors in the home care setting (Carneiro et al., 2015) and have been found to have a direct relationship to the prevalence of MSDs among this group (Riccò et al., 2017). Patient handling activities include lifting, transferring and repositioning patients, tasks cited in the literature as requiring considerable strength and which can lead to overexertion injuries and MSDs (Carneiro et al., 2017; Dondi et al., 2024; Grasmo et al., 2021). According to a systematic review of the literature focusing on safety risks associated with physical interactions between patients and caregivers in home care settings carried out by Hignett et al. (2016), together with direct patient care tasks, patient handling may account for up to 87% of the tasks carried out by caregivers in home settings. However, this figure is likely to vary considerably depending on patient needs and caregiver occupation and role (e.g. home nurse, domestic aid, etc.).

While few studies seek to identify the level of exposure to the risks of patient handling and heavy lifting in home care settings, a small-scale (N=69, 82.6% women) cross-sectional direct observation study by Dondi et al. (2024) into the various occupational exposures encountered by nursing aides and nurses in home care settings in the United Kingdom (UK) shed light on the prevalence of various handling hazards faced by these workers. The study identified risks associated with tasks such as repositioning patients in bed (34.8%), transferring patients from bed to chair (30.4%), transferring patients from chair to bed (26.1%) and moving patients between chairs (26.1%), with nursing aides being particularly vulnerable. According to the interview participants in Grasmo et al.'s (2021) small-scale qualitative study in Norway (N=8, 50% women), there is considerable exposure to risks of patient handling even where the employer promotes ergonomic work practices, including proper body mechanics for client mobilisation and handling, and the use of safe patient handling equipment.

3.1.3 Awkward and static postures

Awkward postures can be defined as body positions that deviate from a neutral alignment and can cause discomfort. Home care workers often work in cramped or confined spaces and are required to adopt awkward or painful postures while carrying out their tasks due to the restrictive environment found in patients' homes (Carneiro et al., 2015, 2017) or unpredictable movements of care recipients (Hjalmarson and Lundberg, 2015). This can involve bending, twisting or rotation of the back, reaching or extending, which can lead to discomfort and/or strain to the back, shoulders and other body parts (Hignett, 2016; Hjalmarson et al., 2015). It can also involve arm elevation, forward trunk inclination, and kneeling (Tjøsvoll et al., 2022), holding an uncomfortable position for an extended period or sudden movements, which can increase the risk of injury.

The literature highlights that activities such as helping clients in and out of bed, repositioning patients in bed, and pushing or lifting wheelchairs, as well as assisting clients with bathing or clothing, also expose home care workers to postural risk factors for MSK injury (Hjalmarson and Lundberg, 2015; Pulkkinen and Lindholm, 2023; Riccò et al., 2017). A small study (N=147, 87% women) by Carneiro et al. (2017) relying on survey data from home care nurses employed at health centres in northern Portugal also cites inadequate bed height, especially low bed height, as a contributing factor to the adoption of inadequate postures and consequently to the appearance of MSK problems. Otto et al.'s (2019) quantitative study (N=242, 90% women) indicates a high prevalence of exposure to awkward postures (80%) and a lifting and bending exposure score of 34.8% among the 20 home care nurse participants in their questionnaire study from Germany.

Furthermore, standing or walking for long periods, as well as sustaining static postures for extended periods when providing care, have also been identified in the literature as risk factors for MSK complaints and pain among home care workers (Davis and Kotowski, 2015; Carneiro et al., 2017). A Norwegian study, which aimed to objectively evaluate the physical work demands and exposures of 114 home care workers (71% women) using wearable sensors, found that the workers observed spent approximately half of their workday sitting and the other half engaging in various physical activities, with significant time spent standing (25%) and moving (11%), although moderate to vigorous physical activity was reportedly low (1.6% of the home care work day) (Tjøsvoll et al., 2022). This study also found arm elevation greater than 30° to be prevalent; 75 (66%), nine (8%), and five (4%) home care workers on average were elevating their upper extremities ≥30°, ≥60° and ≥90° for ≥124 min, ≥37 min and ≥8 min, respectively. Such levels have been associated with a more than a twofold risk of sickness absence (Gupta et al., 2022). With respect to aerobic workload, 25% of the participants in their study also spent 50-93% of the workday above 33% heart rate reserve (HRR) due to the high physical demands and postures required, putting them at risk of cardiovascular strain (Tjøsvoll et al., 2022). This study was the first to carry out the objective measurement and evaluation of the physical demands of home care workers using devices, self-reported methods, and/or visual and video-based observations, typically the primary tools for assessing physical work demands.

3.1.4 Repetitive motions

The repeated performance of similar tasks or movements during work activities or performing repetitive tasks, particularly daily caregiving tasks such as dressing, bathing or providing wound care, is also identified in the literature as leading to cumulative strain and MSDs over time for home care workers (Davis and Kotowski, 2015; Pulkkinen and Lindholm, 2023). These tasks often require repeated movements of the caregiver's upper extremities, particularly the arms and hands. Repetitive motions often occur in conjunction with other risk factors, such as awkward postures and forceful exertions. For instance, repetitive tasks performed in cramped spaces or with poor ergonomics can compound the risk of MSDs (Carneiro et al., 2017). While specific prevalence data for repetitive motion injuries is limited in the recent European literature reviewed, it is recognised as one of the common causes of injury among home care workers in literature reviews of MSK risks and MSDs in healthcare and studies of risk exposures in home care settings outside of the EU (Agbonifo et al., 2017; Ravenswood and Douglas, 2018; Ganer, 2016).

While studies identifying the specific exposure levels to different risks faced by workers in the home care setting are scarce, Carneiro et al.'s (2015) study does make a contribution in this regard. The study involved the assessment of nursing activities obtained by video footage and photographs in patients' homes by five female home nurse professionals in Portugal to quantify the risks of different activities

and postures, using two methods (REBA and MAC). In this study, the highest risk values (REBA = 8) were associated with repetitive wound treatment requiring a sustained awkward position, and the single-handed repositioning of a dependent patient lying in a double bed. Highlighting the presence of multiple risk factors for home care workers, the study finds that apart from the bed not being ideal, the surrounding space was occupied by furniture, significantly increasing the risk faced by the worker (Carneiro et al., 2015).

3.1.5 Exacerbating factors

The literature highlights several factors that contribute to heightening the MSK risks faced by home care workers. First, the home environment may lack appropriate assistive devices or equipment for safe patient handling, increasing the risk of injury (Carneiro et al., 2017). As highlighted in Hignett et al.'s (2016) review of the literature on safety risks in home care settings, the right equipment may be lacking or it may be inadequate (e.g. lifting or bathing equipment that is the wrong size or weight capacity for the patient). Second, the unpredictable and uncontrolled home setting and nature of the work (in terms of required tasks) present unique challenges that hinder the standardisation of ergonomic practices and control of OSH management practices (Carneiro et al., 2017; Grasmo et al., 2021). As highlighted by Carneiro et al. (2015), insufficient training in ergonomics and safe handling techniques can contribute to home care nurses devaluing the risks and adopting unsafe practices. Arlinghaus et al.'s (2013) study of back injury among home health aids in the United States (US), also found that injury risk was increased in home health aides who reported the need for additional ergonomic equipment in patient homes as well as those who reported low supervisor support.

Additionally, MSK risks are exacerbated by the psychosocial risks facing home care workers. According to data from the 2021 EWCTS, workers within the HeSCare sector generally experience the highest share of co-exposure compared to all European workers and 25% of social workers are at risk of co-exposure. A number of studies point to the psychosocial risks that exacerbate the MSK risks faced by home care workers. Firstly, time pressure (high work demands, working at high speed and without breaks) amplifies MSK risks. Home care work often involves tight or irregular schedules and heavy workloads, leading the home care workers to rush through tasks and engage in potentially compromising proper body mechanics (Grasmo et al., 2021; Pulkkinen and Lindholm, 2023).

High physical job demands are also common and the high prevalence of solitary work in home care work, where home carers frequently operate without immediate support from colleagues, as well as insufficient training are identified in the literature as possibly further increasing the physical burden on individuals and increasing the potential for injury (EU-OSHA, 2014; Hignett et al., 2016; Larsson et al., 2013). Furthermore, staff shortages leading to high work demands, working at high speed, and without breaks and long hours may exacerbate MSK risks (EU-OSHA, 2022), and an ageing workforce may be particularly vulnerable due to declining physical capacities and unchanged occupational demands (Mänttäri et al., 2023).

With respect to research gaps, while there is a wealth of research on the work-related MSK risks associated with nurses and nursing assistants handling overweight or obese patients (see Choi and Brings's (2016) scoping review), there is a lack of research on patient handling of obese patients by home care workers.

3.2 Psychosocial risks

Psychosocial risks arise from poor work design, organisation and management, as well as from poor social context of work, and they may result in negative psychological, physical and social outcomes (EU-OSHA, 2024). They are multifaceted in their nature and in their potential to impact various health outcomes such as cardiovascular diseases and mental disorders. In the field of occupational epidemiology, since Selye's work in the late 1930s, several explanatory models of the relationship between work-related psychosocial risks and health disorders have been formulated (Kompier, 2002; Rugulies, 2019). However, the demand-control-social (DCS) support (Johnson and Hall, 1988; Karasek, 1979) and effort–reward imbalance (Siegrist, 1996) models have been the most widely used to show the harmful effects of these risks, backed by the most scientific evidence and of the highest quality at international level (Niedhammer et al., 2021; Rugulies et al., 2023). Scientifically, these risks have been studied separately, which is how they are assessed in companies and institutions, and in combination (job strain, iso-strain). More recently, the demand-resource model (Bakker and Demerouti, 2007), which

combines the dimensions mentioned in the two previous constructs in these two concepts (demands, resources), has been developed.

However, these models do not cover the entire spectrum of work-related psychosocial risks known today. From a gender perspective, high emotional demands (Vanroelen et al., 2009; Zapf et al., 2001) or work–family conflict (Cooklin et al., 2016; Lunau et al., 2014; Martinsen et al., 2018) are relevant shortcomings. Psychosocial risks also encompass a wide range of work characteristics that are often intertwined and frequently interact with and/or influence the impact or severity of physical and MSK workplace hazards. Good psychosocial working conditions for home care workers are important for workers' health and welfare, but also for patients' satisfaction with care, specifically overall satisfaction, treatment by staff and sense of security (Borstrom et al., 2022; Brouillette et al., 2023).

The research highlights important differences in the prevalence of work-related psychosocial risks, showing that these risks disproportionately affect precarious workers, such as those in low-income, insecure jobs, and are further compounded by intersecting factors like gender, age and immigrant status (ETUI, 2023a). Additionally, these disparities vary significantly across occupations and countries, the latter attributed to differences in work and employment regulations and social policies.

In general, occupations involving direct interactions with clients carry higher psychosocial risks, as they increase the likelihood of high emotional demands and the risk of encountering challenging, inattentive or even aggressive clients (EU-OSHA, 2023), in addition to the risks related to high quantitative demands, low control, low support or high rewards. According to the latest data from the Third European Survey of Enterprises on New and Emerging Risks (ESENER 2019) and the OSH Pulse 2022 survey, the level of exposure to several psychosocial risks is higher in the HeSCare sector than in other sectors, the most reported risks across the sector being severe time pressure and difficult interactions or social situations (with patients and family, etc.) (EU-OSHA, 2024). While data specific to the home care work subsector are not obtainable from European-wide surveys, data from the EU-LFS show that exposure for social workers (NACE 88) (including home care, 88.1) to the risk of severe time pressure is 16%, difficult customers or patients 18%, poor communication 5%, job insecurity 5%, threat of violence 2% and lack of autonomy 1%. Data from the 2021 EWCTS also show that 65% of social care workers reported sometimes/often/always dealing with emotionally disturbing situations (EU-OSHA, 2024). The multiplicity of roles and activities carried out by workers in the home care sector means there are likely to be considerable variations with respect to exposures to psychosocial risks between different types of home care workers.

Psychosocial risks in the HeSCare sector vary across European countries, specifically related to interactions with difficult clients, poor internal communication, and long or irregular working hours (EU-OSHA, 2023). Slovenia shows the highest percentage of workers dealing with challenging clients (96.7%), followed closely by Portugal at 94.1%, Estonia at 91.5% and Poland at 91.4%, while poor communication or cooperation within healthcare organisations is another significant issue, with Sweden reporting the highest level at 51.8% in the sector, followed by Denmark at 45.5%. Furthermore, long or irregular working hours are prevalent, particularly in Sweden, where 56.8% of HeSCare workers report these challenging conditions. Denmark and Cyprus also show considerable prevalence of long or irregular hours, with 47.8% and 47.0% reported respectively, suggesting that unpredictable work schedules compound the physical and emotional demands of the sector, further escalating stress and exhaustion levels of workers. Regional patterns emerge from the data. Nordic countries, particularly Sweden and Denmark, rank highly in several categories, especially concerning poor communication and extended working hours, which is surprising given their generally well-developed welfare systems. Meanwhile, European countries like Estonia, Poland and Bulgaria report high levels of psychosocial risk, particularly related to difficult client interactions (EU-OSHA, 2023). Overall, southern and central European countries appear to experience moderate psychosocial risks in the HeSCare sector.

A general trend across Europe and in the HeSCare sector is the increase in reported work-related psychosocial risks over time (EU-OSHA, 2023, 2024). There is some evidence to suggest that this is also the case in the home care sector. A study by Strandell (2020) indicated significant deterioration of the work environment for Swedish home care workers between 2005 and 2015, a worsening attributed to several factors related to the psychosocial work environment, specifically, in this case, higher workloads, lower job autonomy, lower supervisory support and understaffing. The Ruotsalainen et al. (2020) study exploring Finnish home care workers' job satisfaction, stress and psychological distress

also reports deteriorating working conditions, particularly with respect to increased time pressure for home care workers.

Stakeholders interviewed in the context of the study highlighted the challenging psychosocial environment of home care workers, emphasising emotional strain due to prolonged contact with users' illness, pain, incapacity and death. Home care workers are also at risk of verbal and physical violence, particularly when caring for individuals with dementia or mental illnesses. Working in isolation is also a significant concern, especially among live-in carers, due to the arrangement of both living and working within users' homes. Job demands in home care services are difficult to delineate given the complex nature of users' needs, and the tasks of home care workers usually expand beyond their contractual duties, contributing to exhaustion and stress. Some interviewees noted that the pandemic intensified pressures on domestic workers, with clients demanding more work in less time. General precarious working conditions, including low pay and atypical hours, further exacerbate risks associated with time pressure and overload. According to union representatives interviewed, time constraints, often coupled with the use of digital time tracking tools, contribute to work intensification, limiting the quality of care and increasing home care workers' stress levels. The demands of home care work often push employees to exceed their contractual obligations in order to meet professional or ethical standards in patient care. This situation can lead to internalised stress, negative coping mechanisms and frustration.

'One thing that we always hear from workers is that the job doesn't allow us to do the work in the prescribed way.' (Worker representative)

'It's very difficult to spend sufficient time with each care recipient to give them the quality of care that they need and the quality of care that the carers would like to give them.' (Worker representative)

3.2.1 Quantitative demands

Demand in the DCS (Johnson and Hall, 1988; Karasek, 1979) and effort in the effort–reward imbalance models (Siegrist, 1996) refer to quantitative aspects of the work, specifically to the amount of work in relation to the time available to do it, as well as the pace or uneven distribution of tasks. In this respect, the most studied health risk involves excessively high workloads and related time pressures, in other words, high quantitative demands or high workloads or overloads, high pace of work or high time pressure, intensification, overtime and long working hours.

High quantitative demands are consistently identified in the literature as major psychosocial risks for home care workers. High workloads refer to an overwhelming or excessive number of clients or volume of tasks and responsibilities that may be complex or demanding, within a given timeframe often without adequate resources, support or breaks. High workloads often lead directly to increased time pressure, understood as an unhealthy contrast between the time available or allocated and the amount of time required to complete the task (Cœugnet et al., 2016). Some survey studies provide data on the percentage of participants reporting high workloads, although this is: a) limited; and b) there is significant variation in reported prevalence, including between studies carried out in the same context. For example, in Sweden, 49% of home care workers in Norström et al.'s (2023) survey of home carers (71% assistant nurses, 12% home care aides and 17% with no formal health training) (N=1,154, 84% women) reported high workloads, while high workload prevalence was reported to be 28% in Sjöberg et al.'s (2020) study (N=1162, 84% women). Assander et al.'s (2022) study of nurse assistants and nurse aides (N=226, 80% women), also in Sweden, reported that 70-86% of the workers perceived high job demands (high workloads and time pressure). In Belgium, 66% of the home care workers in Vander Elst et al.'s (2016) study (N=675, 93.8% women) scored high on workload.

High workloads and time pressure can lead to home care workers working unpaid hours and adopting other coping strategies such as skipping lunch or shortening breaks to maximise efficiency (Coeugnet et al., 2016; Strandell, 2023; Strandell and Stranz, 2021). Moreover, the exposure to this risk can negatively affect the time home care workers have available to discuss difficult situations with colleagues

seeking support, exposing them to low social support and to low control, reducing their sense of control over their work (Strandell, 2020).

Andersen and Westgaard's (2013a) survey study (N=138, 89.8% women) characterises high work demands as a combination of factors, such as physical demands (heavy lifting and pace), mental demands (task overload and cognitive overload), and time pressure due to a high number of visits and increased transfer time between care recipients. Kaihlanen et al. (2023), on the other hand, defines objective job demands as time pressure, number of interruptions and client care needs, while they define subjective job demands as time pressure, role conflicts and disruptions during the day, and job demands for live-in care workers may also include insufficient rest, lack of privacy and limited free time (Bruquetas-Callego, 2019; Kriegsmann-Rabe et al., 2023). While Väisänen et al. (2024) as well as Mänttäri et al. (2023) find the work of home care workers to not be particularly physically taxing in the Finnish context, the findings from their study on job demands and recovery suggest that home care nurses have more direct care time with clients, which may indicate more intense work, with less daytime recovery from work, which is important to sustain work ability and wellbeing.

The work condition and employment factors highlighted in the literature as contributing to high workloads and time pressure include an increased case load (i.e. number of clients each day) (Norström et al., 2023; Ruotsalainen 2020), understaffing and scheduling issues due to the unpredictable nature of home care work, or inflexible or fragmented time allocation, as well as unforeseen incidents, interruptions or additional tasks that often occur in relational work and that affect aspects such as travel time and time spent with clients (Atkinson and Crozier, 2020; Kaihlanen et al., 2023; Pulkkinen and Lindholm, 2023; Ruotsalainen et al., 2020; Vänje and Sjöberg, 2021). Gebhard and Wimmer (2023) also find significant association between time pressure and travel. Other contributing factors have been identified as frequently covering the work of staff on sick leave, taking care of users recently sent home from hospital (Grasmo et al., 2021), and a lack of guidelines as to how to deal with unexpected incidents (Vänje and Sjöberg, 2021), as well as traffic (Atkinson and Crozier, 2020; Coeugnet et al., 2016). Grasmo et al.'s qualitative study (2021) (N=8, 50% women) exploring home care workers' experiences of their work conditions in Norway highlights the risk of high workloads becoming a cyclical problem, whereby high sick leave rates due to workload pressures create staffing challenges, which in turn increase the workload for remaining staff, and risks for home care workers' health leading to more sick leave.

With respect to quantitative caseloads, a small number of studies report the average number of client visits carried out per day by home care workers and/or time spent on each visit. In one recent study in Sweden (N=64, 90% women), home care worker participants reported carrying out an average of 15 visits per day and in 50% of the cases they reported spending 15 minutes or less with each recipient (Strandell, 2022). The participants in another study reported between 13 and 14 clients visits daily (Sweden), and it was found that many home care workers also experience an uneven distribution of work throughout the day, with intense periods of back-to-back visits (Sjöberg et al., 2020). Finally, the participants in Andersen and Westgaard's (2013a) study (N=138, 89.8% women) in Norway reported between 10 and 27 client visits per day. Moreover, caseloads increased over time.

The common occurrence of additional tasks within the daily working routine of home care workers is also identified as a risk factor in the literature. For example, Gebhard and Wimmer's (2023) study investigating work-related burdens experienced by home care workers in their daily routines and using audio diaries from 23 participants in southern Germany identifies additional tasks as the central node in the network of burdens faced by these workers and causing time pressure. Additional burdensome tasks are often considered to be time-consuming administrative or reporting tasks (Andersen et al., 2015; Kaihlanen et al., 2023; McDonald et al., 2019), rather than those requested by patients, and were considered by the participants of Gebhard and Wimmer's study (2023) to add to high quantitative workloads and cause delays. These authors also suggest that the burden of additional tasks may explain feelings of having unpredictable workdays found in previous studies (Fjortoft et al., 2021; Grasmo et al., 2021). They also stress, however, that occasional additional tasks are not the primary cause of time management and workload challenges; instead, these challenges are an inherent problem in home care stemming from how the work is organised (Gebhard and Wimmer, 2023).

Higher workloads among home care workers could also be associated with certain work tasks, since Norström et al.'s (2023) study exploring the distribution of 15 work tasks among home care personnel in Sweden (N=1,154, 84% women) found tasks such as responding to personal alarms, running errands

and helping with bathing were linked to higher workloads, while the assistant nurses in this study expressed a desire for more time for tasks such as social support and rehabilitation measures and less time on domestic chores.

Time pressure, often because of high workloads, emerges in the literature as an important challenge faced by home care workers. Time pressure is also argued to have increased due in some part to the increasing complexity of home care clients' needs and patient-specific needs (Ruotsalainen et al., 2020) alongside overly tight schedules (Kaihlanen et al., 2023; Gebhard and Wimmer, 2023). Many older people also require care roughly around the same time — morning, mealtimes and bedtime — contributing to objectively high workloads and time pressure at these peak times (McDonald et al., 2019). Evidence from a study in France (N=21) also finds that average time per visit is significantly lower in the evening than in the morning for both nurses and nurse assistants (Weerdt and Baratta, 2015). Although the connection is not made in the paper, this is likely to impact the possibilities of reconciling work with social life and family responsibilities, particularly for women. Subjective feelings of time pressure may also depend on the value that the activity has for the individual or fears of sanctions or reprisal (Coeugnet et al., 2016).

As stated by Strandell (2022), time pressure has to do with constraint or compression of time, control of time and unpredictability of time. With respect to time constraints, the home care worker participants in Ruotsalienen et al.'s (2020) study, consisting of a survey of home care workers in the Finnish context (N=121, 98% women) and 15 interview participants (100% women), reported not having enough time for patients or to perform their work properly, as well as only having time for necessary tasks. Time pressures may be experienced as feelings of rushing through work and hectic workdays (Andersen and Westgaard, 2013b), or as having limited time to eat lunch or to go to the bathroom (Grasmo et al., 2021; Strandell and Stranz, 2022). Time pressure due to a lack of time may also lead to risky or unhealthy behaviour, as well as prevent home care workers from participating in health promotion programmes or properly following safety regulations (Elfering et al., 2018b; Gebhard and Wimmer, 2023; Larsson et al., 2013; Otto et al., 2019). Time pressure may also lead home care workers to manipulate timer systems to deliver care based on their professional judgment. Strandås et al. (2019) illustrate how home nurses engage in various practices, such as starting the timer before entering a patient's home, allowing it to run after leaving, or adjusting it afterward, regardless of the actual time spent with patients. They also avoid logging overtime to align with the allocated times. Time pressure may also be experienced when potential interruptions or emergencies, such as responding to alarms, are not accounted for by management scheduling and when there is a shortage of staff (Atkinson and Crozier, 2020; Strandell, 2023).

A mixed methods study by Coeugnet et al. (2016) investigated the causes and effects of time pressure experienced by hospital-in-the-home nurses from one organisation in France (N=4), focusing on their driving behaviour and emotional wellbeing, as well as exploring regulations to mitigate these pressures. They found that more than half of the work-related trips by hospital-in-the-home nurses were under time pressure, with 38 out of 68 trips made by the nurses were reported as having time pressure. The number of patients per round varied, with three to six patients for low time constraints and seven to eight for high time constraints. Furthermore, the emotional verbalisations of the nurses captured during observations and interviews were predominantly negative, with 51 out of 71 being negative. For the nurses in this study, time pressure also led to increased risk-taking behaviours such as tailgating and speeding.

In this study, time pressure emerged because of objective time constraints, as a result of an overload of work and work organisation, but also of perceived challenges and worry about providing insufficient patient support as well as uncertainties to do with both the duration of the next care visit and the duration of the trip to get there. The findings suggest that objective time constraints alone do not necessarily elicit subjective time pressure, and suggest the greater importance of the high value that the activity has for the home care worker as a condition for time pressure, above the fear of institutional sanctions (Coeugnet et al., 2016). The threat of traffic violation sanctions was also not a contributing factor due to protective measures provided by the organisation.

In a similar vein, both insufficient time and a lack of quality time spent by home care workers with patients is identified by McDonald et al. (2017) as a factor that not only affects the care experience and negatively impacts on the older persons wellbeing, but that leads to feelings of inadequacy among workers. In this qualitative study (N=104, 99% women) carried out among home care workers in Ireland, the authors point to some instances where workers only have designated 15-30–minute slots for care delivery (time

constraints). They also stress that person-centred care takes time, which appears contradictory to current business models or outsourced models of care in which time has become a commodity to be saved and managed. Where urgent care tasks take precedence, there is less time and attention for other tasks such as conversations and support for coping with everyday life (Fjørtoft et al., 2021). As highlighted by Hajek et al. (2017), the need for quality time, alongside skills, knowledge and a relationship with the care recipient, expands in the presence of chronic or progressive illnesses (such as dementia) to allow for the quality and length of time needed to build a trusting relationship and provide care that may be unpredictable and complex.

With respect to the unpredictability of time, the realities of care work involve clients' evolving needs and preferences along with travel between homes — both of which can be challenging to predict and define in advance — as well as frequent interruptions and unforeseen events. This unpredictability is a significant factor in how time is experienced and managed by home care workers; interruptions and unreasonable tasks and quality-threatening time pressure also contribute to increased attentional cognitive failure as well as accidents (Elfering et al., 2018a). Time pressure was reported in Gebhard and Wimmer's (2023) qualitative study as mostly related to traffic situations, however, other burdening aspects are parking, weather and darkness, in relation to travel. Time pressure may also be experienced when potential interruptions or emergencies, such as responding to alarms, are not accounted for by management scheduling and when there is a shortage of staff (Atkinson and Crozier, 2020; Strandell, 2023).

There is evidence in the literature to suggest an **intensification** of workloads and time pressures for home care workers over time. Norström et al.'s (2023) study, for example, highlights that on average the number of home care recipients per worker per day increased from 4.0 in the 1980s to 11.8 in 2015 in Sweden. Sjöberg et al.'s (2020) study reports that number to be closer to 13 in 2020. Strandell's (2019) study, also in the Swedish context (N=371), found increasing workloads and time pressure among home care workers between the years 2004 and 2015. Compared to home care workers surveyed in 2005, the survey participants in 2015 reported a higher number of clients attended to daily (11.8, compared to 8.6), less supervisory support, less time to discuss difficult situations from colleagues and reduced control over their daily work planning (Strandell, 2020). The author suggests that the cumulative impact of higher demands and diminished resources due to cutbacks and organisational reforms has created a work environment marked by increased stress, lower morale, and a potentially greater risk of burnout and health-related issues among home care workers in Sweden. However, the fact that the study is now 10 years old raises concerns about its current applicability and more longitudinal research is needed in different country contexts to test the claims.

Similar claims around the deterioration of working conditions for home care workers are made by Ruotsalainen et al. (2020) in their study consisting of a survey of home care workers in the Finnish context (N=121, 98% women) and 15 interview participants (100% women). The participants in this study, predominantly practical nurses, reported an insufficient number of carers, alongside increased sick leave covers, contributing to higher workloads and time pressures. Demonstrating the cyclical nature of the problem revealed by participants in Grasmo et al.'s (2021) study, the qualitative analysis of the interviews in this study reveals that the high-pressure environment has led to exhaustion and increased sick leave, which has increased the workload for those at work. This, in turn, is perceived to have contributed to recruitment challenges as well as a decline in care quality due to lack of continuity in client–caregiver relationships and diminished team collaboration (Ruotsalainen et al., 2020).

Long or irregular working hours are risks that refer to work schedules that extend beyond typical working hours (often defined as eight hours per day or 40 hours per week) or that involve inconsistent, unpredictable hours, including night shifts, weekends or split shifts. Long, fragmented and irregular hours are frequent characteristics of care work and, particularly when experienced alongside high job strain, are associated with coronary heart disease, strokes, depression and other health outcomes such as obesity (Niedhammer et al., 2021). Long and unsociable hours have also been found to be associated with poor work–life balance (Strandell and Stranz, 2021) and is a gendered issue as women continue to disproportionately bear the responsibility for unpaid domestic and caregiving work. This dual burden often exacerbates the challenges of managing fragmented or unpredictable schedules, leading to longer working days, despite most home care workers being part-time, resulting in higher risks of burnout.

The DARES (2021) analysis of psychosocial risk exposures among French home care workers reveals highly irregular and atypical working time patterns. Specifically, 51% of these workers do not have

consistent daily working hours, and 15% do not know their schedules in advance. Additionally, 40% work on split shifts, with two work periods separated by at least three hours, and 29% lack 48 consecutive hours of rest. Similarly, another study based on a large nationwide sample of home care workers in Spain (N=1,345) shows that 61% of respondents report that their actual working hours do not match the agreed contractual conditions. More than a third of the participants indicated that they work either too many or too few hours, primarily due to the system of working time accounts or 'pool of hours' (*bolsa de horas*), which allows companies to unilaterally change the distribution of working hours in response to changes in service organisation, due to discharge, casualties or other incidents (Dema Moreno and Estébanez, 2022).

In Strandell and Stranz's (2021) study, approximately 45% of the 226 Swedish home care workers surveyed stated that they worked at least three of the following four shifts (day, evening, weekend and night), while more than one-third of the respondents worked split shifts at least once a month. The study underscores how irregular hours and split shifts negatively impact the ability of workers to balance their jobs with social and family responsibilities, despite political and union efforts in the country to promote family-friendly workplaces by reducing fragmented work hours. The authors argue that the prevalence of these working conditions is tied to organisational demands for cost-efficiency and resource adaptation and emphasise the need for more predictable and employee-centred scheduling. In contrast, the home care workers in Larsson et al.'s (2013) study reported often working long hours, 94% of them reporting having schedules that include day, evening and night shifts, while 6% reported working night shifts. Shift work can also negatively impact sleep patterns and quality, causing home care workers to feel unrefreshed and poorly rested (Grasmo et al., 2021). One interview participant from Kaihlanen et al.'s (2023) study in Finland highlighted the difficulty of recovering from double-shifts, which are often caused by understaffing.

Long working hours are also a significant psychosocial risk for live-in care workers. In Germany, Kriegsmann-Rabe et al. (2023) report that workers experience 'permanent availability and lack of free time due to a 24-h care schedule' (p. 1). This aligns with findings from Italy, where Vianello (2023) notes that workers are officially limited to 54 hours per week or 10 hours per day, but in practice, many exceed these limits. Some participants from the Kriegsmann-Rabe et al. study (2023) also report extreme cases, such as 'no single day off in six weeks' (p. 7). The impact of these extended hours means that workers often suffer from insufficient rest and limited personal time. For example, Bruquetas-Callejo (2020) found that in the Netherlands, many workers 'sleep poorly as their elderly clients need attention during the night'; this constant availability creates what some workers described as living in a 'golden cage' or a 'convent' (Bruquetas-Callejo, 2020:114). Moreover, in relation to job demands, it is also important to distinguish between the unique and different situation of live-in carers and those of other home care workers, although there is a lack of research on this sub-group, who tend to be women migrants. Job demands for live-in care workers include high workloads, long working hours, insufficient rest, lack of privacy and limited free time (Bruquetas-Callejo, 2020). As also highlighted by Kriegsmann-Rabe et al. (2023), whose qualitative study explores stressors and resilience factors affecting live-in migrant home care workers in Germany, time pressure is also significant due to the 24-hour care schedules and the need for constant attention to clients, including during the night.

3.2.2 Emotional demands

Emotional demands refer to the need to avoid becoming excessively involved in work situations that arise from interpersonal relationships, particularly in occupations focused on providing services to people. These roles often involve the transfer of feelings and emotions, especially in circumstances of suffering and trauma. Managing such situations frequently requires the expression of emotions that may not be genuinely felt. The most studied health risks in this context are associated with excessive emotional demands, including the high demands placed on workers to hide their true emotions.

HeSCare work is widely recognised as emotionally demanding, with workers often required to regulate their emotions to maintain professionalism in highly stressful and emotionally charged situations (Eurofound, 2020a). This is also relevant to home care work, where the emotional component may be somewhat involved in home care work, in part used instrumentally to regulate working relationships (Vianello, 2023). Emotional labour in this sector involves managing personal feelings while addressing the pain and anxiety of patients, pressures from patients' relatives, and the demands of caring for individuals with severe or terminal illnesses at the end of their lives, as well as dealing with death.

Workers may also feel pressure to hide, disguise or regulate their emotions in interactions with care recipients or their families (EU-OSHA, 2023; ETUI, 2022; Eurofound, 2020a).

While emotional work can be rewarding, emotional demands represent a risk when they are so high or complex that the worker feels unable to cope or manage them or must implement strategies to balance their emotional involvement (Weerdt and Baratta, 2015). Emotional burdens are recognised as work environment risks, but they are often unidentified, undervalued and not formally reported (Vänje and Sjöberg, 2021). Furthermore, Vänje and Sjöberg (2021) highlight the gendered nature of emotional labour; often performed outside formalised tasks in home care contexts where demands for support are not explicitly stated or recognised.

Exposure to intense emotional demands may contribute to the high prevalence of home care workers reporting emotionally disturbing experiences and challenging interactions with patients (Assander et al., 2022; Balkaran, 2023; Gebhard and Wimmer, 2023; Tsui et al., 2019). Home care workers are also at higher risk of professional isolation, a risk that tends to increase the burden of the emotional demands that are inherent to care work. The DARES (2021) analysis of the 2017 French nation-wide Sumer survey (*Surveillance médicale des expositions des salariés aux risques professionnels,* Medical Surveillance of Employee Exposure to Occupational Risks), shows that home care workers are faced with strong emotional demands despite having fewer tension with users compared to other employees (9% of home care workers report having been victims of harassment or violence in the context of their work vs 16% for other employees). Home care workers more frequently hide their emotions at work compared to other employees, with 38.8% doing so compared to 30.6% of other employees. They also face a higher likelihood of dealing with individuals who are suffering or in distress (65.4% vs 54.3%). Furthermore, home care workers more frequently report not being able to discuss work-related challenges with colleagues (24.1% compared to 4.4% of other employees).

Providing a qualitative perspective on emotional strain, the audio entries from Gebhard and Wimmers' (2023) study indicate that burdens related to the emotional strains were mentioned most often (a total of 84 times), and most frequently due to the patients' dying, suffering and fear. In Belgium, 28.4% of the home care workers in Vander Elst et al.'s (2016) study (N=675, 93.8% women) reported that they were often or almost always confronted with emotional demands.

Home care necessarily involves interactions with both patients and often their family members or caregivers with whom they may also collaborate (Ris et al., 2019). While this collaboration can enhance care outcomes, it also introduces additional complexities that affect the emotional wellbeing of home care workers. Difficult interactions with clients and their families are identified as significant contributors to mental fatigue and emotional strain among home care workers (Van der Heijden et al., 2008), while positive relationships with clients and users, as well as colleagues and managers, contribute to home workers' good health (Grasmo et al., 2021). Brouillette et al. (2023), exploring qualitative aspects of aide–client relationships in the US, noted that the quality of aide–client connections is influenced by various factors, including communication style, support from family and home care agencies, allotted care time and clear job task boundaries.

The stress of challenging interactions is illustrated in a qualitative study by Grasmo et al. (2021), which explored the experiences of home care workers in Norway. Participants reported that interactions with clients could be stressful, particularly when dealing with verbal violence, clients with mental health conditions or dementia, and intoxicated individuals in the home environment. In Koivula et al.'s (2016) qualitative study in Finland, intoxicated clients were also reported to complicate home care work, obstructing the implementation of care recommendations and making home care tasks particularly demanding. These workers also expressed concern over their limited training in dealing with elderly clients' alcohol use, emphasising the need for collaboration with substance abuse services and emergency department personnel to address these challenges effectively.

In Grasmo et al.'s (2021) study, difficult interactions not only increased perceived risk but also added to the emotional toll of the job. Despite these challenges, the same study found that meaningful interactions and relationships with clients could contribute positively to workers' wellbeing, highlighting the dual nature of these encounters. Gebhard and Wimmer (2023) offer a complementary perspective by emphasising the positive and negative aspects of social relationships in home care. While social connections were identified as the most important source of joyful moments for workers, burdens related to family members were frequently reported as a cause of emotional strain. This aligns with findings by

Ris et al. (2019), who stressed that effective collaboration between family caregivers and home care workers is not only crucial for the health of the relatives but also for the mental health and welfare of the workers themselves.

The literature on live-in carers also points to challenging interactions such as dealing with clients' cognitive neurodegenerative diseases like Alzheimer's and dementia, which can lead to aggressive behaviour and hallucinations (Kriegsmann-Rabe, 2023). There are also issues with clients such as lack of sympathy, control issues and trust problems. With families, stressors include violations of rules and arrangements, such as being asked to perform tasks outside their agreed duties, sexual harassment, cultural racism, financial fraud and ignorance of care workers' needs (Kriegsmann-Rabe, 2023; Bruquetas-Callejo, 2020). Challenging interactions for live-in care workers further include emotional strain, social isolation, and interpersonal conflicts with clients or their families, often exacerbated by language barriers (Hipp et al., 2024). They are expected to prioritise clients' needs over their own, which can lead to skipping meals or being constantly available, resulting in sleep deprivation and blurring the lines between professional duties and personal time (Vianello, 2023). As highlighted in Vianello's study of Moldovan live-in carers in Italy, clients often expect the same level of care as from family members, adding emotional stress.

3.2.3 Control

Control in terms of psychosocial factor has two components: first, the scope of influence that the worker has on decisions in everyday working life (decision authority) and, second, the possibilities of applying skills and knowledge and acquiring new ones in the performance of work (skill discretion). The health risk is by default; it is low control, low decision authority, low skill discretion, low autonomy and/or low influence.

With respect to a lack of control over working procedures, one of the studies reviewed suggests that home care workers' ability to control their work has decreased over time (Van Eenoo et al., 2018), reiterated by Strandell (2020) in her comparison of the work situation in Swedish home care between 2005 and 2015. While data on the prevalence of lack of control are scare, 84.2% of the participants in Strandell and Stranz's (2022) study reported a lack of autonomy, alongside distrust from management and minutely controlled tasks, contributing to a high level of job-control precariousness. The literature also points to the limited autonomy experienced by home care workers in decision-making regarding care provisions when working for private agencies. Care workers employed by agencies may be particularly affected. In the UK, McDonald et al. (2019) find that home care workers directly employed by the public sector reported more autonomy in appraising and responding to day-to-day care needs compared to those working for private agencies.

The lack of control that home care workers have over the pace of their work also emerges as a major issue. The interviewees in McDonald et al.'s (2019) study, for example, perceived the lack of power they have to organise or adjust their worktime in accordance with their own needs or their client's needs. Strict time measurements with little flexibility, and associated time pressures, contribute to 'temporal precariousness' — one of the elements that makes home care work precarious (Strandell and Stranz; 2022). Ruotsalainen et al. (2020) and Kaihlanen et al.'s (2023) studies in the Finnish context both further underscore the problematic nature of time standardisation based on specific time units for each task and work planning using external resource planning systems, as they fail to account for the full range of responsibilities undertaken by home care workers or adapt to dynamic, real-time changes in field conditions.

Strandell's (2020) study, in the Swedish context (N=371), found that compared to home care workers surveyed in 2005, the survey participants in 2015 reported a higher number of clients attended to daily (11.8, compared to 8.6), which could be linked to reduced control over their daily work planning (Strandell, 2020). Home care workers' lack of control over the pace of work is cited in some studies as being due to the marketisation of care services, commissioning practices and neoliberal policies, as well as the increased use of information and communication technology (Atkinson and Crozier, 2020; McDonald et al., 2019; Rubery et al., 2015; Strandell, 2023).

Sandberg et al. (2018) specifically examined the joint impact of high demands and low control as a source of job strain among home care staff, with a focus on dementia care specialists. They found that dementia care specialists experienced significantly higher levels of job strain (mean score of 5.71)

compared to other staff (mean score of 4.71), with contributing factors including language barriers and organisational climate. Similarly, Assander et al. (2022) underscored job strain as having its source within both individual and organisational factors within the psychosocial work environment. Adverse outcomes tied to job strain included increased stress, insomnia, burnout, psychological disturbances, depression and sleep problems, with long-term sick leave being particularly prevalent among nursing staff and aides in Sweden. This study highlighted the role of poor leadership, unfavourable organisational culture and climate and limited control at work in exacerbating job strain, suggesting that addressing these factors could significantly improve the wellbeing of home care staff.

The lack of control that home care workers have over their schedules or processes is highlighted across the literature as another significant risk. In the UK, many home care workers are employed on zero-hour contracts, meaning their schedules can vary substantially from week to week and travel times are often unpaid (McDonald et al., 2019; Rubery et al., 2015). These conditions cause instability or unpredictability with respect to work hours and transfer the risk of income instability from providers to workers. In Germany, public home care providers also had to make significant changes to their internal organisation during the COVID-19 pandemic, which affected workers' control over their schedule (Gebhard and Wimmer, 2023). The authors note that public providers typically work on a system of rotation for care workers, which was interrupted due to the pandemic and reduced workers' control over their usual work patterns. Giordano's (2024) study of the pandemic's consequences for frontline home care workers in Brussels also highlights that workers had little control over their working schedule or number of hours due to 'unstructured flexibility' at this time. There was a lack of ability to plan ahead and reschedule services based on needs, leading to improvisation and prioritisation based on urgency.

Gebhard and Wimmer (2023) also point to differences in control over working hours between public and private sector workers in Germany during the pandemic. Public sector employees had more flexibility to adjust their schedules according to personal and family situations during the pandemic, while, in contrast, private sector workers, often self-employed, had less control and felt pressured to maintain their hours despite personal circumstances. However, even in the public sector, workers face constraints due to strict time-based commissioning and high workloads (Giordano, 2024), although systems of rotation of workers may provide a degree of control over work patterns (Vänje and Sjöberg, 2022).

Live-in carers also experience a lack of control over work hours and schedules, which is closely tied to the expectation of constant availability, with workers being required to provide care both during the day and at night and often without any days off (Bruquetas-Callejo, 2020; Kriegsmann-Rabe et al., 2023, Vianello, 2023). A significant proportion of the Polish live-in carers in Hipp et al.'s study (2024) reported having no day off per week — around 55% versus around 70% for agency and non-agency workers, respectively. As highlighted by Bruquetas-Callejo (2020), attempts by these often migrant workers to negotiate better control over work hours may also be unsuccessful due to their limited bargaining power.

3.2.4 Social support

Social support refers both to the possibility of social relations at work (a structural element) and to the functional aspect of relationships at work, that is, receiving or not receiving the necessary help and support to carry out the job properly, both from colleagues and superiors. The risk to health is the absence or scarcity of social support; in other words, isolation and low instrumental support, both from superiors and colleagues, with the functional aspect being the most studied by researchers.

With respect to home care, **working alone** is identified in the literature as a significant psychological stressor for home care workers. Workers reported managing numerous responsibilities and performing most tasks without contact with colleagues and supervisors, which contributed to feelings of isolation (Hignett et al., 2016; Pulkkinen and Lindholm, 2023). Furthermore, a Swedish study comparing home care work in 2005 and 2015 found that those surveyed in 2015 reported receiving **less support** from their supervisors and from colleagues since they had less time to discuss difficult situations compared to 2005 (Van Eenoo et al., 2018). These findings were corroborated by Strandell's (2020) study also in Sweden, which linked the eroded support to the increase of case workloads: the survey participants in 2015 reported a higher number of clients attended to daily, at 11.8 compared to 8.6 in 2005.

Similarly, a qualitative study by Grasmo et al. (2021) highlighted the prevalence of solitary work among home care workers in Norway, as well as feelings of loneliness, where employees frequently worked alone in patients' homes. Despite this, participants in the study emphasised the importance of

relationships with colleagues as a source of social fellowship, support and positive feedback. Many also reported benefiting from strong managerial support and leadership. These findings suggest that even in contexts of solitary work, a supportive work environment can provide critical emotional and professional resources.

Further evidence of the mitigating effects of social support is provided by Vauhkonen et al. (2021), who conducted a quantitative study of 167 home care workers in eastern Finland (88.6% women). Most respondents reported receiving help and support from colleagues when needed, reinforcing the value of collegiality in reducing work-related stress. The effects of lack of support on occupational wellbeing in this study were found to be indirect, while lack of information was found to have a direct effect on occupational wellbeing (Vauhkonen et al., 2021). These findings are consistent with Möckli et al. (2020), who found that job-related social support and feedback were among the most significant contributors to work engagement among the home care workers studied in Switzerland. In this study, it was found that social support not only decreased emotional exhaustion but also served as a critical moderator for fostering resilience among workers.

Fattori et al. (2023) similarly highlights the protective effects of social support in reducing work-related distress. In this study, psychosocial risk factors and burnout were explored among palliative care workers, comparing those in inpatient hospice and home care settings. Conducted in northern Italy, the cross-sectional study included 106 participants, predominantly female (68%) and mainly nurses (57%). The findings revealed that home care workers reported more frequent communication with colleagues and patients or caregivers than inpatient hospice staff, and inpatient hospice workers experienced lower peer support and a poorer psychosocial safety climate. The study confirms significant psychological and physical fatigue in both care settings, suggesting that home care does not impose a greater psychological burden compared to inpatient hospice care.

3.2.5 Role ambiguity and conflict

Role ambiguity occurs when there is a lack of clarity about a worker's responsibilities, expectations or boundaries in their job. On the one hand, workers themselves may not know exactly what tasks they are expected to perform, how to prioritise them or how their role fits into the broader organisational goals. On the other hand, misunderstandings of the role of home care workers among clients, their families or other healthcare workers may occur (D'astous et al., 2019; Elfering et al., 2018b). While there is a lack of specific prevalence or exposure data, factors contributing to role ambiguity are identified in the literature as a lack of clear work descriptions, guidelines for unforeseen events and undefined boundaries (Vänje and Sjöberg, 2021), additional tasks that fall outside the caregiver's job description (Elfering, 2018b), The prevalence of informal work practices, which are not formally recognised or valued, along with the emotional labour often involved and expected in home work — and expected from women — creates expectations that demand significant emotional investment without clear boundaries or recognition, contributing to role ambiguity (Vänje and Sjöberg, 2021; Atkinson and Crozier, 2020).

Role conflict refers to incompatible or contradictory expectations or demands or requirements that may involve conflicts of a professional or ethical nature. In the literature on home care, it is discussed with respect to contradictory instructions (Otto et al., 2019), a mismatch between expectations and capabilities given the organisational demands (such as workload and strict scheduling), and time constraints, contributing to stress, feelings of inadequacy, and concerns that clients are not receiving the necessary or quality of care required (Atkinson and Crozier, 2020; Ruotsalainen et al., 2020; Strandell, 2023; Strandell and Stranz, 2022). Again, while prevalence data are largely missing, one study in Sweden reports that 46% of the participants worried that clients do not receive the necessary care while almost one-quarter reported feelings of insufficiency (Strandell and Stranz, 2022), factors that are considered indicators of role conflict in this study.

On the other hand, home care workers may not have the right skills to perform the work required, leading to unpreparedness as well as feelings of insufficiency, which, in turn, is related to intentions to quit these jobs (Strandell and Stranz, 2022). The identified sources of this risk include the evolving nature of home care work and overall increased demands, but also demands for more complex and medically orientated care, while learning demands and ongoing skill development requirements are not being met (Assander et al., 2022; Sjöberg et al., 2020; Vänje and Sjöberg, 2021). As highlighted by Strandell and Stranz (2022), the gendered devaluation of care work that informs perceptions of the unskilled nature of care work that is not considered to require any specific qualifications or training helps explain this. Vänje and

Sjöberg (2021) also refer to blurred boundaries between professional and personal roles in home care work, where workers must individually decide to draw the line between their two 'selves', potentially leading to role conflict.

A systematic review of the literature on the experiences of home care workers providing care for people with dementia up to the end of life (D'astous et al., 2019) found evidence that home care workers felt that the lack of clarity as to their job role, doubts about being a contributing team member, alongside views on their own remuneration may lead them to question the value of their work and the contributions they make to the care of people with dementia dying at home, which can lead to role conflict.

With respect to live-in carers, role ambiguity is characterised by Hipp et al. (2024) as imbalances in power and dependence, lack of clear contractual definitions, 24/7 availability expectations, social isolation, interpersonal conflicts and language barriers. These factors contribute to role ambiguity and misunderstandings about responsibilities and expectations, conflicts that they state care agencies can both alleviate and worsen. Bruquetas-Callejo (2020) also reports that some live-in care workers aspire to move to jobs in the formal care sector with more defined hours as well as boundaries between work and personal life, suggesting difficult working conditions with respect to role ambiguity and work–life balance.

A further psychosocial risk related to workloads is the perceived or real mismatch between the competencies (training, knowledge, or physical or mental capabilities) of care workers and the tasks required, which can negatively affect how home care workers experience their job. On the one hand, home care workers may not have the right skills to perform the work required, leading to unpreparedness as well as **feelings of insufficiency and inability to provide good-enough care**, which, in turn, is related to intentions to quit these jobs (Strandell and Stranz, 2022). Identified sources of this risk include the evolving nature of home care work and overall increased demands, but also demands for more complex and medically orientated care, while learning demands and ongoing skill development requirements are not being met (Assander et al., 2022; Sjöberg et al., 2020; Vänje and Sjöberg, 2021). As highlighted by Strandell and Stranz (2022), the gendered devaluation of care work that informs perceptions of the unskilled nature of care that is not considered to require any specific qualifications or training helps explain the prevalence of limited possibilities for skill development and the lack of supplementary training of home care workers.

Some studies highlight the impact of inadequate qualifications and training on the performance and wellbeing of healthcare workers, as well as potential risks to patient safety. For example, Sjöberg's et al.'s (2020) survey study (N=1,152, 84% women) in the Swedish context found that workers without the relevant health education experience a higher loss of quality-adjusted life year scores (QALY) when exposed to high workloads than their counterparts with higher qualification levels. Norström et al.'s (2023) study also found that 93% of unqualified home care workers (home care aides and carers with no formal training) were frequently delegated tasks related to the preparation, administration and delivery of medicines despite not having the requisite knowledge and competence on drugs and pharmacology as required by the Swedish authorities. Although the study does not mention any reported negative impacts for the home care workers as a result, the authors underscore the potential threat this has to the safety of home care recipients. Leiblfinger et al.'s (2021) study of how live-in care as a whole and care workers in particular (from Romania and Slovakia, providing care in Austria) were affected by the pandemic and related policy responses also highlights how the pandemic exacerbated tasks and workload beyond care workers' competencies.

The other side of this coin is the risk that home care workers are carrying out tasks below their level of professional skills and identity or that are too easy for them, which may lead to job dissatisfaction, burnout, and feelings of being undervalued or overburdened. With respect to this issue, home care workers with distinct educational and qualification levels in Norström et al.'s study expressed a preference for carrying out fewer domestic chores and errands, with the researchers attributing this to beliefs among the workers that these tasks should be completed by others; and Grasmo et al.'s (2021) study in Norway found that performing tasks aligned with professional skills and identity is considered as important and health-promoting by the home care worker participants. Finally, 15.7% of the participants in Strandell and Stranz's (2022) study reported limited possibilities to use their skills, while greater proportions of the participants reported a lack of opportunities for skill development and supplementary training, 26.9% and 39.4%, respectively.

However, there is evidence to suggest that the quantitative problems of workload are more prevalent than content-related (learning demands) ones. Sjöberg et al. (2020), for example, found that an unevenly distributed workload (20% at least rather often experiencing problems) and too much to do (25% at least rather often experiencing problems) were more of a problem for the home care workers than those experiencing problems with work tasks that were too difficult (1.1% at least rather often experiencing problems) or considering their work tasks to require more training (7.1% at least rather often experiencing problems). In line with Sjöberg et al.'s (2020) findings, Gebhard and Wimmer (2023) also indicate that home care workers report more problems related to workload related to quantitative aspects, with additional tasks the most cited burden, than due to content-related ones.

3.2.6 Rewards

The psychosocial dimension of rewards refers to pay (fair salary), esteem (recognition), stability of employment and working conditions, and career opportunities (status control). Again, the health risk is absence or scarcity: low rewards, job/employment/working conditions insecurity, low esteem, low career development.

The home care work sector is characterised by both **job and employment insecurity**, defined in the literature in different ways. While job insecurity refers to employee perception of a lack of security in the present job and workplace or workloads and unpredictability, employment insecurity refers to a perception of an inability to find another job in the profession if current employment were to end (Zeytinoglu et al., 2015), employment insecurity often contributing to job insecurity (Hignett et al., 2016). As stated by Tsui et al. (2018), the distinctiveness of home care work is that when a client dies, workers may lose a close relationship as well as a job.

Employment insecurity is also discussed in terms of low full-time employment rates, high use of split shifts, difficulties in recruiting and retaining staff, and high turnover, high stress, understaffing and a significant portion of younger workers not planning to stay in the sector (Bruquetas-Callejo, 2020; Sjöberg et al., 2020). Employment precariousness is another term used to describe instability in employment conditions such as low pay and temporary contracts (Strandell and Stranz, 2021), lack of employee status and access to social security benefits (Giordano, 2022), as well as unclear legal situations, lack of official control, absence of permanent employment for many workers and insufficient protection under current social policies in the case of live-in carers (Kriegsmann-Rabe, 2023).

Part-time, non-standard and casual hours, as well as the use of zero-hour contracts, are also contributing factors to both job and employment insecurity and are prevalent in the home care sector dominated by female workers (Atkinson and Crozer, 2020; Vänje and Sjöberg, 2021). There is some evidence from Italy and Ireland to suggest that insecurity is more prevalent among private sector home care workers than public sector workers (Giordano, 2022a; O'Neill et al., 2023). There are also significant differences across countries with respect to proportions of workers on part-time or zero-hour contracts (zero-hour contracts unique to only a few contexts) (EU-OSHA, 2024). Few research papers provide data on this; in Vauhkonen et al.'s (2021) study in Finland, 30% of home care workers were reported as in temporary or non-permanent positions, and in Boström et al.'s (2022) study in Sweden, 72% of their participants had a full-time position, suggesting either a significant proportion of job security in this country or simply reflecting where the participants have been selected for the study. On the other hand, Atkinson and Crozier (2020) highlight figures of between 70% and 80% of home workers employed on zero-hour contracts in the UK.

Zero-hour contracts and commissioning practices also contribute to unpredictability with respect to work hours and patterns (Atkinson and Crozier, 2020). Under these conditions, providers are often only paid for direct care time, not travel or other work-related activities, which further leads to episodic working patterns where workers are unpaid between visits (Atkinson and Crozier, 2020).

A report examining the psychosocial risks faced by home care assistants in France showed that the sector's working time patterns are characterised by a high degree of fragmentation, owing to the prevalence of part-time jobs and the frequent changes to work schedules at extremely short notice (DARES, 2021). This often leads to longer working hours and work–life/work–family conflict, which in turn increases the risk of depression. Income insecurity can also be considered one element of employment insecurity, with 48.5% of the participants in Strandell and Stranz's (2021) study in the Swedish context reporting income insecurity. This study highlights income insecurity's relationship with

physical strain and mental strain, poor work–life balance and intentions to quit, raising concerns about persistently low wages, as well as the involuntary nature of part-time work in the home care sector.

Low pay as a psychosocial risk refers to earning wages insufficient to meet basic living needs, which can significantly impact workers' mental and physical wellbeing. Among home care workers, low pay is identified as contributing to occupational stress and dissatisfaction (Grasmo et al., 2021; Otto et al., 2019). In the literature reviewed, studies point to perceptions of home care work as a low-qualified job associated with low wages, despite its complexity and qualifications of many workers (Giordano, 2022a; Vänje and Sjöberg, 2021). Grasmo et al. (2021), in their study in Norway, also highlight that low pay is associated with inconsistent compensation, with no reimbursement for mileage, and is a factor leading home health aides to seek other employment despite finding the work rewarding. This issue is compounded by other organisational challenges such as lack of training and unclear expectations.

In the UK, Rubery et al. (2015) point to the fact that most home care workers are paid close to the minimum pay, with limited opportunities for pay advancement, while Atkinson and Crozier (2020) indicate that pay rates in UK home care are suppressed to around £14-15 per hour, which is below the UKHCA's calculated hourly cost of £16.70. This is considered low pay due to marketisation and funding pressures leading to a 'race to the bottom' in employment practices. McDonald (2019) also suggests that home care workers in the UK, particularly in the private and not-for-profit sectors, may experience low pay due to being employed without proper contracts and under constant time pressure. In the Swedish context, Strandell and Stranz's (2021) study reports that half of the employees worry about their salary being too low to cover expenses, although, like in the majority of studies, specific figures or detailed descriptions of 'low pay' are not provided.

Studies of live-in carers also underscore the burden of insufficient payment for workers. Kriegsmann-Rabe et al. (2023) highlight that in Germany, intermediary agencies may exploit workers by paying those with less German language skills less than others. In the Netherlands, Bruquetas-Callejo (2020) suggests that posted workers may receive lower wages than local workers due to lack of wage parity. Hipp et al.'s (2024) study of 222 Polish migrant live-in carers in Berlin, Germany, also points to pay differences between live-in carers employed by agencies and those not employed by agencies. Agency live-ins are more likely to earn below the minimum wage of €1,300 per month, while non-agency live-ins are more likely to earn higher wages. Agency workers in this study were also found to be less satisfied with their pay compared to non-agency workers.

Finally, a **lack of opportunities for advancement** represents a risk to home care workers and has been linked to high turnover rates and workforce instability (Spetz et al., 2019), as well as psychological stress (Vauhkonen et al., 2021). In Strandell and Stranz's (2021) study, of the 226 Swedish home care workers (86% women) surveyed in the 2015 Nordcare study, 26.9% reported limited possibilities for skill development, while 39.4% reported a lack of supplementary training and 15.7% reported limited knowledge and skills. In this study, these three factors were considered elements of 'skill precariousness', one of the four dimensions of precariousness facing home care workers (employment precariousness, temporal precariousness and job-control precariousness constituting the other three dimensions).

3.2.7 Work–family conflict

The conceptualisation of work–family conflict as a work-related psychosocial risk is rather new. It deals with the possible consequences of employment in care work in households. On the one hand, it considers the increase in total work demands and working hours (double work). On the other hand, it is seen as involving organising and managing the demands of the two facets (the domestic and the professional), which may be simultaneous (double presence). Both the double burden and the synchronous demands have been shown to cause time and energy conflicts for the employed population, mainly women (given the unequal distribution of domestic-family tasks between men and women), affecting their health and welfare. Work–life imbalance, or the unsatisfactory balance between work and personal life, is a risk found to be significantly associated with health outcomes such as sleep problems and psychotropic medication use (Niedhammer et al., 2021). Given the high proportion of women in the home care workforce, work–life imbalance is a significant risk facing this sector, although the disproportionate impact on women is only recognised explicitly in one of the academic articles reviewed (Coeugnet et al., 2016).

Among studies in the home care sector, Otto et al. (2019) found that approximately one-third of the home care workers in their study in the German context reported poor work–life balance. Strandell and Stranz's (2022) paper also report that one-third (31.5%) of Swedish home care workers experience poor work–life balance. It examines work–life balance by measuring how well working hours fit in with family life or social commitments. Time pressure, lack of job control, irregular hours, split shifts, unsocial hours and income insecurity of home care work were identified as sources. Increased workload, shift work and long hours are also identified as factors that contribute to work–life imbalance (Coeugnet et al., 2016; Grasmo et al., 2021; Van Eenoo et al., 2018; McDonald et al., 2019).

Live-in migrant home care workers are potentially most at risk from work–life imbalance. In Germany, Kriegsmann-Rabe et al. (2023) carried out a qualitative study of 16 migrant live-in home care workers (one man, 15 women), all of Polish nationality and with an average age of 55 years, characterising the work by permanent availability and lack of free time due to a 24-hour care schedule. They argue that these factors lead to stressors such as separation from family, lack of breaks, interrupted night's rest and missing private life, as reported by 12 out of 15 interviewees in the study. Similar findings were reported by the 10 participants of Polish, Bulgarian and Slovakian origin in Bruquetas-Callejo's (2020) study of live-in migrant carers in the Netherlands. Hipp et al.'s (2024) findings suggest that non-agency live-ins are more likely to experience work–life imbalance than workers employed by agencies, with 50% having less than two hours of breaks per day and around 70% having no day off per week. Agency live-ins report better work–life balance with longer breaks and at least one day off per week.

Furthermore, some studies underscore the impact of the COVID-19 pandemic on work–life balance of home care workers (Giordano, 2022b; FitzGerald et al., 2024). For example, Giordano (2022b) reports that as a consequence of the COVID-19 lockdown measures, migrant live-in elderly carers in Belgium faced a difficult choice: either prioritise their job at the expense of their personal freedom, health and working conditions or preserve their freedom by leaving their job, risking their economic survival and that of their families.

3.2.8 Violence and harassment

Violence and harassment, ranging from sexual violence and physical violence to verbal abuse are significant risks facing home care workers in Europe, and have been found to have significant negative impact on both the physical and mental health of home care workers (Clari et al., 2020; Lucien et al., 2024). Workers report emotional strain, stress, anxiety and symptoms of post-traumatic stress disorder due to violent experiences (Schaller et al., 2021; Grasmo et al., 2021). In addition to direct injuries from physical assaults, workers report experiencing headaches, tension and MSK issues related to stress from violent incidents (Grasmo et al., 2021). Violence negatively impacts job satisfaction and increases the likelihood of leaving the profession, and leads to shortened or missed care visits and changes in care plans, negatively impacting care outcomes and quality (Phoo and Reid, 2022; Schaller et al., 2021). Violence and harassment may come not only from **clients** but also from **family** members or other individuals in their homes or neighbourhoods (Pulkkinen and Lindholm, 2023). It is important to note that prevalence rates vary across studies, likely due to differences in study populations, definitions of violence and measurement methods. Additionally, underreporting of violence is a common issue in healthcare settings, so figures may underestimate the true prevalence of violence against home care workers (Clari et al., 2020; Fattori et al., 2023; Phoo and Reid, 2022).

A number of systematic reviews of the literature have been carried out in this area. Lucien et al.'s (2024) systematic mixed studies review found 10 studies on workplace violence by care recipients in home care settings. This review categorises the abuse experienced by home caregivers as **physical violence, non-physical violence, sexual aggression and sexual harassment**. **Physical violence** includes acts such as pushing, hitting, biting, kicking or grabbing the caregiver, often resulting in direct harm or threats. **Non-physical violence** encompasses verbal abuse, intimidation and threats, such as cursing, racial insults, spreading rumours, stalking or manipulating finances, which can create a hostile environment. **Sexual aggression** involves physical and verbal sexual violations, including inappropriate touching, explicit comments and even rape. Additionally, caregivers may experience **sexual harassment**, including exposure to sexually explicit comments, gender-based insults, persistent unwanted advances, sexual rumours or being propositioned for sexual favours (Lucien et al., 2024).

Verbal abuse, which may involve another person yelling or swearing, name calling or using words to control and hurt, is reported as the most common form of workplace violence and is a significant problem

for home care workers (Gerberich, 2019; Karlsson et al., 2020). The scoping review by Balkaran et al. (2023) on abuse in home care further identifies verbal abuse as including cursing, screaming, questioning competency, making insulting remarks and threats. This review also reports that home care workers supporting dementia patients report an increase in experiencing abuse compared to others not caring for dementia patients (Balkaran et al., 2023). In the UK, Dondi et al. (2024) found that verbal abuse was prominent for nurse aides, with 31% of participants in their study reporting experiencing it. An interesting finding was underscored in Grasmo et al.'s (2021) qualitative study of home care work conditions in Norway: while sexual harassment was more common among female workers, some male participants in their study reported being stigmatised by elderly users who believe the home care profession is for women.

While less common than verbal abuse, physical violence towards home care workers still occurs (Balkaran et al., 2023). **Physical violence** includes being hit, punched or scratched by patients, both intentionally and accidentally (Do Byon et al., 2017). In a study from Switzerland, Schnelli et al. (2021) found that 7.9% of home care workers experienced physical violence in the past 12 months. Fattori et al.'s (2023) study of palliative care workers also report that the majority of participants in their study from Italy reported that aggressive behaviours are rare, with more violence experienced in residential facilities than in home care settings. However, there is a lack of studies in the European context that provide data on the prevalence of verbal abuse and physical violence in home care settings.

With respect to sexual **violence and harassment**, female workers in particular describe experiences of uncomfortable verbal and physical sexual behaviour from male patients (Grasmo et al., 2021). A systematic review and meta-analysis was carried out by Clari et al. (2020) on sexual violence in home care. This study found the overall prevalence of sexual violence (both harassment and abuse) among home care workers to be at 6%, with paraprofessional workers having a higher prevalence (7%) compared to professional workers (5%). They also report that most studies in their review investigated sexual harassment, while sexual abuse was less investigated. With respect to prevalence data from different country contexts, 14% of the German sample in Schilgen et al.'s (2019) study reported experiencing sexual harassment, while 24% of Finnish home care workers in Pulkkinen and Lindholm et al.'s (2023) study reported having experienced sexual harassment from clients, with some reporting violence or harassment on a weekly basis. However, it is important to note that overall weekly and monthly frequencies of violence or threat of violence were low in this study, and some reported no experiences at all. A further 12% of the participants in this study had also suffered sexual harassment by clients' family members or other individuals in their homes or neighbourhoods.

Studies point to several factors that increase the likelihood of home care workers experiencing **violence**. According to Karlsson et al. (2020), increased risk of verbal abuse is associated with caring for patients with limited mobility and working in homes with limited space in which to perform care tasks, while a decreased risk was identified when predictable work schedules were maintained by the caregiver (Gerberich, 2019). Other factors are also identified in the literature as increasing the likelihood of home care workers experiencing violence. Firstly, worker characteristics — younger age, temporary positions, limited experience and limited time interacting with patients — are associated with higher risk of abuse (Balkaran et al., 2023). Women also reported higher mean scores in all considered risk factor scales related to experiences of violence compared to men in one study from Italy (Fattori et al., 2023). Migrant home care workers are also especially vulnerable to exploitation and abuse due to language barriers, limited experience and financial dependence. Fouskas et al. (2019) highlight the intersectionality of gender and legal status of migrant women working in domestic workers in Greece as a risk factor exacerbating their exposure to exploitation and abuse. These practices are exemplified by control exerted by employers through document confiscation and threats to report workers to authorities. Secondly, clients with cognitive disorders, substance abuse disorders and limited mobility are more likely to be violent, while older, male and minority race clients are also associated with higher violence rates (Phoo and Reid, 2022). Balkaran et al.'s (2023) scoping review also highlights that home care workers supporting dementia patients are also at significantly higher risk of abuse, while patients with substance abuse problems may be more likely to exhibit aggressive behaviours (Grasmo et al., 2021; Koivula et al., 2016*).*

The literature also points to the nature of the work and working conditions as sources of these risks. They discuss the unique challenges faced by home care workers due to the unbalanced power dynamics and dependency created in the employment of migrant women, as well as the varied and uncontrolled

nature of clients' homes as work environments that can create unpredictable situations (Do Byon et al., 2016; Clari et al., 2020; Grasmo et al., 2021; Pulkkinen and Lindholm, 2023). Phoo and Reid (2022) also highlight that very distant client–worker relationships can increase the risk of violence and that workers who feared that violence might happen were more likely to experience violence. Workers' isolation, lack of peer support and communication breakdowns also contribute to a normalised culture of abuse (Balkaran et al., 2023). Furthermore, stressful job demands and expectations to complete any assigned tasks also increase risks as conflicts and abuse (particularly verbal) can arise as home care workers push back on extra tasks (Balkaran et al., 2023).

3.3 Physical, biological and chemical risks

3.3.1 Physical risks

Physical risks in home care work arise from the physical environment both inside and outside the clients' homes. Care workers may experience injuries as a result of **slips, trips and falls (STFs)** because the home environment is unsafe or not designed to meet their needs or ensure their safety. Cramped conditions and limited workspace particularly in bathrooms, kitchens and bedrooms are highlighted as risks (Norlander et al., 2015). On the other hand, vibrations, noise, poor lighting, and overexposure to heat, cold and draughts are other potential risk factors that can cause harm or injury (EU-OSHA, 2024; Norlander et al., 2015). Furthermore, home care work involves travelling from one client's home to another, sometimes during night hours and through unsafe neighbourhoods, which poses additional risks related to traffic accidents and safety, as well as trips and falls, stress and feelings of physical insecurity (EU-OSHA, 2014).

Studies point to risks inside and outside of the home environment. Inside the home environment, clutter and obstacles are identified as hazards in Hignett et al.'s (2016) scoping review of safety risks associated with physical interactions between patients and caregivers during treatment and care delivery in home care settings. Participants in studies carried out in Norway (Grasmo et al., 2021) and Finland (Pulkkinen and Lindholm, 2023) also point to the quantity of things, including loose wires and objects on the floor, hoarding and rubbish, and pets, as risk factors. With respect to temperature, noise and lighting that affect home care workers, Hignett et al.'s (2016) review cites temperature and poor lighting as a permanent physical environment issue facing home care workers, supported by moderate evidence from multiple studies, mentioned also by the participants in Pulkkinen and Lindholm's (2023) study. From an empirical standpoint, results from two different studies in the US found similar findings regarding the prevalence of STFs (12% and 18% of surveyed workers reported experiencing STFs over a 12-month period) and the related risk factors (Merryweather et al., 2018; Muramatsu et al., 2018). A first source of risks factors is associated with the physical and social environment of home care settings, including poor lighting, loose carpets, slippery floor, obstacles, and issues in accessing beds or toilets. Additionally, the presence of intimidating canines or other animals, as well as interactions with uncooperative patients or their relatives, contribute to these risks. Another source of risk consists of organisational-related factors including excessive workload and stress, such as feelings of being rushed due to the high numbers of patients.

On the other hand, outside the home environment, home care workers can be exposed to a multitude of risks. Studies in colder contexts, highlight the risks of slipping and falling due to icy and snowy conditions (Grasmo et al., 2021) as well as inadequate snow clearance, salting and footwear (Norlander et al., 2015). Norlander et al. (2015) also underscore that many workers, including home care workers, travel by foot or by bike, which increases their exposure to outdoor winter hazards. Another study focused on risky driving behaviours (speeding, inattention and driving while tired) and their relationship with job demands and work-related fatigue among Norwegian home care workers (N=210). The study concludes that time pressure, work overload and shift work act as significant stressors that influence risky driving behaviour through fatigue. Driving inattention is reported as the most prominent risky behaviour more strongly related to mental fatigue and time pressure (Nordfjærn et al., 2023). Another study conducted in France found similar associations between perceptions of time pressure experienced by home care nurses and risky driving. Specifically, the study found that home care nurses performed more than a half (55.8%) of their work-related trips under time pressure, which increased the risks that nurses take on the road, especially tailgating and speeding. Perceptions of time pressure were influenced by understaffing due to vacations or sick leave or excessive workloads, along with other

stressors derived from the very uncertainties and challenges associated with home care and driving time (Cœugnet et al. 2016).

However, there is a notable lack of studies in the EU context of the physical risks facing home care workers, with many more studies carried out in the US. More research is needed into the potential and unique exposures to different weather conditions and climates, but also on the changes in work organisation practices and workload management. Studies suggest potential areas of intervention to reduce physical risk exposures, for instance, through a more balanced distribution of the workload and daily schedules, which allow for reduction of workloads, while maintaining service levels and reducing risks (Durak and Mutlu, 2024).

3.3.2 Biological risks

Biological risks refer to exposure to infectious agents and hazardous biological materials or substances, such as blood-borne pathogens, that can lead to infection or illness. Several papers highlight the exposure to infectious diseases, through needle puncture or other modes of transmission, as a key biological risk (Pulkkinen and Lindholm, 2023; Bien et al., 2020). Biological risks may be exacerbated by poor hygiene conditions (such as bodily secretions and bugs), including pet hygiene, within patients' homes (Grasmo et al., 2021; Pulkkinen and Lindholm, 2023; Polivka et al. 2015). Hignett et al.'s (2016) systematic review of the literature of risks facing home care workers due to physical interactions states that the specific diseases mentioned in the literature include hepatitis, HIV, flu, tuberculosis, measles and chickenpox. Studies also mention increased risk of COVID-19 infection as a biological risk (Vauhkonen et al., 2021).

There is a notorious lack of studies on the prevalence of sharp injuries among home care workers that are main source of exposure to serious blood-borne pathogens exposure. Brouillette et al.'s (2017) review only identified five studies on the topic, which revealed a larger exposure among nurses compared to home care aides (nurses working in home care have a 5.25% average risk of experiencing at least one sharp injury in the past year, while aides have a 1.74% risk). The study highlights the need for improved prevention and safety practices and interventions, as home care work is becoming more medicalised and the risk of sharp injuries is likely to increase. In this regard, it should be noted that non-medical professionals in home care work, such as personal carers or domestic aides, are excluded from the scope of Directive 2010/32/EU[52] on the prevention from sharp injuries in the hospital and healthcare sector.

While there is a notable lack of recent data on the prevalence of exposure to biological risks of home care workers in European settings, 44% of the respondents in Pulkkinen and Lindholm's (2023) study in Finland reported encountering biological hazards monthly or more frequently in their work. Among the potential environmental hazards facing home care workers captured by Dondi et al. (2024) in their observational study carried out in the UK were exposure to dogs (14.5%) and cats (8.7%) as potential allergens and infectious hazards, as well as to mould or mildew (8.7%), and dust and blood-borne pathogens, although specific prevalence data were not provided in the latter case.

3.3.3 Chemical risks

Chemical risks are risks that arise from the effects of chemical agents in the workplace (EU-OSHA, 2024) that can contribute to physical injury or a range of adverse health outcomes. Chemical risks refer primarily to the handling of and exposure to substances used for cleaning, disinfecting or medication administration; however, exposure to dust, gases, fumes or second-hand smoke may also be considered chemical risks that home care workers are potentially exposed to.

There is a notable lack of recent studies on the range of chemical risks in home care settings, particularly with respect to cleaning substances and medication, with many more studies carried out in the US. Some studies, however, point to the chemical hazards. For example, the chemical hazards mentioned by participants in Pulkkinen and Lindholm's (2023) study included medicines and disinfectants used in cancer treatments. According to the survey, 20% of respondents felt their occupational safety was compromised due to chemical hazards monthly or more frequently. However, chemical risks were not considered significant in this study compared to other risks.

[52] More information available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010L0032

However, several studies explore the risk of second-hand smoke exposure, and related poor air quality, in the home care setting when visiting client homes, which may occur despite workers having rights to a non-smoking work environment (Grasmo et al., 2021), highlighting the unique challenges of working in private residences. Angus and Semple (2019), carrying out a review of the literature on second-hand smoke exposure of health and community care workers, note that exposure is common while also drawing attention to the lack of data on the extent, frequency and concentration. Some evidence of exposure is provided; 24-31% of eldercare workers in Denmark reported second-hand smoke exposure during work shifts, 31% of home health care aides in New York reported job-related second-hand smoke exposure, while 45% of home care nurses in Canada reported being exposed to second-hand smoke 'regularly' or 'always' (Angus and Semple, 2019). The review also underscores the potential risk of e-cigarette emissions, although there are little data to date on long-term effects.

The only publications in the European context and within the 2014-2024 timeframe are from the UK. In this regard, Dobson et al. (2023) in Scotland and O'Donnell (2024) in the UK explore the risks associated with second-hand smoke exposure, identified as increasing risks of cancer, respiratory and cardiovascular conditions such as asthma, heart attacks and strokes. With respect to exposure, 74% of the participants in Dobson et al.'s (2023) survey study (N=490, 89%) reported exposure, and 50% reported daily exposure. In this study, personal exposure monitoring also showed that 21% of home visits were exposed to particulate matter (PM) 2.5 levels exceeding WHO guidelines, potentially harmful levels.[53] Dondi et al.'s (2024) cross-sectional study that utilised a trained supervisor to complete the direct observation of the healthcare worker (nursing aide and nurse) also found exposure to second-hand smoking (15.9% with smell in home and 8.7% with active smoking).

According to stakeholders interviewed, the COVID-19 pandemic has brought increased attention to the prevalence of risks associated with handling chemicals and infections. These risks are a significant concern, as workers often lack control over the cleaning products in use at clients' homes and families fail to consider safety measures. These risks are more salient for undeclared or untrained workers who may lack proper guidance and knowledge of regulations.

3.4 Health and safety outcomes

Workplace accidents and occupational diseases are the primary indicators of OSH outcomes. The 2021 EWCTS revealed that the HeSCare sector had the highest proportion of workers experiencing illnesses or health issues lasting, or expected to last, over six months. Although these findings may partly reflect the pandemic's impact, there is also evidence of a rise in workplace accidents over the past 10 years (EU-OSHA, 2024). In the home care sector, a significant portion of accidents occur while travelling between clients' homes, as noted by the stakeholders interviewed. Employers face additional difficulties in mitigating travel-related risks as workers use different transportation modes for commuting to clients' homes. There is also evidence indicating a high prevalence of MSDs, along with growing concerns about the mental health challenges faced by home care workers, despite the limited evidence of the extent of mental health issues in the sector.

A main point highlighted by interviewees concerned the high risks of underreporting and lack of recognition of work-related health outcomes in domestic work settings, for different reasons. Firstly, the distinction between common and work-related accidents may be challenging in the case of live-in workers, due to blurred boundaries between personal and working times when workers live in the same household where they provide their services. Second, domestic workers in irregular administrative situations or doing undeclared work are also not likely to report workplace accidents to the competent authorities, and some occupational illnesses may not be recognised as such. In addition to the lack of regulation, some studies in the occupational health of domestic workers suggest that regulatory gaps may be further aggravated by the presence of biases and prejudices among medical and legal actors responsible for enforcing the law. In this regard, a study based on interviews with Italian doctors reveals that their understandings of migrant domestic workers' health risk are often influenced by cultural stereotypical views of migrant workers and the historical devaluation of women's work, and especially care work, resulting in under-recognition of associated health risk and outcomes (Vianello and Wolkowitz, 2023). A similar study conducted in Spain based on the analysis of recent court rulings on

[53] In exposure monitoring, particulate matters refers to a range of airborne particles from different sources, including dust, dirt, soot or smoke and liquid droplets that can be inhaled and cause health problems.

domestic workers found that certain illnesses more common among women, fibromyalgia and mood disorders, such as anxiety and depression, are often not taken as seriously in risk assessments, due to prevailing gender and socioeconomic biases that result in the under-recognition of domestic workers' claims. In addition, findings show that migrant domestic workers are underrepresented in legal cases analysed, highlighting additional barriers for migrant workers in accessing legal protections (Martínez and Hervías, 2025).

3.4.1 MSDs

MSDs can be defined as disorders and diseases of the MSK system or connective tissue, mostly manifesting as backache and/or muscular pains in the shoulders, neck, upper limbs and/or lower limbs (hips, legs, knees, feet, etc.) (EU-OSHA, 2023). When caused or made worse by work, they are considered 'work-related', and, while there are considerable differences with respect to the reported prevalence of MSDs to be found between MSs and sectors, MSDs remain the most common work-related health problem in the EU (EU-OSHA, 2019). The prevalence rates of all MSDs are higher for female workers than for male workers and the likelihood of reporting MSDs increases significantly with age. Furthermore, according to data from the 2015 European Working Conditions Survey (EWCS), workers with only pre-primary or primary education are more likely to report muscular pains in the upper limbs, lower limbs and/or back, and are also more likely to report chronic MSDs (EU-OSHA, 2019). An increase in MSD cases among HeSCare workers has been linked to the ageing workforce, staff shortages and increased demand for care as well as insufficient funding, inadequate working conditions and limited training opportunities (Eurofound, 2020a).

Physical demands are most frequently identified as the most common factors contributing to MSDs (Caponecchia et al., 2020). Bending, twisting or rotation of the back, reaching or extending, from patient handling or working in cramped environments in homes can lead to discomfort and/or strain to the back, shoulders and other body parts (Hignett, 2016; Hjalmarson et al., 2015). However, workplace psychosocial risks are also associated with MSDs (Bezzina et al., 2023; EU-OSHA, 2021b), supported by an extensive body of literature based on longitudinal studies investigating these links (Niedhammer et al., 2021). Both physical and psychosocial factors are important in explaining MSDs (Kuijer et al., 2024). A systematic review and meta-analysis of 21 longitudinal studies found job strain (low control and high demand) to be a significant risk factor for MSK pain among both men and women, job strain significantly increasing the risk of MSK pain by 62% (Amiri and Behnezhad, 2020). Research also finds associations between employment insecurity and negative health outcomes such as MSDs (Zeytinoglu et al., 2015).

Physical demands (such as lifting, repetitive motion or working in awkward positions) combined with high psychosocial demands (like tight deadlines, job insecurity or lack of control) can also have a synergistic effect on worker health and risk of injury (Brulin et al., 1998; Colin et al., 2022). For example, a worker who is already stressed (due to high job demands or lack of support) may experience increased muscle tension or less resilience to physical strain, leading to a higher likelihood of MSK injuries or chronic pain. An individual's MSD outcomes are shaped by the unique interplay between their quantitative workload — encompassing mechanical and physical demands — and psychosocial factors such as job demands, control and support (Bezzina et al., 2023).

MSDs are a leading cause of work incapacity, sickness absenteeism and permanent disability (EU-OSHA, 2024). They significantly impact not only individuals' daily lives and family relationships but also impose substantial costs on workplaces, healthcare systems and society as a whole (Bezzina et al., 2023; Conti et al., 2024; EU-OSHA, 2020). In 2019, the World Health Organisation (WHO) identified MSDs as the leading global cause of disability, affecting workers across all industries (Caponecchia et al., 2020).

Workers in the HeSCare sector suffer from MSDs more often than the workers in any other sector, with women reporting MSD health problems more than men (EU-OSHA, 2024). According to data from 2020, 46% of HeSCare workers experienced lower-back pain and 47% experienced upper-limb pain in the past 12 months (EU-OSHA, 2020). MSDs are typically associated with the physical demands of jobs in the sector, particularly with respect to manual patient handling, as well as psychosocial risk factors (EU-OSHA, 2021a, 2024). The repetitive nature of care tasks such as lifting and transferring patients, bending over for prolonged periods and awkward postures while assisting with daily activities, all place significant strain on the lower-back, shoulder-neck and other body regions. Demanding schedules and

time pressures, lack of support, role conflict/lack of role clarity, job insecurity, and violence/bullying/harassment, as well as long or irregular hours or rotating shifts also contribute to the problem of MSDs (EU-OSHA, 2021a). However, there are no specific data available to home care.

MSDs are a major physical health outcome associated with risks in home care work, and these issues are frequently reported in studies carried out in different European contexts (Larsson et al., 2013; Tjøsvoll et al., 2022; Hjalmarson et al., 2015). Data from 2021 EWCTS show that 56% of EU-27 workers in the social care subsector (including home care) reported backache, 64% pain in the upper limbs and 41% pain in the lower limbs, over the last 12 months (EU-OSHA, 2024). While EU-level data on the prevalence of MSDs among home care workers are not available, they are considered particularly at risk (EU-OSHA, 2024). This is largely because home care workers often work alone and without the necessary knowledge or equipment, which may be standard in residential and hospital care but rarely available in patients' private homes (EU-OSHA, 2014). MSK chronic pain conditions and acute injuries are reported in the literature reviewed as contributing to increased sick leave days taken, reduced work ability and even early retirement among home care workers (Andersen and Westgaard, 2013a; Carneiro et al., 2017; Lohne et al., 2024).

In their comprehensive review of global research on the prevalence of MSDs for HeSCare workers in different settings, including home care, Davis and Kotowski (2015) suggest the prevalence of injuries or pain in different areas varies depending on different factors. For instance, variations in the types of patients cared for, the home environments and the availability of assistive devices can influence how these injuries develop. There is also evidence to suggest that pain reporting may differ depending on the type of task being carried out. One small sample size qualitative study (with 86% women participants) from the US, for example, found 20-30% of home care worker research participants reported MSK pain during caregiving tasks, while 30-40% reported pain during housekeeping tasks (Love et al., 2017). The nature of home care work, with workers carrying out a multitude of varying tasks, makes it difficult to assess the impact of certain MSK risk factors and isolate their effects (Davis and Kotowski, 2015). Despite these variations and limitations, the lower back, shoulders and neck are highlighted in the literature as the main areas vulnerable to MSDs among home care workers.

Furthermore, it is also important to highlight the role of psychosocial risks in home care settings and their association with MSDs in workers (EU-OSHA, 2021b; Chowhan et al., 2019). A study in Norway by Andersen and Westgaard (2013a) investigated the perceived psychosocial factors (work intensification and stress) leading to perceived general tension, understood as a stress response, that has been found to have a mediating effect in the relationship between risk exposures and MSK pain, severe shoulder-neck pain and low back pain common among home care workers. A later study by Andersen (2015) to examine the effects of technological and organisational interventions on work demands and MSK health also found that this general tension is the strongest predictor of shoulder-neck and low back pain. The study found no change in the overall health outcomes following the interventions over the study's two-year period and sub-group analysis revealed that high-strain workers continued to experience high work demands and shoulder-neck pain, underscoring mentally demanding work as a significant source of MSK pain.

Tjøsvoll et al.'s (2022) study in Norway also points to the imbalance between physical work demands and rest (i.e. lack of time to rest) as a contributing factor to MSDs among home care workers. The health outcomes identified in the paper are stress and MSDs, while stress mediates the effect of work intensification on MSDs. Other factors affecting MSDs include having been injured in the past year, facing hazards at work and working shorter hours. Absenteeism is also highlighted in this study as a significant outcome of physical work demands of home care workers.

Before detailing the main MSK outcomes, it is worth noting that many existing studies use cross-sectional methods, which restrict the ability to establish causal relationships between MSK exposure and MSK outcomes. The scarcity of longitudinal studies specific to the home care sector also limits insights into the long-term effects of exposure to MSK risk factors for this group (Davis and Kotowski, 2015; Conti et al., 2024), as well as into possible impacting factors such as increasing rates of obesity, for example. Furthermore, the scope of research often focuses narrowly on specific outcomes (especially low back pain) or provides an overview of all potential MSK hazards and outcomes, with little attention to the risks associated with specific tasks such as bathing (see King, 2017 in the US case). Furthermore, few studies of the prevalence of MSDs among home care workers focus on the association between MSK risks and slips and falls, for example, or more serious MSD outcomes such as reported

injuries or lost-day cases (Davis and Kotowski, 2015). More research is also needed into upper-extremity and lower-extremity pain outcomes associated with MSDs the different HeSCare subsectors generally (Davis and Kotowski, 2015), as well as pain management strategies.

- **Low back pain**

Low back pain is consistently reported as one of the most prevalent MSK issues among home care workers and has been directly linked to physically strenuous tasks (Andersen and Westgaard, 2013a; Carneiro et al., 2017), as well as poor posture and unpredictable movements during tasks (Hjalmarson; 2015). Psychosocial risks, such as job insecurity are also associated with low back pain (Niedhammer et al., 2021).

The exact prevalence rates of low back pain reported often vary between studies. For example, in Carneiro's et al.'s (2017) small quantitative study of home care nurses in Portugal (87% women), the prevalence of complaints for the lumbar region was 64.6%, while Riccó et al.'s (2017) large sample size quantitative study (100% women) found a prevalence of lumbosacral back pain of 31% among Italian home healthcare workers. Carneiro et al.'s (2017) study also found lumbar MSK complaints to be significantly more prevalent among home care nurses compared to those working only in healthcare centres. These complaints are associated with physical suffering, absenteeism and early retirement. The study also highlights indirect relationships between job dissatisfaction and lumbar complaints.

Riccò et al. (2017) also investigated the prevalence of MSDs among home-based healthcare workers compared to their counterparts in residential settings with varying levels of patient handling exposure, finding upper limb complaints and neck pain to be similar between the groups, while home care workers exhibited a notably higher prevalence of lumbosacral pain (31%) compared to residential healthcare workers (21% in low exposure and 25% in high exposure groups, respectively). This quantitative study highlights direct relationships between patient handling tasks and the prevalence of MSDs. Carneiro et al.'s (2017) study also found home care nurses in their study to be three times more likely to report lumbar complaints compared to those working exclusively in health centres, reporting a prevalence rate of lumbar complaints of 64.6%.

Increased time spent in awkward postures is also directly associated with greater low back pain and neck/shoulder pain in home care workers. In Lohne's et al.'s (2024) study of the association between awkward postures, specifically arm elevation and trunk forward bending, and MSK pain among 116 home care workers in Norway (78% women), 55.5% reported low back pain, with 41.4% experiencing mild pain, 11.9% moderate pain and 2.2% severe pain. Some 34% of the participants reported long-term low back pain. The study also found that reallocating five minutes from a forward bending posture while upright below to above 30°, 60° and 90° was associated with 1.8%, 3.5% and 4.0% increase in pain score, respectively. The high amount of arm elevation ≥30° observed in home care workers in Norway (Tjøsvoll et al., 2022) has been associated with a more than twofold risk of sickness absence in a recent study (Gupta et al., 2022).

- **Shoulder and neck pain**

Home care workers are also commonly affected by pain in the shoulder and neck regions, which has been directly associated with physical demands (Andersen and Westgaard, 2013a; Riccó et al, 2017; King, 2017), as well as poor posture and unpredictable movements during tasks (Hjalmarson; 2015). Some studies, such as Carneiro et al. (2017) and Tjøsvoll et al. (2022), find shoulder-neck pain to be slightly more prevalent than low back pain. Of the 114 home care worker participants (71% women) in Tjøsvoll et al.'s (2022) study, 36% reported shoulder-neck pain and 34% reported low back pain in the last year.

With respect to shoulder and neck pain, Lohne et al.'s (2024) study into the association between MSK pain and exposure to awkward postures among home care workers in Norway found 54.9% of the workers were affected, with 37.1% reporting mild pain, 13.1% moderate pain and 4.7% severe pain. Furthermore, 36% of the home care workers in this study reported this pain to be long-term. The researchers also found that reallocating five minutes from upright posture with arms elevated below to above 60° and 90° was associated with a 6.8% and 19.9% increase in neck/shoulder pain score, respectively (Lohne et al., 2024). Andersen et al.'s study (2015), also in Norway, also identified shoulder-neck pain as an MSK health outcome, with high-strain workers experiencing persistent pain and low-to-moderate strain workers experiencing reduced pain.

King's (2017) research carried out in the Canadian context, also points to the high incidence of MSDs due to assisting patients with bathing and toileting, particularly affecting the back and shoulders of home care workers. The paper finds that these injuries are often severe and can lead to long-term disability and high absenteeism rates as well as contribute to high staff turnover and recruitment difficulties. It further highlights that acute injuries may result from sudden loading, while cumulative injuries may develop over time due to repeated stress.

- **Upper and lower extremity pain**

Upper and/or lower extremity pain have also been highlighted as a health outcome for nurses and nursing aides (including home care aides and assistants) globally (Davis and Kotowski, 2015). However, a systematic review of the literature on the prevalence of MSDs carried out by Davis and Kotowski in 2015 noted both a lack of research in the home healthcare setting as well as in relation to body regions other than the lower back and neck/shoulder area. The review further points to the lack of studies on more serious MSD outcomes, such as reported injuries and lost-day cases. Several factors may contribute to extremity pain, including patient handling and awkward postures, repetitive motions and the physical environment of the home. However, prevalence data for extremity issues and pain in home care workers remain limited, underscoring the need for further research. One notable finding comes from Tjøsvoll et al. (2022), where 16% of participants reported knee pain, but overall, prevalence data remain scarce. Riccó et al.'s (2017) study also found upper limb symptoms affecting 10% of home health workers in their study carried out in Italy.

3.4.2 Physical health outcomes

Finally, a small number of studies point to further physical health outcomes. For example, home care worker participants in Grasmo et al.'s (2021) study in Norway reported headaches and nausea, blood pressure problems, seizures and palpitations as well as inflammation in hands and fingers from monotonous tasks, although no prevalence data or associations are put forth. Other studies suggest that time pressure leads to risky or unhealthy behaviours and prevent home care workers from participating in health promotion programmes or from properly following safety regulations, which, in turn, can increase the likelihood of physical injury or adverse health outcomes (Elfering et al., 2018a; Gebhard and Wimmer, 2022; Larsson et al., 2013; Otto et al., 2019).

- **Respiratory issues**

Potential respiratory issues among care workers in home care settings are only mentioned in a few studies, despite various studies measuring exposure levels. O'Donnell et al. (2024) emphasise the health risks of second-hand smoke exposure in their qualitative study of second-hand smoke exposure during home care visits and potential measures to eliminate exposure. They highlight the increased risks of cancer, respiratory conditions such as asthma and cardiovascular conditions. While safety outcomes related to second-hand smoke are not explicitly detailed, they also point to the potential indirect health risk from third-hand smoke exposure through dermal absorption and ingestion of toxins. Poor air quality and allergies were also linked to asthma among home care workers, as noted by Polivka (2015) in a study of environmental health and safety hazards experienced by home care workers carried out in the US, although no references to asthma were found in the EU literature reviewed for this study.

- **Workplace injuries**

Safety outcomes in home care work are a critical concern, encompassing physical, emotional and cognitive factors. A systematic review by Hignett et al. (2016) identified several safety risks, including injuries caused by the improper use of medical devices, sharps injuries due to poor disposal practices and overexertion from physical workload. Additional stressors, such as inadequate peer support and poor workload planning, were noted as contributors to safety issues. The HeSCare sector ranks among the economic activities with a higher incidence of non-fatal accidents in the EU (15.8% of the total in 2022), together with the manufacturing (18%).[54] However, there are no available figures on the types of injuries sustained by home care workers at EU level. Data from the US for the period 2015-2020 provide some insights into the potential risks faced by home care workers. The figures show that overexertion and bodily reactions were responsible for 52% of non-fatal treated injuries. Both violence and injuries

[54] Eurostat, Accidents at work statistics (data extracted in October 2022): https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Accidents_at_work_statistics#Source_data_for_tables_and_graphs

caused by persons or animals, as well as STFs, each accounted for 15% of the total treated injuries (Derk et al., 2024).

STFs emerge as a prominent safety outcome across studies. Elfering (2018b) linked work stressors, such as interruptions, unreasonable tasks and time pressure, to STFs through attentional cognitive failures, suggesting an indirect pathway for safety risks. Polivka (2015) reported that 60% of injuries from client handling occurred inside client homes, with sprains and strains from lifts, slips and trips identified as the most frequent lost work-time injuries in the US. Workplace injury (WI) among care workers has also been studied by Colin et al. (2022) in France. This study investigated the effects of co-exposures to physical and psychosocial work factors on the occurrence of WIs among care workers based on a prospective cohort study nested in the French Working Conditions Survey, with a follow-up period of four years. The study found that 8% of care workers experienced at least one WI during the follow-up period, and the most common injury sites were upper limbs (30%), back (29%) and lower limbs (20%). With respect to physical and psychosocial factors, four out of six physical factors were significantly associated with the incidence of WI: awkward or uncomfortable postures, carrying heavy loads, disturbed concentration and working in an unhealthy work environment (Colin et al., 2022). For psychosocial factors, poor social relationships at work, job insecurity, lack of autonomy and emotional demands were statistically associated with the incidence of WI.

The study revealed a significant interaction between physical and psychosocial exposures in the occurrence of WI (Colin et al., 2022). With low physical exposure, there was no increased risk of WI regardless of the level of psychosocial factors. However, as psychosocial factor exposure increased, there was a significant increase in predicted injury rates for both middle and high exposure to physical factors. Among care workers, 16% (709 workers) were exposed to combinations of physical and psychosocial risk factors with model-predicted rates higher than 40 WI per 1,000 person-years. This high-rate group was characterised by poor social relationships at work, lack of autonomy, high job insecurity and high labour intensity. Working as a nursing assistant or hospital services officer, difficulty in scheduling, overtime, work–family imbalance and insufficient preventive measures were identified as predictors of falling in the high-rate group. Certain demographic factors were associated with higher WI rates, including being female, younger and less qualified, and having lower income, less seniority and precarious work contracts. The study highlights the importance of considering both physical and psychosocial factors in WI prevention strategies for care workers and the authors suggest that interventions should focus on reducing the handling of loads or people and promoting an organisation more centred on the management of human resources to jointly reduce the physical and psychosocial risks causing many WIs in the care sector (Colin et al., 2022).

The review by Balkaran et al. (2023) also underscores the occurrence of physical injuries as a direct result of client aggression. However, it should be noted that the evidence gathered from studies conducted in EU MSs is rather limited.[55]

- **Cardiovascular diseases**

Cardiovascular diseases refer to diseases and conditions that affect the heart and blood vessels and include conditions such as hypertension (high blood pressure), coronary artery disease, heart attacks and strokes, arterial fibrillation, venous thromboembolism, and heart rhythm disorders and heart failure. Even though scientific evidence associating cardiovascular issues with psychosocial risks exposures is extensive and of high quality (Niedhammer et al., 2021; ETUI, 2023b; Dragano et al., 2017), there are no specific studies of such a relation for the home care sector.

With respect to the prevalence of cardiovascular diseases in the home care sector, cardiovascular strain has been linked to high levels of occupational physical activity, with 25% of the home care worker participants in Tjøsvoll et al.'s (2022) study in Norway, for example, reporting spending approximately 50-93% of the workday above 33% HRR, indicating that these workers are exposed to high durations of cardiovascular workload during working hours. While the average cardiovascular load (28% HRR) was within the recommended threshold of 33% HRR proposed by the ILO, 29% of the workers were above this threshold and could be at risk of impaired health.

[55] Specifically, the paper mentions findings from three EU Member States (Finland, Norway and Germany) with no results related to aggressions.

Cardiovascular issues among home care workers have also been linked to second hand-smoke, and increased PM2.5 exposure is linked to significant increases in cardiopulmonary and all-cause mortality, as well as increased risks of cancer, respiratory conditions and cardiovascular diseases. For home care workers in Dobson et al.'s (2023) study in Scotland, in a reasonable worst-case scenario, the additional PM2.5 exposure from second-hand smoke could be around 15 µg/m3 over the course of a day compared to colleagues not exposed to second-hand smoke in homes.

Mänttäri et al.'s (2023) study of 95 home care nurses (92% women) from across nine different home care service units in Finland found reduced heart rate variability (HRV) among the participants, with an average metabolic equivalent during work shifts of 1.8 ± 0.5. This health outcome is associated with increased physical workloads, which they find to be more taxing on the heart during evening shifts, indicating higher stress levels and impaired recovery, particularly for older workers. Reduced HRV is linked to an increased risk of cardiovascular and all-cause mortality. The study also highlights a high need for recovery among home care nurses, suggesting significant occupational stress from both physical and mental demands.

3.4.3 Mental health disorders

The relationship between psychosocial risks exposure and mental health disorders is well established by research (Niedhammer et al., 2021; Rugulies et al., 2023). ETUI (2023b) presents a comprehensive study on attributable fractions (AFs) of disease[56] associated with job strain, effort–reward imbalance, job insecurity, long working hours and bullying across 35 European countries for 2015. The AFs of depression were all significant, with job strain showing the highest AF at 16%, followed by job insecurity and bullying at 9% each and effort–reward imbalance at 6%. Further studies have found significant associations of precarious employment and highly demanding working conditions with depression and emotional exhaustion (Belvis et al., 2024; Conway et al., 2023).

- **Depression**

Considering the significant exposure and prevalence of psychosocial risk factors in the home care sector, it is noteworthy to highlight the scarcity of studies identified regarding the prevalence of mental health illnesses such as anxiety and depression among home care workers. Among the few available studies, Vauhkonen (2021) identified anxiety as related to work community factors, specifically lack of training and support from supervisors as well as inadequate work organisation and information provision. This study also mentions increased anxiety among the surveyed home care workers due to the COVID-19 pandemic. Some grey literature sources partially address the gap on mental illnesses. The DARES (2021) large survey of working conditions of French home care workers found that nearly 40% of home care workers surveyed show signs of depressive status ranging from mild to severe, which may be due to longer working hours and work–life/work–family conflicts due to the high degree of fragmentation of working time patterns. The paucity of studies in this area contrasts with the more substantial recent research on the prevalence of depression among informal carers (e.g. Nolan et al., 2024) or with older studies on the association between psychosocial risks and depressive symptoms among carers in geriatric establishments (Jakobsen et al., 2015). However, there remains a dearth of evidence regarding the impact of other risk factors on mental health outcomes, particularly concerning the effects of violence and abuse and sexual harassment on depression or stress, an issue that has received greater attention from researchers (Hanson et al., 2015; Pulkkinen and Lindholm, 2023).

- **Burnout and emotional exhaustion**

Burnout is identified in the literature as an important health outcome related to workplace risks in the home care setting, often associated with psychosocial risks such as time pressure and high workloads (Grasmo et al., 2021; Ruotsalienen et al., 2020; Strandell, 2023) as well as other work organisation factors (Vänje and Sjöberg, 2021), such as an insufficient number of carers (Ruotsalienen et al., 2020) or longer working hours and work–life/work–family conflicts (Möckli et al., 2020).

[56] The attributable fraction (AF) is defined as the fraction of diseases (morbidity or mortality) that could have been avoided by removing the exposure or some other risk factor. Source: https://oshwiki.osha.europa.eu/en/themes/burden-occupational-diseases#:~:text=Occupational%20diseases%20are%20illnesses%20primarily,have%20temporary%20or%20permanent%20consequences

Burnout has been studied among Italian healthcare workers by Fattorri et al. (2023), who examined psychosocial risk factors and burnout among palliative care workers, comparing those in inpatient hospice settings to those providing home care services. Burnout was assessed using the Copenhagen Burnout Inventory. Over half of the participants (52%) reported at least one burnout scale above the risk threshold, with inpatient hospice workers exhibiting a higher prevalence (66%) compared to home care workers (47%). Work-related burnout was positively associated with work intrusiveness but negatively correlated with both peer support and psychosocial safety climate. Similarly, caregiver-related burnout was negatively associated with psychosocial safety climate and perceived support. Although all burnout scales were higher among workers who had experienced aggressive behaviours, the small sample size limited statistical significance.

Petersen et al.'s (2023b) results in a representative survey with German nurses show a high prevalence of emotional exhaustion across different care settings (hospitals, nursing homes and home care), with 44% reporting symptoms linked to increased sick leave days. Prevalence estimates of emotional exhaustion were independent of the care setting and cited excessive job demands (measured as 'working at the limit of one's capacity') and working on weekends as the main risk factors. A similar study comparing workers in home and residential care settings in a municipality in Sweden (N=227 and N=357, respectively) found that home care workers show lower levels of stress conscience and burnout compared to those in residential settings. Stress conscience refers to stress related to feelings of being troubled or burdened due to not being able to live up to or perform according to standards. Significantly, findings highlight that despite showing lower overall stress, home care workers still reported higher levels of lack of time, which is a major stressor. Home care workers also face challenges in adapting to users with complex needs, due to working alone and confronting needs that cannot be met. The study also found relatively high levels of burnout and exhaustion among home care workers (Åhlin et al., 2022).

Burnout and its relationship to the work environment has also been examined by Möckli et al. (2020) among Swiss home care workers. The research was conducted as a multi-centre, cross-sectional survey in the German-speaking part of Switzerland, involving 448 home care workers from seven non-profit home care agencies. The study found low levels of burnout among Swiss home care workers, aligning with similar findings in Belgian home care settings. The authors suggest that these lower burnout levels, compared to hospital settings, may be attributed to factors such as greater independence, autonomy, long-term client relationships and flexible work schedules. The study also highlighted several significant associations. Job demands correlated positively with emotional exhaustion, a key component of burnout. Conversely, job resources were negatively associated with emotional exhaustion. Work–family conflicts and high job demand emerged as the strongest predictors of emotional exhaustion. The authors find support for the demand-resource model within the context of home care work. They conclude that enhancing the home care work environment — by addressing job demands and bolstering resources such as social support and feedback — has the potential to reduce burnout and improve work engagement among home care professionals.

In a similar vein, Petersen and Melzer (2023a) have examined moral distress among homecare nurses in Germany (N=976), focusing on its predictors and consequences. The definition of moral distress highlights the conflict between knowing the right professionally ethical action and the inability to act accordingly due to external constraints. The study finds that high emotional demands and frequent work–life conflicts, along with time pressure, low autonomy and social support, are associated with higher frequency and levels of moral disturbance among home care nurses. Participants surveyed reported negative physical and emotional impacts in connection with stressful situations (overload, helplessness and bad conscience). The consequences of moral distress led to burnout, poorer health status and higher intentions to leave the sector, although it did not affect sickness absence levels. In a more recent paper, Petersen et al. (2024) emphasise the structural challenges within the German home care framework that contribute to moral distress. Specifically, they point out that the system's time-based billing approach, where each task is allocated a set number of minutes, conflicts with nurses' ethical perception of care. This conflict ultimately results in moral distress among home care nurses.

- **Stress, distress**

Stress is frequently reported in the literature as a negative health outcome for home care workers. Hignett et al.'s (2016) systematic review of the literature reports stress from inadequate peer support and workload planning issues. Time pressure was associated with higher stress and psychological distress among home care workers in Ruotsalainen's (2020) study, and it is also linked to emotional

burdens (Vänje and Sjöberg, 2021). Stress is also reported by study participants in different papers as resulting from verbal violence and sexual harassment by clients (Grasmo et al., 2021), driving between client homes (Coeugnet, 2016), hurried work conditions (Pulkkinen and Lindholm, 2023) and lack of control at work (Assander et al., 2022), as well as from a mismatch between expectations and capabilities (Atkinson and Crozier, 2020; Ruotsalainen et al., 2020; Strandell, 2023; Strandell and Stranz, 2022). Increased stress is also identified as related to work community factors, specifically lack of training and support from supervisors as well as inadequate work organisation and information provision in Vauhkonen's (2021) study. This study also reported increased sick leave due to work-related stress and time pressure.

The Johannessen et al. (2024) study on a large sample of home care workers in Norway (N=1,426) found a high prevalence of 'mental distress', with 15% experiencing symptoms of anxiety and depression, significantly higher than the general working population. The findings indicate that emotional dissonance is positively linked to mental distress, while supportive and empowering leadership helps mitigate its impact on mental health. Emotional dissonance refers to the discrepancy between emotions genuinely felt and those expressed to align with professional standards, social norms and organisational requirements. An example is when home nurses are expected to regulate their emotions and display appropriate emotions as part of their job, regardless of their true emotional state. This may involve expressing empathy even when they are fatigued or dealing with challenging or difficult patients.

Stress, burnout, sickness absence and labour turnover are also identified as health outcomes related to the risks of fragmented time, zero-hour contracts and episodic work in UK domiciliary care (Atkinson and Crozier, 2020). In a similar vein, Strandell (2020 suggests that the cumulative impact of higher demands and diminished resources in the sector due to cutbacks and reforms in Sweden has increased the number of work environments with heightened stress levels. Finally, the home care nurses in Otto et al.'s (2019) study, comparing work-related burdens and health outcomes across different care settings in Germany, found that the nurses in home care experience the highest stress levels.

Schilgen (2020) conducted a cross-sectional survey in Hamburg to compare psychosocial stressors and resources affecting immigrant and non-immigrant home care nurses (N=287). The study found no significant differences in overall psychosocial distress between the two groups, but the predictors of distress varied. For immigrant nurses, factors such as greater influence and freedom at work, as well as fixed-term employment, were linked to increased distress, while age, full-time work and overtime were predictors for non-immigrant nurses. Positive relationships with colleagues and supervisors alleviated distress for immigrant nurses, while shift work arrangements mitigate stress for non-immigrant nurses.

- **Sleep-related problems**

Sleep-related problems and associations with occupational physical and psychosocial factors among home care personnel have been explored by Lindholm et al. (2021) in the Swedish context. The cross-sectional questionnaire survey (N=665, 82% women) study found that 22.4% of respondents reported poor sleep quality, 45.0% reported lack of rest and 23.3% reported restless sleep due to thoughts of work. While these rates were slightly lower than findings from similar healthcare settings, they remain a concern.

Several occupational factors were linked to these sleep problems. Lower job contentment emerged as a consistent predictor, correlating with poor sleep quality, lack of rest and restless sleep. The physical burden of care and client-related burnout were associated with both poor sleep quality and lack of rest. Higher quantitative job demands were tied specifically to a lack of rest, while lower back pain showed a strong association with all three sleep-related outcomes. Pain in the shoulders and knees also contributed to poor sleep quality among the participants, 58.2% expressed dissatisfaction with leadership, 47.7% perceived higher qualitative demands, and 46.0% reported significant mental and emotional burdens of care. Pain prevalence was highest in the lower back (40.6%), shoulders (37.1%) and neck (35.6%), aligning with the physical demands of home care work (Lindholm et al., 2021).

The Lindholm et al. (2021) findings highlight the significant impact of occupational, physical and psychosocial factors on sleep-related problems in home care workers. Low job contentment and lower back pain were particularly influential, being strongly associated with poor sleep quality, lack of rest and restless sleep. These issues, if unaddressed, could lead to adverse health and safety outcomes, increased sick leave, high staff turnover and reduced quality of care. To mitigate these risks, the study highlights the importance of promoting sound psychosocial and organisational working conditions within

home care services. Interventions aimed at improving job contentment and reducing physical burdens could play a pivotal role in preventing sleep-related disorders. Additionally, the study emphasises the need for design-oriented participatory processes to identify root causes of sleep problems and implement sustainable solutions. By involving stakeholders across decision-making levels, these approaches could foster improved occupational safety, health management and overall wellbeing for home care workers

3.4.4 Sick leave and sickness absence

The interplay of psychological and physical demands related to the working conditions in home care settings are associated with higher levels of sickness absence (Grasmo et al., 2021). As mentioned, Grasmo et al.'s (2021) qualitative study exploring home care workers' experiences of working conditions in Norway points to the risk of high workloads becoming a cyclical problem, whereby high sick leaves due to workload pressures create staffing challenges, which increases the workload of staff, leading to more leaves of absence. Evidence of this was reported by the practicing home care nurses in Ruotsalainen et al.'s (2020) study in Finland. With respect to physical work demands of home care workers, the Tjøsvoll et al. (2022) study in Norway collected evidence of exposures while highlighting several health implications. Notably, the study claims that the high sickness absence rate of around 11% in home care in Norway, which is higher than the healthcare sector in general (9.7%) and considerably higher than across all occupations (6.0%), could be partly explained by the physical work demands and awkward postures adopted by the workers observed in the study. In Spain, a study conducted by the public services federation of the UGT pointed to higher levels of sick leave due to attrition and depression among home care workers, which in some cases doubled the national average. These high rates were attributed to excessive workload and lack of social support (Franco Rebollar and Ruiz, 2018).

Long-term sick leave (over 90 days), disability pensions and work ability have also been studied by Dellve et al. (2006) among Swedish home care workers. The study finds that female home care workers have significantly higher rates of long-term sick leave and disability pensions compared to male workers, and that a high proportion of part-time or hourly paid employees is a strong predictor of long-term work ability, explaining 35% of municipal variation. Awkward postures and MSK pain were also found to be associated in Lohne et al.'s (2024) study, in which they reported a high rate of sick leave in the last 12 months among home care workers in Norway (81.7%).

A study by Helgesson (2020) in Sweden examines the interaction effects of physical and psychosocial working conditions on the risk of future disability pensions among a variety of nurses and care assistants (including home-based carers), using data from 14,372 participants in the Swedish Work Environment Surveys conducted between 1993 and 2013. The findings reveal that a large proportion of nurses and care assistants were exposed to a combination of unfavourable physical and psychosocial conditions (high demands and low control) that significantly increased their risk of future disability. The study revealed differences across individual workers' characteristics and occupational groups. Female employees experienced higher rates of disability (36.5%) compared to male employees (22.6%), with older workers being particularly affected. While both nurses and care assistants with high job demands and low job control were more likely to experience future disability, care assistants showed the highest risk of future disability due to the combination of low control and strenuous positions (Helgesson, 2020).

A recent study by Knutsen et al. (2024) has highlighted emotional dissonance and emotional demands as significant risk factors for sick leave due to common mental disorders among Norwegian home care workers (N=1,819). These factors account for 30% and 27%, respectively, of the total number of medically certified sick leave spells attributed to common mental disorders over a 26-month period. Emotional dissonance arises from the way home care workers manage the emotional demands of their job, particularly the conflict or discrepancy between their genuine emotions and those required by their professional role.

4. Risk assessment and risk management strategies at workplace level

The review of research literature on risk management and prevention strategies in the home care sector shows that it is a relatively under-researched field compared to other activities in the HeSCare sector (Anger et al., 2024; Nikunlaakso et al., 2022). These limitations highlight that home care work presents unique challenges for the development of OSH interventions compared to other care settings. The implementation and evaluation of OSH interventions in private homes is indeed challenging due to ethical concerns and other factors related to the nature and organisation of home care work. Home care workers have little control over the work environment and routines vary depending on clients' needs, which limit the ability to make generalisation about the effectiveness of interventions. Time constraints due to understaffing and high turnover rates makes it difficult to incorporate additional safety innovations and to maintain consistent participation and follow-up in interventions studies. In addition, poor communication between workers and supervisors on safety issues may also limit the effectiveness of interventions (Macdonald et al., 2017). Nevertheless, recent reviews suggests that organisational level interventions, such as those focusing on working schedules or communication strategies, and incorporating participatory approaches in their development, may prove particularly effective within the home care setting (Gebhard and Herz, 2023; Macdonald et al., 2017; Rydenfält et al., 2020).

Representatives of stakeholders interviewed voiced similar views on the challenges of risk management and prevention strategies in home care work. They emphasised the importance of training interventions and risk assessments conducted at clients' homes during the initial stages of service to mitigate risks in environments beyond the direct control of employers. The use of assistive equipment for lifting and handling patients also helps reduce the impact on home care workers' health, although resistance from clients or their relatives can complicate its implementation. On a positive note, some interviewees highlighted that increased awareness of hygiene practices post-pandemic has led to improved standards. Conversely, the lack of organisational resources and legal frameworks for many domestic workers directly employed by households is recognised as a major obstacle to intervention. For instance, the absence of collective representation mechanisms, such as complaints procedures, undermines workers' ability to handle challenging situations with aggressive or mentally ill clients.

This chapter presents the findings of the review of risk management and prevention strategies in the home care sector that have been identified during the research. The first section explores the challenges and alternative approaches for the development of risk assessment and risk prevention regulation in the context of home care work, with a focus on workplace inspections. The following three sections present an overview of the main types of intervention addressing different risks factors and health outcomes that have been extensively discussed in previous sections of the report, namely, MSK risks and MSDs, psychosocial risk factors and mental health issues, and initiatives addressing physical, biological and chemical risks. In line with previous research for the HeSCare sector, a distinction is made between organisational and individual approaches, with differences in their focus and scope of implementation (Nikunlaakso et al., 2022; SAASE, 2024; Herz et al., 2024). Organisational-level approaches involve changes in work organisation practices to reduce risk exposures across the organisation. An example is implementing work schedule adjustments or introducing participatory interventions targeted at workload to reduce work-related exhaustion. In contrast, individual interventions target personal behaviours and skills, with a view to improving individuals' ability to handle risks.

4.1 Risk assessment

One of the problems with OSH management in home care settings is that labour enforcement authorities cannot always monitor private households employing carers due to privacy concerns, as these homes are not considered formal workplaces (EU-OSHA, 2024). This makes it difficult to ensure the protection of workers' OSH and labour rights, increasing their exposure to risks. EU-OSHA (2024) reports that in the social work subsector, including home care, 59% of establishments conduct internal risk assessments. However, 30% find these procedures burdensome and 40% lack necessary skills. To assist companies, EU-OSHA has developed the Online interactive Risk Assessment (OiRA)[57] tools to

[57] More information about OiRA and the OiRA tools related to the HeSCare sector is available at: https://oira.osha.europa.eu/en and https://oira.osha.europa.eu/en/oira-tools?f%5B0%5D=sector%3A1194

help small organisations assess their risks. These tools offer a step-by-step approach to risk assessment, including identification, implementation of preventive actions and monitoring.

There are also examples of using digital platforms and ICT tools to conduct risk assessment and prevention plans specific to the social services sector (FORTE, 2024).[58] The integration of digital risk assessment tools in the home care sector has the potential for more consistent and standardised risk assessments across different locations and for ensuring compliance with OSH standards. The Kajaks et al. (2015) pilot study assesses the SafeBack mobile application as a training and injury-prevention tool. The app is intended to calculate low-back compression forces and help caregivers adopt safer postures when handling patients. It can be used in real time or with photographs, providing feedback specific to the posture, which is consistent with the concept of posture coaching, a recognised method for decreasing spine stress and potential injuries. The study does not provide evidence of effectiveness or outcomes. Another example of the use of ICT tools for preventive purposes is provided by Sen et al. (2024). The paper introduces ERG-AI, a machine learning pipeline designed to provide personalised health and safety risk assessments and recommendations like sit-stand workstations, proper footwear, regular movement breaks and correct lifting techniques. The study highlights the high accuracy and reliability of the system in predicting ergonomic postures, and the integration of machine learning with language models, enabling the transformation of technical data into user-friendly ergonomic advice, thus enhancing OSH risk assessment.

Social partners' assessment of good practices in the social services sector highlights the need for collaborative approaches in risk assessments, involving different stakeholders, including employers, workers and their representatives and OSH experts for ensuring a comprehensive evaluation of risks and effective mitigation strategies (FORTE, 2024). The KoBrA initiative in Germany (Box 16) exemplifies the potential of collaborative networks and digital tools to enhance risk assessment and management procedures in the LTC sector. However, the initiative's implementation reveals that home care providers consistently fall behind residential care facilities in adopting OSH measures.

Box 16: Cooperation for Broad Implementation of Occupational Health and Safety in Care Services (KoBrA) (Germany)[59]

The programme focuses on the widespread implementation of OSH measures across diverse sectors. This initiative brings together organisations, occupational safety professionals, company management, health services, employees and their representatives, works councils, external consultants and regulatory authorities to assess and implement measures to improve workplace safety compliance. Key activities include risk assessment, workplace inspections, training in managing violence and implementing safety protocols. Workers play an active role in these efforts by participating in risk assessments to ensure their perspectives are included, attending training sessions on topics such as ergonomic practices, handling aggression, managing psychological stress, and collaborating closely with key stakeholders like safety officers and occupational health professionals. This unique collaboration between the most important stakeholders represents a symbiotic approach with potential for transferability and, especially, learning potential to ensure safer working conditions.

The nature of home care services complicates the implementation of effective risk prevention strategies, due to the lack of resources and the limited awareness of users, who often also act as employers, with potential negative outcomes for home care workers and patients' health. A study conducted among home care nurses employed by Swedish municipalities reveals that the adoption of risk prevention

[58] In France, the social partners for the social services sector contracted a consultancy firm to develop a digital platform for risk assessment and prevention plans adapted to the social services sector based on its previous experience in other sectors. The platform can be accessed via the following link: https://g2p-prevention.didacthem.com/register/branch.
More information is available at: https://osha.europa.eu/sites/default/files/documents/g2p-france-digital-risk-assessment-tool-social-care-sector_w1046_EN.pdfv

[59] More information is available at: https://osha.europa.eu/en/publications/kobra-collaborative-approach-improving-osh-care-and-nursing

actions in the household is challenging due to low awareness and participation by patients and their relatives. Although the study did not specifically address OSH of home care workers, findings point to the need for involving patients and informal carers in building safe environments at home, since in many cases nurses and patients do not share a common understanding of the potential risks that may arise (Lekman et al., 2023). Traditional risk prevention strategies may not fit with the specific context of home care work, as such strategies need to acknowledge its relational nature, diversity and often undetermined nature of tasks involved, along with their multi-location character, which makes it challenging to implement standardised prevention measures (Boudrà, 2022). In this regard, results from the Safe Home Care Intervention in the US show that coaching clients on OSH can be an effective solution for creating safer conditions at home for both users and home care workers (Sama, 2024). The intervention consisted of an initial interview between nurse managers and clients during the initial intake assessment to introduce health and safety guidelines that cover both psychosocial and ergonomic safety aspects. The study found that safety coaching led to improvements such as reducing clutter and improved accessibility, as well as reducing the risk of STFs.

In the EU context, there seems to be a scarcity of academic literature on risk assessments in home care. Some insights can be grasped from qualitative studies. For example, there is evidence to suggest that home care workers themselves are required to carry out risk assessments, either in full or partially, or they at least perceive an individual responsibility for assessing and reporting risks (e.g. Grasmo et al., 2021). In the Larsson et al. (2013) study, only 23% of survey respondents reported always participating in risk assessments. The participants draw attention to the difficulties of performing risk assessments and following safety regulations due to lack of time, equipment and information (Larsson et al., 2013). Dobson et al. (2023) and O'Donnell et al. (2024) underscore that risk assessments in the home care sector regarding second-hand smoke exposure are fragmented, poorly understood, outdated and rarely implemented, or implemented only in some instances (for example, if a worker is pregnant). Results from different studies in the field conducted in Spain point to widespread infringements of the regulation on risk prevention by service provider organisations (Fernández-Cano et al., 2023; Dema Moreno et al., 2022). For instance, findings from a large survey of home care assistants conducted during the pandemic (N=1,345) indicated that 41% of participants were unaware of the company's risk assessment procedures, and only 10% reported being aware that their job position has been evaluated by specialised technical personnel (Dema Moreno, 2022).

Direct employment arrangements, in which domestic workers are employed by private households, further complicate the enforcement of OSH regulations, particularly among foreign workers in live-in arrangements. Results from a recent enforcement campaign conducted by the Finnish OSH Administration in 2021 among 30 households employing foreign workers uncovered many issues. Over half of employers did not provide advance notice of work shifts and lunch breaks, while around one-third did not keep working time records, complicating the determination of actual pay and overtime compensation. The inspections also identified two instances of severe labour exploitation due to underpayment and excessive working hours.[60]

Few studies provide insights into the effectiveness of labour inspectorates in the enforcement of OSH regulations and risk prevention in home care services. These papers describe different aspects of a large research project evaluating the Norwegian Labour Inspection Authority's (NLIA) interventions in home care work environments and employees' health (Finnanger Garshol et al., 2025, 2024, 2022; Johannessen et al., 2022; Indregard et al., 2019). The research applied a longitudinal, randomised, controlled trial design to evaluate the impacts of the labour inspection intervention on compliance with OSH regulations, physical and social work environment, and the prevention of health complaints and sickness absence. The study covered home care workers from 132 Norwegian municipalities that were randomly assigned to three intervention types and one control group (Indregard et al., 2019).

This set of studies examined the effects of two main types of interventions by the NLIA, namely workplace inspections and guidance provided through workshops relating to psychosocial and ergonomic risks. Inspections consisted of NLIA visits to home care units by two trained inspectors, using standardised checklists specifying requirements in different risk management and prevention areas. If

[60] Tyosuojelu.fi. (2022, 7 March). *Serious shortcomings in the working time records of foreigners working in private homes*. Occupational Safety and Health Administration in Finland. https://tyosuojelu.fi/en/-/serious-shortcomings-in-the-working-time-records-of-foreigners-working-in-private-homes-1

necessary, the inspectors provided guidance to promote compliance with relevant regulations and reported infringements along with actions required to ensure compliance. The guidance through workshops intervention consisted of one-time informational sessions by NLIA inspectors for managers and workers representatives from 5-7 home care units in shared geographical locations. During these workshops, participants prepared presentations outlining the main challenges of their respective work environments and inspectors provided practical guidance and advice on how to comply with regulations and minimise risk exposures. An online interactive risk assessment tool was developed that includes a checklist of typical risks in ergonomic and psychosocial work environments that are typical for the home care sector. The tool also features an action plan that specifies measures to address occupational risks, assigns responsible persons and sets deadlines for implementation (Indregard et al., 2019).

With respect to the impacts and main findings of these studies, several things can be highlighted. First, with regard to compliance with OSH regulations, an analysis comparing the number of contraventions 24-30 months after the interventions found increased compliance with requirements related to psychosocial factors in the inspection group compared to the control group, while no significant improvement was observed in the guidance-through-workshop group (Finnanger Garshol et al., 2025). Second, an analysis of whether NLIA interventions were perceived as useful and educational, and whether this perception was associated with the implementation of preventive measures, found that managers in the inspection group more frequently reported having implemented or planning to implement preventive measures compared to the control group, while this effect was not observed for the guidance-through-workshop group (Johannessen et al., 2022). Third, another study assessing the effects of interventions on psychosocial and ergonomic risks factors found that the guidance-through-workshop intervention showed initial positive effects on decision control, control over work intensity and empowering leadership. However, these effects were not statistically significant after adjusting for multiple testing, and no statistically significant effects were found for either intervention on psychosocial and ergonomic risk factors (Finnanger Garshol et al., 2022). Finally, another study (Finnanger Garshol et al., 2024) did not find significant effects on self-reported health outcomes and sick leave either for labour inspections or guidance through workshops after 18 months of the intervention. Yet, the authors caution that the low response rate due to the COVID-19 pandemic may have influenced these results.

4.2 Initiatives addressing MSK risks and MSDs

The multifaceted nature of MSK risks requires a comprehensive approach that includes ergonomic equipment, effective training and an understanding of the unique challenges of home care environments. Reviewing 50 years of research on work-related MSD prevention in general, Kuijer et al. (2024) suggest that successful interventions share similar characteristics, including reduction in the exposure to risk factors through improvements in the physical work environment and reduction of working hours, and the adoption of multifaceted approaches addressing both psychosocial and MSK risk factors in risk assessment procedures. The unique setting of home as workplace means that some interventions used in other sectors will not be applicable or feasible. However, the studies identified for this review reveal a spectrum of strategies aimed at reducing MSK risks and MSDs in home care workers, ranging from ergonomic tools to organisational approaches and training initiatives. A recurring theme in the literature is the lack of evidence regarding the effectiveness of many of the interventions suggested. Indeed, in their systematic review, Caponecchia et al. (2020) noted limited data on outcomes, emphasising the need for more comprehensive studies. This gap underscores the importance of developing evidence-based frameworks that address both physical and psychosocial risks.

4.2.1 Organisational strategies addressing MSK risks and MSDs

Recent systematic reviews have examined the effectiveness of organisational interventions in preventing MSDs, showing moderate evidence that additional breaks can help reduce symptom intensity in different body areas. Although the evidence regarding participatory approaches is more mixed, research highlights that the successful implementation of organisational interventions often depends on psychosocial factors, such as management support and employee involvement, to ensure that interventions are adequate for the needs (Stock et al., 2018; Sultan-Taïeb et al., 2017).

Organisational strategies can play a role in reducing MSK exposures and related outcomes in home care work either through the adoption of ergonomic tools and assistive devices or through the restructuring of work organisation practices that minimise the impacts of physical job demands and

mitigate MSK risks. Nevertheless, evidence on the effectiveness of organisational interventions for preventing MSDs in home care settings is still limited (Macdonald et al., 2017). Some studies point to the potential benefits of initiatives adopting lumbar support devices, training programmes focused on patient handling and transfer skills, and exercise and rehabilitative interventions. However, these studies often acknowledge challenges in implementing these interventions, such as high staff turnover rates, difficulties in observing interventions in private homes and small sample sizes, which lead to mixed or non-significant results.

Different studies have examined the use of various tools and devices to mitigate MSK risk exposures for home care workers. For instance, King (2017) **demonstrated the effectiveness of tools like bidet seats, leg-lifters and sliding benches in improving postures and reducing muscle activity** among home care workers carrying out bathing and toileting activities. Hjalmarson et al.'s (2015) study also emphasises the role of assistive tools in alleviating strain. Tools such as **gait belts** facilitate safer handling of care recipients, while practical **bathroom supports** like grab bars and toilet seat bidets reduce the physical demands of hygiene and mobility tasks. These tools not only enhance caregivers' ability to perform tasks safely but also improve the quality of care provided. However, while Carneiro et al. (2017) supported the use of assistive devices and ergonomic adjustments such as bed height modifications, the findings from this study emphasised the role of job satisfaction in mitigating lumbar complaints, underscoring the importance of a holistic approach to risk management. An example illustrating the potential benefits and limitations of using ergonomic tools in home care work is provided below (Box 17).

Box 17: Lumbar supports (the Netherlands)

In a 2006/2007 randomised controlled trial, a Dutch home care organisation investigated whether adding a commercially available lumbar support to standard ergonomic training could reduce recurrent low back pain and related sick leave. A total of 360 home care workers, predominantly women, attended a two-hour refresher course on safe patient handling and healthy working methods. Participants were then randomly assigned to either continue with ergonomic training alone or to receive a lumbar support, selected for comfort and fit, to wear whenever they experienced or anticipated back pain. Over the next 12 months, researchers tracked adherence to support use and collected monthly self-reported calendars and questionnaires detailing days with pain, pain intensity on a 0-10 scale, functional status via the Quebec Back Pain Disability Scale (0-100) and episodes of back-pain–related sick leave. Objective records of overall absenteeism were also obtained from the employer for verification.

The primary aim was to compare the total number of pain days and calendar days of sick leave between the support and control groups over one year. Secondary objectives included examining differences in weekly pain severity and functional disability, while exploratory analyses assessed feasibility measures such as adherence rates, user comfort and satisfaction, and any adverse effects associated with support use.

Results of the study showed that workers who used the lumbar support experienced 71.7 days of back pain over the year, compared with about 124.4 days for those without it, a decrease of 52.7 days. While total sick days stayed about the same, the support group took nearly five fewer days off specifically because of back pain. On average, they also rated their pain a little lower and reported being able to carry out everyday tasks more easily.

This intervention highlights the potential to improve working conditions and retain staff by addressing MSK health in home care. The findings suggest that lumbar supports, used as a secondary preventive measure alongside ergonomic training, can reduce the burden of recurrent low back pain and even cut back-pain–related absenteeism in home care workers. Although overall sick leave was unchanged, likely due to the multifactorial nature of absenteeism, the targeted reduction in pain days and

improvements in pain intensity and functional capacity support offering lumbar supports to at-risk staff.[61]

Focusing on the home care sector, various studies highlight the restructuring and redesign of caregiving tasks to reduce physical demands on workers and mitigate MSK risks. Hjalmarson et al. (2015) propose decreasing **the time caregivers spend standing and developing supportive practices in front of the care recipient** to reduce strain and improve caregivers' ergonomic safety. Additionally, the authors argue that combining ergonomic education with video analysis provides caregivers with the knowledge to adopt safer practices and allows them to refine techniques based on observed feedback, fostering a culture of continuous improvement. Adopting **'no-lift' policies** has also been proposed as a key strategy for reducing low-back injuries. Davis and Kotowski (2015) highlight the growing effectiveness of these policies when combined with leadership support, training and equipment access. Similarly, Grasmo et al. (2021) and Hignett et al. (2016) emphasise the importance of **supportive management and workload management to address lone working conditions**. However, the findings of these studies show limited effectiveness due to changing and high physical demands. Dondi et al. (2024) also emphasise the enforcement of **safe patient-lifting regulations** to reduce physical strain among home care workers, while also highlighting the need for improved adherence to existing safety protocols and training for workers for effective implementation.

In a similar vein, Lohne et al. (2024) propose reorganising work practices to **minimise excessive arm elevation and trunk forward bending**, which are significant contributors to MSK pain. Their approach focuses on reducing variability in exposure to these risk factors and protecting highly exposed individuals, which requires targeted interventions. An example of such initiatives is provided by the Goldilocks Work Principle (Box 18), which focuses on redesigning home care work to achieve the 'right balance' between physical demands and recovery without compromising performance. This is accomplished by redistributing the workload among home care workers, allowing them to alternate between more and less strenuous tasks, with scheduled breaks for rest and recovery (Lohne et al., 2022; Liaset et al., 2023).

Box 18: Goldilocks Work intervention (Norway)

In 2022, the Norwegian home care sector cared for approximately 156,000 clients aged 67 years or older. The population is ageing and the home care sector is facing workforce shortages that are exacerbated by a high sick leave rate (11%), primarily due to MSDs. Home care workers routinely face physically demanding tasks, such as lifting, pushing and maintaining awkward postures, and so on, while assisting patients in their homes. Recognising that uneven weekly workloads contribute to MSK pain and high sick leave rates, researchers in Trondheim, Norway, designed the GoldiCare intervention to redistribute assignments so that each worker's week contains a 'just right' balance of physical strain.[62]

In a cluster randomised trial, 11 home care units (employing 23-95 staff each) were randomised to either implement GoldiCare or continue standard scheduling. Operations managers in the intervention arm received a three-week, hands-on introduction to the Goldilocks Work Principle and a bespoke Excel-based 'GoldiCare tool'.

A randomised trial evaluated the effectiveness of the intervention and concluded that between the trial and control groups no reduction was found in MSK pain, fatigue, physical behaviours and postures. However, the success of the intervention was dependent on the operations coordinators and how well they followed the intervention protocol, and during the evaluations it was found that this adherence to the rules differed vastly between trial groups. It is therefore still unsure whether MSK health of home care workers can be improved with proper adherence to the intervention protocol.

[61] Roelofs, P. D., Bierma-Zeinstra, S. M., van Poppel, M. N., Jellema, P., Willemsen, S. P., van Tulder, M. W., ... & Koes, B. W. (2007). Lumbar supports to prevent recurrent low back pain among home care workers: A randomized trial. *Annals of Internal Medicine*, *147*(10), 685-692.

[62] Fisher, H., Lohne, F. K., Fimland, M. S., & Redzovic, S. E. (2025). "It's a good idea, but…": A qualitative evaluation of the GoldiCare intervention in Norwegian home care services. *Frontiers in Health Services*, 4, Article 1511772. https://doi.org/10.3389/frhs.2024.1511772

Contrary to expectations, there were no meaningful differences between intervention and control groups in pain or fatigue from baseline to follow-up. The null findings underscored that, without consistent and deep integration into routine scheduling practices, even well-designed workload-balancing tools may not succeed in influencing worker exposures or health outcomes.[63]

Although the GoldiCare trial didn't produce measurable reductions in pain or fatigue, it highlighted the need to address the persistent challenge of MSDs in the sector and yielded valuable guidance on how to make workload-balancing effective in home care settings.

Participatory approaches have emerged as a promising strategy to address MSK risk factors in the home care sector (Box 19), emphasising the relevance of home care workers' involvement in developing interventions, which is associated with a better fit and lessened reluctance to participate in the intervention. Another example of intervention by a French insurance fund (Box 20) presents a comprehensive preventive approach focused on training and raising awareness among home care workers and care recipients, along with the implementation of technical solutions and adaptation of home environments.

Nevertheless, research suggests that implementing organisational approaches to risk prevention may be problematic due to critical issues in work organisation that are more challenging to address and fall outside the scope of the intervention, such as high staff and managerial turnover rates and high workloads, with little time for engaging in non-care activities (Persson et al., 2022). Rasmussen et al. (2017) studied the implementation of a participatory ergonomics programme involving different working teams of eldercare workers (including home care) in a Danish municipality and found that less than half of the solutions suggested by workers to reduce low back pain were fully implemented. Findings show that organisational solutions such as improving communications and changes in work procedures have a better chance of achieving sustainable changes and are more likely to be implemented. In contrast, the implementation of ergonomic solutions, such as assistive devices or improved patient transfer techniques, faced more barriers and resulted in less sustainable changes, as they rely on changes in individual behaviours, and workers might be more likely to revert to old habits over time. The implementation of participatory ergonomic solutions may face internal resistance from managers and team members and may be also hindered by financial and time constraints, as well as a lack of support or collaboration from patients or their relatives.

Box 19: Physical strain in home care services (Sweden)

Between 2017 and 2020, researchers from the Centre for Occupational and Environmental Medicine in Stockholm partnered with Karolinska Institute to quantify the physical strains faced by home care staff. In a subset of 36 (out of 655) participants, who were all female and with mean age of 49 years, they used wearable inclinometers over one to three full workdays to record trunk forward flexion and dominant-arm elevation. These measurements were then compared against both previously gathered data from other occupations and scientifically established 'action levels' above which the risk of MSK injury rises.

The primary aim was to determine whether home care work involves postures that exceed recognised ergonomic risk thresholds.

The data revealed that home care workers exhibited the highest recorded trunk flexion among compared professions, with the 90th-percentile angle reaching 41° or more for nearly 48 minutes of an eight-hour shift, surpassing the 40°/30-minute action level linked to increased low-back injury risk. Arm elevation measures averaged a median of 28° and a 90th-percentile of 59.5°, placing the group

[63] Lohne, F. K., Xu, K., Fimland, M. S., Palarea-Albaladejo, J., & Redzovic, S. (2024). Association between musculoskeletal pain and exposures to awkward postures during work: A compositional analysis approach. *Annals of Work Exposures and Health, 68*(5), 522-534.

just below, but individual workers occasionally above, the recommended 30°/50%-time and 60°/10%-time thresholds for shoulder risk.[64]

The findings highlight the urgent need for organisational and individual ergonomic measures in home care settings. The following actions are proposed by the CAMM:[65]

- systematic work environment assessments by employers;
- risk assessments focused on physical tasks, such as frequent forward bending and arm elevation;
- engaging employees in identifying problems and solutions, acknowledging their expertise; and
- ensuring access to suitable equipment and aids to reduce strain.

The researchers are hopeful that these actions can decrease absenteeism due to sick leave and improve working conditions to ensure staff retention and sustainable employment in the light of staff shortages and increasing demands on the sector.

Box 20: Carers, cared, quality of life to preserve (France)

The programme, implemented by Carsat Aquitaine, focuses on raising awareness of risk prevention in the homes of care recipients. It offers methodologies and financial support to home care providers in the region, with the primary goal of reducing MSDs. Preventive measures include adapting care recipients' homes and providing technical aids. By utilising tools such as training and financial assistance, the programme offers a transferable approach to enhancing safety and quality of life in home care environments.[66]

4.2.2 Training and individualised preventive approaches addressing MSK risks and MSDs

Beyond interventions targeting the work organisation and the workplace, individual interventions are aimed at changing the behaviour of workers. Individualised interventions can play a role in preventing MSK risks and MSDs for a range of reasons (van de Wijdeven et al., 2023). First, changes **in individual practices are crucial when technical improvements are unavailable or their implementation is less feasible**, as in the context of home care services. Second, as seen above, the **effective implementation of organisational interventions depends on changes in individual behaviours and compliance** and are a feasible starting point for the intervention through training or by OSH practitioners who do not have influence on or control over employees' work environment.

Individual interventions to reduce exposure to MSK risks can include workplace adjustments and the use of assistive tools, variations in the executions of work activities, exercise for workers to prepare for physical activity and recover from its effects, and applying job-specific related knowledge and behaviours in the performance of tasks, as well as skills and trained movements to reduce physical strain (van Wijdeven et al., 2023). **Maintaining the physical capacity of home care workers** is a critical component of MSD prevention and the research provides insights into various training interventions in this regard. Mänttäri et al. (2023) emphasise the role of education programmes in maintaining physical capacity and preventing MSDs. Individually tailored interventions, such as those focusing on early symptoms like general tension, were shown to be effective for specific worker groups. Otto et al. (2019)

[64] Centrum för arbets- och miljömedicin Region Stockholm. (2021). *Riskabelt hög ryggbelastning för hemtjänstpersonal i Stockholms län*. https://www.camm.regionstockholm.se/aktuellt/riskabelt-hog-ryggbelastning-for-hemtjanstpersonal-i-stockholms-lan-visar-ny-rapport/

[65] Berglund, K., Lind, C. M., Kjellberg, K., Yang, L., Målqvist, I., & Forsman, M. (2021). *Fysisk belastning inom hemtjänsten – kartläggning och åtgärdsförslag*. Stockholm: Centrum för arbets- och miljömedicin, Region Stockholm, Rapport 2021:08. http://dok.slso.sll.se/CAMM/Rapportserien/2021/Fysisk_belastning_inom_hemtjansten_tg.pdf

[66] More information is available at: https://www.carsat-aquitaine.fr/home/entreprise/risques-professionnels/demarche-de-prevention/aidants-aides.html

advocated **ergonomic and strength training programmes** tailored to the needs of nurses in elderly care and home care settings. These interventions are **designed to enhance workers' physical resilience** and reduce the incidence of MSDs, particularly in high-strain tasks. Christensen and Johannessen (2024) point out that the perceived quality of the training provided during the implementation of new technologies was associated with less subsequent neck pain. However, there is limited evidence of effectiveness of training programmes in the prevention of MSDs in European studies. In Spain, Gallart et al. (2022) found that participation in a training programme proved effective in reducing the burden of care after completion (N=86), though the effects did not persist in the following six and 12 months, suggesting the need for follow-up courses to sustain positive effects.

In Canada, the Community of Practice and Safety Support for Navigating Pain (COMPASS-NP) is a noteworthy initiative designed to address chronic pain among home care workers based on the adaption of the original COMPASS programme, which has proved to be an effective intervention in addressing OSH risks faced by home care workers, who often work in isolation and lack typical OSH protection measures. The primary aims of COMPASS were to increase health-promoting behaviours, such as healthy nutrition and regular physical activity, as well as promoting heath protecting behaviours. The intervention involves regular meetings where 8-10 home care workers gather to participate in training activities, set goals and offer each other mutual social support. These meetings are run by a peer leader who follows a scripted curriculum designed to cover various aspects of health protection and promotion. The programme aims to build a community of practice among home care workers, fostering a shared professional identity and mutual support. It provides relevant training on health and safety topics and encourages behavioural change through goal setting and problem solving, all tailored to the specific needs of home care workers (Olson et al., 2016, 2018, 2023).

The two initiatives detailed below provide different examples of interventions aimed at the prevention of MSK risks and MSDs in which training activities play a significant role in promoting safe working practices (Boxes 21 and 22).

Box 21: ErgoCoach System (the Netherlands)

The Dutch national 'Project ErgoCoaches' registered and supported frontline care workers, termed ErgoCoaches, tasked with preventing and reducing physical strain in colleagues. ErgoCoaches are team members who have taken on additional responsibility for preventing and reducing physical strain in addition to their executive duties. They ensure that their colleagues in the workplace pay structural attention to their physical strain. These team members received additional training in safe handling techniques, risk signalling and peer coaching, while maintaining their regular care duties. By 2012, 13,000 ErgoCoaches were registered in the programme, which included annual surveys, targeted workshops and ongoing registry support.[67]

One study mapped the evolution of the ErgoCoach role over time, and in the cross-sectional survey found that facilities without ErgoCoaches experienced a 9.1% prevalence of low back pain sick leave over 12 months. Facilities with coaches but lacking formal guideline integration saw a modest reduction to 8.3%, while those combining coaches and active guidelines averaged 7.1% sick leave. Although the drop in back pain leave was small, multivariate analysis attributed significant indirect effects to ErgoCoaches mediating improved use of transfer protocols and bolstering nurses' motivation, especially where the managerial climate and equipment access were strong.[68]

The role of ErgoCoaches is one catalyst for positive change within a broader ergonomic strategy.

[67] Knibbe, H. J. J., Knibbe, N. E., & Geuze, L. (2004). ErgoCoaches in beeld. *Project ErgoCoaches*. https://gezondenzeker.nl/wp-content/uploads/2018/04/Ergocoaches-in-Beeld.pdf

[68] Knibbe, H. J. J., Knibbe, N., E., & Klassen, A. J. W. M. (2012). ErgoCoaches: Peer leaders promoting ergonomic changes–Exploring their profile and effect. *American Journal of SPHM, 2*(3), 93-99. https://gezondenzeker.nl/wp-content/uploads/2018/02/Ergocoaches_Knibbe_Klaassen_2012-1.pdf

Box 22: Siun sote's ergonomics model (Finland)[69]

The Siun sote organisation implemented a prevention programme to address MSK strain among its staff. The programme emphasises an adaptable ergonomics model through training, awareness-raising and practical interventions. Its results led to a clear reduction in sick leave, by 11% in 2020 and 4.5% in 2021 and absenteeism due to inability to work fell to 20 days per person/year from 22 days in 2019. The model puts a strong emphasis on prevention through training and awareness-raising, with the kinds of solutions that are easier to transfer to other subsectors and environments.

4.3 Initiatives addressing psychosocial risks and mental health issues

Over recent decades, workplace interventions to prevent psychosocial risks and mental health issues have expanded from primarily individual approaches aimed at enhancing workers' knowledge and skills to cope with stressful working conditions to more comprehensive or integrated approaches, addressing different aspects of working conditions and work organisation practices, such as those aimed at increasing workers' control and autonomy on the job. There is substantial evidence on the effectiveness of integrated approaches in terms of psychosocial risk prevention and management strategies in the workplace (Rugulies et al., 2023). Participatory approaches involving some degree of involvement of workers or their representatives in decision-making processes in different aspects of work organisation have the potential for improvements in the psychosocial work environment in terms of control, social support and rewards, particularly in lower-level occupational groups and among women (Llorens et al., 2019). However, most interventions addressing the mental health of HeSCare and the home care workforce focus on individual approaches rather than on organisational aspects (Nikunlaakso et al., 2022; Gebhard and Herz, 2023).

4.3.1 Organisational strategies addressing psychosocial risks

There is limited evidence of organisational interventions in the home care sector compared to other care settings. Reviews of recent research into interventions addressing the OSH of home care workers indicate that the organisational interventions are focused on the providing ergonomic equipment or implementing digital solutions, but there is a lack of interventions considering the complex psychosocial work environment of home care work. Some researchers suggest that the reduced number of interventions studies in home care organisation may stem from methodological challenges and limited control over clients' home environments, but is also explained by a lack of interest due to the low status of home care occupations. They highlight the need to embrace a gender perspective and involve workers in the design and implementation of interventions to ensure effective solutions. Resource constraints and poor organisational support due to understaffing or managerial attitudes towards frontline workers can also affect the feasibility and the effectiveness of organisational interventions (Macdonald et al., 2017). This often results in a tendency to focus on 'low-hanging fruit' or visible consequences rather than on tackling the underlying causes of work environment issues (Rydenfält et al., 2020).

Several studies emphasise the importance of introducing systemic changes in the way work is organised in the home care sector to reduce psychosocial risks. Norström et al. (2023) propose redistributing tasks among home care personnel to lighten workloads, highlighting the link between certain tasks and negative health outcomes. This redistribution strategy also underscores the need for increased resources and staffing to improve overall health outcomes. Similarly, Ruotsalainen et al.'s (2020) study also suggests promoting self-organising team practices to improve working conditions and reduce worker turnover. Vander Elst et al. (2016) demonstrate in their study that a supportive culture, reasonable workloads and continuous training help buffer the relationship between workload and burnout. The study also highlighted the importance of redesigning jobs to better balance emotional and quantitative demands. Furthermore, Elfering (2018a) suggest team-based interventions, including training for nurses and managers, to reduce interruptions and time pressures. This study also provided

[69] More information is available at: https://www.siunsote.fi/en/frontpage/ and https://osha.europa.eu/en/publications/mitigating-exposure-musculoskeletal-risks-siun-sote-ergonomics-model

evidence of the effectiveness of such strategies in promoting safety behaviours and reducing negative affectivity.

Rydenfält et al.'s (2021) study exploring local-level initiatives to improve the working environment of Swedish home care workers identifies two main areas of organisational interventions. These interventions target different aspects of work organisation, with the most common changes being the establishment of self-managed teams. Additionally, changes in the planning and scheduling of services are noted, which also involve greater involvement of home care workers in organisational decision-making processes. The focus on smaller teams or increased teamwork reflects a broader trend in healthcare towards emphasising teamwork. In the context of home care, these reorganisations were primarily aimed at improving continuity of care for clients and giving employees more control over their work (Rydenfält et al., 2021). A significant body of research examines organisational interventions aimed at enhancing home care workers' autonomy and control on the job through teamwork and participatory approaches. Research points to overall positive impacts of teamwork in job satisfaction and the work environment of home care nursing, particularly in terms of providing workers with a sense of control over their work and a source of support in terms of expertise and emotional support, facilitating the management of the complex and demanding nature of home care work, and reducing work-related stress (Larsson et al., 2022).

In line with these results, Kaihlanen et al. (2023) advocate investing in autonomous work planning and enhancing team collaboration, highlighting the importance of evidence-based decision-making in establishing supportive work environments. The Maurits et al. (2015) study based on a survey of nursing staff (nursing assistants and registered nurses) working in Dutch home care organisations shows that nursing staff working in teams with a higher degree of self-direction are more satisfied with their jobs, and that this positive relationship is explained by self-perceived autonomy over patient care. Interestingly, the effect of autonomy over job satisfaction differed according to educational level and was not significant for nursing staff with lower qualification levels. The study notes that nursing assistants with lower educational levels usually work under the supervision of higher qualified nurses and that their degree of autonomy is restricted to personal care tasks. These findings highlight the importance of considering differences in work organisation patterns when implementing self-directed working teams in home care settings.

A notable example of intervention targeting the traditional work organisation of home care services in the sector is the Netherlands' Buurtzorg home care model (Hegedüs et al., 2022). Buurtzorg Nederlands is a non-profit Dutch home care provider organisation that has garnered international recognition for its innovative use of self-governing nursing teams. Starting in 2007 in a small city of Almelo, Buurtzorg (meaning 'neighbourhood care' in Dutch) has become a large national organisation employing more than 10,000 nurses and assistants in 850 teams spread across the country.[70] The model is distinguished by an integrated approach to community-based care that emphasises self-managed teams and person-centred services from a bottom-up perspective. Buurtzorg organises work into self-managed teams of 8-12 nurses and nurse assistants covering specific geographical areas. These teams enjoy maximum autonomy to make decisions and organise work to best meet clients' needs in a holistic way and according to their professional criteria. Nurses provide a full range of services, from personal care to highly technical interventions, involving the patient's family and other community services to promote clients' independence and self-care. Crucially, Buurtzorg uses a flat per-hour payment system and does not let reimbursement rates determine which level of staff delivers care, allowing those who perform the tasks to make their own decisions. Working teams' management is also supported by a web-based IT solution that streamlines administrative tasks and facilitates effective communication and coordination between and within working teams. The organisation operates with a small back-office, resulting in lower overall overhead costs compared to other organisational forms, thanks to the small size and self-management of working teams. The implementation of this approach is generally associated with different positive outcomes in terms of cost effectiveness and patient and staff satisfaction (Nandram and Koster, 2014; Johansen and van den Bosch, 2017).

The Buurtzorg model has been rapidly scaled up and become a new paradigm with a potential to address workforce challenges in LTC systems across different national contexts. The organisation of small, self-managed teams benefits from rotating responsibilities, fostering flexibility, skill development and

[70] More information is available at: https://www.buurtzorg.com/

collective decision-making, which enhances team autonomy and adaptability in delivering care (Hegedüs et al., 2022). Significantly, the adoption of this model shows the potential for innovative models to challenge existing practices in home care and promote more integrated, patient-centred care, while contributing to broader discussions on alternative payment models in home care nursing (Cristofalo and Dariel, 2021). However, studies of experiences of Buurtzorg-derived models outside the Netherlands have pointed to challenges associated with its implementation. These involve difficulties in managing hierarchical shifts within large bureaucratic organisations and the need for managers to adapt to new roles, and the lack of appropriate IT support for mobile work (Drennan et al., 2018).

Hansen and Neumann (2023) shed light on some problematic aspects associated with the implementation of self-managing teams in Norwegian municipal home care services. The study findings reveal a significant gap between the reform's intended goals and its implementation. While care workers were granted more autonomy and responsibility, they were not given additional time to conduct proper assessments and make decisions according to their professional judgment. Home care workers spent considerable time on coordination and logistical tasks within their self-managing teams, which reduced the time available for direct care provision and professional assessments. Moreover, the lack of active involvement from the managerial level in facilitating support and creating trusting relationships hindered the success of the trust reform. Ultimately, the study concludes that without addressing fundamental issues such as working conditions, resource allocation and effective leadership, the implementation of self-managed teams risks being shaped by managerial logic rather than fostering a genuine culture of trust and care. While research on the Buurtzorg model generally reports positive outcomes, it is important to acknowledge the challenges related to its implementation and the limited evidence regarding its effects on the health and welfare of home care workers (Box 23).

Box 23: Buurtzorg model (Barcelona, Spain) [71]

The Buurtzorg model is a work organisation model in the home care sector originating in the Netherlands that has been extensively researched as an example of good practice and implemented in different contexts (UK, France). The model emphasises dedicating significant time to direct, personalised care, ensuring a deep understanding of each individual's needs, history and environment before implementing solutions. Decision-making is decentralised, allowing work teams autonomy while maintaining strong coordination with central offices. Teams consist of trained nursing professionals, integrating nursing and personal home care services. Each team of 10-12 professionals serves neighbourhoods of 5,000-10,000 residents, fostering strong connections within the community and delivering tailored, comprehensive solutions. Team cohesion is a priority, with a focus on building trust and collaborative relationships within the group.

Planning and scheduling working time is a crucial aspect for organisational interventions addressing psychosocial risks in the home care sector (Macdonald et al., 2017; Rydenfält et al., 2020). Research highlights different issues related to working time management and its impact on working conditions of home care workers. Restructuring and public financing cuts has resulted in understaffing and increased work intensification, with home care workers having less time for patients and usually being forced to make choices that conflict with their professional criteria and competence (Bergqvist et al., 2024). Along with time constraints, the fragmentation of work schedules and the lack of control over working time is a concern for many home care workers. These challenges are extensively identified in time-based commissioning systems, particularly when combined with zero-hour contracts, where service providers and workers are paid only for direct client service hours, a practice prevalent in the UK (Burns et al., 2023; Atkinson and Crozier, 2020), though similar practices are being adopted in other EU countries (see Box 23).

Organisational interventions addressing challenges in working time organisation include the adoption of flexible scheduling allowing home care workers increased control over the allocation of working hours

[71] More information is available at:https://osha.europa.eu/en/publications/barcelona-social-superblocks-initiative-proximity-home-care-services

and the order of daily visits according to their needs or ensuring increased regularity and predictability in working hours (Boxes 24 and 25). Research highlights the need to consider the implications of organisational interventions from a gender perspective and the need to ensure participation of home care workers to prevent non-intended consequences (Ryfendält et al., 2020). In this regard, Ede and Rantakeisu (2015) point to the negative effects of a policy initiative that aimed to increase full-time employment in the elderly care sector in Sweden. The reform introduced a system of 'unscheduled' working hours that gives employers greater flexibility to cover shifts previously managed by temporary staff. This new system resulted in decreased control by workers over their working time as it demanded greater availability during off-hours to adapt to new clients and co-workers. This resulted in conflicts with their personal life commitments, and some even reduced their working hours following the initiative's implementation. There are other instances where organisational interventions have led to negative outcomes due to the failure to involve home care workers in their design and implementation. Bensilman et al.'s (2022) study on the impact of flexible scheduling and the introduction of a mobile app for service management in a Belgian home care organisation revealed that, although these innovations were intended to enhance service delivery and efficiency and meet users' expectations, they resulted in increased stress, diminished job autonomy, and difficulties in maintaining work–life balance for many workers due to fragmented and unpredictable working hours.

Box 24: 7/7 Work scheduling model (Germany)

In Germany, there are ongoing trials for innovative organisation of work in the care sector. Among these scheduling models is the 7/7 work model. The 7/7 work model was first implemented in 2010 by the German senior care society (DSG) at a care facility near Berlin. In this model, care workers work seven consecutive days, with 12-hour shifts, followed by seven days off. This structure allows for extended recovery periods and better work–life balance. Furthermore, it was deemed helpful and successful during the COVID-19 crisis, because the same caregivers always worked together, infections were easy to track, as were quarantine necessities, and it was easier for teams to compensate for team members on sick leave.[72]

Although working 12-hour shifts seven days in a row can be demanding and rather exhausting for employees, they tended to come back much better rested and with a new perspective after the seven days off. This schedule has benefits not only for workers in terms of work stability and adequate rest periods, but also for residents, who have the same carer for a week, which strengthens bonding and improves the overall consistency and quality of care provided.

After a successful trial in Berlin, the programme has gained popularity and several care facilities have integrated the schedule with positive outcomes in addressing staff shortages, attracting workers and overall improvement of working conditions. The possibility of deploying this kind of schedule depends on the organisation's specific needs, capacity to implement innovative scheduling models, and the willingness of the organisation and its caregivers to adapt.[73]

Box 25: Duty scheduling models (Austria)

Service Mensch GmbH is a non-profit company of Volkshilfe, one of Austria's largest welfare associations, with 9,000 employees across nine states. The organisation manages nursing homes and provides home care services. The company implemented a duty scheduling system in 2019 in selected care units of home care and nursing services for the elderly in Lower Austria. The measure was adopted in a context of staff shortages and lessened appeal of the sector, particularly among young workers, due to the poor working conditions. The objective of duty scheduling is to ensure

[72] Flachenecker, B. (2019, 4 November). 7/7-Arbeitszeitmodell: Stabilität und Ausgleich. *Health&Care Management*. https://www.hcm-magazin.de/7-7-arbeitszeitmodell-stabilitaet-und-ausgleich-257530/

[73] DSG Deutsche Seniorenstift Gesellschaft mbh& Co. KG. (n.d.). *7/7 Arbeitszeitmodell in der Pflege*. https://www.deutsches-pflegeportal.de/magazin/7-7-arbeitszeitmodell-in-der-pflege

that there is always available staff on duty to meet service demands, while providing some flexibility to meet individual employees' work–life balance needs.

The new scheduling model provided three options:

- morning model: Monday to Friday morning, no evening and no weekend duties;
- leisure time model: work on as few days as possible (many consecutive days off, weekend bonuses); and
- holiday replacement team: take over tours due to pre-planned absences.

The initiation of the process commenced with an on-site presentation of the measure, followed by a survey of employees' individual preferences. A project manager evaluated the feasibility of implementation based on the reported employee preferences and client needs, and subsequently devised a proposal for a duty schedule. The draft proposal was subsequently presented and deliberated upon with the employees, with any necessary changes made accordingly. Upon reaching a consensus on the initial plan, a four-month pilot phase was instituted during which the plan was tested and refined based on the evolving needs of clients and the requests of employees, until its final adoption. Regular evaluations of the system's operational efficiency are conducted by management.

As expected, the implementation of the measure was reflected in a considerable increase in the satisfaction levels on the part of both clients and home care workers, along with a significant reduction of staff resignations. Nearly all employees (97%) expressed their satisfaction with the new duty scheduling model. Similarly, a large share of employees (85%) reported improved work–life balance compared with the previous situation, and 75% perceived positive feedback from clients. Nearly all employees expressed their desire to continue working with these schemes and recommended their extension to other care units.[74]

4.3.2 Individual approaches addressing psychosocial risks in home care

Different studies have explored the potential of individual approaches through training or supportive tools to address psychosocial risks factors faced by home care workers. Fraboni et al. (2024) assess the design and implementation of a comprehensive train-the-trainer (TTT) programme in a large multinational company. The TTT programme involves a group of employees responsible for promoting safety culture through knowledge sharing within the organisation. The programme targeted 15 OSH managers from different EU branches who were expected to implement it with supervised employees. The training plan addressed critical risk factors that were identified based on an analysis of safety events reported by workers. The programme included five modules, including simulations encouraging trainer–trainee interactions, each focusing on critical safety areas.

One of the main risks addressed was reducing distraction and inattention while driving. The programme focused on strategies to maintain focus, acknowledging the risk of multitasking accidents and the use of mobile phones while driving. The programme also addressed coping with fatigue and managing time pressure, offering workers a deeper understanding of their safety risks, such as STFs when handling equipment or assisting patients, along with practical guidance for managing these risks. The programme also tackled the risks associated with frustration and aggression from patients or their relatives, training workers with de-escalation techniques and strategies to manage their own emotions effectively. Overall, the TTT programme aims to create a sustainable and scalable way to promote OSH in home care organisations, although the study does not provide results or measure the effectiveness of its implementation (Fraboni et al., 2024).

The examples identified of individual-level approaches to psychosocial risk management and prevention focus on equipping workers with enhanced competences and skills to address risks arising from complex interpersonal relationships involved in working in isolation in private homes, such as verbal and physical

[74] FORTE project. (2024). 'New Duty rota models for better work-life balance', in *Improving working conditions in social services. Good Practices from across Europe* (pp. 40-43). https://www.socialemployers.eu/wp-content/uploads/2024/06/FORTE-Report-Improving-working-conditions-in-social-services.pdf

abuse from clients and families and working with patients with cognitive impairments, and on coping with emotional stress and risks of burnout (Boxes 26 and 27). Along with the challenges of low wages and lack of social and professional recognition, these risks negatively impact the emotional wellbeing of home care workers and influence their intentions to leave the job. Strategies aimed at developing training and career progression opportunities contribute to enhancing home care workers' satisfaction with the job (Hamadi et al., 2019). Individual and training interventions should also emphasise emotional and communication skills, in combination with the organisation of support groups that provide home care workers with opportunities to discuss job-related challenges and learn coping strategies. This approach supports employees maintaining their emotional wellbeing and organisations in their efforts to retain staff (Janssen and Abbot, 2023). The Fallahpour et al. (2020) study showed positive impacts on perceived job strain among participants in a dementia care education programme in Swedish home care services. The intervention aimed at supporting changes in ways of working based on evidence and group discussions around challenging situations participants experienced in their daily practice with patients with dementia and the applicability of theoretical knowledge to these situations. Risks of abuse, including physical and psychological violence, are present in home care settings and affect both workers and clients. Balkaran et al.'s (2023) systematic review of the topic shows that prevention strategies predominantly address the issue through training initiatives and other practices such as regular coaching sessions between managers and workers. Evidence from Glass et al. (2017) and Small et al. (2022) supports the effectiveness of these interventions, showing improvements in home workers' knowledge, increased confidence in managing situations of violence and abuse, and the reduction of incidents (Glass et al., 2017), although there may also be gaps in access to and the contents of training (Small et al., 2022). However, it should be noted that most of the studies on this topic are from the US and Canada, with very few studies from EU countries. This suggests that there might be a need for more comprehensive research on abuse in home care across European contexts, although similar initiatives report positive results (Box 27). Future research should focus on assessing the effectiveness of proposed interventions and integrating evidence-based practices with a focus on both worker and client safety to creating a comprehensive framework for addressing abuse and violence in home care settings (Balkaran et al., 2023).

Box 26: PROCARE (Professional Caregivers Burnout Prevention Initiative)[75]

The PROCARE Project is a European initiative focused on training managers of LTC units to serve as mentors for their caregiving staff, aiming to prevent and manage occupational burnout.

Project activities:

- Development of training modules: Creation of educational content, including modules on mentoring methodologies, session design and strategies for overcoming barriers in mentoring.
- Implementation of mentoring tools: Introduction of tools such as the PROCARE Self-Monitoring Tool, Mentoring Agreement/Contract Tool, and Mentor's and Mentee's Diary Tools to facilitate effective mentoring relationships.
- Conducting mentoring exercises: Activities like establishing SMART career goals, SWOT analysis and skills mapping to support caregivers in their professional development.
- Pilot testing: Trial runs of the mentoring programme and tools in real-world settings to assess effectiveness and gather feedback.
- Policy advocacy: Development of a policy paper to promote the integration of mentoring programmes in LTC settings, emphasising their benefits in preventing caregiver burnout.

The PROCARE Project brings together a variety of organisations across Europe, including universities and umbrella and local organisations. The project's aim is to address not only care professionals but also managers of caregiving institutions. It also includes policy stakeholders and

[75] More information is available at: https://osha.europa.eu/en/publications/multi-country-burnout-prevention-initiative-based-mentoring-and-training-case-procare

mental health professionals. This project is also mostly focused on mental health and burnout and its prevention, making it an interesting addition with its specific focus.

Box 27: Company programmes for health promotion and violence prevention in workplace health management (Germany)

The BAGGer project ('Betriebliche Angebote zur Gesundheitsförderung und Gewaltprävention im BGM: wirkungsmodellbasierte Konzeption und Evaluation eines BGF-Programms', translated as 'Company health promotion and violence prevention programmes in occupational health management: impact model-based design and evaluation of a workplace health promotion programme') was a two-and-a-half-year model initiative funded by the German Federal Ministry of Health. It sought to design, implement and evaluate a holistic workplace health promotion (WHP) and violence-prevention programme across acute hospitals, inpatient care facilities and outpatient nursing services in North Rhine-Westphalia.[76]

Grounded in a logic-model framework, BAGGer's overarching aim was to strengthen the health and working conditions of nursing staff by integrating behaviour and environment-focused interventions into a comprehensive Occupational Health Management (BGM) system. The project addressed five core questions: (1) What health problems and work-related consequences do nurses experience? (2) Which interventions show promise, and what are their assumed mechanisms? (3) How transferable are these interventions to different care settings? (4) What changes can be observed at organisational and individual levels? (5) Which factors facilitate or hinder sustainable implementation under routine conditions? To answer these, the team conducted systematic reviews, qualitative interviews, employee surveys, and a formative and summative evaluation (BGM-Check) of the delivered interventions.

In the period from April 2021 to October 2022, 15 partner institutions implemented 137 organisational (e.g. ergonomic consultations, workflow workshops) and 235 behavioural (e.g. stress management sessions, relaxation breaks) interventions. Participation was highest for short, on-site activities integrated into paid shifts. Pre-post analyses at the organisational level showed descriptive improvements, particularly in prevention infrastructure and willingness, and in outpatient services, while individual-level surveys detected a significant boost in work organisation in residential care. Trends also indicated slight reductions in reported violence in inpatient settings. Interviews underscored that workload, shift compatibility, leadership support and multi-channel communication were decisive participation drivers or barriers.

BAGGer demonstrated that effectiveness of WHP and violence prevention are contingent on both the organisation design and programme content and offers a scalable blueprint for strengthening nurse wellbeing and violence prevention across diverse healthcare settings.

4.4 Initiatives addressing physical, biological and chemical risks

The review of the academic research literature has produced limited studies of examples of interventions specific to addressing physical, biological and chemical risks. Beyond risk assessments and the literature in this regard, two studies conducted in the US have been identified that consider gaming and virtual simulation as health and safety training and hazard identification for home care workers (Darragh et al., 2016; Lavender et al., 2019). These studies revealed that while most participants were generally able to identify most common risks, many less obvious risks were often overlooked (e.g. low height sofa poses risk of injuries when lifting or assisting a patient, risks of falling objects from overloaded cupboards). The researchers highlight that the interactive and immersive character of virtual simulation tools holds potential for improved training of home care workers, enabling them to effectively identify

[76] Bundesminiterium für Gesundheit. (2023). *Betriebliche Angebote zur Gesundheitsförderung Gewaltprävention im BGM: wirkungsmodellbasierte Evaluation eines BGF-Programms (BAGGer)*. https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5_Publikationen/Praevention/abschlussbericht/Abschlussbericht_BAGGer-Projekt.pdf

and respond to diverse and changing risks within the home environment, although more research is needed to assess their effectiveness.

4.4.1 Physical risk prevention

With respect to interventions aimed at physical risk prevention, the Norlander et al. (2015) study is relevant as it emphasises the importance of slip-resistant footwear and attachable anti-slip devices to prevent falls, particularly during winter. It also highlights the role of maintenance practices like snow clearance and the need to address organisational factors in intervention design. Evidence from other studies supports the effectiveness of slip-resistant shoes, but Norlander et al. (2015) do not provide new data, instead recommending further exploration of organisational strategies to enhance safety. Slip-resistant winter footwear as a strategy to reduce fall risk for home care workers has also been explored by Bagheri et al. (2021).

4.4.2 Chemical risk prevention

Second-hand smoke exposure is a significant concern for home care workers, particularly during home visits. The review by Angus and Semple (2019) proposes several strategies to reduce second-hand smoke exposure, including educating smokers, negotiating smoking behaviour changes, using tobacco substitutes, limiting staff exposure to second-hand smoke areas and rotating staff assignments. However, the study does not provide evidence of the effectiveness of these strategies.

Building on these findings, Dobson et al. (2023) and O'Donnell (2024) critique the inadequacy of current strategies to protect staff from second-hand smoke, noting that respiratory protective equipment, such as masks used during the COVID-19 pandemic, is ineffective. Both studies suggest nicotine replacement therapy (NRT) and e-cigarettes as potential tools for achieving temporary smoking abstinence during home visits. While participants viewed NRT positively, caution was expressed regarding e-cigarettes, indicating mixed perceptions. Dobson et al. (2023) also point to additional strategies such as ventilation improvements, air-cleaning devices and updated smoking guidance, but note the lack of evidence on their effectiveness. Both studies call for more research and robust protective measures for home care workers.

4.4.3 Biological risk control

Infection control is a critical concern in home care settings. However, aside from some studies centring on COVID-19, it is an under-researched topic in recent academic literature on health and safety risks in home care. Dondi et al.'s (2024) study in the UK is the only study reviewed to underscore the importance of regular hand hygiene training for staff to mitigate infection risks. While this study acknowledges the presence of existing regulations for infection control, it does not evaluate their implementation or propose innovative strategies. Most of the studies conducted on infection prevention and control in home care settings are from the US (Brockhaus et al., 2024; Adams et al., 2021).

Box 28: Reducing Occupational Risk for Blood and Body Fluid Exposure Among Home Care Aides (USA, Illinois, Chicago)

The 2013 study 'Reducing Occupational Risk for Blood and Body Fluid Exposure Among Home Care Aides: An Intervention Effectiveness Study' by Amuwo et al. evaluated a participatory training and communication intervention designed to reduce sharps-related hazards for home care aides in Chicago, Illinois. Conducted as a quasi-experimental, pre-test/post-test trial, the project partnered with a large, unionised agency (Employer A, intervention group) with approximately 1,200 aides and a medium-sized agency (Employer B, control group) with 200 aides. Over an 18-month period, all aides attended mandatory training sessions during which the intervention group received a one-day peer-led educational workshop on blood-borne pathogen risks, followed by a refresher session

introducing client-facing communication tools, namely, refrigerator magnets explaining safe sharps disposal and wallet cards outlining post-exposure procedures.[77]

The primary objective was to determine whether a structured, participatory approach could increase the use of approved sharps containers by clients of home care aides, thereby reducing the aides' occupational exposure to needles and other sharps. Secondary aims included assessing changes in self-reported exposure incidents and evaluating the feasibility of embedding safety communication tools into routine home care workflows. By engaging labour, management and frontline aides in workshop design and delivery, the study sought to raise awareness and empower aides to negotiate safer practices directly with their clients.

Matched pre- and post-intervention data (N=166 aides) revealed a statistically significant increase in client use of valid sharps containers among the intervention group: usage rose from 34.4% before training to 49.3% after. The control group showed no significant change. Although self-reported blood and body fluid exposures increased modestly in the intervention cohort (from 5.5% to 10.3%), this shift likely reflected greater awareness and reporting rather than an actual rise in incidents.

This study demonstrated that brief, peer-facilitated workshops, when coupled with simple communication aids, can effectively shift client behaviours in home care settings, where traditional engineering controls are difficult to enforce. Embedding safety education within mandatory training and equipping aides with tangible tools to engage clients proved both feasible and scalable: intervention participation rates exceeded 70%. This model offers a replicable framework for reducing sharps-related risks in largely unsupervised, heterogeneous home environments.

Conclusions and policy pointers

Home care work consists of a range of medical, personal care and assistance services to dependent adults provided within recipients' homes. Over the last decades, there has been a fast-growing demand for home care services driven by population ageing and public policy choices, since home care generally provides a more cost-effective solution compared to LTC in institutionalised settings. The ongoing trend of deinstitutionalisation of LTC in the EU has significant implications for the employment and working conditions of home care workers and their health and safety. This research report has examined the main OSH risk factors and health and safety outcomes faced by home care workers, as well as the key strategies for risk prevention. It also examines the prevailing strategies and interventions for prevention and management, with a view to identifying relevant examples of good practices with transferability potential.

The review of the research literature on OSH of home care workers reveals limitations of the existing body of research. Overall, **there is limited evidence on OSH risks and related health and safety outcomes of home care workers in the EU**. This can be attributed to the small sample sizes and the geographical concentration of most studies, as well as the under-representation of specific categories of home care workers who have been gaining greater significance within the total home care workforce in many MSs. Most of the available research originates from northern EU MSs and focuses on the experiences of more qualified groups of home care workers (home nurses) working in service-provider organisations, while there is a substantial gap of research evidence on the situations of domestic workers directly employed by households. Thus, the available research evidence does not reflect the fragmentation of employment arrangements observed in many MSs, especially among countries with limited public involvement in the provision of home care services.

Despite the regulatory changes following the ratification of the ILO Convention, there is evidence of persistent challenges in enforcing labour standards. The present study gathers examples of different approaches to the formalisation and professionalisation of domestic work in different MSs, ranging from national laws and policies to other forms of support by different stakeholders (trade unions, local authorities and civil society organisations) (Boxes 13, 14 and 15). New legislation passed in 2024 in

[77] Amuwo, S., Lipscomb, J., McPhaul, K., & Sokas, R. K.. (2013). Reducing occupational risk for blood and body fluid exposure among home care aides: An intervention effectiveness study. *Home Health Care Services Quarterly, 32*(4), 234-248. https://doi.org/10.1080/01621424.2013.851050

Spain has extended regular OSH risk prevention regulation to domestic workers (Box 7). The Belgian 'service vouchers' have also proved an effective strategy in creating formal employment opportunities and providing workers with access to social security benefits comparable to standard employment (Box 12). In France and Italy, collective bargaining institutions have played a more prominent role in addressing regulatory gaps. From Italy, a notable example is provided by EBINCOLF (Box 8), a joint body established as part of the national collective agreement in the domestic work sector aimed at enhancing professional standards and safe working environments through training and certification.

Home care work involves significant exposures to a range of OSH risks arising from the unconventional nature of private homes as workplaces, and the challenges they present in both the physical and psychosocial work environment. On the one hand, home care workers face MSK risks due to the performance of physically demanding tasks, such as lifting and transferring patients. Home care workers often adopt awkward postures while performing care tasks within patients' homes. Repetitive motions when assisting patients in dressing, bathing or providing care also contribute to cumulative physical strain. These risks are exacerbated by the lack of assistive ergonomic equipment that are available in institutionalised care settings as well as unsuitable conditions of clients' homes, such as reduced spaces or obstacles that make it difficult to work safely, leading to overexertion and increasing the risk of trips, falls and injuries. MSDs are highly prevalent in the sector. Low back pain is consistently reported across studies as one of the most common issues, directly linked to physically strenuous tasks and poor postures. Shoulder and neck pain are also frequently reported, often associated with patient handling and awkward postures. These MSDs can lead to chronic pain conditions, increased sick leave, reduced work ability and early retirement of home care workers, thereby contributing to staff shortages.

On the other side, the interpersonal dynamics of home care work expose workers to a complex psychosocial work environment. Caring for patients in chronic illness, in suffering or distress in their own homes can be rewarding, but it can also turn into highly emotionally demanding experiences, requiring empathy and relational skills for its effective management. Moreover, home care workers find themselves in vulnerable positions within patients' homes. This can manifest as verbal abuse, mistreatment or expectations that exceed the scope of their professional duties by patients or their relatives. **The isolation of working in private homes, often without immediate support from colleagues or supervisors, can exacerbate these issues**.

The exposure to different risk factors is further intensified by precarious employment conditions and prevalent work organisation practices that contribute to a high-stress work environment. Despite employment growth over the last decades and increased demand, home care workers remain among the lowest paid occupations in the EU. The home care sector faces significant staff shortages and public sector restructuring and financing constraints have resulted in chronic understaffing issues and increased quantitative demands impacting an ageing workforce. High workloads and time pressure are consistently identified in research as major psychosocial risks for home care workers. These demands refer to an overwhelming or excessive number of clients, and the number of tasks and responsibilities that are difficult to perform within time allotted for each client, often leading to unpaid working hours and a decreased sense of control over their work. High quantitative demands are also linked to the experience of role conflicts, arising from contradictory expectations or demands that may involve conflicts of a professional or ethical nature. Studies report that a significant share of home care workers feel concerned about not being able to treat patients according to their professional criteria due to time constraints. These conflicts are often exacerbated by the gendered devaluation of care work, which is often not considered to require specific qualifications or training. These perceptions contribute to the lack of professional recognition of home care workers, resulting in greater risks of burnout and a negative impact on the quality of care provided. Work–family conflict is also a pervasive issue, given the gender composition of the workforce, and further exacerbated by challenges of managing fragmented and unpredictable schedules.

Despite the challenging psychosocial working conditions of home care workers, there is limited evidence on the extent of mental health outcomes as compared to MSDs. Depression and anxiety are common concerns, resulting from long working hours and the experience of low social support and work–life conflict. **Burnout and emotional exhaustion are also frequently reported, often linked to high workloads, time pressure and emotional demands.** Stress is another common consequence, arising from various sources such as verbal abuse, harassment and the experience of conflicts due to the

inability to act in accordance with professional standards or to meet clients' expectations due to external constraints. These issues can result in reduced job satisfaction, increased sick leave and higher turnover rates.

In addition, home care workers face a range of physical, biological and chemical risks in their work environment. **Physical risks arise from the physical environment both inside and outside of clients' homes, resulting in STFs, and the risks of accidents when travelling between clients' homes. Biological risks mainly involve exposure to infectious agents and blood-borne pathogens through needle punctures and other forms of transmission.** The COVID-19 pandemic has raised awareness of home care workers' exposure to these risks, which can result in infectious diseases. Chemical risks in home care settings mainly involve exposures to substances used for cleaning, disinfecting or medication administration. While these risks and outcomes are significant, there is a general lack of data on their prevalence and severity in the EU.

Structural issues in the home care sector pose significant challenges for OSH management at different levels. Firstly, the boundaries of the sector are challenging due to the increasing diversity of tasks and the employment arrangements involved in the provision of home care services. These complexities are illustrated by ongoing debates around informalisation and professionalisation within the sector, which has become a focal point of policy discussions and recent social dialogue initiatives aimed at organising the sector at the EU level. The fragmented employment status of home care workers results in social and employment protection gaps, particularly for domestic workers directly employed by households, and creates additional obstacles for ensuring adequate OSH protections for all workers. In addition, the high prevalence of undeclared work and cross-border mobility of the care workforce, from either EU or third countries, entails additional challenges for the enforcement of labour laws and OSH regulations.

Policy initiatives addressing structural issues in the home care sector focus on improving the professionalisation and working conditions of home care work, addressing skills needs and staff shortages. Examples of such interventions consist of training initiatives and career progression pathways including upskilling and certification to enhance the professional status and appeal of home care work, particularly for those occupational profiles with less qualification requirements (see Boxes 3, 4, 5 and 6). Another set of relevant interventions presented in the report aims at strengthening professional and service quality standards (see Boxes 1 and 2).

This study shows that **there is relatively limited research on OSH risk management and prevention strategies in the home care sector compared to other HeSCare settings**. Home care work presents unique challenges for implementing and evaluating OSH interventions, due to the lack of control over the work environment in private homes, with each home presenting specific risks and work routines varying depending on clients' needs, which limits the ability to implement consistent strategies and make generalisations about the effectiveness of interventions. Additionally, conducting risk assessment and implementing solutions at clients' homes often require agreement with household residents, who may lack adequate resources or an understanding of safety concerns of home care workers. The implementation of interventions in the home care sector also faces significant challenges due to prevalent issues in work organisation, such as high staff turnover rates and time pressures, which can lead to inconsistencies in implementation, eventually compromising their assessment and effectiveness.

The present study has identified various strategies to address OSH risks of home care workers. However, much of the research on this topic acknowledges the challenges in implementing and evaluating these interventions, resulting in mixed evidence regarding their effectiveness. Overall, there is some evidence in support of comprehensive approaches combining organisational and individual strategies, while also involving home care workers in the design and implementation of interventions to ensure a better fit to their needs.

A critical aspect of OSH risks management and prevention in the home care sector concerns difficulties in conducting risk assessments in private homes. The report has gathered examples of innovative approaches for improving risk assessments through the use of digital tools and collaborative approaches involving different stakeholders (Box 16). To address physical and biological risks, some innovative approaches use gaming and virtual simulation for health and safety training and hazard identification. These tools allow workers to practice identifying and responding to diverse risks within a simulated home environment. These interventions highlight the need for improved training and risk prevention tools

tailored to the diversity of home care environments as well as the need for raising awareness and involving clients in preventive actions.

The study has identified different examples of promising strategies based on their learning and transferability potential at different levels. At organisational level, these interventions focus on restructuring work practices and enhancing employees' autonomy on the job. One significant approach involves the implementation of self-managed working teams, as in the case of the Buurtzorg model originating in the Netherlands. This model has been successfully adapted to different contexts, particularly in providing home care workers with a sense of control and social support (Box 23). Another key area of organisational intervention is working time management, with the adoption of flexible scheduling systems that allow home care workers increased control over the allocation of working hours and the order of daily visits, allowing improved work–life balance and recovery opportunities (Boxes 24 and 25). Similarly, other organisational interventions target the distribution of physical workloads among home care workers, with a view to achieving the right balance between physical demands among home care workers without compromising performance, allowing them to alternate between more and less strenuous tasks, with scheduled breaks (Box 18).

Individual strategies for risk management and prevention in the home care sector primarily focus on training and skills development. This type of intervention aims to equip workers with the knowledge and abilities to manage different types of risk they face in their work environment. Examples of such strategies include training programmes on safe patient handling and transfer skills, in combination with the use of ergonomic devices, such as lumbar supports, which has proved to be an effective solution for low back pain (Box 21). Other examples of individual approaches targeting psychosocial risks focus on emotional and interpersonal skills. These include enhanced training for home care workers to better handle patients with dementia or to manage situations involving violence and abuse. The PROCARE project, for instance, focuses on training managers to serve as mentors for caregiving staff, aiming to prevent and manage occupational burnout (Box 26). The BAGGer project in Germany implemented comprehensive training sessions on topics such as stress management and violence prevention. These interventions are crucial in a context where most care workers work in solitude and lack immediate social support from colleagues and supervisors but also for ensuring adherence and compliance with organisational interventions (Box 27).

Policy pointers based on the results of this study for policymakers, social partner representatives and OSH researchers are summarised below.

Policy pointers for research in OSH in the home care sector

- More comprehensive research: Research needs to acknowledge the growing diversity of tasks and types of employment in the home care sector beyond formal employment in service-provider organisations. This includes live-in care workers and undeclared workers, who may face unique risks due to their migrant status and the nature of live-in work. Future studies should aim to include a more diverse range of home care workers to provide a comprehensive picture of psychosocial risks across the entire sector.
- Overall, there is limited research evidence on OSH risk exposures and their impact on health outcomes.
- There is a dearth of studies focusing on home care workers' exposures to physical, chemical and biological risks (and related health outcomes) with which to inform effective prevention strategies in the sector.
- There is a notable gap of longitudinal studies that limits knowledge of long-term effects of OSH risk exposures on home carers' health.
- Expand the evidence on the feasibility and effectiveness of different strategies of intervention for risk management and prevention in the home care sector.
- Comparative studies: More research is needed from a cross-national comparative perspective to identify examples of good practices in OSH risk prevention and management with transferability potential.

Policy pointers for OSH practitioners: bridging sector- and company-level strategies

- Develop sector-specific risk assessment and prevention tools tailored to the challenges of home care environments, including digital tools for risk monitoring and providing real-time support to workers.
- Collaborate with clients and household residents: Involve clients and their families in OSH efforts in the home care sector, raising awareness of their role and assisting them in keeping a safe work environment.
- Integrate a gender perspective into risk prevention and management strategies for home care work. Recognise and address the unique risks faced by women, who represent most of the home care workforce.
    - Implement policies that promote work–life balance by introducing flexible working arrangements while also ensuring predictable schedules.
    - Develop specific policies against all forms of abuse and sexual harassment.
- Consider the intersections of gender with other factors, such as age, migration and socioeconomic status in shaping OSH risks and outcomes, and in the design and development of interventions.
- Address workload issues: Implement measures to ensure appropriate staffing and manageable workloads, reduce time pressure and improve quality of care.
- Address psychosocial risks through comprehensive strategies combining organisational and individual approaches. These can include changes in work organisation practices, such as the adoption of teamwork aimed at enhancing job control and social support, and training initiatives addressing emotional demands and the management of stress and risks of burnout.
- Promote participatory approaches: Encourage participation of home care workers and their representatives in the development of OSH initiatives at workplace level. Strengthening home care workers' voice and professional autonomy gives them more control over their work environment and is crucial for developing more effective and adaptable interventions.
- Improve equipment and ergonomics: Provide access to appropriate ergonomic equipment and assistive devices to reduce physical strain, and offer training programmes on patient handling.

Formalisation and professionalisation in home care work: strategies to tackle undeclared work and improve OSH and working conditions

- Addressing precarious working conditions and undeclared work in the home care sector is crucial for ensuring quality of care and sustainability of LTC provision in ageing societies. Improving working conditions can help tackle staff shortages and reduce staff turnover, contribute to job satisfaction and ensure continuity of care in home care services.
- Strengthen legal framework: Implement comprehensive legal frameworks to extend minimum social protection and employment rights to all home care workers, notably to domestic workers directly employed by households.
- Promote formalisation: Develop incentives for employers and workers to transition from undeclared to formal employment by reducing financial and administrative burdens and assist clients in fulfilling their OSH responsibilities as employers.
- Enhance inspection and enforcement: Increase resources and explore innovative approaches for conducting inspections and ensuring compliance with OSH regulations in private homes (e.g. specific campaigns, digital tools, and co-enforcement initiatives between labour authorities, social partners and civil society organisations).
- Strengthen regulatory frameworks or supervision of cross-border recruitment agencies and digital platforms to ensure fair working conditions and prevent misclassification of home care workers.
- Fair and quality commissioning practices: Public administrations at different levels (national, regional and local) can support quality of employment and OSH in the home care sector by

ensuring adequate financing and staffing levels in public services and the inclusion of decent employment and OSH standards in commissioning practices for home care private providers.

- Develop and implement clear legal guidelines for conducting risk assessments and implementing preventive measures in private households.
- Support professional development of home care workers: Promote training and career pathways and wage progression opportunities to enhance the professional status and appeal of home care work, including training on OSH risk prevention and management.
- Promote cross-border knowledge and transferability of practical tools and risk prevention initiatives. Emphasise case-based learning by highlighting workplaces that have successfully implemented changes to reduce OSH risks, thereby enhancing both staff wellbeing and patient outcomes.
- Promote social dialogue and collective bargaining at different levels: Strengthening the role of home care workers' collective organisation and representation can contribute to efforts aimed at the professionalisation of home care work and the enforcement of and compliance with OSH regulations.

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European Agency for Safety and Health at Work

Santiago de Compostela 12
48003 Bilbao, Spain
E-mail: information@osha.europa.eu

https://osha.europa.eu

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