EURES

Report on labour shortages and surpluses

2025

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Abbreviations

AI	artificial intelligence
Cedefop	European Centre for the Development of Vocational Training
EFTA	European Free Trade Association
EU-27	the 27 Member States of the European Union
EU-LFS	European Union Labour Force Survey
EURES	European employment services
Eurofound	European Foundation for the Improvement of Living and Working Conditions
GDP	gross domestic product
ICT	information and communications technology
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
JVR	job vacancy rate
LSS	labour shortage or surplus
LTC	long-term care
NACE	general industrial classification of economic activities within the European Union
NCD	non-communicable disease
NCO	national coordination office
OECD	Organisation for Economic Co-operation and Development
PES	public employment service
SMEs	small and medium-sized enterprises
STEM	science, technology, engineering and mathematics

Country codes

CODE	COUNTRY	CODE	COUNTRY	CODE	COUNTRY	CODE	COUNTRY
AT	Austria	**EE**	Estonia	**IS**	Iceland	**PL**	Poland
BE	Belgium	**EL**	Greece	**IT**	Italy	**PT**	Portugal
BG	Bulgaria	**ES**	Spain	**LT**	Lithuania	**RO**	Romania
CH	Switzerland	**FI**	Finland	**LU**	Luxembourg	**SE**	Sweden
CY	Cyprus	**FR**	France	**LV**	Latvia	**SI**	Slovenia
CZ	Czechia	**HR**	Croatia	**MT**	Malta	**SK**	Slovakia
DE	Germany	**HU**	Hungary	**NL**	Netherlands		
DK	Denmark	**IE**	Ireland	**NO**	Norway		

Glossary

TERM	DEFINITION
ageing population	Refers to a demographic shift characterised by a rising proportion of elderly individuals relative to the total population (European Labour Authority, 2024a).
automation	The use of technology, typically in the form of machines or computer systems, to perform tasks with minimal human intervention (European Labour Authority, 2024a).
digitalisation	The process of converting analogue information into a digital form, enabling the storage, processing and transmission of data using digital technology.
employment level	Defined as the number of people engaged in productive activities in an economy. The concept includes both employees and the self-employed. The two main indicators used to calculate the employment level are the number of persons employed or the number of employees (Eurostat, n.d.-a).
European employment services (EURES) countries	The EU Member States plus Iceland, Liechtenstein, Norway and Switzerland.
extended labour force	The extended labour force is the total number of all employed plus unemployed persons (the labour force), plus those seeking work but not immediately available to work, plus those available to work but not seeking a job (Eurostat, n.d.-b).
green pervasiveness	Green pervasiveness is the share of online job advertisements containing at least one green skill out of the total number of online job advertisements for a given occupation (Cedefop, n.d.-a).
green transition	The comprehensive process of shifting from traditional, resource-intensive and environmentally harmful practices to more sustainable, eco-friendly alternatives. It involves adopting cleaner technologies, reducing carbon emissions, promoting renewable energy sources and implementing environmentally conscious policies across various sectors.
International Standard Classification of Education	The reference international classification for organising education programmes and related qualifications by levels and fields. The latest (2011) version has nine education levels, from level 0 to level 8.
International Standard Classification of Occupations	An international classification developed by the International Labour Organization to organise jobs into a clearly defined set of groups according to the tasks and duties undertaken.
jobseekers	Individuals actively looking for employment opportunities, seeking suitable jobs based on their skills, qualifications and career goals (European Labour Authority, 2024a).
labour demand	The amount of labour that employers seek to hire during a given time period (e.g. expressed in working hours) at a particular wage rate and under specific working conditions, requiring a specific set of skills, in order to meet the needs of the production of goods and the provision of services.
labour market imbalance	An imbalance between supply and demand in a given labour market. It can be driven by underlying skills mismatch but can also be caused by other conditions, such as an imbalance in the overall labour supply and demand.
labour market slack	The labour market slack is the sum of unemployed persons, underemployed part-time workers, persons seeking work but not immediately available to work and persons available to work but not seeking a job. The labour market slack is expressed as a percentage of the extended labour force (Eurostat, n.d.-b).
labour market tightness	A situation where labour demand is high compared with the supply (European Labour Authority, 2024a).
labour migration	The term used to describe the movement/migration of people, from one place to another, for purposes of employment or finding work (International Labour Organization, n.d.). In the scope of the report, the term refers to movement of nationals from non-EURES countries to EURES countries for the purpose of finding employment.

TERM	DEFINITION
labour mobility	EU or EFTA citizens moving their habitual residence to another Member State or EFTA country other than their country of citizenship and/or working in a different Member State or EFTA country to that where they reside (European Commission: Directorate-General for Employment, Social Affairs and Inclusion et al., 2026).
labour shortage	Situation in which the demand for workers in an occupation exceeds the supply of workers available who possess the required skills and are willing to work at a specific wage rate and in specific working conditions in a particular place and point in time (Eurofound, 2021).
labour supply	For the purposes of this study, labour supply is the total number of hours worked in the economy. This is based on the number of people participating in the labour force, structural causes of unemployment and the average hours worked per worker.
labour surplus	Situation in which the demand for workers in an occupation is below the supply of workers available who possess the required skills and are willing to work at a specific wage rate and in specific working conditions in a particular place and point in time.
NACE	A four-digit classification serving as a framework for collecting and presenting statistical data according to economic activity, applicable in a wide variety of European statistics in the economic, social, environmental and agricultural domains.
old-age dependency ratio	The old-age dependency ratio is the ratio of the number of elderly people at an age when they are generally economically inactive (i.e. aged 65+) to the number of people of working age (i.e. 15–64 years old) (Eurostat, n.d.-c).
public employment service	A government-run agency or organisation that provides employment-related services, including job matching, career counselling and support, to jobseekers and employers (European Labour Authority, 2024a).
replacement demand	The number of openings created by people leaving the labour market, either on a temporary basis (e.g. for parental leave or due to sickness) or through retirement or death.
severe shortage	Shortage of a high magnitude, as defined by EURES national coordination offices for their national context.
skills gap	A skills gap can be analysed at the individual level (using a skills audit / competence profiling), at the company/sector level or at the regional, national or international level. It can be linked to an insufficient level of qualification; it may also refer to situations where the workforce has the right level of qualification but lacks specific types of skills (such as management skills) or experience required to perform a task or a job adequately. This term is close to, but not synonymous with, skills shortage and skills mismatch.
skills mismatch	The discrepancy between the qualifications and skills that individuals possess and those needed by the labour market (European Labour Authority, 2024a).
skills shortage	A situation where the demand for people with a particular type of skill exceeds the available supply of people with that skill at the market-clearing rate of pay; also called a talent shortage (European Labour Authority, 2024a).
vulnerability	The conditions determined by physical, social, economic and environmental factors or processes that increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards (UNDRR, n.d.). Alternatively, '[a] person (or household) is vulnerable to future loss of well-being below some socially accepted norms if he or she lacks (or is strongly disadvantaged in the distribution of) assets which are crucial for resilience to risks' (Morrone et al., 2011). A vulnerable group refers to a group of individuals who experience a higher risk of poverty, social exclusion, discrimination and violence than the general population (Cedefop, n.d.-b).
widespread shortage occupation	An occupation with a labour shortage that has been identified by EURES national coordination offices in at least 15 countries.
widespread surplus occupation	An occupation with a labour surplus that has been identified by EURES national coordination offices in at least 14 countries.
working conditions	The working environment and aspects of an employee's terms and conditions of employment. This covers aspects such as the organisation of work and work activities; training, skills and employability; health, safety and well-being; and working time and work–life balance. Pay is also an important aspect. Working conditions overlap with job quality, but it is a broader concept (Eurofound, 2012).

Executive summary

This report analyses labour shortages and surpluses across European employment services (EURES) countries in 2025, drawing on information collected from EURES national coordination offices and complementary EU-level data sources. It explores labour market imbalances, where they are most pronounced, how they have evolved over time, which groups of workers are most affected and how labour mobility can contribute to alleviating mismatches. A dedicated focus is placed on the health and care sector, where shortages are particularly widespread and persistent.

Overall, the findings point to labour shortages that are increasingly structural in nature. While labour markets have begun to loosen compared with the immediate post-pandemic period, shortages remain acute in key occupations and sectors. Demographic change, skills mismatch, working conditions and limited labour mobility continue to constrain adjustment. Addressing these challenges requires an integrated response that combines activation, skills development, improvements in job quality and more effective use of intra-EU mobility and migration.

Labour market imbalances across EURES countries

As in previous reports, labour shortages remain widespread across EURES countries. In 2025, almost all four-digit occupations in the International Standard Classification of Occupations were reported as being in shortage in at least one country, underlining the breadth of labour market tensions. These shortages, 2 617 in total, are not evenly distributed. A small group of countries – most notably Italy (253 occupations in shortage out of the 2 617), the Netherlands (195), Bulgaria (193), Belgium (184) and Romania (170) – account for a large share (38 %) of reported shortage occupations, while others report far fewer, such as Malta (4), Croatia (30) and Ireland (30).

Shortages are most frequently observed in the categories of professionals, craft and related trades workers and plant and machine operators and assemblers. Importantly, they are not confined to highly skilled roles: many occupations requiring medium-level, job-specific skills – particularly in construction, transport and personal services – also face persistent shortages. A substantial share of shortages is classified as being of medium or high severity (57 %), suggesting that employers face sustained difficulties in filling vacancies even as labour market tightness eases overall.

Surpluses, 2 177 in total, are more geographically concentrated still. Austria (322 occupations in surplus), Finland (316), Latvia (284), Czechia (141) and Greece (134) together account for more than half of all reported surplus occupations, with Austria and Finland alone making up one third. Surplus occupations are most common among clerical support workers, elementary occupations and some professional roles. In several cases, surpluses coexist with shortages in the same occupation in different countries or regions, highlighting the uneven spatial distribution of labour imbalances.

These findings underline the importance of addressing shortages not only through domestic measures but also through better matching across borders. Nearly all occupations reported as being in shortage in at least one country are also reported as in surplus elsewhere, with still largely untapped potential for labour mobility. Strengthening EURES matching services, improving information flows and reducing administrative barriers are therefore central to a more efficient reallocation of labour within the EU.

Developments in labour market imbalances over time

Compared with the previous report, the number of shortage occupations that are considered 'widespread' – that is, when more than half of the countries report that occupation as having a labour shortage – has declined (from 43 to 24). At the same time, the severity of widespread shortages has increased, with an average of 30 % of the shortages across these 24 occupations classified as highly severe, compared with an average of 24 % in the previous report. This suggests that shortages are becoming more concentrated in specific occupations and that the short-

fall in workers in those occupations has grown increasingly critical.

The decline in vacancy rates since 2022 suggests some loosening of labour market conditions. However, it has not translated into a substantial easing of shortages in many occupations. Since 2021, employment has continued to grow in 18 out of 24 of the widespread shortage occupations, notably in health and care and hospitality. In other shortage occupations, especially in construction and skilled trades, employment has even declined, reflecting ageing workforces and challenging working conditions that deter new entrants.

Widespread surplus occupations have generally experienced more modest employment growth since 2021 than widespread shortage occupations. While most clerk and secretary roles saw job growth from 2021 to 2024, employment for general office clerks declined, suggesting that AI adoption may be reducing demand for these positions. As AI use rises, further declines in employment are likely.

The findings presented in this report suggest that labour shortages are increasingly driven by structural factors rather than short-term cyclical fluctuations. Policy responses therefore need to go beyond macroeconomic stabilisation and focus on longer-term supply constraints. This includes improving the attractiveness of shortage occupations, expanding relevant training pathways, supporting labour mobility and anticipating the labour market impacts of technological change.

Characteristics of workers in shortage and surplus occupations

Around one quarter of total employment in EURES countries (accounting for around 53 million people) is concentrated in occupations experiencing a widespread shortage or surplus. The distribution of workers across these occupations reveals important intersections between labour market imbalances and demographic characteristics.

Women remain markedly under-represented in shortage occupations and over-represented in surplus ones. In 2024, women accounted for just over one quarter of employment in widespread shortage occupations but around 70 % of employment in widespread surplus occupations. This reflects persistent occupational segregation, with women concentrated in clerical, administrative and care-related roles, while many construction- and engineering-related shortage occupations remain overwhelmingly male-dominated. These patterns not only limit the effective supply of labour in shortage occupations but also increase women's exposure to employment risks in surplus ones.

Age profiles further reinforce these challenges. Older workers – those aged 50 and over – are over-represented in both shortage (36 %) and surplus (39 %) occupations, implying high replacement demand in the coming years as retirements accelerate. At the same time, younger workers are under-represented in many shortage occupations, particularly those requiring long training periods or offering demanding working conditions. Without targeted measures to attract younger cohorts, shortages in these occupations are likely to persist or intensify.

In terms of education, shortage occupations are often characterised by a high share of educated workers with a medium level of education (57 %) who have occupation-specific skills, while surplus occupations more frequently rely on general qualifications (20 %). This highlights the importance of vocational education and training, apprenticeships and continuous upskilling and reskilling. Increasing the supply of highly educated workers alone is unlikely to resolve most shortages.

Migrant and mobile workers play an important role in both shortage and surplus occupations. While their presence helps to alleviate labour shortages in some occupations, overqualification remains widespread, particularly among migrants in low-skilled surplus occupations. Actions that improve skills recognition, reduce mismatch and support upward mobility are therefore essential to making better use of existing labour supply.

Labour shortages in the health and care sector

Labour shortages are particularly acute and persistent in the health and care sector, which employs around 25 million people (or around 11 % of total employment) in the EURES countries. Five health and care occupations are among the 24 widespread shortage occupations; on average, 36 % of shortages in these five occupations are highly severe, compared with an average of 28 % in other widespread shortage occupations. Specialist and generalist medical practitioners, nursing professionals and health care assistants are among the most widespread and severe shortage occupations across EURES countries. In many countries, shortages affect a broad range of health occupations simultaneously, leaving limited scope for domestic reallocation or transnational matching.

These shortages are driven by a combination of demand- and supply-side factors. Population ageing is increasing demand for health and care services, while the workforce itself is ageing. The share of workers aged 50 or over is above 50 % for several health and care occupations in several countries, such as generalist medical practitioners (in Italy, Czechia and Austria), specialist medical practitioners (in Bulgaria, Greece and Lithuania) and nursing professionals (in Lithuania, Bulgaria and Latvia). Long training periods and regulated qualification requirements limit the speed at which labour supply can respond to these shortages. At the same time, difficult working conditions – characterised by heavy workloads, long and irregular hours and emotional strain – undermine retention and discourage new entrants from joining the sector.

Many countries have increasingly relied on mobile workers and migrants to fill health and care vacancies. Among home-based personal care workers, 8 % are EU mobile

workers and 26 % are migrants. In highly educated regulated professions, such as dentists and medical practitioners, up to 18 % of those employed are mobile or migrant workers. While labour mobility and migration are essential components, they are constrained by complex recognition procedures, language requirements and uneven training standards. Moreover, excessive reliance on recruitment from abroad risks exacerbating shortages in sending countries if not accompanied by appropriate safeguards.

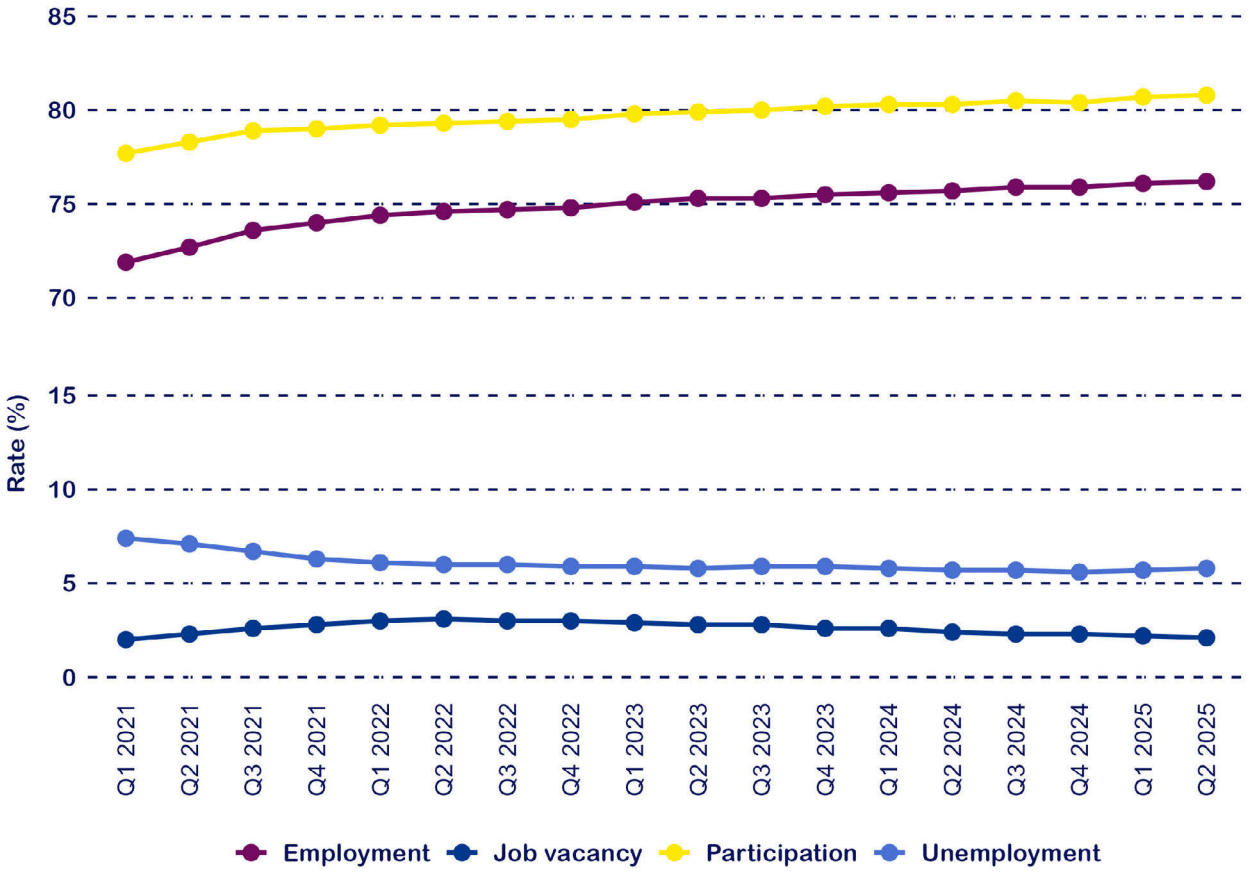
Responses in the health and care sector therefore need to be multifaceted. Improving working conditions and job quality is central to retaining existing staff and attracting new entrants. Expanding training capacity, including through innovative pathways and bridging programmes for foreign-trained professionals, is essential but will yield results only over the medium- to long-term. At the same time, more efficient use of skills – through task shifting, digitalisation and organisational innovation – can help alleviate pressure on overstretched staff.

1. Introduction

1.1. Background

EU gross domestic product (GDP) growth slowed from 0.5 % to a modest 0.2 % in the second quarter (Q2) of 2025, compared with the previous quarter (Eurostat, 2025a). At the same time, employment growth increased to 0.1 % in Q2 2025, following stagnation in the first quarter. Much of the employment growth in the second quarter can be attributed to older workers and women entering employment (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2025a). Unemployment in the European employment services (EURES) countries remained relatively stable up until Q2 2025, with the rate remaining around 5.7 % throughout the year (Figure 1). Youth unemployment, on the other hand, decreased to 14.6 % in August 2025, from 15.2 % in the same month of the previous year (Eurostat, 2025b). The job vacancy rate (JVR) fell further during Q2 2025, down to 1.9 % from 2.1 % the year before, signalling a continuation of a loosening labour market overall, albeit with marked differences across sectors (Eurostat, 2025c). Both construction and administrative and support services continue to exhibit high JVRs.

Figure 1: Employment, labour market participation, unemployment and job vacancy rates in the EURES countries, Q1 2021–Q2 2025 (people aged 20–64)



NB: Data used are seasonally adjusted.

Sources: Eurostat datasets (lfsi_emp_q) (11 September 2025), (jvs_q_nace2) (15 September 2025) and (une_rt_q) (11 September 2025).

Largely, these developments reflect a challenging global context, amid weak economic sentiment and uncertainty around geopolitical tensions and trade policy (European Commission: Directorate-General for Economic and Financial Affairs, 2025a). Looking ahead, as EU employment expands modestly, unemployment is expected to continue declining, underpinned by still tight labour markets, improved productivity and wage growth. Influenced by megatrends such as ageing populations, the EU's greening targets, ever-evolving technological progress and the strive towards competitiveness, shortages in key sectors of the labour market will remain a key constraint, unless decisive action is taken.

Despite the economic challenges and uncertainty, firms continued to expand on hiring; thus, the employment rate, at 75.8 %, is close to the 2030 target of 78 % of people aged 20–64 in employment (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2025b). At the same time, labour shortages remain. So effective policy action should activate the vast untapped labour resources and thus alleviate existing mismatches in the EU labour market. One fifth of the working-age population in the EU was inactive in 2024. Women, older people and migrants make up four fifths of these 51 million people. Moreover, 14 % of young people (aged 20–29 years), or 6.8 million, are not in employment, education or training. Ten million people outside the labour force would like to work, but are prevented from doing so for various reasons (e.g. personal preferences, health, caregiving), and 6.5 million people are working but wish to work more hours. This shows the extent of the potential additional labour force, which could be activated under the right conditions.

If left unresolved, imbalances in the labour market can have adverse effects on both employees and employers. Although labour shortages may enhance the negotiating power of workers and jobseekers, they can also lead to deteriorating working conditions, particularly in terms of hours and work intensity (Zwysen, 2024). For businesses, these shortages often translate into increased costs due to higher employee turnover and constraints on production capacity and growth prospects. Small and medium-sized enterprises (SMEs) are particularly impacted by shortages (Eurofound, 2025).

Action is therefore crucial to alleviate the labour market imbalances and counteract their negative implications. Employers are increasing job quality, be it through better pay, flexible work, childcare facilities or training, as a way to compete for labour in the sectors most affected by shortages (Zwysen, 2024). Promotion of participation and employment of older people is increasingly seen as a key policy in the EU and its Member States (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2024). In addition, removing participation barriers for women, people with disabilities and non-EU nationals is needed (Eurofound, 2025). Finally, effectively addressing shortages will require more targeted measures to facilitate the transition of young people from education to work (Eurofound, 2024).

1.2. Scope and methodology

This report aims to comply with Article 30 of Regulation (EU) 2016/589 [1]. This regulation mandates that each EURES country collect and examine gender-disaggregated data on labour market imbalances, specifically shortages and surpluses, at both the national and sectoral levels. Particular attention is given to vulnerable groups.

The 2025 report, the eighth report in the series, continues with a consistent yet flexible methodological approach. This allows for meaningful comparisons of key insights across different years, while acknowledging relevant limitations. Such a framework supports identifying whether labour shortages are structural or temporary. This edition places a spotlight on cross-border labour mobility and the health and care sector.

The objective of this report is to identify occupations facing labour shortages and those facing surpluses across the EURES countries, which are the EU Member States and Iceland, Liechtenstein, Norway and Switzerland. In addition, it offers insights into the degree of severity of these labour market imbalances.

The primary source of data for this report is the EURES national coordination offices (NCOs). In Q3 2025, NCOs were asked to identify occupations within their respective countries or regions that were experiencing labour shortages or surpluses. As in the previous edition of this report series, NCOs assessed all 436 occupations classified under the four-digit International Standard Classification of Occupations (ISCO) 2008 framework, indicating whether there was a shortage, a surplus, a balance (neither shortage nor surplus) or both a shortage and a surplus – indicating a regional variation. If no data were available for a particular occupation, this was also noted [2]. To ensure the completeness and reliability of the data, a rigorous quality control process was carried out. A detailed explanation of the methodology and data-cleaning procedures is available in Annex 1.

Of the EURES countries, Iceland, Liechtenstein and Switzerland were the only ones that did not complete the data collection questionnaire, and thus are excluded from all the analyses based on NCO data. In Belgium, three of the four NCOs, representing the Brussels, Flemish and Walloon regions, submitted data on their respective regional labour market imbalances. All occupations identified as being in shortage or surplus by at least one of these regions were included in Belgium's overall contribution.

While every participating country reported occupations facing shortages, three EURES countries, Ireland, Italy and Poland, did not provide data on surplus occupations. In these cases, the necessary information to identify surpluses was not available at the national level.

Even though the method used to gather this information from the NCOs remains consistent with the previous year's approach, any changes in how NCOs compile their data may affect the comparability of results over time. In cases where countries reported significant shifts in the number of shortages or surpluses compared with the previous year, follow-up enquiries were made to determine whether these changes reflected actual labour market developments or were due to methodological adjustments. Such changes often involve the use of new or additional indicators to identify occupations in imbalance. In the following countries, methodological updates were reported for the 2025 data: Spain, Italy, Malta, Portugal, Slovakia and Finland. In these instances, direct comparisons with earlier editions regarding the number of identified imbalances are not possible.

Moreover, it is left to each NCO to determine the most suitable method for identifying whether occupations are in shortage or surplus in their national context. Consequently, the definition of shortage and surplus occupations, in terms of their identification using quantitative methods such as thresholds for specific indicators (e.g. ratio of jobseekers to vacancies), varies across countries. Similarly, the method for determining the severity of a shortage or surplus (i.e. low, medium or high severity) differs across countries as well. Therefore, caution is advised in direct country comparisons of the data.

To identify occupations affected by labour shortages and/or surpluses, NCOs relied on a range of sources and indicators (Table 1). The primary data source was administrative

1 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R0589-20190731.
2 Not all NCOs indicated the status consistently for each occupation. In some cases, answers for specific occupations were missing. It was then assumed that the information was not available for these occupations.

records from public employment services (PESs), which included employer-reported vacancies and information on jobseekers. It is important to recognise that PES data typically reflect specific aspects of vacancies and jobseeker profiles, rather than offering a comprehensive view of the entire labour market. Moreover, national differences exist in terms of regulatory requirements, for example, whether employers are obliged to report vacancies to a PES or whether jobseekers must register with a PES, which can influence the scope and nature of the data collected.

Commonly used indicators used by the NCOs include the ratio of vacancies to jobseekers within a given occupation and the absolute number of jobseekers or vacancies. The NCO data presented in this report cover the years 2025 and 2024. The sources used go beyond purely quantitative data. In addition to statistical indicators, consultations were held with employers and labour market experts to enrich the analysis and provide a more detailed understanding of occupational mismatches.

Table 1: Main data sources and indicators used to identify labour shortages and surpluses, 2025

Data source	Number of reporting NCOs	Indicator used	Number of reporting NCOs	Reference year	Number of reporting NCOs (1)
PES administrative data	23	Ratio of jobseekers to vacancies	15	2025	15
View of employers (qualitative)	1	Total number of vacancies (2)	8	2024	15
Occupational barometer (3)	2	Total number of jobseekers (2)	8		
National data (e.g. national Labour Force Survey)	4	Ratio of jobseekers to total employed people	6		
Third-party employment survey (i.e. a survey not conducted by a PES)	3	Views of PES (qualitative)	7		
Views of the PES (qualitative)	6	Employer skills shortage surveys	5		
Views of experts (qualitative)	1	Ratio of vacancies to total employed people	2		
Immigration data	2	Views of experts (qualitative)	2		
Cedefop's Skills-OVATE (4)	1	Employers' views (no survey) (qualitative)	3		
PES employment survey	3	Number of work permits issued	2		
		Frequency of sourcing the skill from abroad	1		
		Time required to fill vacancies	1		

(1) This number includes the separate submissions from the three Belgian regions. Therefore, the total sum is 30 (i.e. the number of NCOs) and is higher than the number of countries (28).
(2) While NCOs generally rely on more than one indicator to determine occupations in shortage or surplus, an indicator that exclusively considers either the demand or the supply side is not sufficient to establish whether a shortage or surplus is present in an occupation.
(3) An occupational barometer is often based on qualitative data and has a shorter time horizon than a typical forecast.
(4) Cedefop, European Centre for the Development of Vocational Training; Skills-OVATE, Skills Online Vacancy Analysis Tool for Europe.

NB: Countries could select up to three data sources and up to three indicators from a list, and could add any other alternative ones.
Source: Data submitted by EURES NCOs.

To provide deeper insight and context for the labour market imbalances identified, a variety of secondary data sources were consulted. These included publicly available datasets from Eurostat, the Skills Online Vacancy Analysis Tool for Europe (Skills-OVATE) from the European Centre for the Development of Vocational Training (Cedefop), the European Working Conditions Survey from the European Foundation for the Improvement of Living and Working Conditions (Eurofound) and other relevant studies and reports.

In addition, data from the European Union Labour Force Survey (EU-LFS) were analysed in relation to the identified imbalances, with a focus on understanding their impact on vulnerable groups. The report offers a detailed examination of four key demographic characteristics – gender, education level, age and country of origin – to better understand which groups are most affected.

The analysis also incorporated qualitative data to explore the underlying causes of labour market imbalances, particularly within the health and care sector. This qualitative assessment drew on three main sources: a literature review, findings from focus groups and interviews (see Annex 3 for the discussion guide) and responses from EURES NCOs via an open-ended questionnaire (see Annex 4).

2. Labour market imbalances identified

2.1. Geographical distribution of labour market imbalances

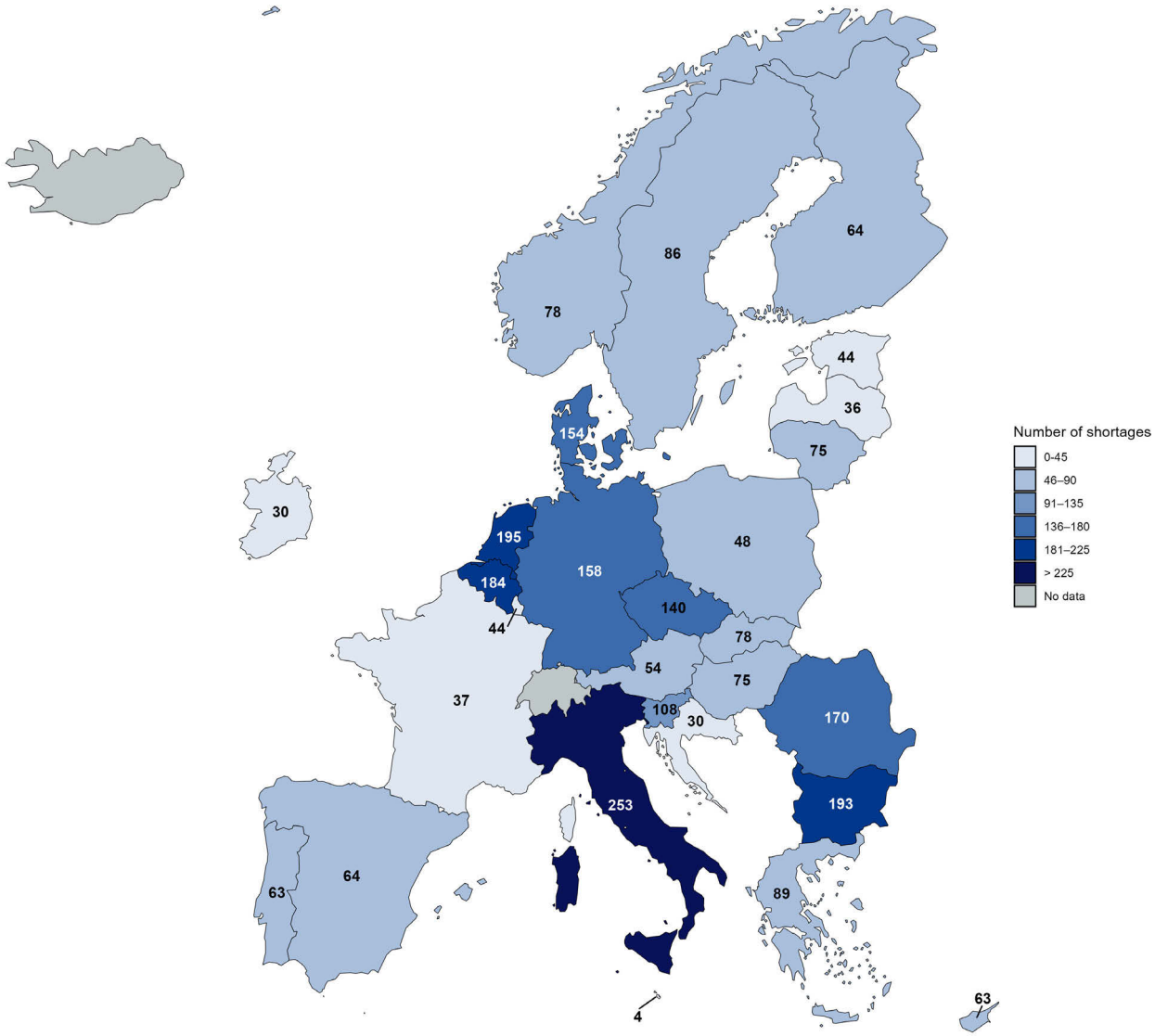
2.1.1. Countries reporting shortages

Shortage occupations were identified by 28 EURES countries [3]. Nearly all (97 %) unique occupations at the four-digit ISCO 2008 level are indicated to have a labour or skills shortage in at least one country. In total, 2 617 instances of shortages were reported across EURES countries [4]. When looking at the numbers of shortages at the country level, large variations are observable (Figure 2). Eight countries face shortages in fewer than 50 occupations, while 11 countries report between 50 and 100 shortage occupations and nine countries have more than 100 shortage occupations. The countries facing the largest number of shortages are Italy (253), the Netherlands (195), Bulgaria (193), Belgium (184) and Romania (170). These five countries account for 38 % of all reported shortages among EURES countries. On the other hand, Malta (4), Croatia (30), Ireland (30), Latvia (36) and France (37) have the fewest shortage occupations, together amounting to merely 5 % of all shortages. No apparent regional pattern in the number of shortage occupations is observable, with the countries with the most shortages located in Italy, the Netherlands and Bulgaria.

3 NCOs from Iceland, Liechtenstein and Switzerland have not provided data.

4 This is not a count of unique occupations, as all countries could mention the occupation. Overall, 421 of the 436 distinct four-digit ISCO 2008 occupations were identified as shortage occupations by at least one country. Shortage occupations include those that were categorised as either 'Shortage' or 'Both shortage and surplus (e.g. regional differences)'.

Figure 2: Numbers of shortage occupations identified, by EURES country, 2025



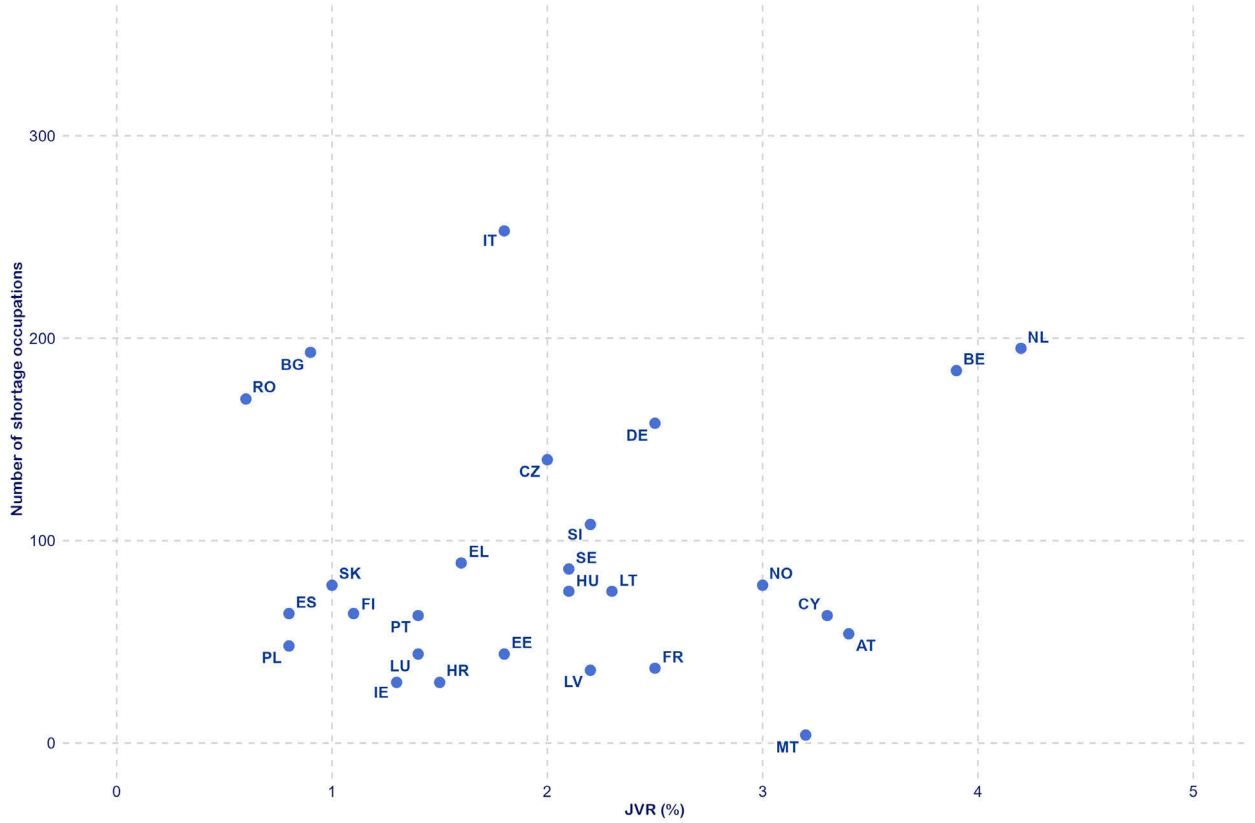
NB: Includes occupations categorised as 'Shortage' and 'Both shortage and surplus (e.g. regional differences)'.
Source: Data submitted by EURES NCOs.

In most countries, a positive correlation is observed between the number of occupations identified as being in shortage and the JVR, while the correlation between shortages and the unemployment rate is generally negative (see Figure 3 and Figure 4). A high JVR may reflect economic expansion or substantial replacement demand, and, when unemployment is low, this can result in a greater number of reported shortages. For instance, Belgium and the Netherlands have the highest JVRs and are also among the top five countries in terms of the number of shortage occupations. At the same time, the Netherlands has lower unemployment rates than the other top five countries with the highest number of shortage occupations.

However, this pattern does not always hold true. Malta has very few shortage occupations, but has a high JVR and a low unemployment rate. This situation can be explained by the nature of shortage occupations and their proportion to total employment, along with recruitment methods (such as informal hiring through personal networks rather than public job postings). Some countries may report fewer shortage occupations, yet these roles might represent a large share of employment, which could still result in a high JVR despite the lower count of occupations in shortage.

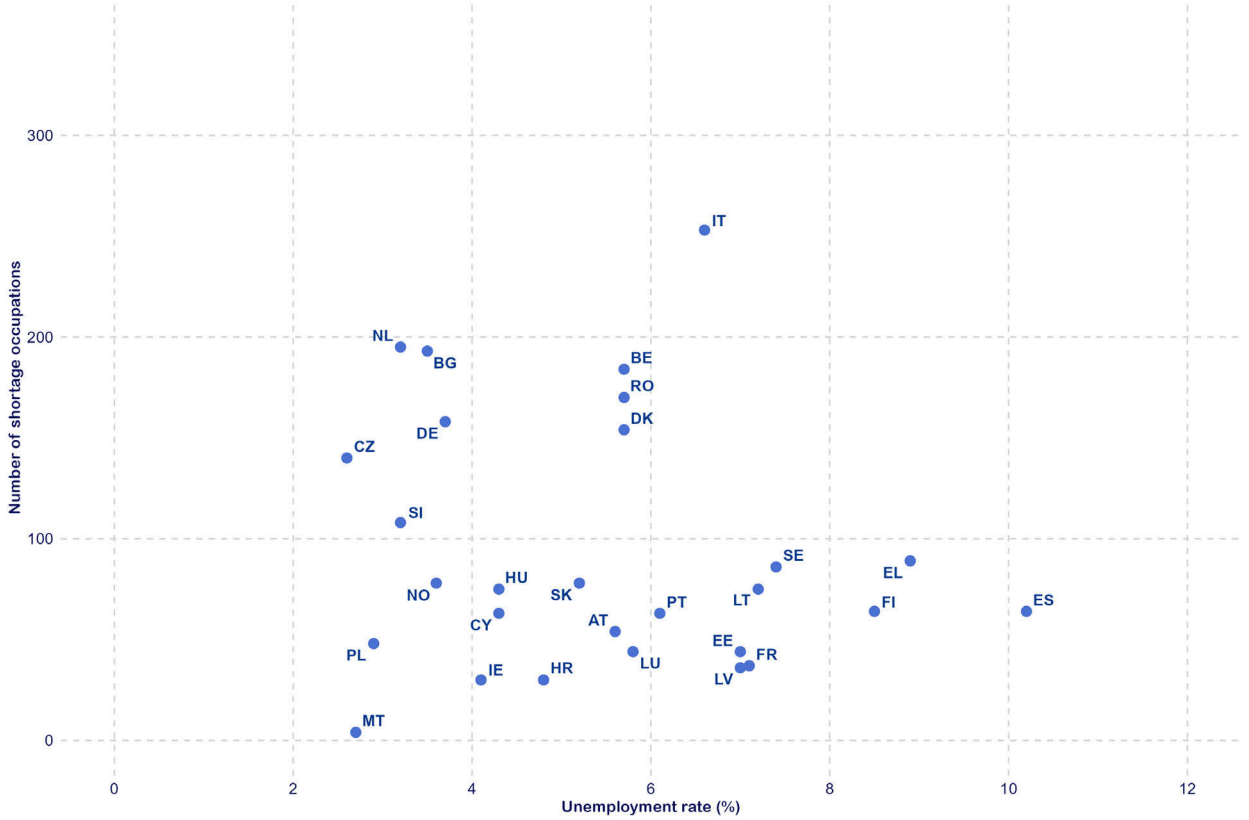
Moreover, the strength of the relationship between the JVR and the number of shortage occupations may vary depending on how NCOs define and identify shortages. For instance, in Bulgaria, where the JVR is relatively low, an occupation is classified as being in shortage if there are fewer than 20 jobseekers per vacancy. By contrast, Austria, which has a high JVR, uses a much stricter threshold, considering an occupation in shortage if the ratio of jobseekers to vacancies falls below 1.4.

Figure 3: Number of shortage occupations and JVR, by EURES country, Q2 2025



NB: Includes occupations categorised as 'Shortage' and 'Both shortage and surplus (e.g. regional differences)'.
Sources: Data submitted by EURES NCOs; Eurostat dataset (jvs_q_nace2) (15 September 2025).

Figure 4: Number of shortage occupations and unemployment rate, by EURES country, Q2 2025 (people aged 20–74 years)



NB: Includes occupations categorised as 'Shortage' and 'Both shortage and surplus (e.g. regional differences)'.
Sources: Data submitted by EURES NCOs; Eurostat dataset (une_rt_q) (11 September 2025).

Occupations may be reported to be in shortage at the national level. However, it may also be the case that occupations exhibit both shortages and surpluses within the same country. Such a situation may be due to regional differences in terms of demand and supply. In 12 countries, NCOs reported occupations that have both shortages and surpluses (Figure 5). Belgium reported the most occupations with both shortages and surpluses [5]. Finland and Hungary also indicate a relatively large number of occupations with regional differences [6].

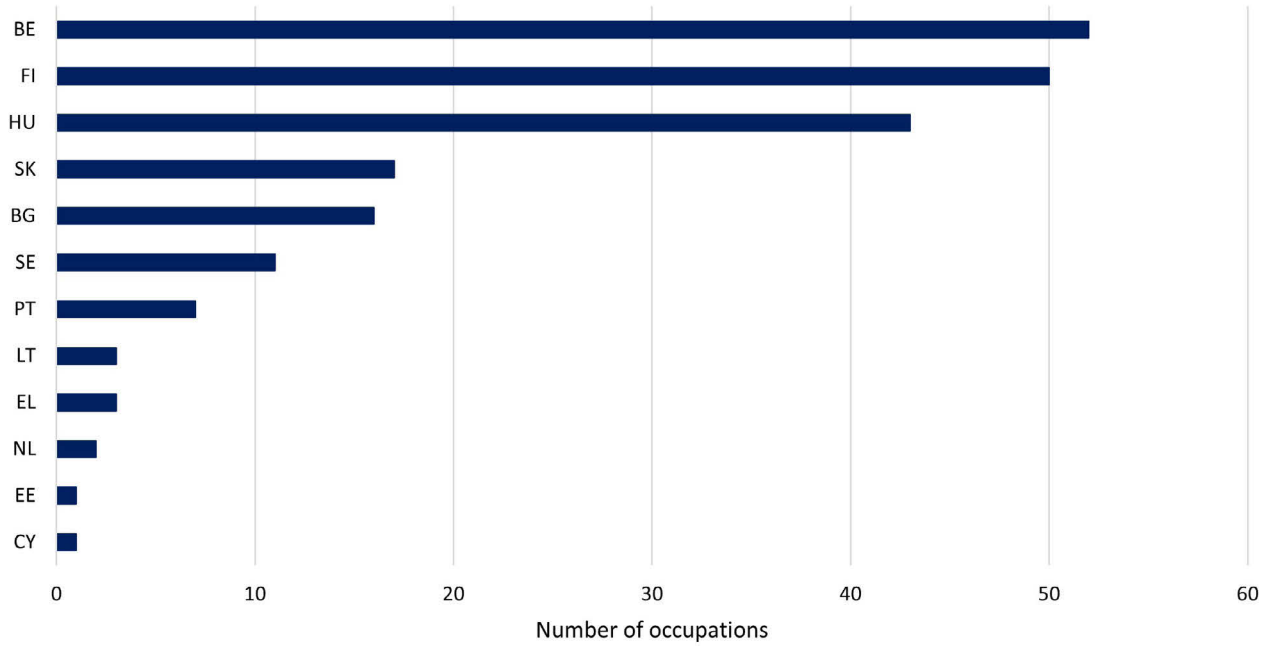
Among the occupations reported to be in shortage and surplus at the same time, the following broad occupational groups are frequently mentioned:

- elementary occupations, notably cleaners and helpers in offices, hotels and other establishments, other cleaning workers and crop farm labourers,
- services and sales workers, notably bartenders and home-based personal care workers.

The occurrence of both shortages and surpluses in the same occupation within a country indicates the potential to address these imbalances by encouraging workers to relocate from areas with labour surplus to those experiencing shortages. The degree to which such imbalances can be mitigated depends not only on the specific nature and scale of the shortages and surpluses but also on factors such as workers' awareness of available job opportunities and their readiness and capacity to relocate.

5 The large number of occupations reported as 'Both shortage and surplus (e.g. regional differences)' is probably due to the methodology used to collect Belgian data. Each region submits its own data, which are aggregated at a later stage.
6 It is possible that more occupations exhibit shortages and surpluses simultaneously, but that the information necessary for identifying them is lacking. For example, a few NCOs report information on shortage occupations only, suggesting that indicators on surplus occupations are not available at the same level.

Figure 5: Countries reporting occupations with both shortage and surplus, 2025



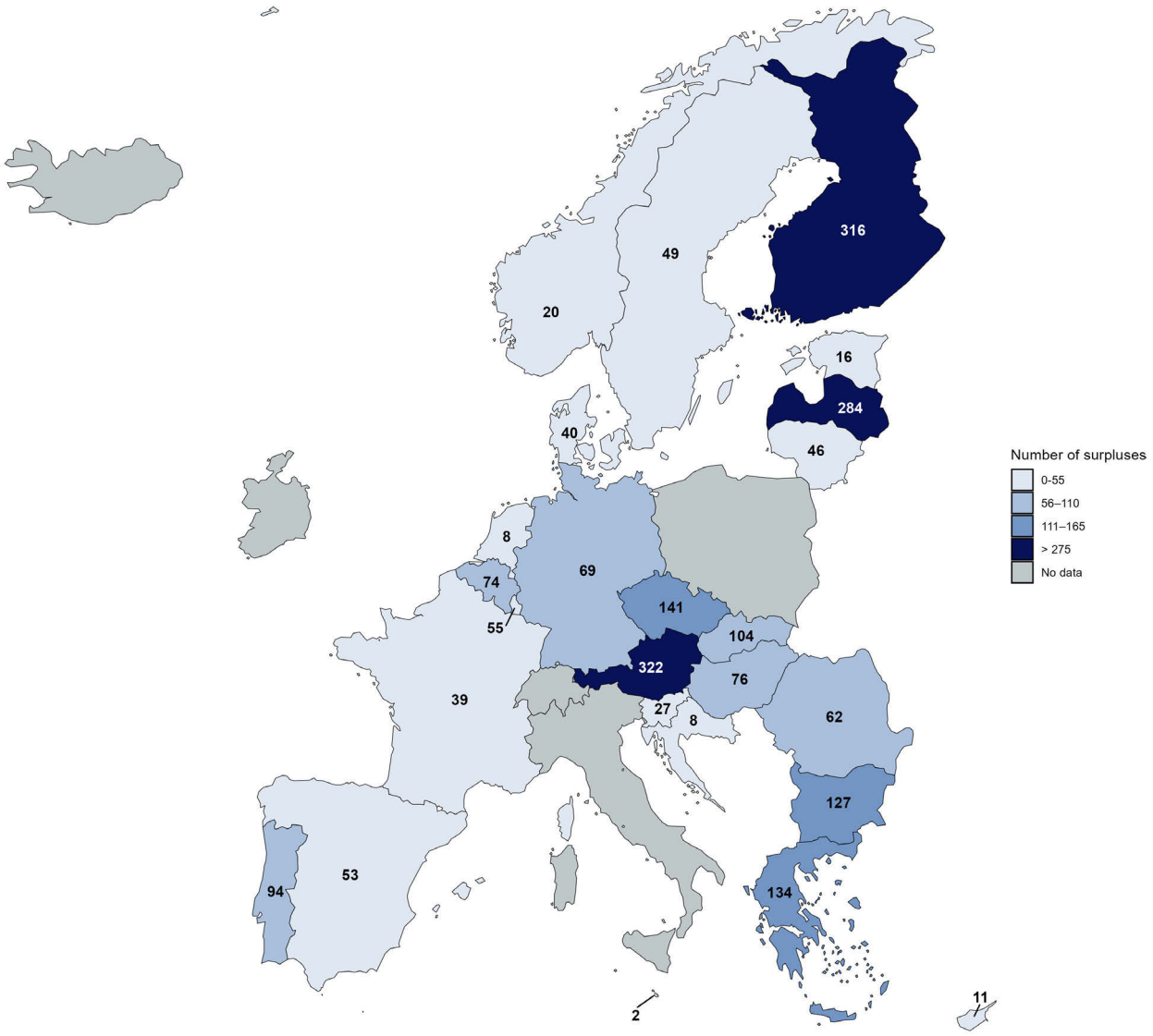
Source: Data submitted by EURES NCOs.

2.1.2. Countries reporting surpluses

Across the 25 EURES countries that submitted this information [7], surpluses have been identified in a total of 2 177 occupations, with large variations in the number of surpluses across countries (Figure 6). Austria (322), Finland (316), Latvia (284), Czechia (141) and Greece (134) are the countries facing the largest number of occupations in surplus. Combined, these five countries account for 55 % of all surplus instances across the 25 EURES countries. Austria and Finland alone make up nearly one third of all surpluses. Malta (2), the Netherlands (8), Croatia (8), Cyprus (11) and Estonia (16) report the fewest occupations to be in surplus, together representing just 2 % of the 2 177 occupations.

7 Ireland, Italy and Poland did not submit information on surplus occupations. NCOs from Iceland, Liechtenstein and Switzerland did not provide data.

Figure 6: Number of surplus occupations identified, by EURES country, 2025



NB: Includes occupations categorised as 'Surplus' and 'Both shortage and surplus (e.g. regional differences)'.
Source: Data submitted by EURES NCOs.

Figure 7 illustrates that there is no consistent pattern linking the number of shortage occupations to surplus occupations across countries. Countries positioned above the diagonal line have more surplus occupations than shortages, whereas those below the line face more shortages than surpluses. Countries located close to the diagonal tend to have a relatively even distribution between the two.

Ideally, a well-balanced labour market, where supply meets demand, would place a country in the lower-left corner of the chart. For example, the labour markets of Croatia, Luxembourg, Hungary and Malta appear to be more balanced than those of other countries.

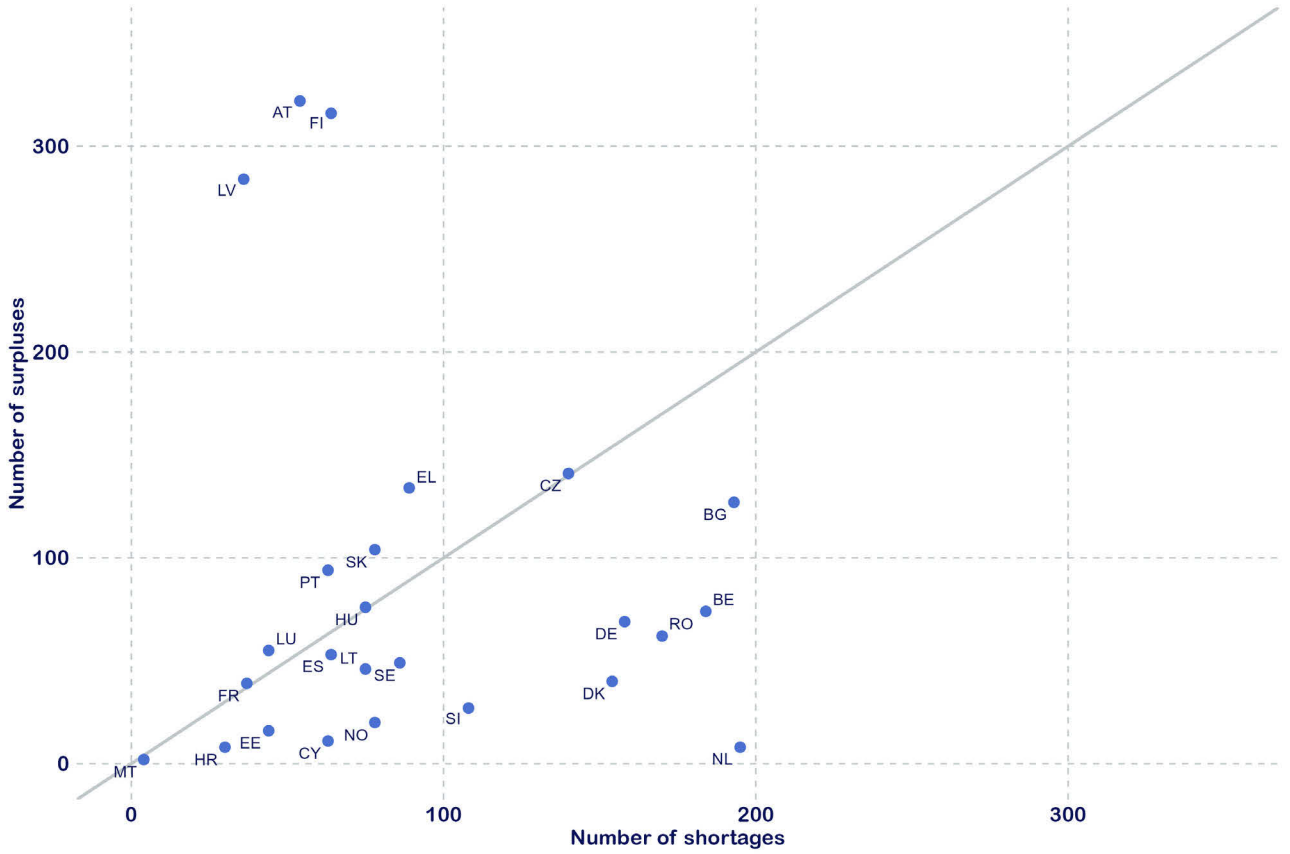
Countries such as the Netherlands, Denmark, Romania, Germany and Belgium show a high number of shortage occupations and relatively few surplus ones. This suggests a general shortfall in labour supply or in skills, possibly due to rapid growth in certain sectors or challenges in replacing workers.

By contrast, countries such as Latvia, Finland and Austria, where surplus occupations substantially outnumber shortages, are likely facing insufficient demand for labour in certain fields or misalignments between qualifications and job requirements.

France, Hungary and Czechia report similar numbers of shortage and surplus occupations. In these cases, it may be possible to reduce labour market imbalances by facilitating transitions from surplus to shortage roles. However, the success of such transitions depends on several factors: the types of occupation involved, the compatibility of re-

quired skills and qualifications, the differences in working conditions and the scale of supply and demand in each occupation. Additional considerations include workers' awareness of job opportunities, employers' knowledge of available talent and the willingness of both sides to adapt, whether through occupational mobility, relocation or openness to hiring from adjacent fields with transferable skills.

Figure 7: Number of shortage occupations versus surplus occupations reported, by EURES country, 2025

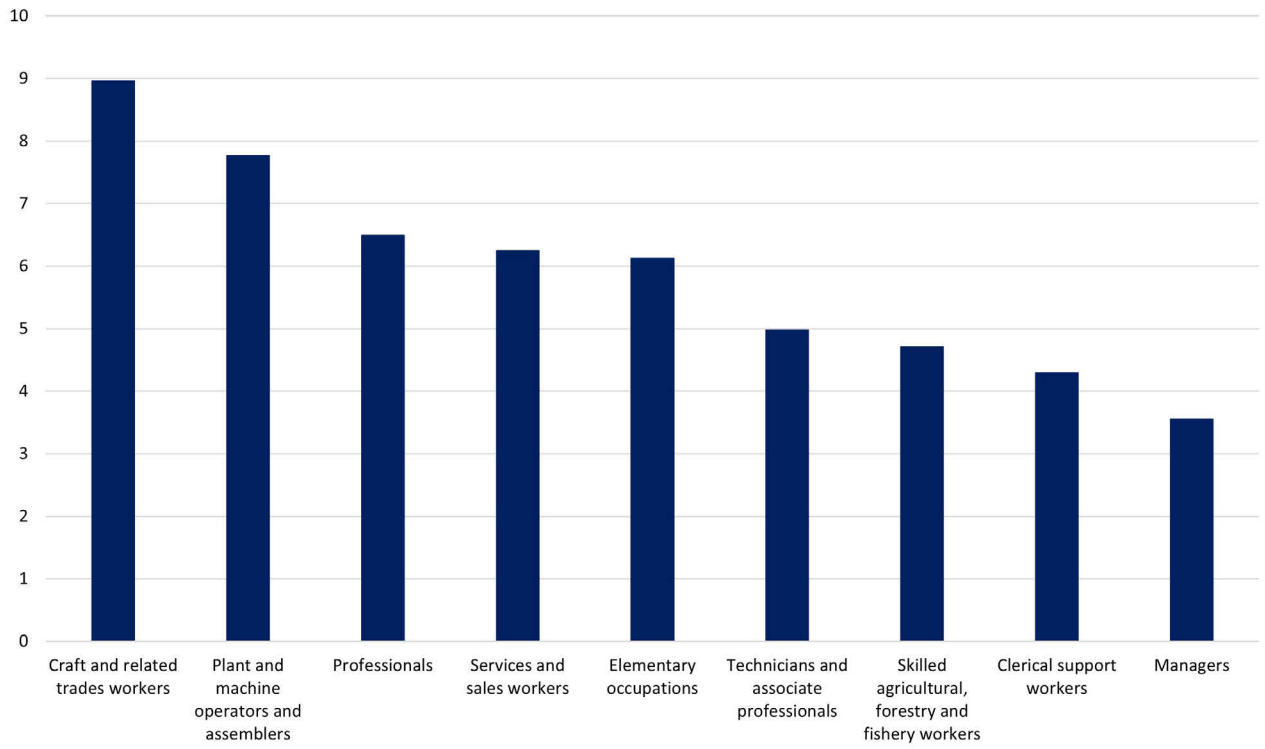


NB: Includes occupations categorised as 'Shortage', 'Surplus' and 'Both shortage and surplus (e.g. regional differences)'.
Source: Data submitted by EURES NCOs.

2.2. Occupations in shortage

Shortages are most frequently observed among craft and related trades workers, plant and machine operators and assemblers and professionals (Figure 8). Nevertheless, labour shortages are not confined to these groups. In fact, every broad occupational category includes at least one occupation experiencing shortages in at least one country. This highlights the widespread and varied nature of labour market imbalances across the EURES countries.

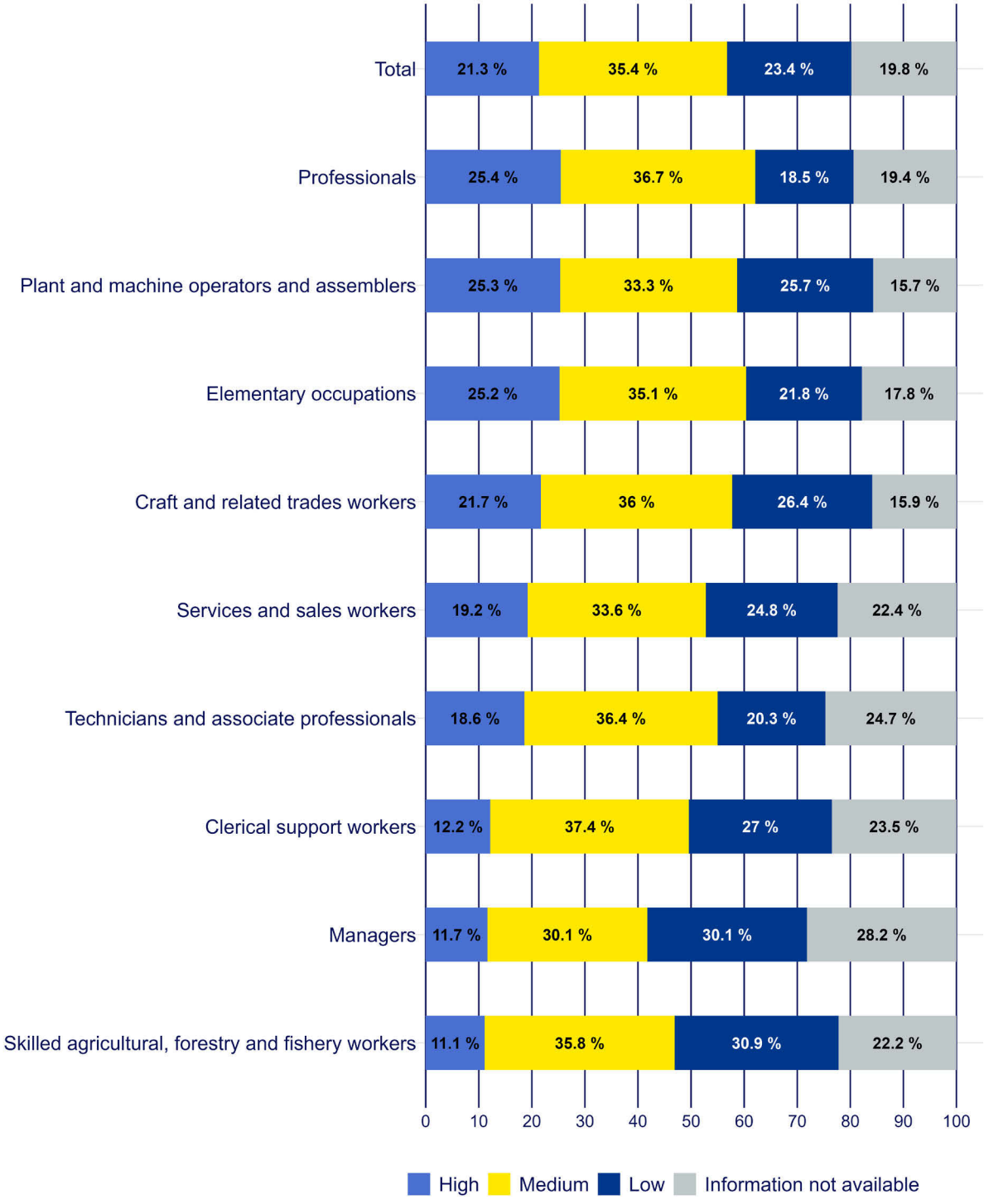
Figure 8: Most common shortage occupations, by broad occupational group, 2025



NB: Calculated as the ratio of the number of shortage occupations identified to unique shortage occupations within each group.
Sources: Data submitted by EURES NCOs; ISCO classification list.

Among occupations identified as being in shortage, 21.3 % of shortages are reported as being of high severity, 35.4 % as medium severity and 23.4 % as low severity. The occupational group with the highest proportion of severe shortages is that of professionals, followed by plant and machine operators and assemblers and elementary occupations (Figure 9). High-severity shortages are also frequently observed among craft and related trades workers. This demonstrates that labour shortages are not limited to roles requiring advanced qualifications. In fact, shortages tend to be less severe in groups such as managers, technicians and associate professionals, and skilled workers in agriculture, forestry and fisheries.

Figure 9: Severity of shortage occupations, by broad occupational group, 2025



NB: The percentages might not add up to exactly 100 % due to rounding.
Source: Data submitted by EURES NCOs.

To evaluate how pronounced a shortage is in a particular occupation, both the number of countries reporting the shortage and the severity of the shortage are considered. In this context, an occupation is classified as having a 'widespread shortage' if it is reported as being in shortage in more than half of the countries that provided data.

The occupations most commonly facing widespread shortages include specialist medical practitioners, welders and flame cutters, building and related electricians, nursing professionals and plumbers and pipe fitters (Table 2). These roles are reported as being in shortage in nearly three quarters of the countries that submitted information.

The broader list also features numerous health-related and skilled trades occupations. As in previous editions of this report, engineering and construction roles continue to be prominently represented among widespread shortage occupations.

Many of these occupations fall within the same subgroups at the two-digit level of the ISCO 2008 classification, including the following:

- health professionals: generalist and specialist medical practitioners, nursing professionals and physiotherapists,
- building and related trades workers (excluding electricians), such as plumbers and pipe fitters, floor layers and tile setters, carpenters and joiners, air conditioning and refrigeration mechanics and roofers,
- metal, machinery and related trades workers, including welders and flame cutters, sheet metalworkers, structural metal fabricators and erectors, machine tool setters and operators, vehicle mechanics and repairers and machinery mechanics and repairers,
- electrical and electronic trades workers, such as building and related electricians and electrical mechanics and fitters.

Among these widespread shortage occupations, a relatively high proportion of the shortages are reported as severe. On average, nearly one in three of these shortages is considered highly severe, compared with just one in six for occupations not classified as having a widespread shortage.

Further distinctions can be made by examining the severity of shortages within commonly reported occupations. For instance, shortages of welders, flame cutters and specialist medical practitioners are reported by 22 out of the 28 countries. However, the degree of severity of the shortages of specialist medical practitioners are often greater than those of welders or flame cutters. A similar difference can be observed between building and related electricians and nursing professionals, and between sheet metal workers and generalist medical practitioners. This may indicate dire labour market imbalances in the health and care sector, compared with the construction sector. The shortages in public service sectors, such as health and care, come with widespread negative societal effects (Eurofound, 2023).

Table 2 also highlights recent developments in the most pronounced shortage occupations, looking at changes since the previous year (for additional details, consult Table 14 and Table 15 in Annex 5, which show trends over several years). Several roles appear to face persistent shortages, as they are consistently reported to be in shortage by a large share of countries. Such occupations may be considered to face structural shortages, as opposed to those occupations in which shortages might reasonably subside in the short-to-medium term. Notably, welders and flame cutters have remained high on the list over recent years. Other occupations with shortages include nursing professionals, specialist medical practitioners, plumbers and pipe fitters and heavy truck and lorry drivers.

Shortages in healthcare professions, in particular specialist and generalist medical practitioners, became more pronounced across EURES countries in 2025, possibly reflecting the higher demand for healthcare from ageing populations. At the same time, shortages in several construction sector-related occupations also became more substantial in 2025. Climate-related policy initiatives contributed to rising demand in construction and its supply chains. Workers such as building electricians, air conditioning mechanics and roofers are increasingly sought after. Shortages in occupations linked to the health and care and the construction sectors seem to be of a more structural nature, requiring targeted policy action to alleviate the imbalances.

Shortages in the hospitality sector are starting to become less pronounced than in previous years, particularly in roles such as butchers and cooks. This may indicate that the increase in demand in the hospitality sector, fuelled by the rapid recovery from the COVID-19 pandemic and not met by a similar increase in labour supply, seems to be subsiding.

The structural nature of labour shortages becomes even more apparent when looking at occupations experiencing high-severity shortages, compared with general shortage trends. Many of the widespread shortage occupations mentioned above, which have consistently ranked high over the past few years, particularly those related to the health and care and construction sectors, are the same ones that are most frequently reported to have a high-severity shortage.

Overall, there seems to be a concerning trend of increasing severity among most shortage occupations, with several roles identified as having a high-severity shortage in more countries than in 2024.

Table 2: Widespread shortage occupations, by number of countries, prevalence of high severity and changes since previous year, 2025

Occupation	Number of countries reporting occupation in shortage (out of 28)	Percentage of shortage reports classed as high severity	Percentage of shortage reports classed as high or medium severity	Change (percentage points) in share of countries reporting shortage since 2024	Change (percentage points) in share of high-severity shortages since 2024
Specialist medical practitioners	22	55 %	82 %	6.2	11.7
Welders and flame cutters	22	32 %	73 %	- 0.7	- 3.0
Building and related electricians	21	29 %	48 %	- 0.9	1.3
Plumbers and pipe fitters	20	35 %	55 %	- 1.0	6.4
Nursing professionals	20	40 %	80 %	- 4.4	3.6
Sheet metal workers	19	11 %	58 %	2.3	- 5.3
Generalist medical practitioners	19	37 %	74 %	5.8	9.1
Heavy truck and lorry drivers	19	32 %	84 %	- 4.6	- 16.0
Bus and tram drivers	19	32 %	74 %	5.8	3.8
Health care assistants	18	28 %	61 %	- 1.2	1.5
Electrical mechanics and fitters	17	24 %	59 %	- 1.4	6.9
Butchers, fishmongers and related food preparers	17	18 %	65 %	- 4.8	1.9
Structural metal preparers and erectors	17	18 %	65 %	- 1.4	- 10.1
Cooks	17	29 %	59 %	- 15.1	11.2
Air conditioning and refrigeration mechanics	16	38 %	81 %	2.0	6.3
Carpenters and joiners	16	25 %	63 %	2.0	0.0
Motor vehicle mechanics and repairers	16	44 %	69 %	- 1.5	14.3
Chefs	16	19 %	56 %	- 1.5	1.1
Agricultural and industrial machinery mechanics and repairers	16	25 %	69 %	2.0	0.0
Electrical engineers	16	38 %	50 %	2.0	6.3
Roofers	15	47 %	60 %	8.7	8.2
Metal working machine tool setters and operators	15	27 %	73 %	- 8.5	4.4
Floor layers and tile setters	15	13 %	47 %	8.7	- 9.7
Physiotherapists	15	20 %	73 %	- 11.9	9.5

NB: Widespread shortage occupations are defined as occupations indicated as being in shortage by more than half of the countries that reported shortage occupations. Occupations are ranked based, first, on the number of countries reporting a shortage and, second, on the share of high-severity shortages.

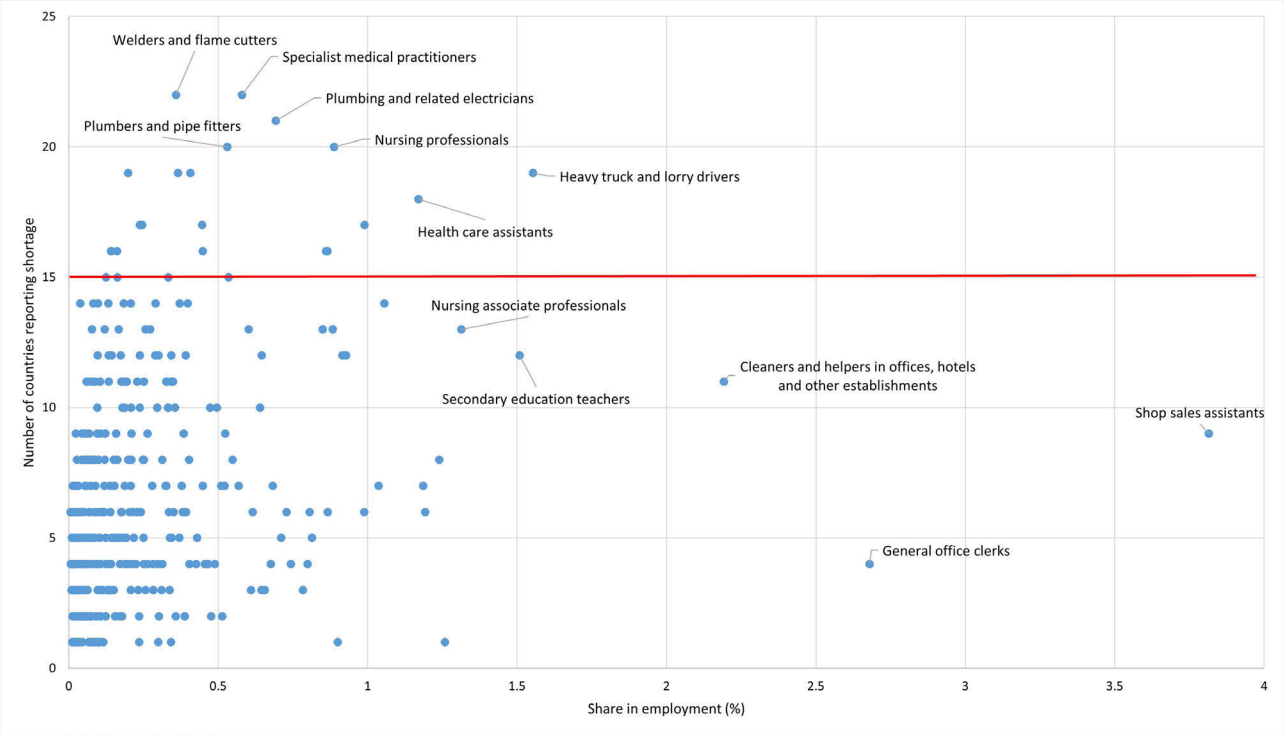
Source: Data submitted by EURES NCOs.

Figure 10 shows the four-digit ISCO 2008 occupations by their share of total employment in the EURES countries, alongside the number of countries reporting those occupations to be in shortage. Most occupations are clustered to the bottom-left side of the area, indicating relatively low employment shares within these occupations and few countries with shortages. Several widespread shortage occupations (those above the threshold given by the horizontal red line) also make up a generally small share of employment (i.e. less than 0.5 %). However, despite their relatively smaller employment shares, they may present critical bottlenecks, delaying or constraining the output and productivity of other occupations. Moreover, occupations with small employment shares may be characterised by highly specialised skills, which implies longer training times and relatively more limited substitutability from occupations with similar characteristics in terms of skills.

On the other hand, various occupations with widespread shortages make up a more substantial share of total employment. This may be an indication of an additional challenge in overcoming the imbalance, as the general demand for workers in these occupations is relatively larger. These occupations include health care assistants and heavy truck and lorry drivers – both with employment shares above 1 %. In such cases, the challenge is not merely one of skills mismatch but of missing workers. Resolving shortages would require substantial inflows of workers, while traditional mechanisms such as training may be insufficient or too slow.

Moreover, occupations with the largest shares of total employment are also reported to be in shortage in several countries. The occupation of shop sales assistant, with an employment share of close to 4 %, is identified as in shortage in nine EURES countries, while there is a shortage of cleaners and helpers (employment share above 2 %) in 11 countries. High demand for workers in a specific occupation, as indicated by an occupation's share of total employment, compounded by relatively less favourable working conditions (including, but not limited to, wages) could lead to an occupation facing shortages (Zwysen, 2024).

Figure 10: Occupations, by share of employment (2024) and number of EURES countries reporting shortages (2025)



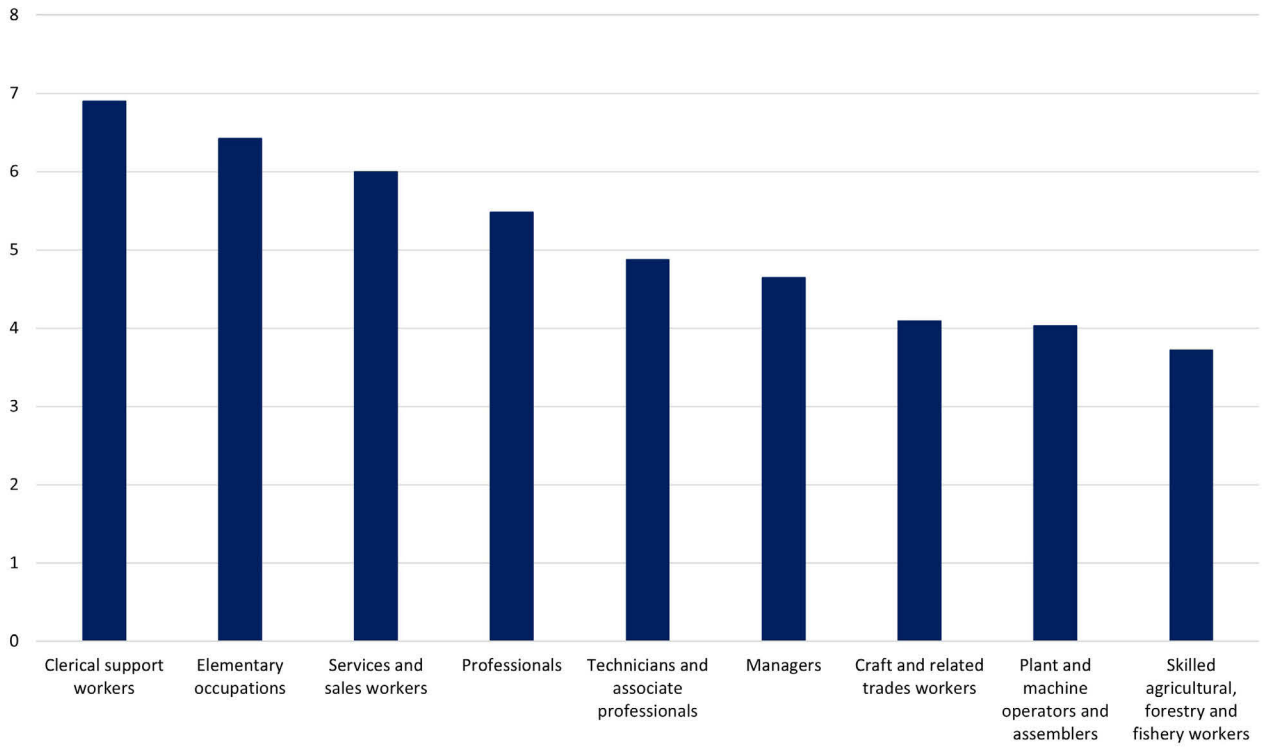
NB: Red horizontal line indicates the threshold for an occupation to be classified as having a 'widespread' shortage, that is, at least 15 countries report a shortage.

Sources: Data submitted by EURES NCOs; EU-LFS special data extractions.

2.3. Occupations in surplus

Surpluses are most frequently observed among clerical support workers, elementary occupations and services and sales workers (Figure 11). Similarly to labour shortages, surpluses are present in all broad occupational groups, with every category including at least one occupation experiencing a surplus in at least one country. To an extent, the picture is reversed when comparing the most common shortage occupations with the most common surplus occupations. For example, clerical support workers are most often cited to be in surplus, whereas they are relatively rarely in shortage. At the same time, plant and machine operators and assemblers are often in shortage, but rarely in surplus. However, some occupational groups contain both, having occupations with shortages and occupations with surpluses, such as services and sales workers and professionals. This may indicate a potential for worker transitions from surplus to shortage occupations within broad groups if occupations are not too distinct from each other.

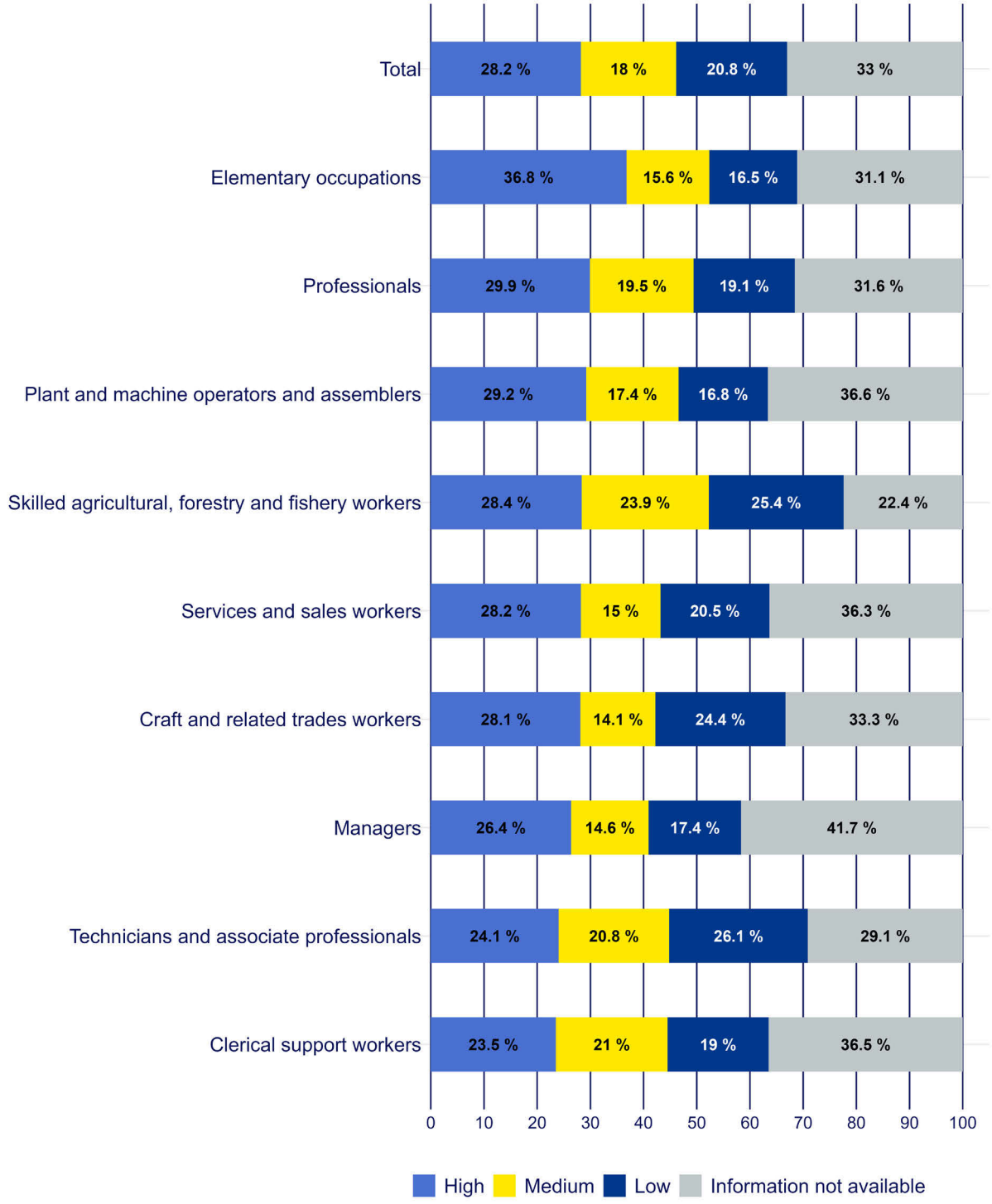
Figure 11: Most common surplus occupations, by broad occupational group, 2025



NB: Calculated as the ratio of the number of surplus occupations identified to unique surplus occupations within each group.
Sources: Data submitted by EURES NCOs; ISCO classification list.

Among all occupations identified as being in surplus, 28.2 % of surpluses are classified as being of high severity, 33 % as medium severity and 20.8 % as low severity. The occupational group with the highest proportion of severe surpluses is that of elementary occupations, followed by professionals and plant and machine operators and assemblers (Figure 12). These are the same groups that most frequently face high-severity shortages. Moreover, compared with labour shortages, the shares of high-severity surpluses tend to be larger, both overall and among broad occupational groups. These insights further highlight the need for increased efforts to support workers in transitioning from surplus to shortage occupations.

Figure 12: Severity of surplus occupations, by broad occupational group, 2025



NB: The percentages might not add up to exactly 100 % due to rounding.

Source: Data submitted by EURES NCOs.

Table 3 highlights occupations that more than half of the countries identified as being in surplus, along with the proportion of these surpluses considered to be of high severity. Surpluses remain common among clerical support workers and certain professional roles, especially those related to design and translation.

One possible explanation for these widespread surpluses is the impact of automation and digitalisation. In general, occupations involving manual and highly routine tasks are more susceptible to automation. Roles such as clerical roles, which rely heavily on repetitive tasks, are increasingly being replaced by automated systems.

Moreover, advancements in technologies such as generative AI are enabling automation in areas previously thought to be resistant to it. This shift may be contributing to declining demand in some professional occupations. For example, graphic designer and interpreter roles are likely to be affected, helping to explain the observed surpluses in these fields.

Table 3: Widespread surplus occupations, by number of countries and prevalence of high severity, 2025

Occupation	Number of countries reporting occupation in surplus	Percentage of surplus reports classed as high severity
Graphic and multimedia designers	19	37 %
Cleaners and helpers in offices, hotels and other establishments	16	25 %
General office clerks	15	40 %
Secretaries (general)	15	27 %
Shop sales assistants	14	36 %
Translators, interpreters and other linguists	14	21 %
Travel consultants and clerks	14	7 %
Car, taxi and van drivers	13	23 %
Administrative and executive secretaries	13	8 %

Source: Data submitted by EURES NCOs.

2.4. Quantification of labour market imbalances

This section describes the pilot quantification of labour shortages and surpluses based on the analysis of demand and extended supply of labour by two-digit ISCO 2008 occupations for Romania. This pilot method has been applied for all EURES countries [8] and the results are available on the European Labour Authority website.

Labour demand is given by the sum of unfilled job positions (number of vacancies) plus employment (number of people employed). The extended supply is the total number of all employed plus unemployed persons (the labour force), plus those seeking work but not immediately available to work, plus those available to work but not seeking a job (Eurostat, n.d.-b). More details about the method can be found in Annex 1.

The aim of this approach is to quantitatively measure the extent of labour imbalances within occupations and countries, applying consistent estimates of labour supply and demand. Therefore, it offers a comparable view on the magnitude of imbalances, considering not only the unemployed in the supply, as frequently done in similar work, but also the potentially active.

Figure 13 and Figure 14 present the results of this method in the example of Romania for the two-digit ISCO 2008 occupations within the broader one-digit group of 'Professionals'. Figure 13 shows labour demand (yellow bars) (i.e. vacancies) in relation to supply (blue bars) (i.e. unemployed) for each occupation, while Figure 14 presents the same information, but adds the potentially active (purple bars) to extend the supply. Occupations for which the yellow bar is larger than the blue (or combined blue and purple) bar(s) are considered to experience shortages, since the demand for workers exceeds their supply. In the opposite cases, where the blue (or combined blue and purple) bar(s) are larger than the yellow bar, there is likely to be a labour surplus. The figures also indicate the extent, or severity, of labour imbalances. Notably, for occupations where the yellow bar is substantially larger, this is a clear indication of a relatively more severe labour shortage.

In Romania, labour shortages are present in most of the occupations in the broad group of 'professionals', at least when considering only the unemployed in the labour supply (Figure 13). The only exception is teaching professionals,

8 Except Malta, because two-digit occupations are not available in the EU-LFS microdata.

where supply exceeds demand for workers to a substantial degree, with an estimated nine unemployed people for each vacancy. All other occupations are in shortage, to varying degrees of severity, with the most severe shortage of workers among information and communications technology (ICT) professionals.

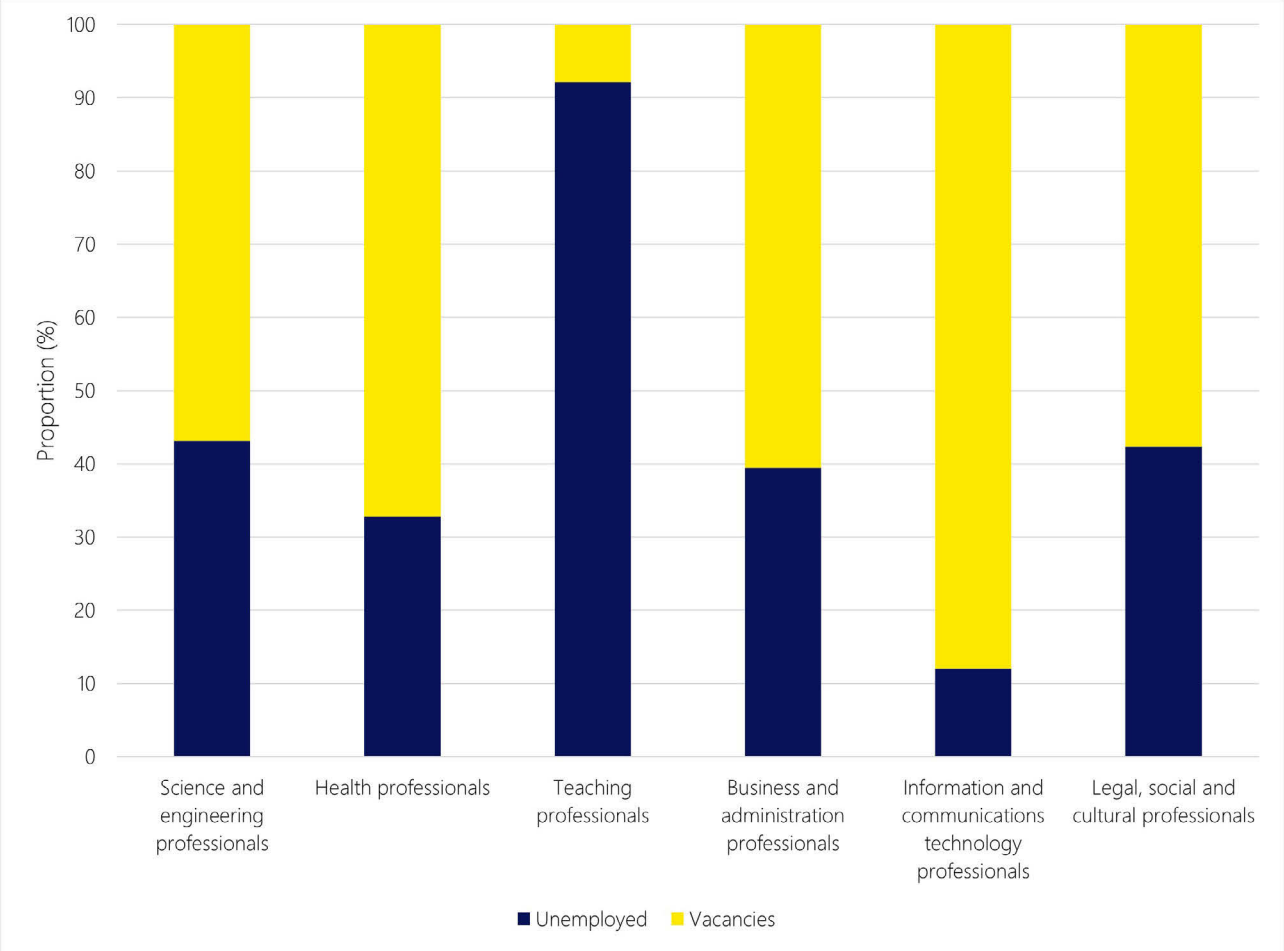
When also considering the potentially active in the labour supply, the picture changes somewhat (Figure 14). Clearly, labour supply is increased, and shortage occupations turn into occupations in balance or the shortages become less severe. For example, science and engineering professionals, an occupation shown to be in shortage before, could be in balance, as the combined number of unemployed and potentially active almost matches the number of vacancies. For health professionals, the impact of extending supply to include the potentially active is even more apparent. This occupation had the second most severe shortage when considering only the unemployed in the labour supply, whereas it is in balance when including the potentially active.

These findings provide a clear indication of the potential of targeting those who are outside the labour force in alleviating labour shortages in critical occupations.

The results of this method should be interpreted with caution since there are notable limitations. The main limitation is the lack of an established source of data for vacancies by occupation and country. Only two EURES countries publish vacancy data by occupations, Hungary and Romania, and the data are restricted to one-digit occupations. Eurostat's latest experimental statistics (Eurostat, n.d.-d) offer job vacancy statistics by occupation using breakdowns of online job advertisements.

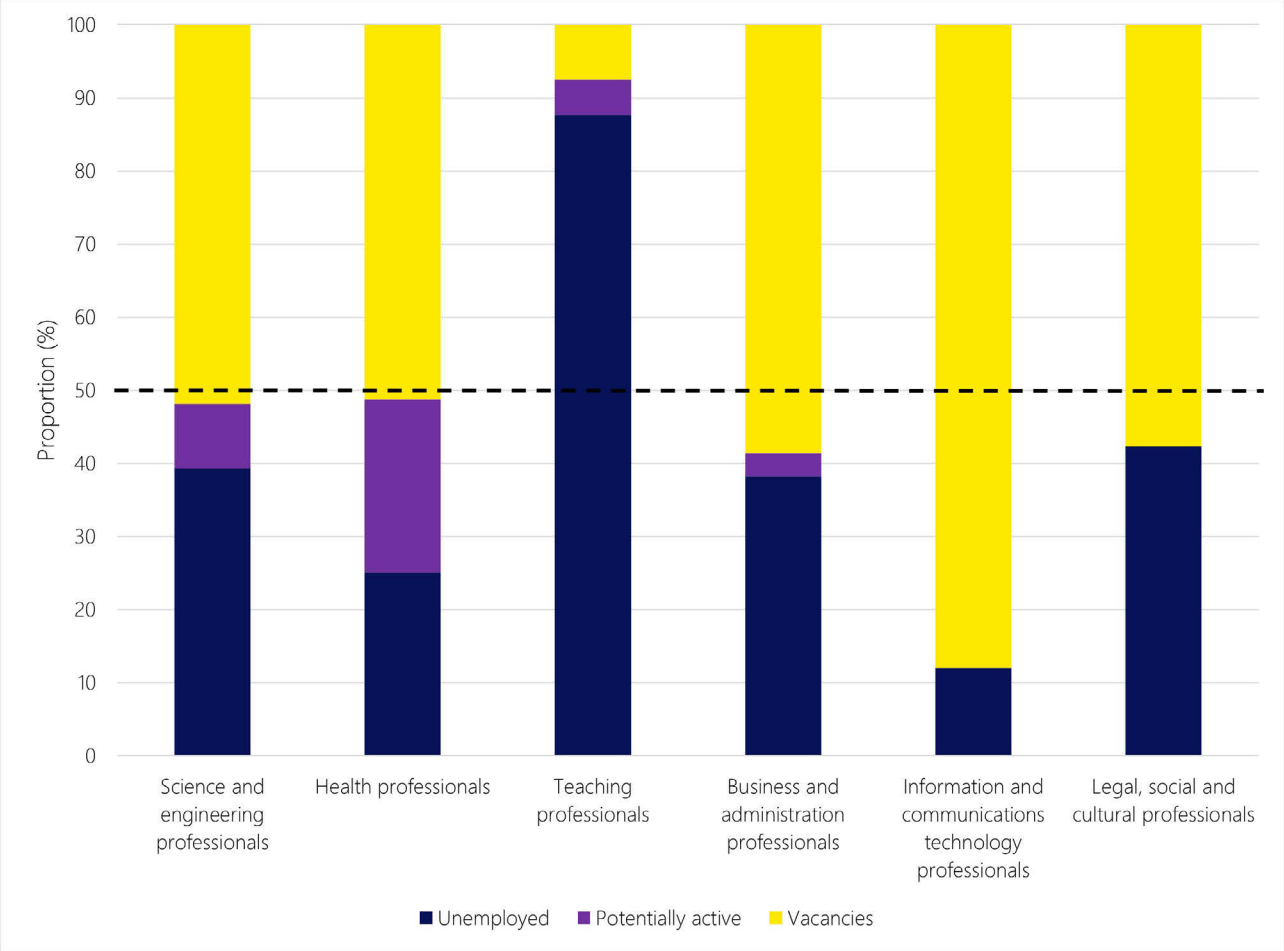
Another limitation of the analysis is data availability in the EU-LFS microdata related to the extended supply. One issue is the reliability of data linked to a small sample size, while another is a significant reliance on information about previous occupations to allocate unemployment and labour market slack to the correct two-digit occupations. The latter is associated with strong assumptions, that is, that workers will search for jobs in the same occupation they held previously and that those contributing to the labour market slack who did not previously hold a position are likely to follow the same occupational distribution as those who did. Furthermore, the supply is restricted to individuals who have previously held an occupation. If the information required is unavailable, that individual is excluded from the quantification of supply within the occupation, which may result in the underestimation of the supply. Recent graduates and other new labour market entrants, such as mobile workers and migrants, are not included in the analysis to avoid double counting, because current data are unavailable and because of the need for additional assumptions to allocate them to two-digit occupations.

Figure 13: Labour demand (vacancies) and supply (unemployed) in Romania, by two-digit occupation in the broad group of 'professionals', 2024



Sources: EU-LFS microdata; National Institute for Statistics – Romania (n.d.).

Figure 14: Labour demand (vacancies) and supply (unemployed and potentially active) in Romania, by two-digit occupations in the broad group of 'professionals', 2024



Sources: EU-LFS microdata; National Institute for Statistics – Romania (n.d.).

2.5. The link between labour market imbalances, mobility and migration

Within the EURES network framework, the term 'transnational workers' describes individuals who are employed in a EURES country different from their country of origin. This includes those who move freely for work, whether on a long-term basis or temporarily, such as for seasonal employment, and those who are posted abroad by their employer or who work remotely from another country.

By contrast, cross-border workers are people who reside in one EURES country and commute to a neighbouring country for work. They may be employed or self-employed and typically return to their home country on a regular basis, such as daily or weekly.

Given this context, there is notable potential for transnational job matching between occupations experiencing shortages and those with labour surpluses. Out of 423 occupations identified as being in shortage in at least one country, 416 (or 98 %) also appear as surplus occupations in at least one other country (European Labour Authority, 2026). One of the occupations most frequently reported as being in shortage – welders and flame cutters – was flagged by 22 countries, while two countries reported a surplus (Table 4). Moreover, for several occupations, the number of theoretical matching possibilities is relatively large, with cleaners and helpers and construction labourer roles exhibiting at least 10 instances of simultaneous shortages and surpluses across EURES countries.

However, the scope for transnational matching is more limited in healthcare professions. For example, nursing professional was listed as a shortage occupation in 20

countries, with only Finland identifying a surplus in this role. Specialist and generalist medical practitioners – two occupations with widespread shortages –lack any surpluses and, therefore, matching possibilities.

Table 4: Transnational matching possibilities to alleviate labour market imbalances: number of countries identifying a certain occupation as in shortage or surplus, 2025

	Occupation	Number of countries identifying a shortage	Number of countries identifying a surplus	Potential matching opportunities
Widespread shortage	Specialist medical practitioners	22	0	0
	Welders and flame cutters	22	2	2
	Building and related electricians	21	2	2
	Nursing professionals	20	1	1
	Plumbers and pipe fitters	20	3	3
	Generalist medical practitioners	19	0	0
	Sheet metal workers	19	2	2
	Bus and tram drivers	19	5	5
	Heavy truck and lorry drivers	19	4	4
	Health care assistants	18	4	4
Most matches	Cleaners and helpers in offices, hotels and other establishments	11	16	11
	Building construction labourers	11	10	10
	Home-based personal care workers	12	9	9
	Painters and related workers	12	9	9
	Hotel receptionists	11	9	9
	Shop sales assistants	9	14	9
	Gardeners, horticultural and nursery growers	9	11	9
	Kitchen helpers	12	8	8
	Civil engineering labourers	9	8	8
	Mail carriers and sorting clerks	8	10	8

Source: Data submitted by EURES NCOs.

While job openings exist across EURES countries, their mere availability does not automatically lead workers to seek employment abroad. Research has highlighted several key factors that influence transnational labour mobility (Ludden et al., 2019; Broersma et al., 2022; Edzes et al., 2022). One major factor is the wage disparity between a worker's country of residence and the country of employment, with higher wages in the home country tending to discourage outward mobility, while more attractive wages in the destination country serve as a pull factor. This is conditional on workers being aware of these opportunities and not facing significant language, or other, barriers. In addition, elevated unemployment rates in a worker's region of origin increase the likelihood of seeking employment in neighbouring countries.

2.6. Summary

Nearly all occupations classified under the four-digit ISCO 2008 classification have been identified as experiencing shortages in at least one country. The highest numbers of shortages are reported by Italy, the Netherlands, Bulgaria, Belgium and Romania, in that order.

Table 5: Top 10 shortage and surplus occupations in EURES countries, 2025

Rank	Shortage occupations	Share of employment, EURES countries, 2025	Surplus occupations	Share of employment, EURES countries, 2025
1	Specialist medical practitioners	0.58 %	Graphic and multimedia designers	0.33 %
2	Welders and flame cutters	0.36 %	Cleaners and helpers in offices, hotels and other establishments	2.19 %
3	Building and related electricians	0.69 %	General office clerks	2.68 %
4	Nursing professionals	0.89 %	Secretaries (general)	1.26 %
5	Plumbers and pipe fitters	0.53 %	Shop sales assistants	3.82 %
6	Generalist medical practitioners	0.37 %	Translators, interpreters and other linguists	0.13 %
7	Bus and tram drivers	0.41 %	Travel consultants and clerks	0.12 %
8	Heavy truck and lorry drivers	1.55 %	Car, taxi and van drivers	1.04 %
9	Sheet metal workers	0.20 %	Administrative and executive secretaries	0.78 %
10	Health care assistants	1.17 %	Freight handlers	0.80 %

NB: Ranks are determined by (1) the number of countries reporting a shortage/surplus and (2) the share of high-severity shortages/surpluses.

Source: Data submitted by EURES NCOs.

Some roles face persistent and widespread shortages that are often severe (Table 5). This is especially true for jobs in healthcare and construction, which have consistently appeared on shortage lists over the years. Long-term trends, such as demographic shifts and the transition to a greener economy, are expected to intensify these shortages further.

Conversely, almost all of the ISCO 2008 occupations have also been reported as in surplus in at least one country, with the highest numbers of surplus roles identified in Austria, Finland, Latvia, Czechia and Greece, in that order.

Notably, no clear link was identified between the number of shortage occupations and the number of surplus occupations within individual countries, suggesting structural differences within national labour markets.

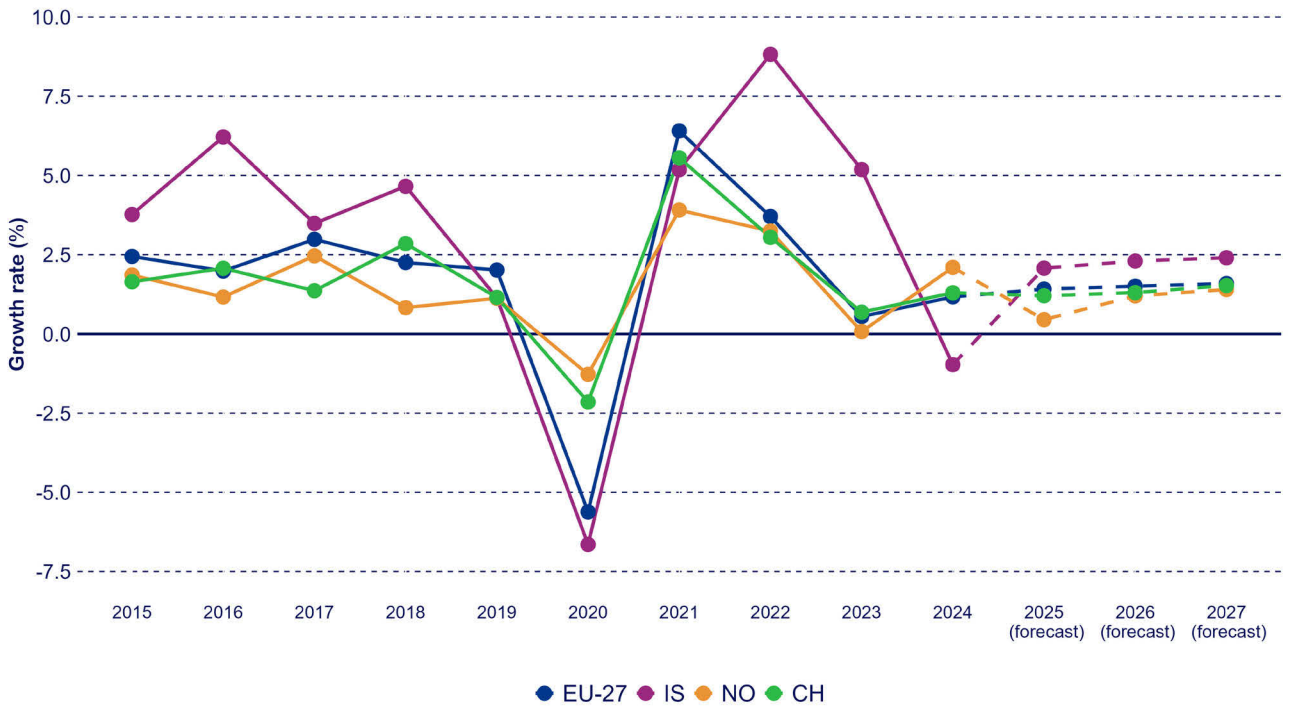
Of the 423 occupations identified as being in shortage in at least one country, 416 are considered to have surplus in another. Despite this overlap, several barriers may impede effective transnational labour matching. These include difficulties in recognising qualifications across borders, language-related challenges, information asymmetry and worker preferences.

3. Developments in labour market imbalances over time

3.1. Overall trends in the workforce

Over the past decade, the European economy has experienced modest growth, with the COVID-19 pandemic and the latest geopolitical tensions, namely the Russian war of aggression against Ukraine, being the main external factors affecting the economy (European Commission: Directorate-General for Economic and Financial Affairs, 2025b). From 2015 to 2024, GDP growth in EURES countries experienced a slowdown, going from an average of around 2.3 % per annum to less than 1 % in the post-pandemic period (2023–2024), as can be seen in Figure 15. In 2024, the EU economy experienced modest growth, supported mainly by public spending and improving household incomes (European Commission: Directorate-General for Economic and Financial Affairs, 2025a). Government consumption increased by 2.7 %, while private consumption gradually strengthened as real disposable incomes increased by 2.6 % amid higher employment, wage gains and easing inflation. Nonetheless, consumer confidence remained subdued, reflecting the lingering effects of high inflation, and savings stayed above pre-pandemic levels, reflecting elevated uncertainty and attractive returns on savings. The economy is expected to recover further over 2025–2026, driven by consumption growth combined with a rebound of investment.

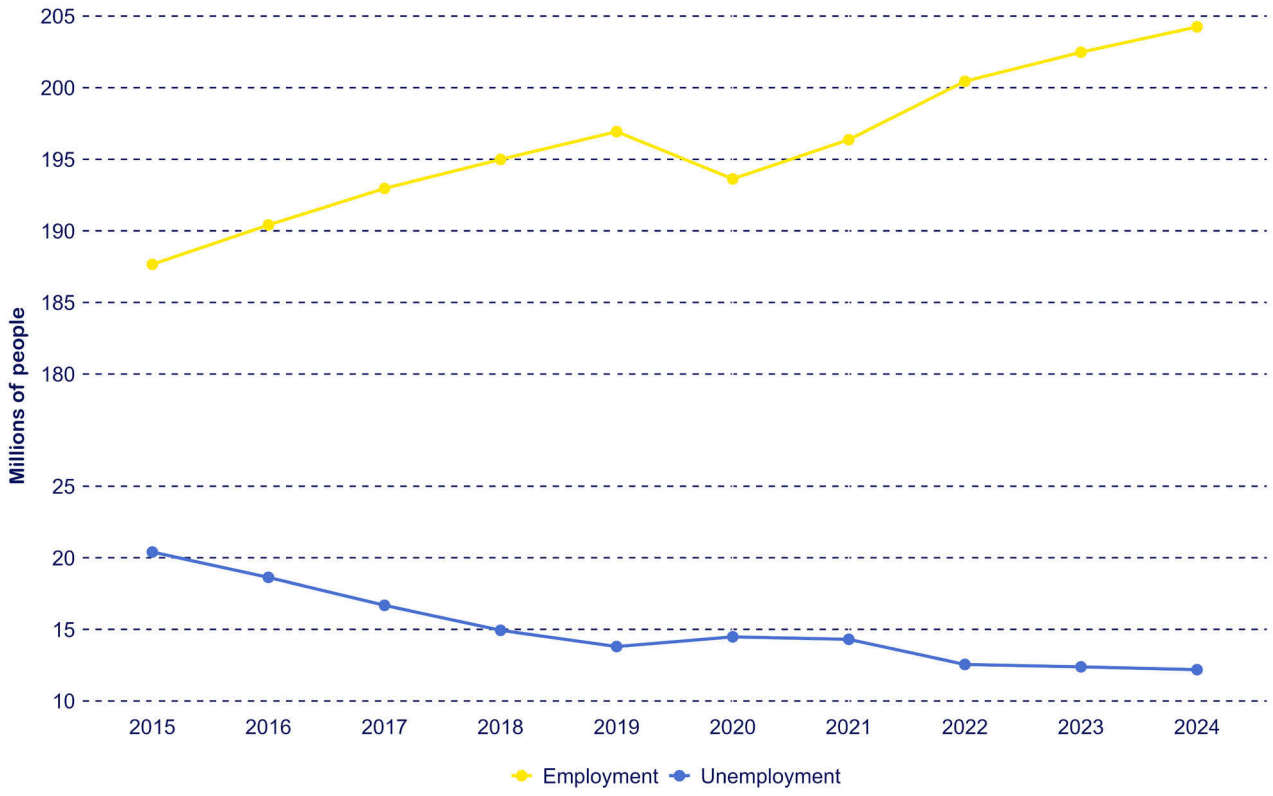
Figure 15: Real GDP growth rates for the EURES countries, 2015–2027



Source: Authors' elaboration based on the Annual Macro-Economic Database of the European Commission's Directorate-General for Economic and Financial Affairs (AMECO) (https://economy-finance.ec.europa.eu/economic-research-and-databases/economic-databases/ameco-database_en#database, accessed 5 December 2025).

Recent employment growth has been underpinned by greater labour force participation, especially among women and older workers (European Commission: Directorate-General for Employment, Social Affairs and Inclusion et al., 2025). Looking ahead, a gradual slowdown in recruitment and wage growth is expected, suggesting that, although labour markets are tight by historical standards, a gradual loosening should take hold in the coming years. In line with this, the European Commission expects a continued slowdown in employment growth (European Commission: Directorate-General for Employment, Social Affairs and Inclusion et al., 2025). Combined, the economic and employment trends could indicate that economic growth is expected to translate into fewer job vacancies, and thus fewer shortages and an increase in labour surpluses.

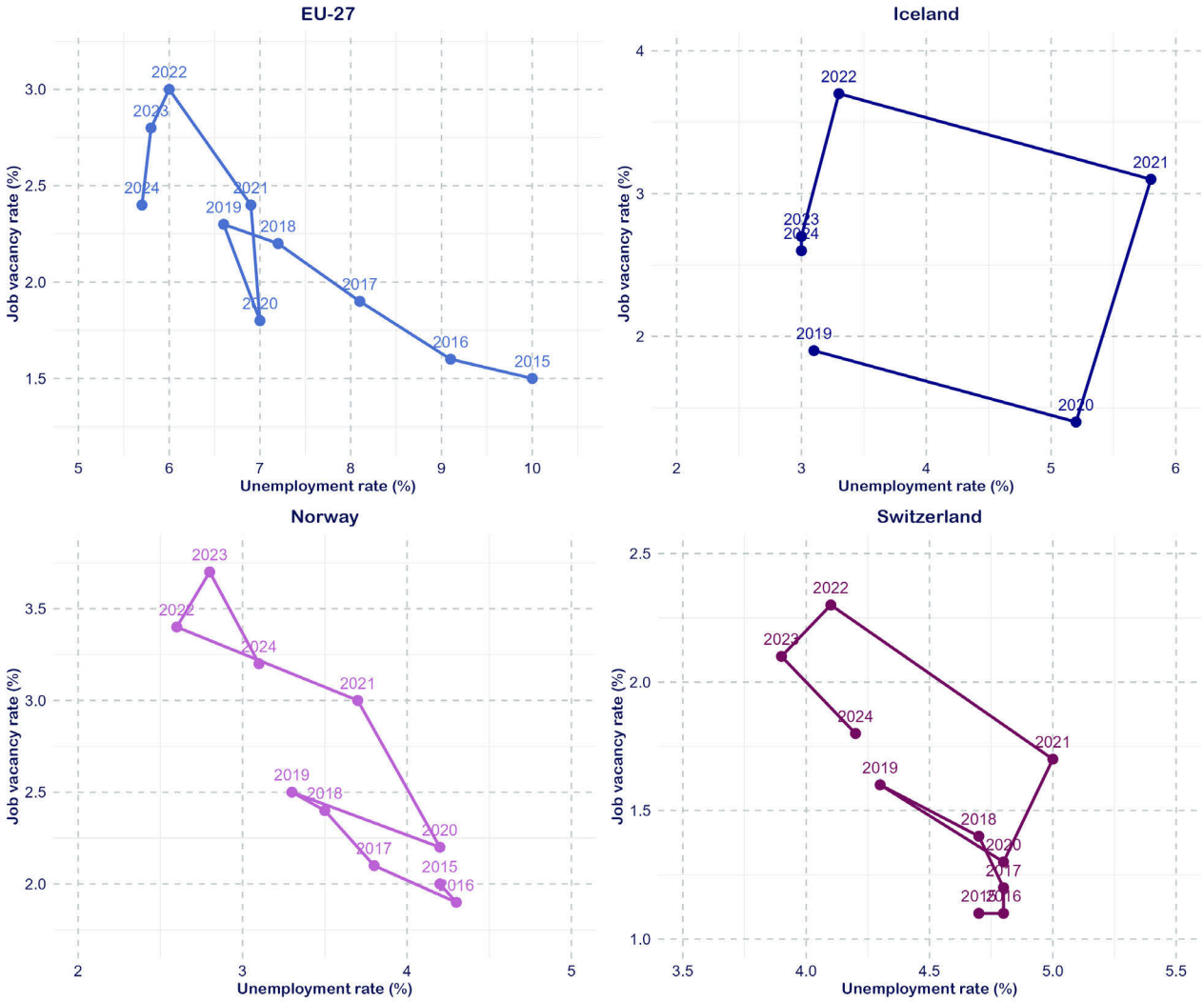
Figure 16: Trends in employment and unemployment levels in the EURES countries, 2015–2024 (people aged 20–64 years)



Sources: Eurostat datasets (une_rt_a) (11 September 2025) and (lfsi_emp_a) (12 June 2025).

The indications of a tightening of the labour market over the past decade are shown in Figure 16. Employment grew from around 187 million in 2015 to close to 205 million in 2024 in the EURES countries, and the number of people unemployed decreased from around 22 million to around 12 million during the same period. During the COVID-19 pandemic in 2020, employment declined, but no impact on unemployment was observed. This could indicate that some people temporarily exited the labour force during this period. This was followed by a recovery of employment to its trend in the following years. These opposite trends in employment and unemployment are consistent with tightening labour market conditions.

Figure 17: Beveridge curves for the EU-27, Iceland, Norway and Switzerland, 2015–2024 (people aged 20–64 years)

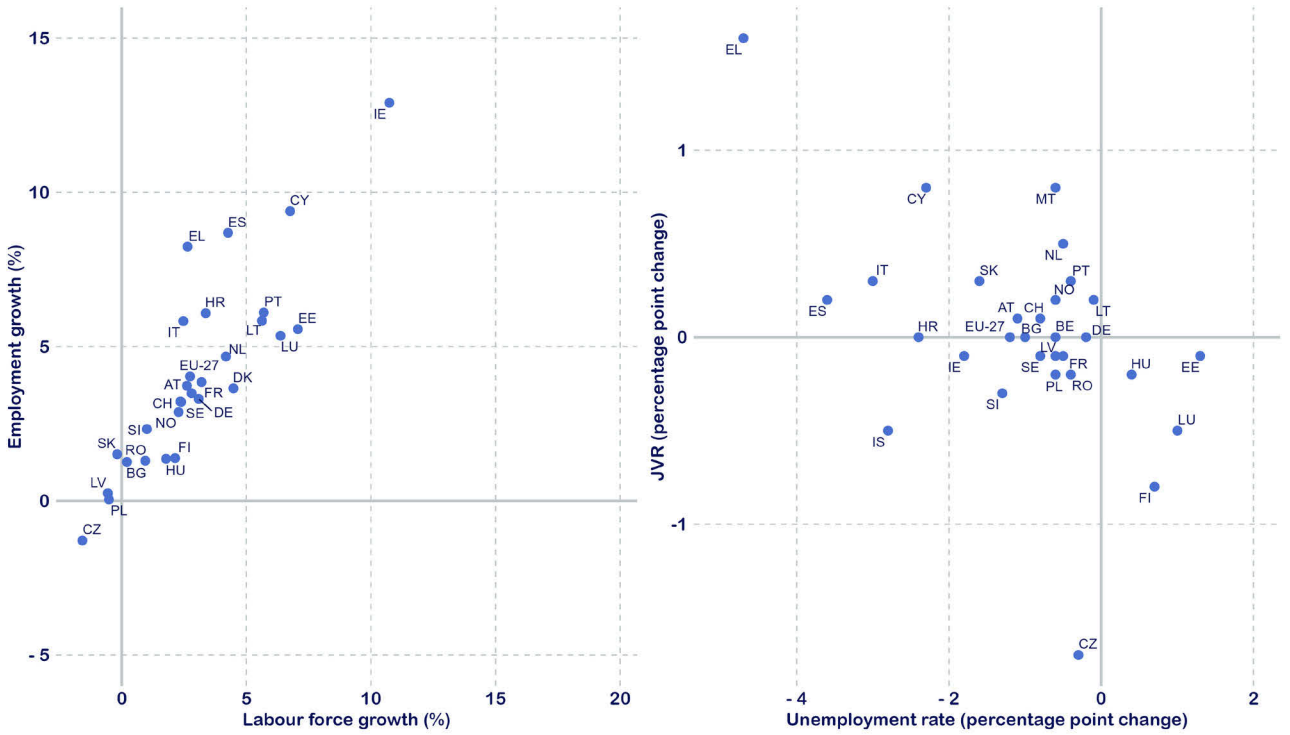


NB: Data for Iceland are only available from 2019 onwards.

Sources: Eurostat datasets (une_rt_a) (11 September 2025) and (jvs_a_rate_r2) (15 September 2025).

The Beveridge curves in Figure 17 provide indications that the labour market may have started to loosen in the last two years. The labour market has been experiencing a decline in the unemployment rate, concurrent with an increase in the JVR over the past decade in the EU-27. Norway and Switzerland set themselves apart in this aspect as they experienced a stagnant evolution up until 2021. JVRs rose in the aftermath of the COVID-19 pandemic in these two countries. However, the upward trend in the JVR in the EU-27 started to decline in 2023, falling from its peak of 3 % in 2022 to less than 2.5 % in 2024. It is worth noting that this decline in the JVR has yet to be matched with an increase in the unemployment rate in the EU-27, although this is already the case in the EURES countries. This change in trend is consistent with a decline in labour demand (see Figure 18), but it has so far resulted only in a convergence with labour supply growth. It is reasonable to expect unemployment to increase if labour demand were to decline further.

Figure 18: Labour market trends in the EURES countries, 2021–2024 (people aged 20–64 years)



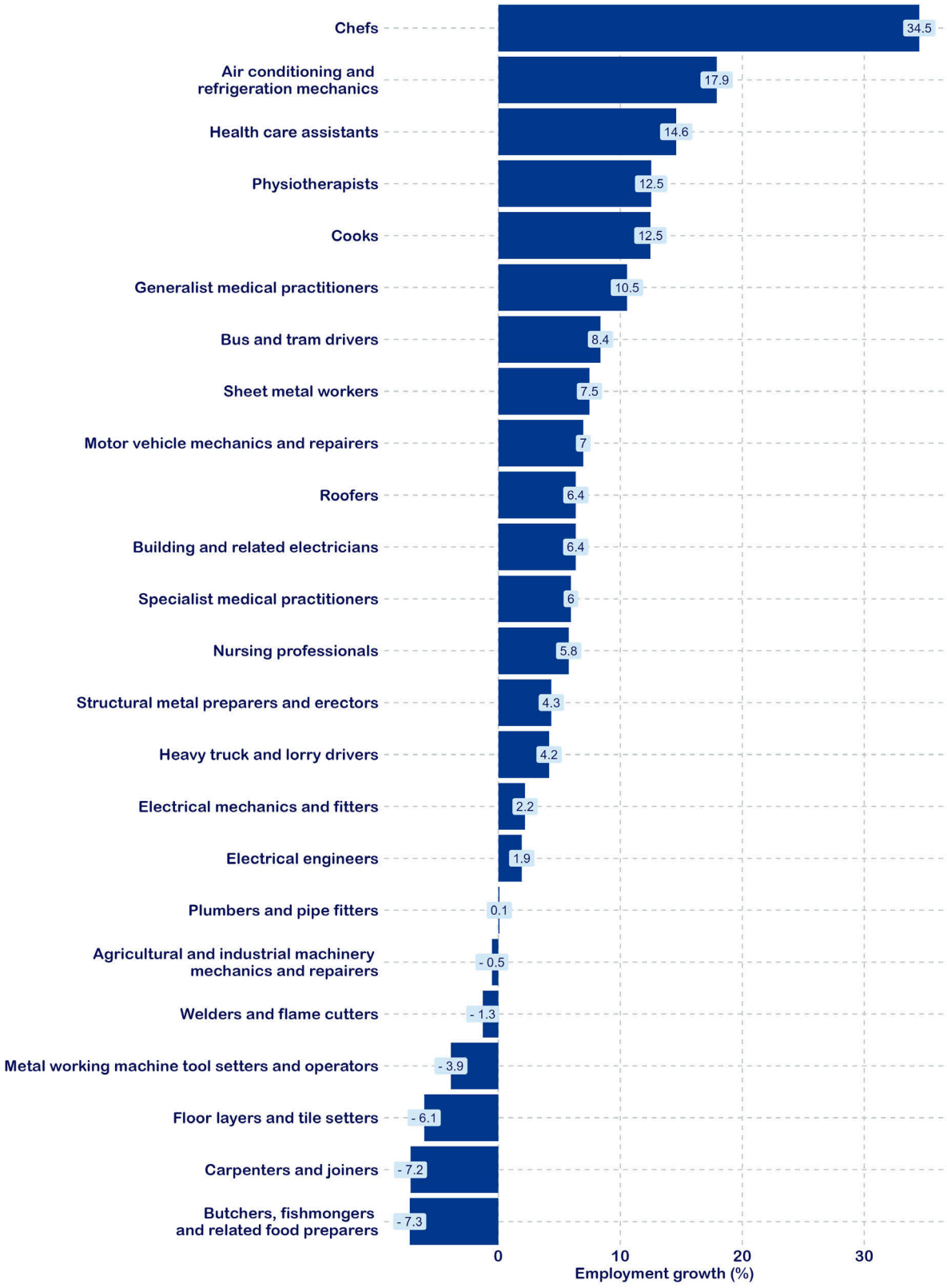
Sources: Eurostat datasets (une_rt_a) (11 September 2025), (lfsi_emp_a) (12 June 2025) and (jvs_a_rate_r2) (15 September 2025).

At the country level, there is a disparity in the labour market trends experienced over the past few years. As can be seen in the left panel of Figure 18, most countries saw an increase in both labour force and employment over 2021–2024, except Czechia, Latvia and Poland. Czechia is the only country to have experienced a decline in both labour force and employment in the last three years. The general trend observed in the right panel of Figure 18 is consistent with the previously mentioned tightening of the labour market. Most EURES countries experienced a decline in their unemployment rate, except for Hungary, while they experienced an increase in labour demand. However, it should be noted that the growth of the JVR and decline in the unemployment rate experienced by most countries is relatively weak (less than 1 %).

3.2. Employment trends in widespread shortage occupations

For widespread shortage occupations, employment growth over 2021–2024 has mainly been concentrated in high-skilled occupations in accommodation and food-related occupations (e.g. chefs, cooks) (Figure 19). Health and care occupations also experienced strong growth (e.g. health care assistants, physiotherapists, generalist medical practitioners). Growth in this occupational group could be explained by the fact that employment may have yet to recover from the pandemic, combined with increased demand on health services due to demographic changes in the overall population (OECD / European Commission, 2024). Furthermore, shortages in healthcare occupations may be exacerbated by their high reliance on mobile workers, which could accentuate shortages in the countries of origin (Blanco Moreno, 2024).

Figure 19: Changes in employment in widespread shortage occupations in the EURES countries, 2021–2024 (people aged 15+ years)



Source: EU-LFS special data extractions.

High growth in employment over 2021–2024 is also observed in occupations related to the accommodation, hospitality and food sector. However, the high growth observed in this sector over 2021–2024 probably captures the rebound growth in employment in 2021 and 2022 following the COVID-19 pandemic, as that sector was one of the hardest hit by the economic impacts of shutdowns (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2023a; Eurostat, 2024a). The hospitality sector faced significant labour shortages in the couple of years following the pandemic due to a rapid recovery of the labour demand, which outpaced the supply (Causa et al., 2022), leading to an increase in demand for services tied to this sector. As the labour market raced to adjust for this surge in demand, employment in hospitality occupations surged. This dynamic could help explain why chefs (34.5 %) and cooks (12.5 %) experienced some of the highest employment growth rates in widespread shortage occupations between 2021 and 2024.

Some widespread shortage occupations have experienced a decline in employment over 2021–2024. The main group affected is lower-skilled occupations related to the construction industry, such as insulation workers and carpenters and joiners. The European Construction Industry Federation (2023) argues that this decline in employment in a sector facing persistent labour shortages may be attributed to multiple factors, such as an ageing workforce and unattractive working conditions, which include gender imbalances and an overall limited level of attractiveness to young talent. Similarly, welders and flame cutters have also experienced persistent labour shortages in recent years. This is mainly due to fewer younger people choosing welding/trade careers, mainly due to a bad public image and unattractive salaries (König et al., 2021).

Box 1: Generalist medical practitioners

COUNTRIES WITH THE HIGHEST EMPLOYMENT SHARES IN 2024:		
MALTA	**DENMARK**	**SWEDEN**
At least 29 % of generalist medical practitioners in the EURES countries reported working over 40 hours a week in 2024.		
In line with this, over 30 % of workers in this profession reported working on weekends regularly in 2024.		
Over 72 % of generalist medical practitioners in EURES countries reported being emotionally exhausted by their work in 2024.		
2021: 232 700 workers did overtime out of 700 100 total workers (33 %)		**2024:** 226 300 workers did overtime out of 774 000 total workers (29 %)

Sources: EU-LFS special data extractions; European Working Conditions Survey, 2024.

Box 2: Carpenters and joiners

COUNTRIES WITH THE HIGHEST EMPLOYMENT SHARES IN 2024:		
NORWAY	**DENMARK**	**LITHUANIA**
At least 20 % of carpenters and joiners in the EURES countries reported working over 40 hours a week in 2024.		
At least 76 % of carpenters and joiners reported carrying heavy loads regularly as part of their work activities in 2024.		
In line with this, over 78 % of workers in this profession reported having to be in tiring positions on a regular basis in 2024.		
2021: 228 400 workers did overtime out of 1 million total workers (23 %)		**2024:** 199 300 overtime workers did overtime out of 950 000 total workers (21 %)

Sources: EU-LFS special data extractions; European Working Conditions Survey, 2024.

Box 3: Heavy truck and lorry drivers

COUNTRIES WITH THE HIGHEST EMPLOYMENT SHARES IN 2024:		
ROMANIA	**BULGARIA**	**ESTONIA**
At least 28 % of heavy truck and lorry drivers in the EURES countries reported working over 40 hours a week in 2024.		
Over 75 % of heavy truck and lorry drivers reported tiring positions as being usual in their line of work in 2024.		
Over 70 % of workers in this profession reported being emotionally exhausted by their work in 2024.		
2021: 1 million workers did overtime out of 3.2 million workers (31 %)	**2024:** 934 200 workers did overtime out of 3.3 million workers (28 %)	

Sources: EU-LFS special data extractions; European Working Conditions Survey, 2024.

In Box 1, Box 2 and Box 3, the extensive shortages in the occupations of generalist medical practitioners, carpenters and joiners and heavy truck and lorry drivers are examined in greater detail.

The occupation of generalist medical practitioners is characterised by an ageing workforce. Over the past four years, the proportion of practitioners aged over 50 has consistently exceeded 35 %. By contrast, only 13.7 % of those employed in this profession were under 30 in 2024. This imbalance in age distribution has resulted in a growing number of retirements without adequate replacement (Eurostat, 2025d). The situation is further exacerbated by demographic changes in the population that have increased demand for healthcare and social care services. Together, these factors have caused demand to outstrip the supply of qualified practitioners, thereby intensifying pre-existing labour shortages. These developments could also help explain the strain that workers in this profession have reported, as can be seen in Box 1.

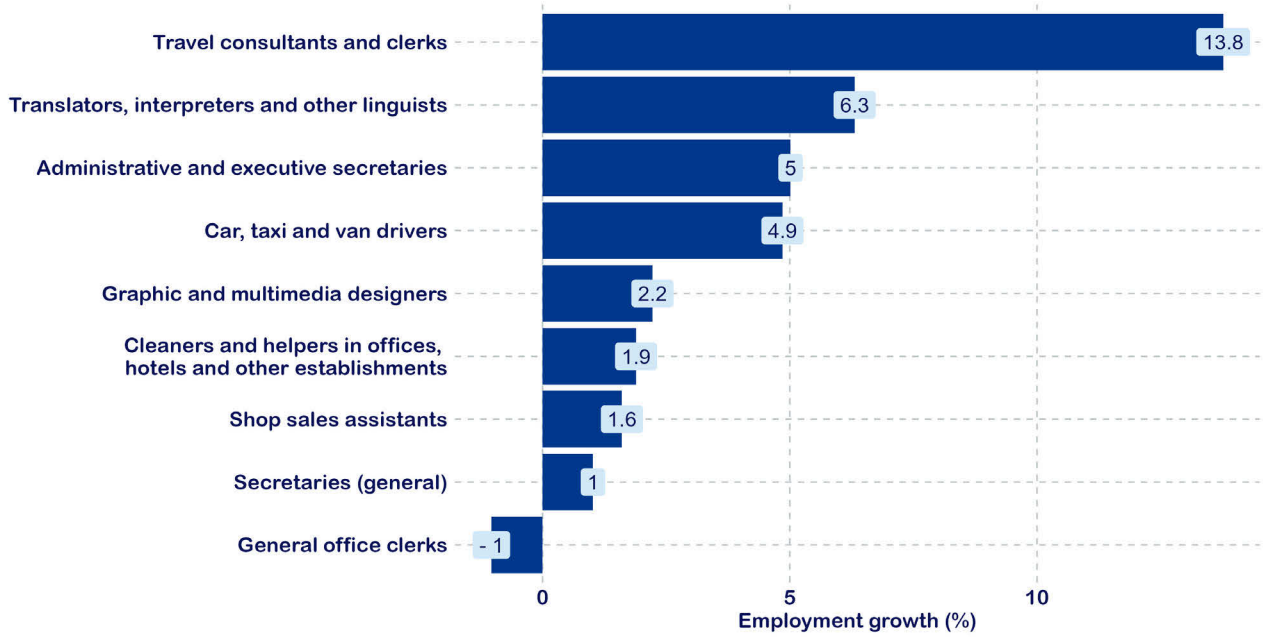
The shortage of carpenters and joiners can be attributed to several factors. Similarly to generalist medical practitioners, 31.6 % of carpenters and joiners were over 50 years of age in 2021, rising to 34.2 % in 2024. This trend may be linked to the unattractive working conditions, which make it more difficult to recruit younger workers. As noted in Box 2, at least 22 % of carpenters and joiners worked at least 40 hours per week in 2024. Furthermore, carpenters and joiners face physically strenuous work, with over three quarters of workers reporting tiring positions and heavy load-bearing as regular occurrences (Box 2). Coupled with the increased demand for construction over the past decade, partly driven by initiatives such as the green and digital transitions, these conditions are likely to have contributed to exacerbating labour shortages (European Labour Authority, 2024b).

Finally, several factors underpin the current widespread shortage of heavy truck and lorry drivers. Low job attractiveness and accessibility, along with extended working hours, have rendered these roles less appealing (International Road Transport Union, 2022). These factors could also help explain the high level of emotional distress reported by workers in this profession, with over 70 % of heavy truck and lorry drivers reporting feeling emotionally exhausted by their work. In addition, the occupation faces uncertainty due to the prospect of increased automation, which may discourage new entrants (World Maritime University, 2019). Collectively, these challenges have led to a significant reduction in the supply of skilled drivers, thereby intensifying the labour shortfall in this sector.

3.3. Employment trends in widespread surplus occupations

As shown in Figure 20, many of the occupations identified as experiencing widespread surpluses are classified as clerical support workers and administration associate professionals (ISCO 2008 classification groups 33, 41 and 42), which are employment groups vulnerable to automation (Gmyrek et al., 2023). Although most clerk and secretary occupations in this group experienced employment growth between 2021 and 2024, general office clerks saw a decline in employment over the same period. This could be indicative that AI is starting to reduce the demand in these occupations. As AI uptake increases, it is reasonable to assume that growth in employment in these occupations would be negatively impacted.

Figure 20: Changes in employment in widespread surplus occupations in the EURES countries, 2021–2024 (people aged 15+ years)

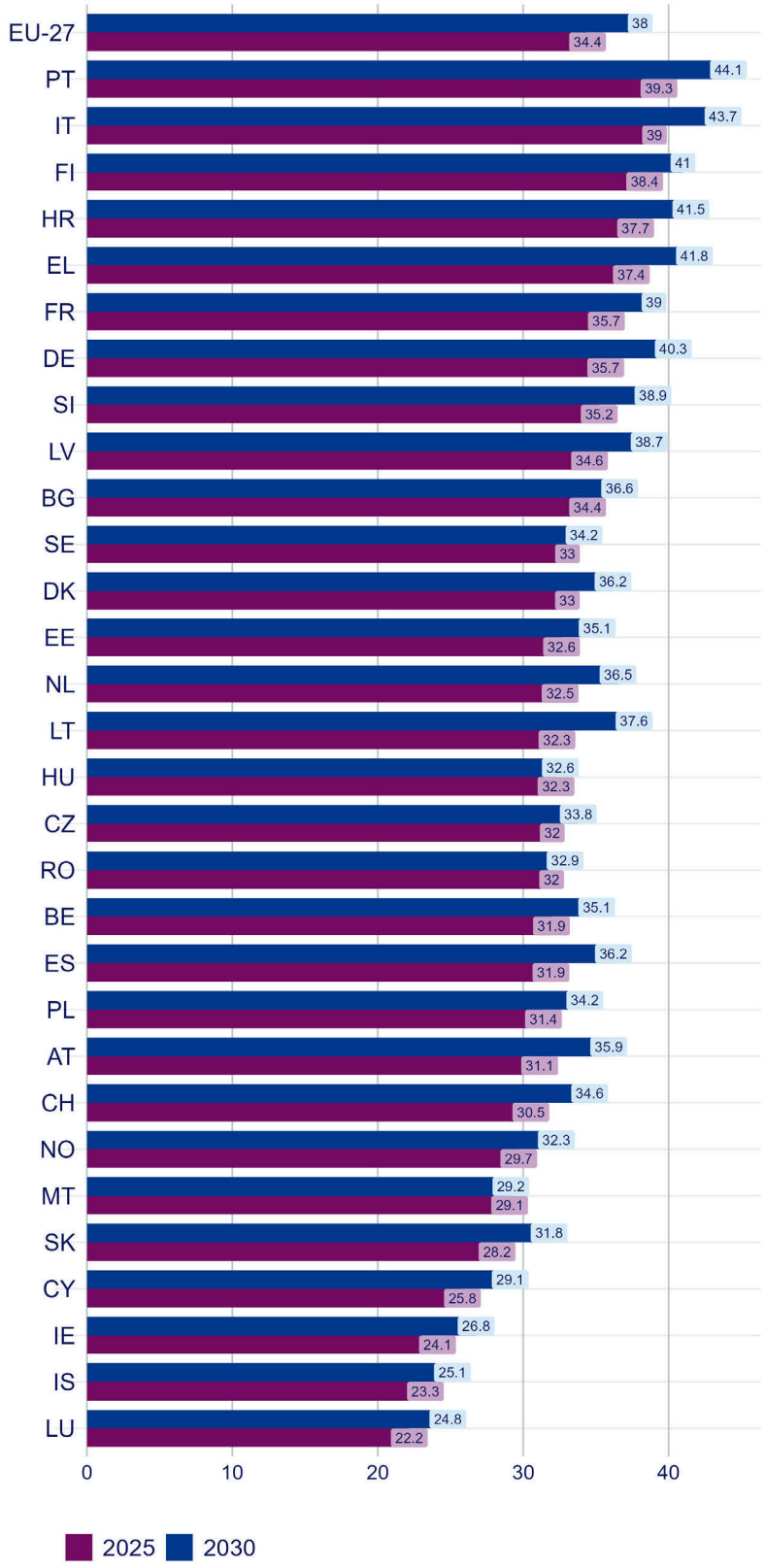


Source: EU-LFS special data extractions.

3.4. Future trends

Multiple factors are expected to influence the evolution of shortages and surpluses in the long run. First, demographic change is expected to impact the labour supply. As can be seen in Figure 21, the old-age dependency ratio is expected to rise across most EURES countries over the coming years as the baby boomer generation moves into retirement. Since younger-age cohorts are relatively smaller, the retirement of people aged 55 and over is likely to reinforce labour shortages. This trend would be particularly acute in occupations where a pre-existing gap in the age composition of employment already exists. For example, among heavy truck and lorry drivers, over 40 % are older than 50 years, whereas the share of workers younger than 20 years is under 9 % (see Figure 34). Such an occupation would be faced with increasing shortages as older cohorts move into retirement. Furthermore, the shift towards a more elderly population is also going to increase labour demand in the health and care sectors, compounding labour shortages there (OECD / European Commission, 2024).

Figure 21: Old-age dependency ratio (65+ years to 15–64 years) in the EURES countries, 2025 and 2030

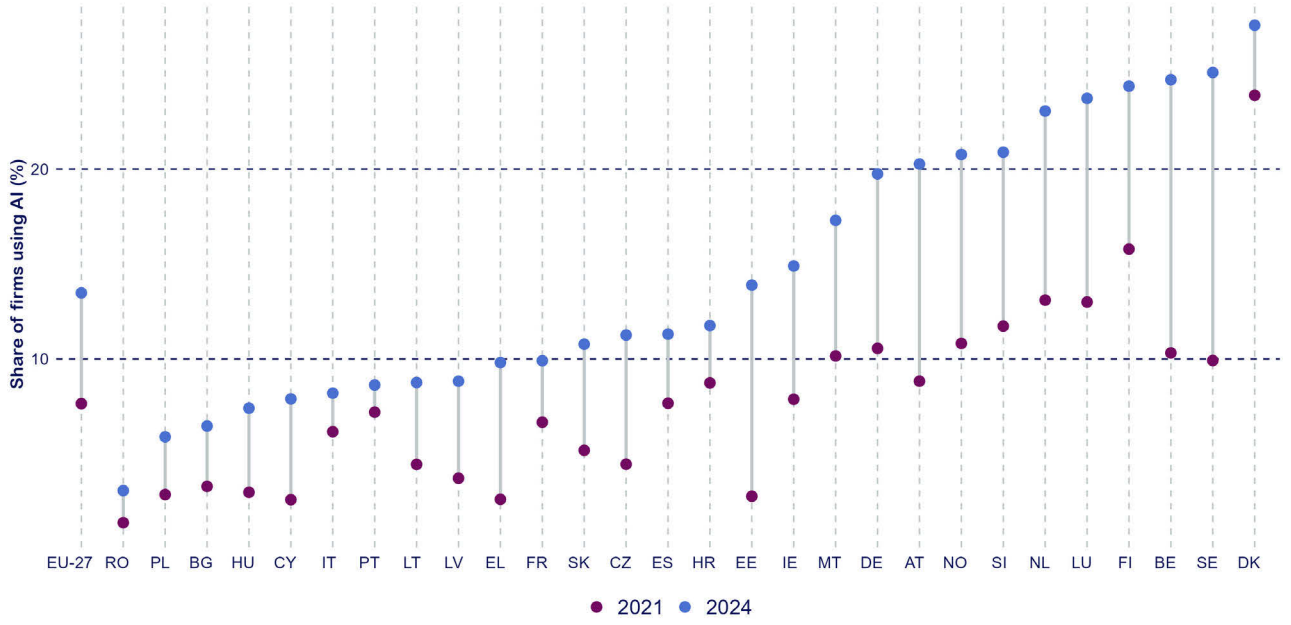


Source: Eurostat dataset (proj_23np) (28 June 2023).

The reinforcing effects of demographic changes on labour shortages in the coming years may partly be offset by the increasing use of automation and AI technologies.

In recent years, a decline in digital skill requirements has been observed. However, even as digital skill requirements have gone down, the use of AI has increased. As can be seen in Figure 22, the use of AI has increased over the past three years across EURES countries, a trend which is expected to continue over the coming years (Ionașcu, 2025). The increased use of AI has primarily been concentrated in countries such as Belgium, Denmark, the Netherlands, Finland and Sweden, which may indicate that the effects of the technology on employment are likely to be first observed in these regions.

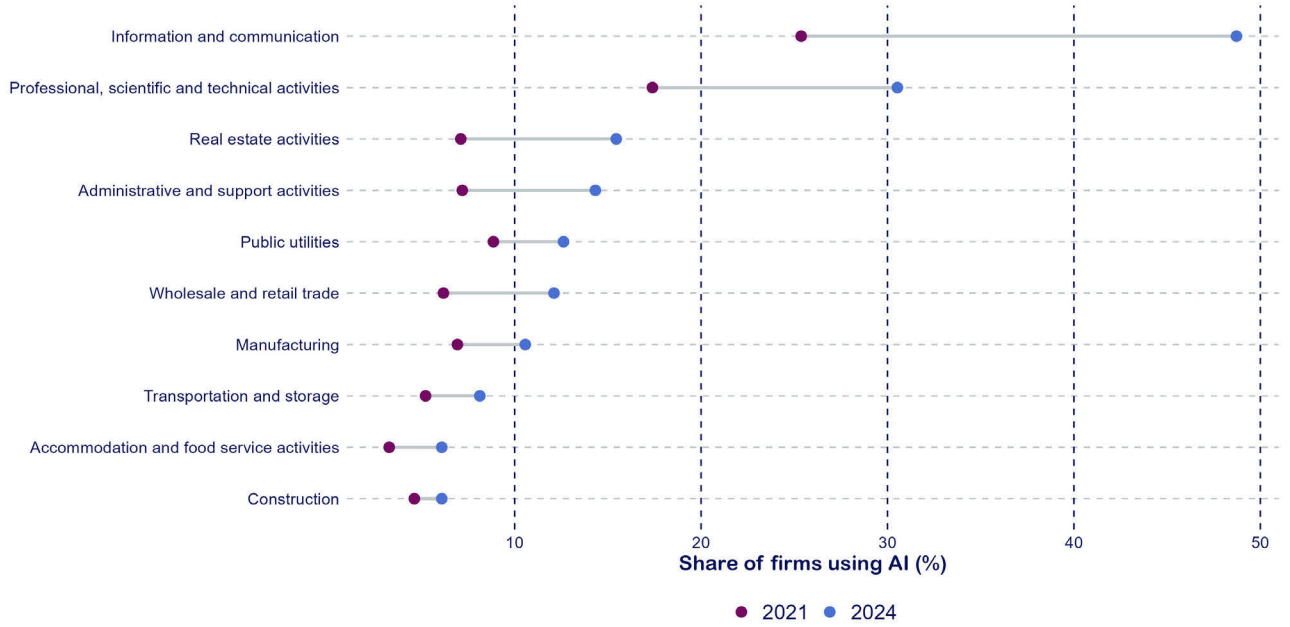
Figure 22: Use of AI in all activities (except agriculture, forestry and fishing; mining and quarrying; and the financial sector), EURES countries, 2021 and 2024



Source: Eurostat dataset (isoc_eb_ai) (17 July 2025).

The increased use of AI is also likely to affect occupations differently based on sectoral uptake and occupational distribution of sectors. As can be seen in Figure 23, AI use has been primarily used in the information and communications technology (ICT) and professional, scientific and technical activities sectors, since these are the main sectors that develop and use digital technologies. However, it is worth noting that AI uptake has been positive across the board. As such, while the maximum penetration of AI in certain sectors, such as construction, might be much lower than in ICT, the current increases in use seem to indicate that there is still room to grow. Furthermore, as the technology matures, it could be reasonable to assume that penetration in other sectors might increase. This accelerated uptake of AI technologies in firms would most likely result in a shift away from labour for certain tasks, thereby leading to a decline in labour demand or an increase in current workforce productivity. This would, in turn, be likely to lead to a decline in labour shortages and an increase in surpluses in occupations concentrated in digital sectors, such as ICT.

Figure 23: Use of AI, by broad sector, EU-27, 2021 and 2024

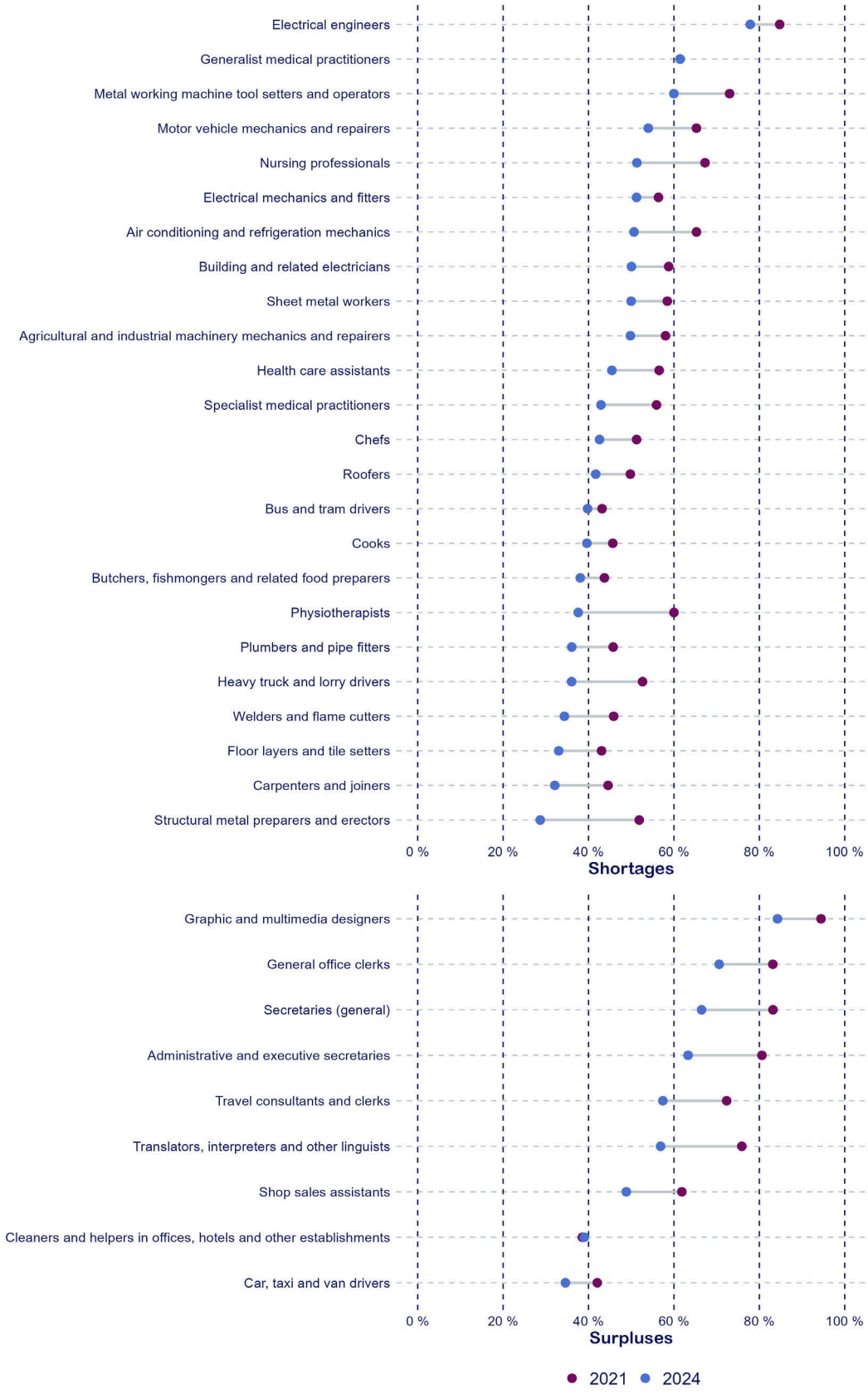


NB: The sector disaggregation corresponds to the general industrial classification of economic activities within the European Union (NACE) Rev. 2, except 'public utilities', which corresponds to the 'water supply; sewerage, waste management and remediation activities' sector.

Source: Eurostat dataset (isoc_eb_ain2) (17 July 2025).

Not all occupations are equally exposed to AI. Figure 24 shows that surplus occupations tend to exhibit higher levels of digital pervasiveness, further highlighting the spread of digitalisation. However, all occupations across both widespread shortages and surpluses saw, at most, a stagnant measure of digital pervasiveness between 2021 and 2024, with the majority experiencing a decline.

Figure 24: Digital pervasiveness in widespread shortage and surplus occupations, EU-27, 2021 and 2024

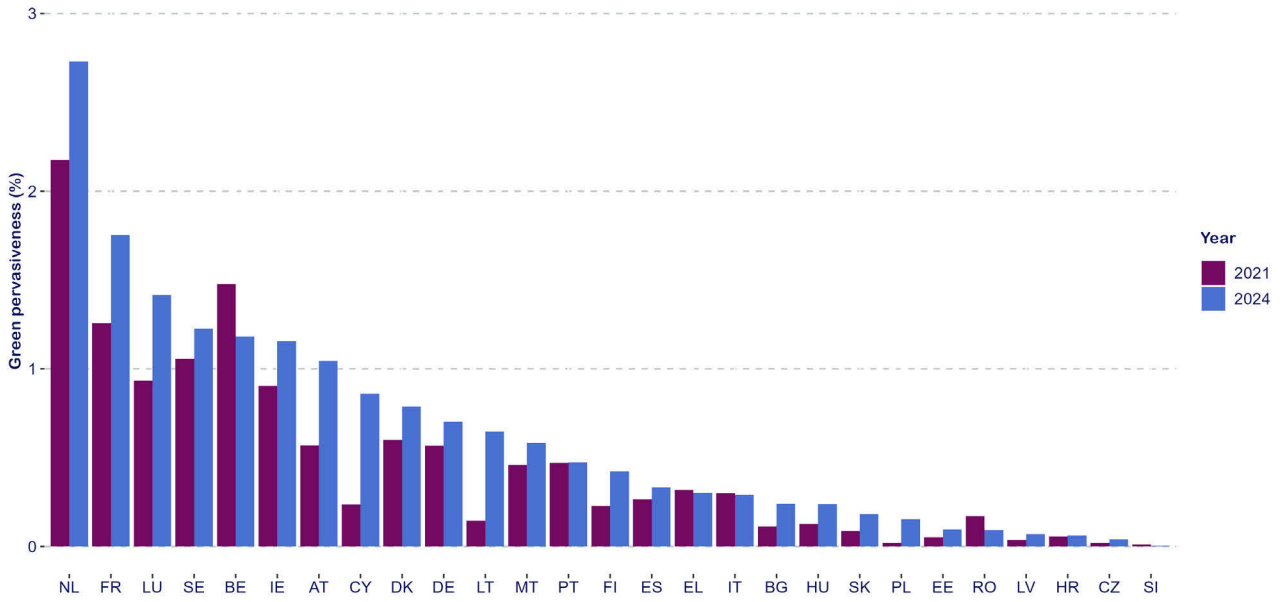


Source: Cedefop (n.d.-c).

Another factor that is likely to influence the trend of labour shortages and surpluses in the long run is climate change. Firstly, climate damage will impact regions differently, with droughts more likely in the south of Europe, while floods will increase in intensity and frequency in the north. These changes are projected to affect employment demand in sectors such as agriculture, which will be directly impacted by increasing climate change damage, thereby leading to a decline in production in these sectors (European Environment Agency, 2020; Jiménez-Donaire et al., 2020). Climate change will also adversely impact working conditions due to higher average temperatures, which may decrease labour supply in occupations particularly exposed to outside weather events (e.g. roofers) (European Climate and Health Observatory et al., 2021; Han et al., 2024).

Besides the impacts of climate change, policy responses, such as the European Green Deal, are influencing the trends in labour supply and demand. The green transition will probably increase labour demand in occupations critical to the transition (e.g. building and related electricians), and thus is likely to accentuate the shortages that are already present (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2023a). As can be seen in Figure 25, most Member States experienced an increase in green pervasiveness, that is, the share of online vacancies that mention at least one skill tied to the green transition. This would seem to support changing labour market requirements, which may lead to increases in shortages. There seems to be no indication that this change is contained to a specific geographical location.

Figure 25: Change in green pervasiveness, EU-27, 2021 and 2024



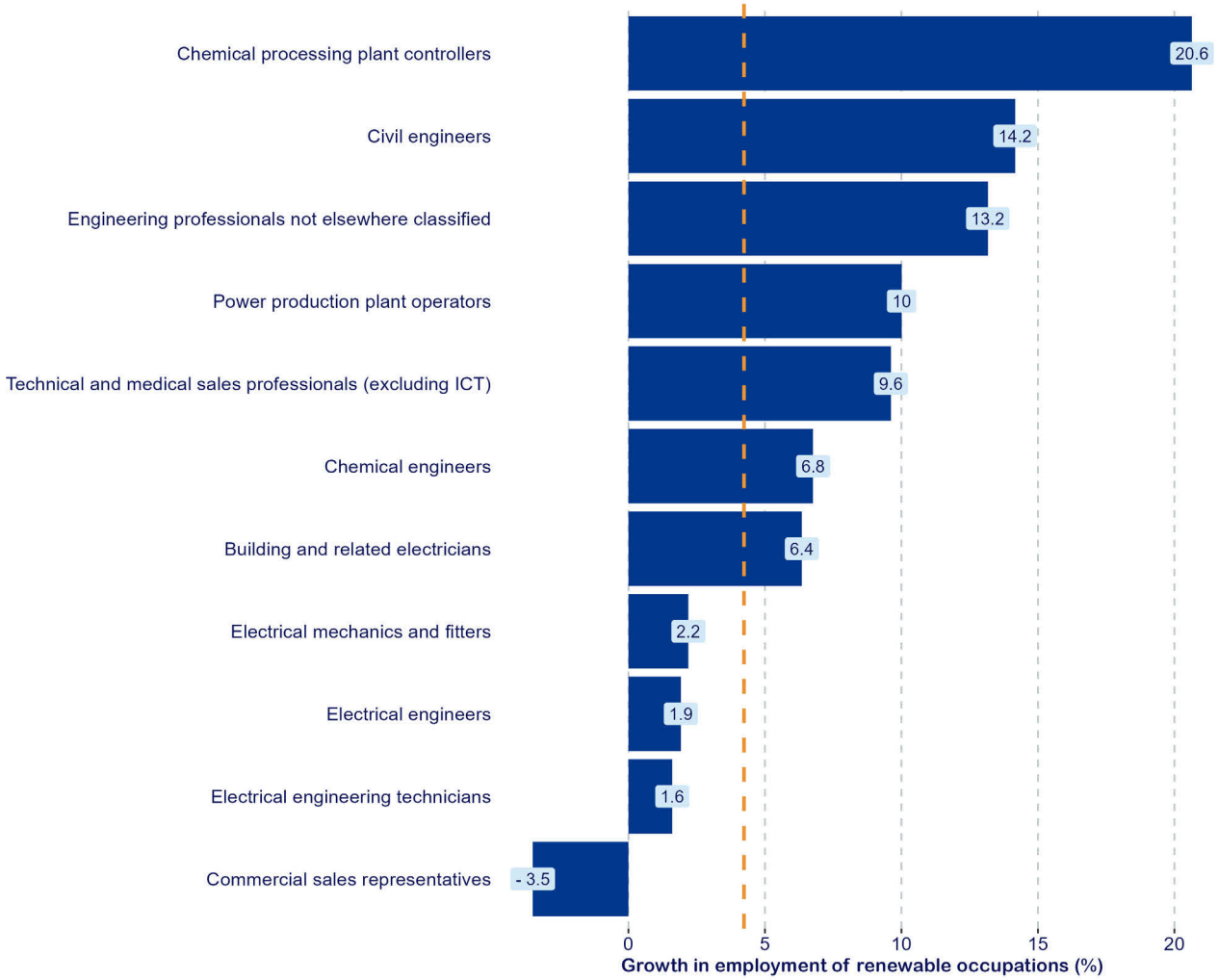
NB: The countries are ordered by the 2024 value.

Source: Cedefop (n.d.-d).

A closer look at the shortage occupations identified in Figure 26 shows that the rising demand for green skills corresponds with employment growth in occupations related to renewable energy. Cedefop's 'Renewable energy and related occupations' (Cedefop, n.d.-e) records online job vacancies that exhibit at least one green skill by occupation. Using it, 11 occupations linked to the renewable energy industry were identified. All of these were reported by at least four NCOs as being in shortage in 2024, with three classified as widespread shortage occupations (which could reflect a strong demand for labour in these fields). Except for commercial sales representatives, all occupations experienced positive employment growth from 2021 to 2024, and only three grew at a slower pace than overall EURES employment, as shown by the orange dashed line.

However, unless reskilling and training efforts keep pace with changing skill demands, the growing emphasis on green competencies is expected to exacerbate existing shortages in the short- to medium-term. The observed growth in both employment in green occupations and green skills requirements underlines a widening skills gap, reinforcing the link between the green transition and persistent labour shortages.

Figure 26: Growth in employment in occupations tied to the renewables industry that are in shortage, EURES countries, 2021–2024 (people aged 15+ years)



NB: The orange dotted line refers to the growth in total employment in EURES countries.

Sources: Cedefop (n.d.-e); EU-LFS special data extractions.

Taking all these factors into account, it is therefore probable that the impact of the green transition on labour shortages will become more acute in the future in industries closely tied to the green transition. The changing skills requirements are also likely to increase labour shortages in the coming years as the green transition is implemented. Similarly, labour surpluses might be amplified due to the skills requirement shifts caused by the green transition.

The impacts of the drivers of long-term trends in labour shortages and surpluses discussed previously, including demographic change, digitalisation and climate change, could well be obscured in the short-term, most notably by the expected effects of geopolitical tensions. The impacts of the current uncertain trade landscape on labour shortages and surpluses can broadly be grouped into two channels.

The first channel would consist of the effects of tariffs imposed by trade partners on goods and services produced within the European Free Trade Association (EFTA) economic area. It is likely that, in the short-term, exporting countries would be hit by increasing costs, leading to a slowdown in hiring (and thus labour demand) (Rinz, 2025; The Budget Lab at Yale, 2025). This could help reduce labour shortages in these sectors. However, assuming stabilisation to a new normal of higher tariffs, firms would be likely to onshore a portion of their production (OECD, 2025a). This would increase domestic labour demand in these sectors for occupations that had previously been offshored, increasing the degree of shortage in these occupations.

The second channel would encompass the effects of tariffs imposed by the EU-27 and EFTA economic bloc on trading

partners. In the short-term, such measures are likely to increase the cost for import-reliant producers and retailers, leading to a slower rate of labour hire, thereby reducing labour shortages in these sectors (Autor et al., 2013), like in the first channel. Similarly, in the long-term, assuming that tariffs stabilise at a new, higher level, a shift of demand away from relatively more expensive imports towards domestic-based alternatives would, in turn, boost demand in the domestic labour market as domestic producers aim to meet the increased demand for their goods and services.

Compounding these two channels, the short-term effect of a higher tariff regime could initially have a loosening effect on labour market shortages, primarily due to slower rates of hiring as firms adapt to the new business environment. However, higher tariffs could accentuate labour shortages in the longer run as reliance on foreign labour markets decreases due to higher trade barriers (OECD, 2025a).

These trade effects on labour shortages and surpluses would primarily be concentrated on sectors that are particularly exposed to trade. Table 6 shows the relative importance of occupations in the top exporting and importing sectors in the EU-27 in 2023. Occupational groups that already have acute labour shortages, such as plant and machine operators and assemblers (which encompasses occupations such as heavy truck and lorry drivers), would thus likely be among the first affected by the trade impacts described previously.

Table 6: Trade exposure of occupations, EU-27 (1), 2023

Trade	Sector	Trade value outside EU-27 (in billion EUR) (share of trade)	Occupation	Number of people employed (000)
Exports	Manufacturing	1 649.9 (74.1 %)	Craft and related trades workers	9 102.4
			Plant and machine operators and assemblers	6 209
			Technicians and associate professionals	4 806.5
	Wholesale and retail trade	364.7 (16.4 %)	Services and sales workers	10 757.8
			Technicians and associate professionals	3 270.8
			Clerical support workers	2 597.6
	Transportation and storage	51.6 (2.3 %)	Plant and machine operators and assemblers	4 512.8
			Clerical support workers	2 276.1
			Elementary occupations	947.7
Imports	Manufacturing	975.7 (49.7 %)	Craft and related trades workers	9 102.4
			Plant and machine operators and assemblers	6 209
			Technicians and associate professionals	4 806.5
	Wholesale and retail trade	681.3 (34.7 %)	Services and sales workers	10 757.8
			Technicians and associate professionals	3 270.8
			Clerical support workers	2 597.6
	Transportation and storage	106.3 (5.4 %)	Plant and machine operators and assemblers	4 512.8
			Clerical support workers	2 276.1
			Elementary occupations	947.7

(1) Data for CH, IS and NO were incomplete.

Sources: Eurostat dataset (ext_tec09) (28 July 2025); EU-LFS special data extractions.

It should be noted that the transition from the short-term effects to the long-term effects is likely to be tied to the perceived certainty in the business community of the new tariff regime. Higher levels of uncertainty regarding trade policy would most likely see firms delay hiring and lay-off decisions, thus delaying the transition to observed long-term effects (Baker et al., 2016; Handley et al., 2017).

3.5. Summary

From 2014 to 2024, employment growth across the EURES countries followed a generally upward trajectory, interrupted only by a brief downturn during the COVID-19 crisis. Since 2021, most Member States have recorded further gains in both employment rates and labour force participation. Falling unemployment rates, together with an increase in job vacancies, indicate a progressively tighter labour market.

Employment growth has been particularly strong across many shortage occupations, most notably in healthcare and hospitality. By contrast, some other shortage areas, including insulation work, have seen employment fall, largely as a result of unattractive working conditions and an ageing workforce. Surplus occupations, many of which face exposure to automation, continued to register moderate employment gains; however, there are emerging signs that automation may be tempering growth in certain clerical roles.

Looking ahead, demographic shifts, the digital transformation and the green transition are likely to remain as the important forces shaping labour market imbalances, although short-term trade disruptions may temporarily obscure their effects.

4. Characteristics of workers

In 2025, 24 occupations were identified as experiencing widespread shortages. Conversely, nine occupations were identified as experiencing widespread surpluses. Collectively, these occupations employed approximately 52.6 million workers in the EURES countries in 2024. Of these, 26.4 million were employed in the 24 widespread shortage occupations, while 26.2 million were employed in the nine widespread surplus occupations (see Table 7).

Table 7: Summary table, EURES countries, 2024 (people aged 15+ years)

Indicator	All occupations	Widespread shortage	Widespread surplus
Number of occupations	436	24	9
Number of people employed (million)	215.2	26.4	26.2

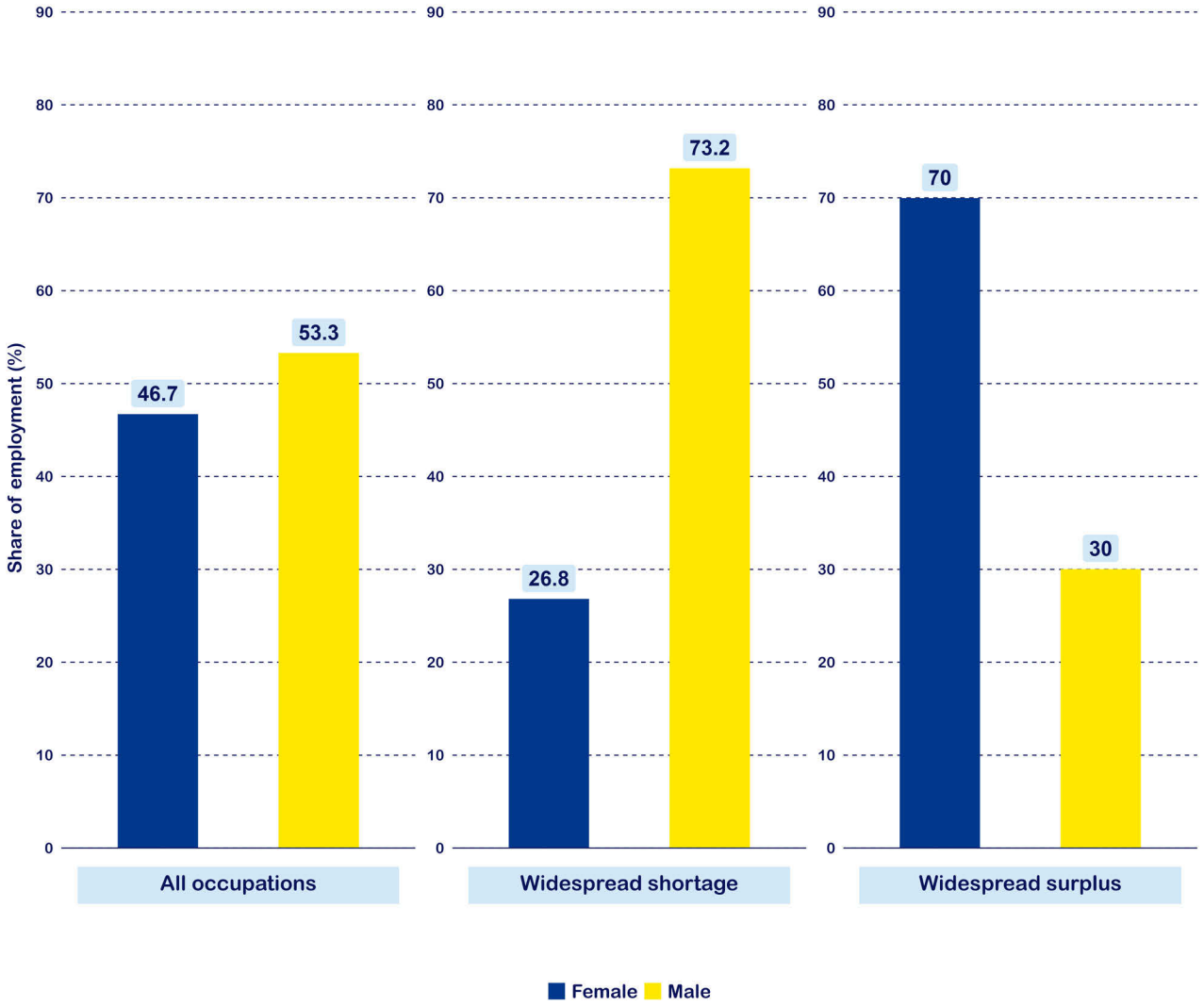
Sources: EU-LFS special data extractions; Eurostat dataset (lfsa_egan2) (20 March 2026).

The 52.6 million workers in widespread shortage or surplus occupations represent around 24 % of the total 215.2 million individuals employed in the EURES countries in 2024. These widespread shortage and surplus occupations constitute approximately 8 % of the 436 occupations under the ISCO 2008 classification.

4.1. Gender profile

Overall, employment across all occupations presents a persistent gender gap between men and women, with men accounting for around 53.3 % of the employment in widespread shortage and surplus occupations in 2024, versus 46.7 % for women (see Figure 27). This trend is more pronounced for widespread shortage occupations. Among the 24 shortage occupations recorded for the year 2025, women accounted for only about 26.8 % of employment, and men around 73.2 %. However, surplus occupations saw an almost opposite dynamic. Women in the nine recorded widespread surplus occupations account for roughly 70 % of employment, while men account for 30 %. The large difference in the gender profiles of the two occupational groups, compared with overall employment, seems to indicate an important gender imbalance, which can lead to vulnerabilities for women. The research corroborates this, providing supporting evidence that higher levels of exposure to labour market fluctuations, particularly with respect to lay-offs and wage growth, seem to affect mainly women (Levanon et al., 2009; Bächmann, 2023).

Figure 27: Shares of employment in widespread shortage and surplus occupations in the EURES countries, by gender, 2024 (people aged 15+ years)

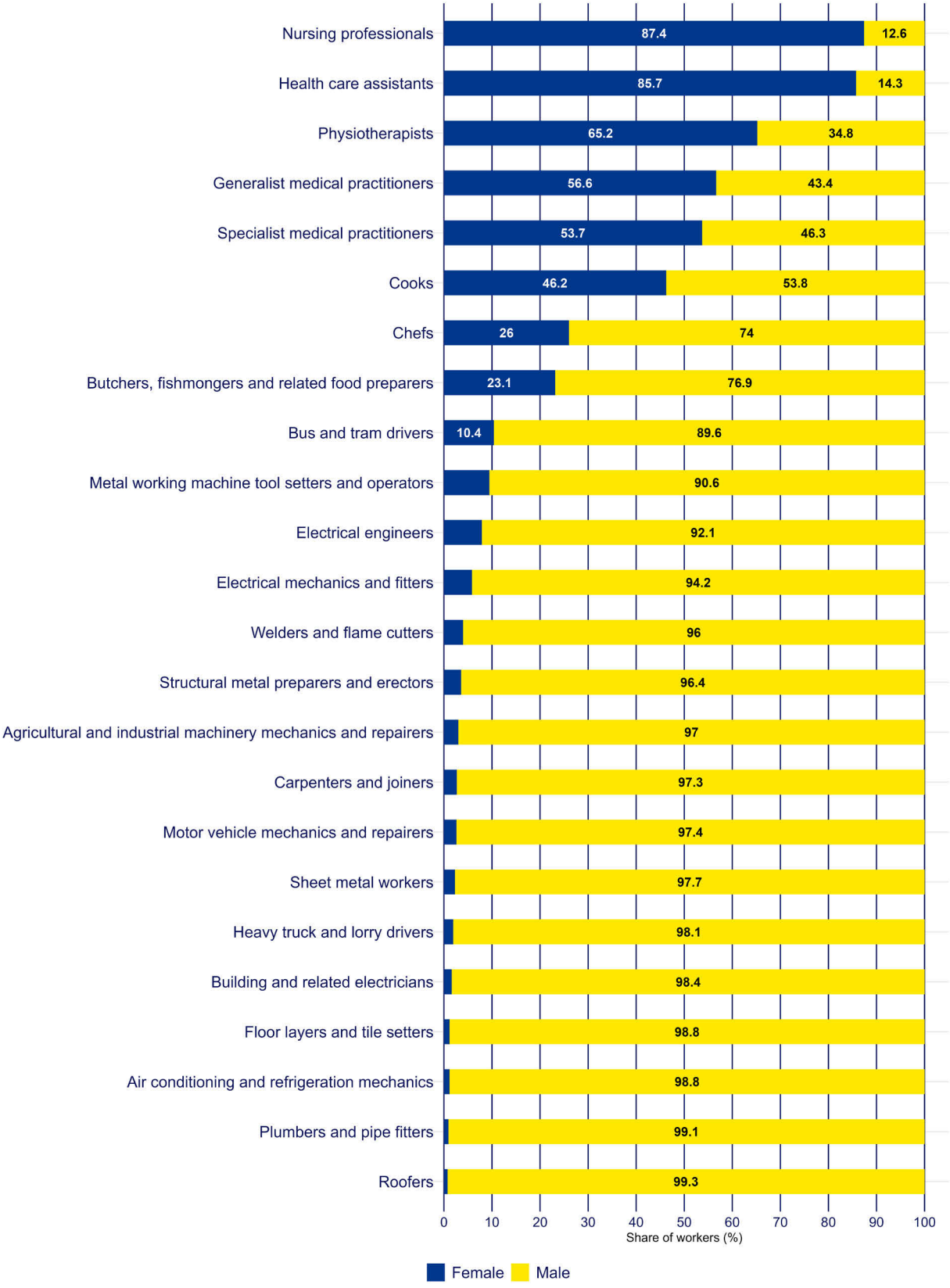


NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

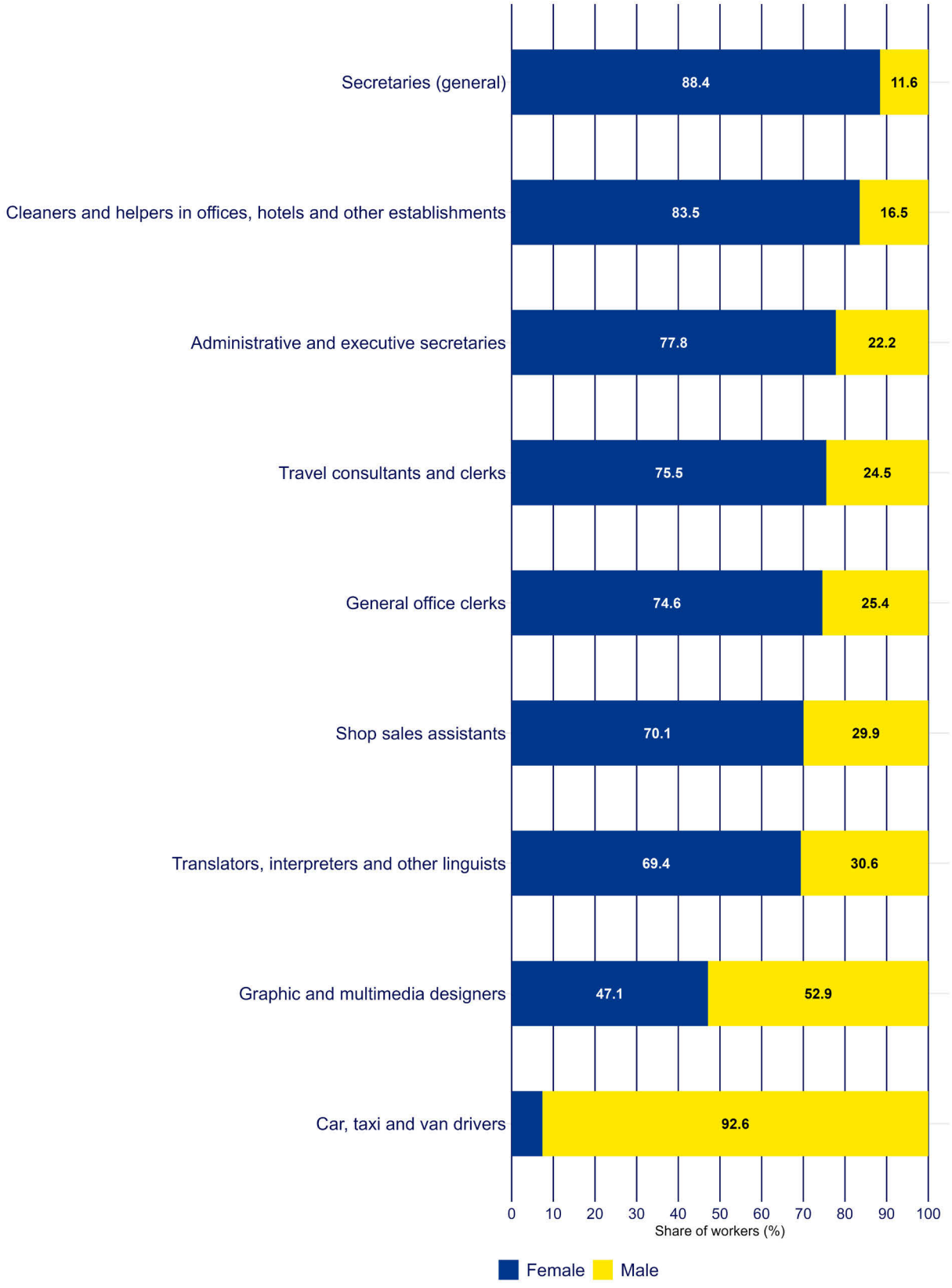
Examining widespread shortage occupations more closely reveals a gender-based occupational segregation (Figure 28). Women's employment is highly concentrated, with women forming a majority in employment in only five occupations. Health and care occupations in particular have a high concentration of women. Conversely, men are predominant in occupations tied to the construction sector, with eight construction-related occupations exhibiting less than 3 % recorded female employment. This reflects a broader trend identified in the literature, where these two occupational groups suffer from persistent gender bias in employment (European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, 2023a; WHO, 2025).

Figure 28: Shares of employment in widespread shortage occupations in the EURES countries, by gender, 2024 (people aged 15+ years)



Source: EU-LFS special data extractions.

Figure 29: Shares of employment in widespread surplus occupations in the EURES countries, by gender, 2024 (people aged 15+ years)



NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

Looking at widespread surplus occupations, clerk and secretary occupations make up almost half of the occupations in this group (Figure 29). The only occupation where men outnumber women by a wide margin is car, taxi and van drivers, which is part of the transport sector. As with shortage occupations, the gender patterns reflect trends in the respective sectors, with secretary and clerical positions being historically filled by women (Eurostat, 2024b). Similarly, the transport sector has historically not been very attractive to women, especially in driver roles (Ng et al., 2020; Duxfield et al., 2025; European Labour Authority, 2025).

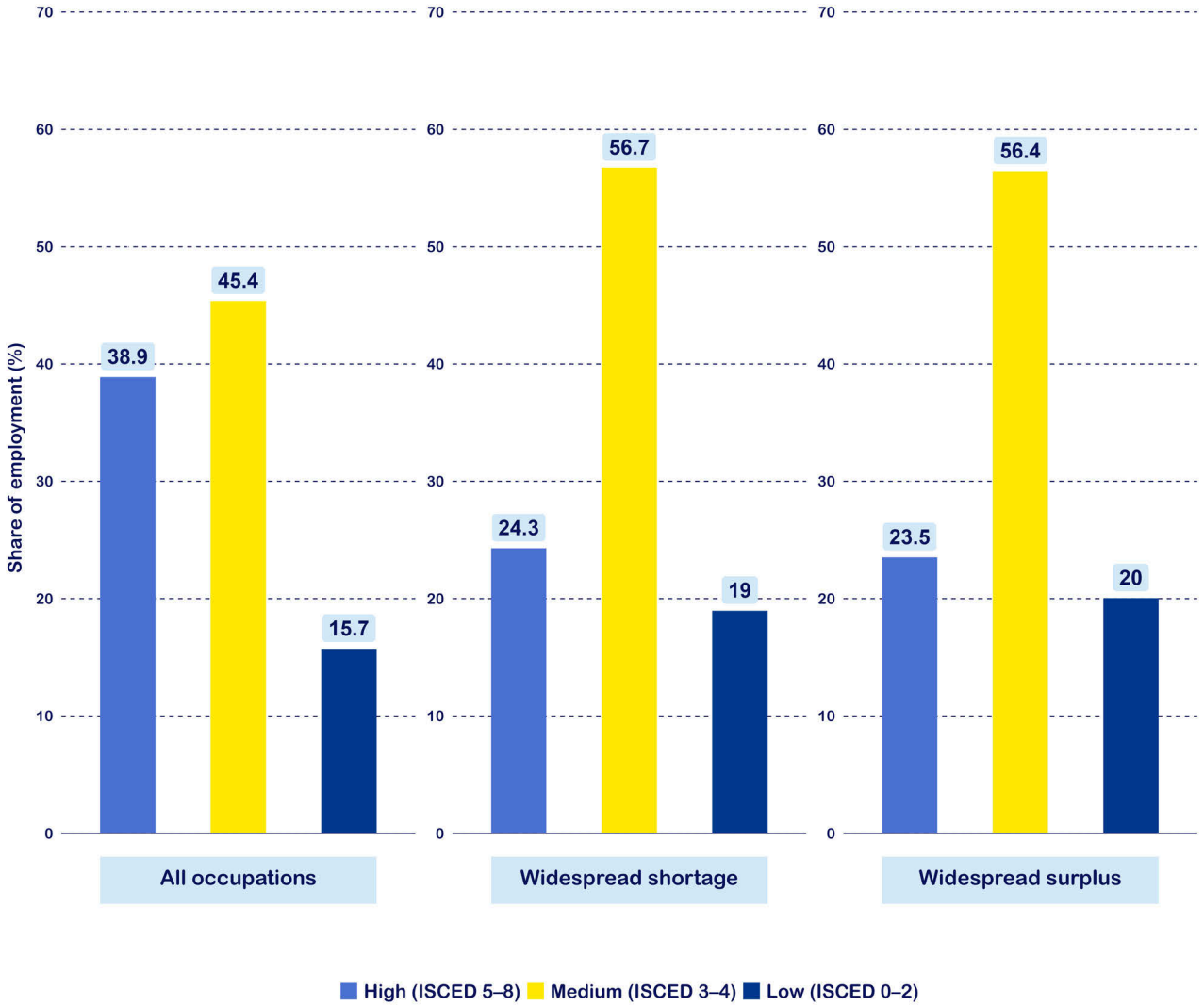
One of the most reported shortage occupations is building and related electricians, with a total of 22 NCOs flagging it as being in shortage. This occupation is representative of the gender-split dynamic observed in shortage occupations, with men accounting for 98.4 % of employment. This stark imbalance further underlines the need for the promotion of gender-inclusive initiatives in the construction sector, especially as the twin green and digital transitions will require important infrastructure and other construction works (European Labour Authority, 2025).

The gender segregation in employment indicates that women are much more likely than men to be employed in surplus occupations. Furthermore, shortage occupations where women predominate tend to be concentrated in the health and care sector, which may be indicative of societal perception biases of these roles (European Institute for Gender Equality, 2017; European Commission, 2022). The European Commission, with its gender equality strategy, has initiated steps that aim to tackle occupational segregation, stereotyping and barriers to women's access to occupations that will alleviate labour shortages (European Commission, 2020, 2025a).

4.2. Education profile

There is not much difference between widespread shortage and widespread surplus occupations in terms of split by education level (Figure 30). Both groups exhibit lower-than-average workforce shares of highly educated people, 24.3 % and 23.5 %, respectively, compared with 38.9 % in all occupations. Conversely, the shares of medium-skilled workers are 56.7 % and 56.4 % for shortage and surplus occupations, respectively, compared with around 45.4 % in all occupations. The shares of low-skilled workers employed in shortage and surplus occupations (19 % and 20 %, respectively) reflect the share in overall employment (15.7 %). This distribution would seem to suggest that medium-skilled workers are in high demand, but within occupations requiring job-specific skills.

Figure 30: Shares of employment in widespread shortage and surplus occupations in the EURES countries, by education level, 2024 (people aged 15+ years)



ISCED: International Standard Classification of Education.

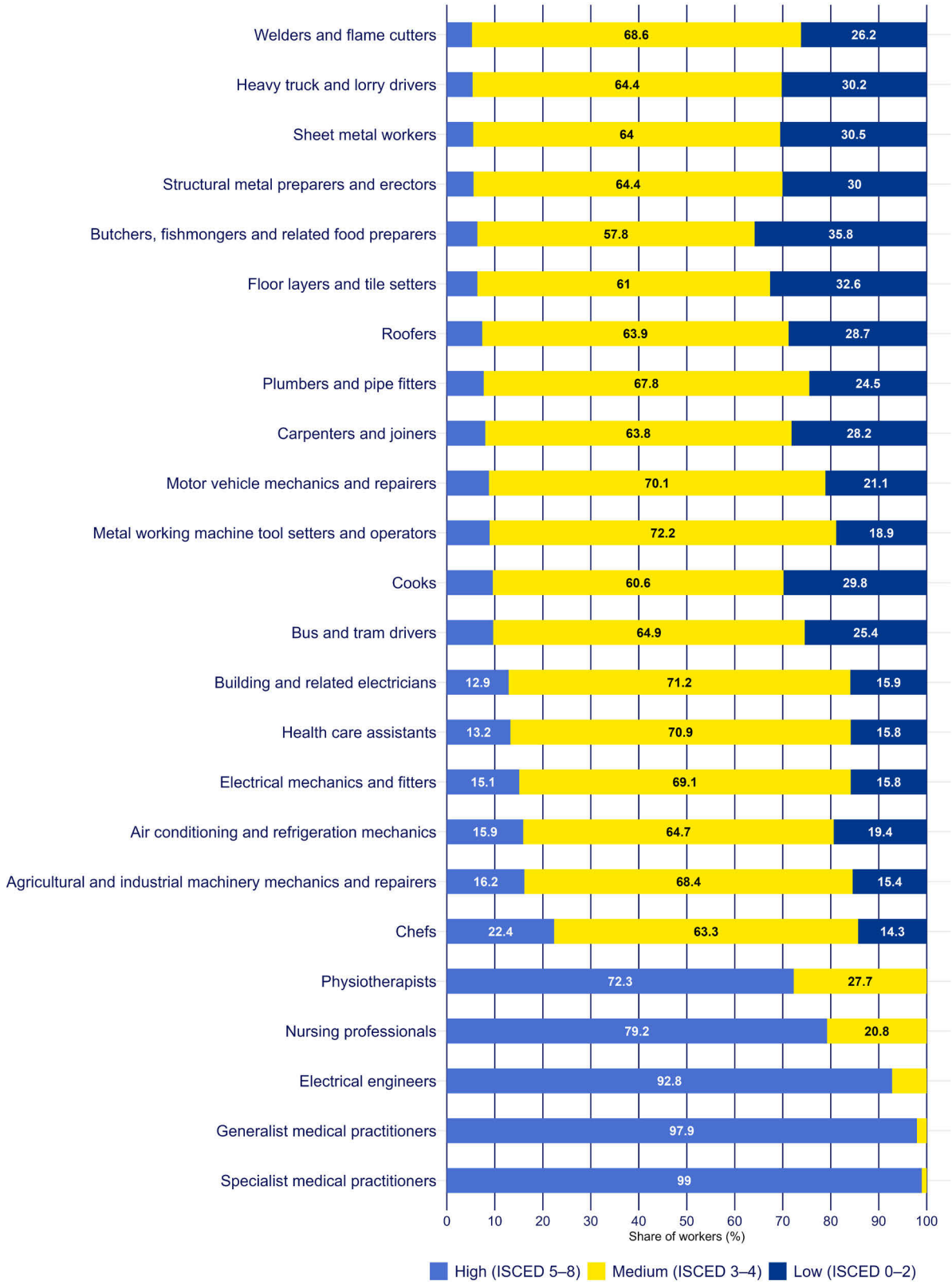
NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

Looking at occupations individually, medium-level education remains prevalent across the most widespread shortage occupations. Jobs in construction are largely represented within this list. These occupations are characterised by a lower-than-average share of highly educated workers and shares of workers with a medium level of education consistently above 60 %, except in healthcare and engineering professions, where a higher level of education tends to be more prevalent (see Figure 31). These occupations rely on labour possessing job-specific skills, although the educational barriers are likely to be lower. Shortages here are therefore most likely driven by a combination of both high demand for these occupations and inadequate supply due to insufficient provision of vocational training and unfavourable working conditions (e.g. lower wages) (Brucker Juricic et al., 2021; Causa et al., 2025).

There are also marked differences in the proportion of highly educated workers between widespread shortage and surplus occupations (Figure 31 and Figure 32). In shortage occupations, higher education is most common within healthcare and engineering roles. Conversely, among surplus occupations, the share of highly educated workers exceeds 50 % in more general occupations (e.g. clerks) and the specialist occupations of translators, interpreters and other linguists. This variation suggests that labour shortages are primarily driven by specific skill requirements, as employers tend to need candidates possessing occupation- or job-specific technical qualifications over general ones.

Figure 31: Shares of employment in widespread shortage occupations in the EURES countries, by education level, 2024 (people aged 15+ years)

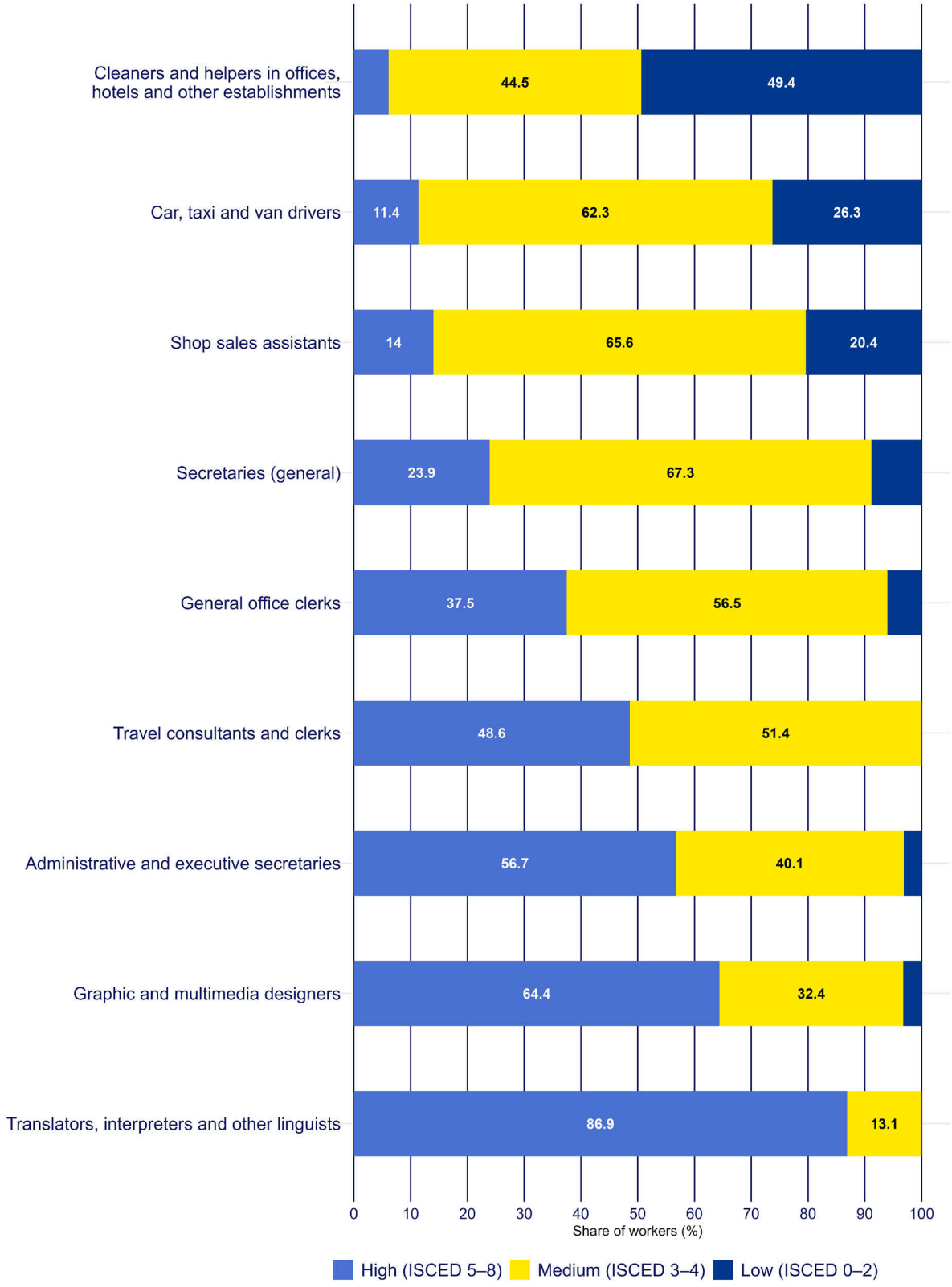


ISCED: International Standard Classification of Education.

NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

Figure 32: Shares of employment in widespread surplus occupations in the EURES countries, by education level, 2024 (people aged 15+ years)



ISCED: International Standard Classification of Education.

NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

Building and related electricians, one of the most reported shortage occupations, is representative of the skills composition of many shortage occupations tied to the construction sector, with an above-average share of medium-skilled workers in employment, and a below-average representation of highly educated labour. The large share of medium-skilled workers reflects the importance of vocational and on-the-job training in specialised skills that this labour relies on, and further underlines the need for incentivisation of such training offerings, given that demand for this occupation is likely to remain high over the coming years due to the green transition.

In recent years, policymakers have also acknowledged the increasing need for policies that boost vocational training to alleviate labour shortages. For example, Norway introduced a new initiative, 'Skilled workers for a new era – with higher vocational education', in recognition of the current situation (Cedefop, 2025; Ministry of Education and Research, 2025). This initiative proposes reforms that are designed to meet employers' demands for more complex qualifications. It also seeks to improve international cooperation through the potential use of the European credit transfer and accumulation system and provide higher vocational education and training institutions with greater autonomy, including the ability to obtain accreditation and independently modify or establish study programmes, thereby improving the relevance, flexibility and recognition of vocational training. However, such measures to boost the attractiveness and availability of vocational training still lag behind other educational policy initiatives aimed at higher education groups, with the Organisation for Economic Co-operation and Development (OECD) (2023a) pointing out that 'combined school- and work-based programmes remain a rarity' (p. 21). Box 4 provides an example of a recent EU initiative aimed at addressing this issue.

Box 4: Net-zero industry academies

The net-zero industry academies are consortia of industry, training providers, social partners, and public authorities created to close urgent skills gaps in clean-tech value chains. They are designed to develop learning programmes and voluntary credentials that education and training providers across Member States can adopt. The net-zero industry academies emerged as a concrete skills pillar of the Net-Zero Industry Act, adopted in 2024 to scale up EU manufacturing of strategic net-zero technologies.

The principal goal is rapid upskilling and reskilling at scale: each academy aims to reach roughly 100 000 learners within three years of establishment, creating a mobile, industry-relevant pool of technicians and medium-skilled staff to support European clean-tech manufacturing and deployment. This goal targets both immediate labour bottlenecks and longer-term workforce resilience for the green transition.

The academies intend to achieve this by co-designing modular curricula and training content with industry, accrediting voluntary credentials to ease cross-border mobility, and scaling delivery through networks of vocational schools, private trainers and industry partners.

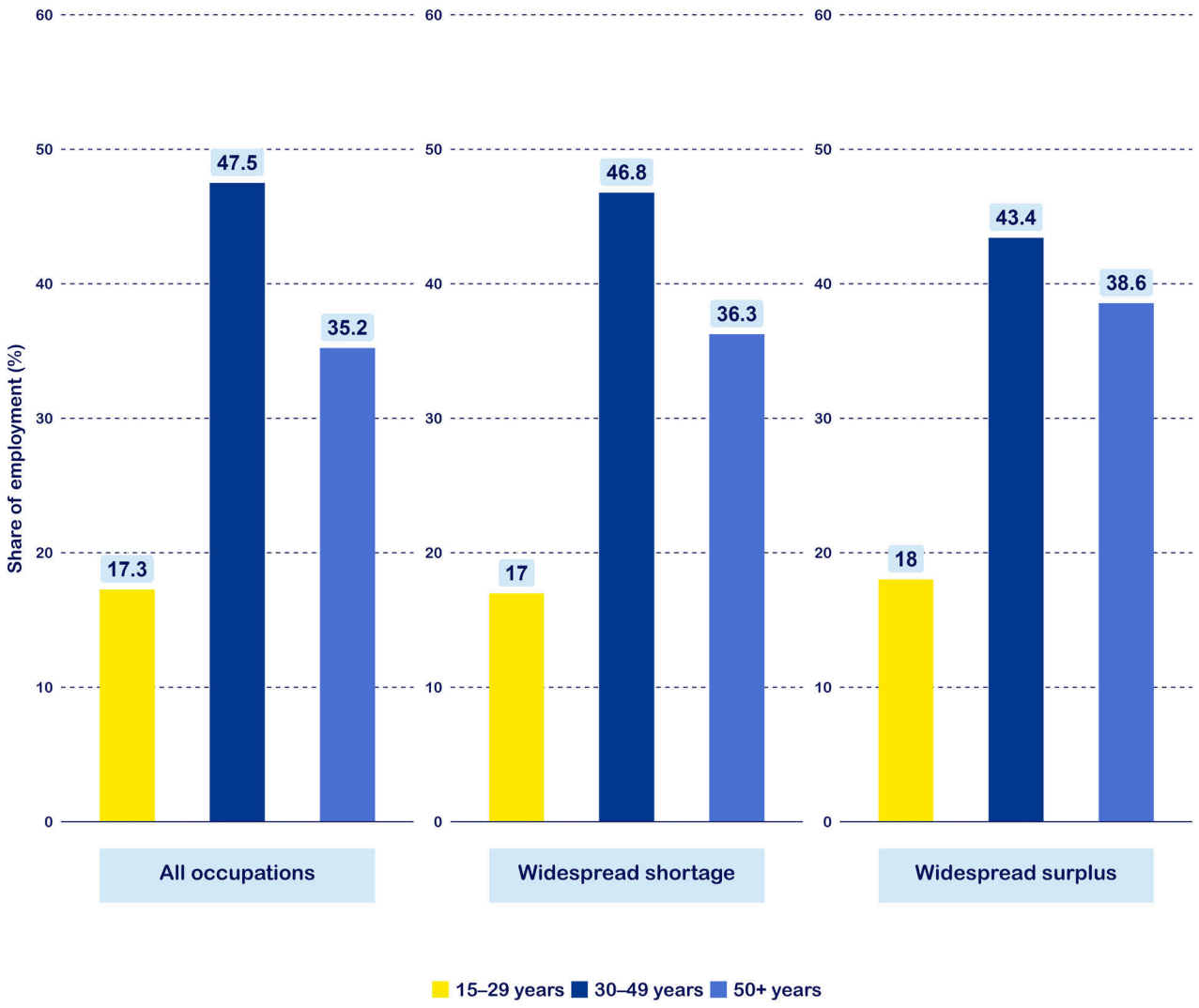
Sources: European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (2023b); European Commission (2024a).

The findings on the severity and frequency of labour shortages presented in this report align with those of previous editions, indicating that an increase in the supply of highly educated jobseekers would not fully address all identified shortages. Nevertheless, such an increase would be particularly advantageous in alleviating shortages in specific professions, notably within healthcare. Conversely, expanding the labour supply of workers with intermediate education could help ease shortages across a broader range of occupations, particularly in the construction sector.

4.3. Age profile

As can be observed in Figure 33, in 2024, workers under the age of 30 in the EURES countries accounted for 17.3 % of the total workforce. For widespread shortage occupations, this proportion was 17 %, and for widespread surplus occupations, it rose to 18 %. Considering older workers, 35.2 % of the total EURES workforce was aged 50 or over in 2024. Among widespread shortage occupations, 36.3 % of those employed were over the age of 50. In widespread surplus occupations, this share was slightly higher, at 38.6 %, indicating that older people might be more at risk of job insecurity in these occupations.

Figure 33: Shares of employment in widespread shortage and surplus occupations in the EURES countries, by age group, 2024



NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

The age distribution varies considerably across specific shortage occupations (see Figure 34). For instance, over 26 % of roofers are under 30 years of age. However, in 2024, the proportion of young people working in widespread shortage occupations was greater than 20 % in only eight out of a total of 24 shortage occupations. The low proportions of young workers in occupations requiring higher levels of education, such as specialist and generalist med-

ical practitioners, can be explained by the long duration of the studies for these professions. In other words, the duration and cost of education can act as barriers to entry, resulting in fewer young workers being employed despite existing shortages.

On the other hand, the under-representation of young workers in certain shortage occupations is a cause for concern, indicating that shortages are likely to persist unless measures are taken to make these roles more attractive. Such measures could include upskilling, reskilling and improving working conditions. The occupations most affected by this include heavy truck and lorry drivers and bus and tram drivers.

This highlights the growing importance of EU initiatives such as the youth guarantee (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2023b), which is a commitment by Member States to ensure that all young people under the age of 30 receive a good-quality offer of employment, continued education, apprenticeship or traineeship within four months of leaving education or becoming unemployed, helping reduce barriers to entry into occupations facing widespread shortages.

By contrast, the proportion of the workforce aged 50 and above was more than 20 % in all widespread shortage occupations, exceeding 40 % in four of them. The large proportion of older workers in these roles poses a significant challenge, as the need for labour replacement is likely to intensify shortages. This issue is especially pronounced in the construction sector, where many shortage occupations, such as floor layers and tile setters, show marked age imbalances and a large share of workers aged 50 or older. To maintain operations, an equivalent number of workers will need to be recruited and trained. Alternatively, progress in automation could partially alleviate some of these anticipated occupational shortfalls. There is, however, no indication that automation will advance sufficiently to offset these labour shortages within the next 15 years. As a result, labour demand is expected to remain steady over this period. Consequently, initiatives like the one outlined in Box 5 will most likely be required to maintain employment levels.

Box 5: The Walloon recovery plan

In the Walloon Region, Belgium, the regional government launched a package of around 20 measures in September 2021 under the 'Plan de Relance de la Wallonie' to address acute labour shortages in the construction, wood and electrical engineering sectors (Cedefop and ReferNet, 2022). The initiative aimed to attract young people and adult learners to these trades, while improving the image of these trades and strengthening vocational pathways.

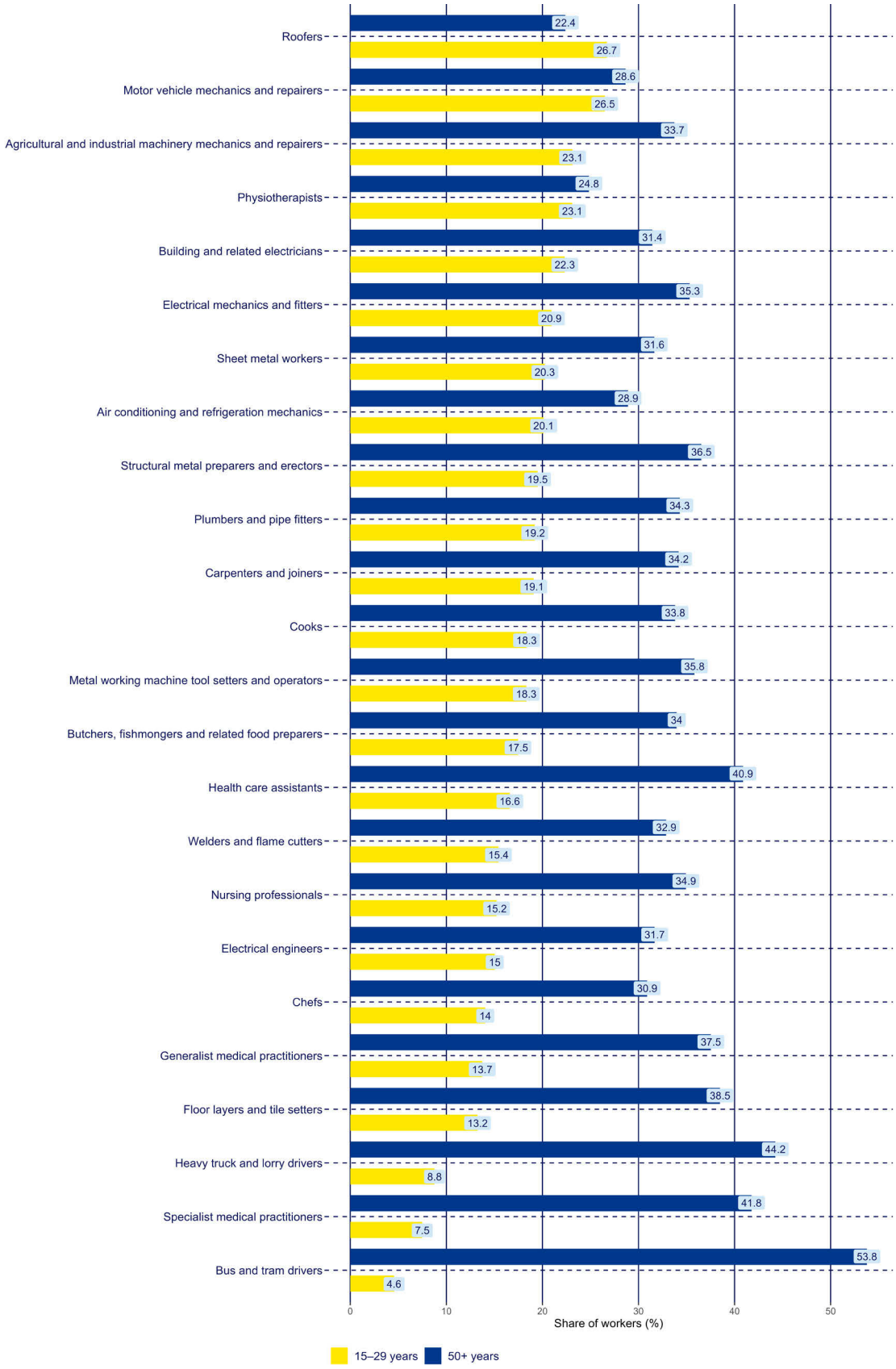
The plan expanded dual education and vocational training through Forem (L'Office wallon de la formation professionnelle et de l'emploi) and the Institut wallon de formation en alternance et des indépendants et petites et moyennes entreprises (Ifapme) [1], creating over 1 000 new training places in shortage occupations. It boosted incentives by offering bonuses of up to EUR 2 000 to learners and jobseekers, free tuition and a 'construction driving passport' covering the cost of training to obtain a driving licence, to reduce transport barriers (Cedefop and ReferNet, 2022). Apprentices' monthly pay was increased, and training modularised for step-by-step certification, while mentor support was strengthened through Ifapme programmes. A public awareness campaign titled '*Je construis mon avenir*' ('I'm building my future') promoted construction careers, particularly among women.

Follow-up data show that six months after completing construction training, 84 % of learners under 18 and 92 % of adult trainees found work in the sector (Cedefop and ReferNet, 2022). Female participation rose by 28 % between 2017 and 2022. By 2023, 1 694 training grants and 452 driving licence vouchers had been issued, 376 of which were used (Cedefop and ReferNet, 2026).

(1) Forem is the Walloon public employment and vocational training service, responsible for job placement, skills development and training for jobseekers. Ifapme is the Walloon institute for work-based learning, specialising in apprenticeships and vocational training for self-employed workers and SMEs.

Sources: Cedefop and ReferNet (2022, 2026).

Figure 34: Shares of workers aged under 30 years and aged 50+ years in widespread shortage occupations in the EURES countries, 2024



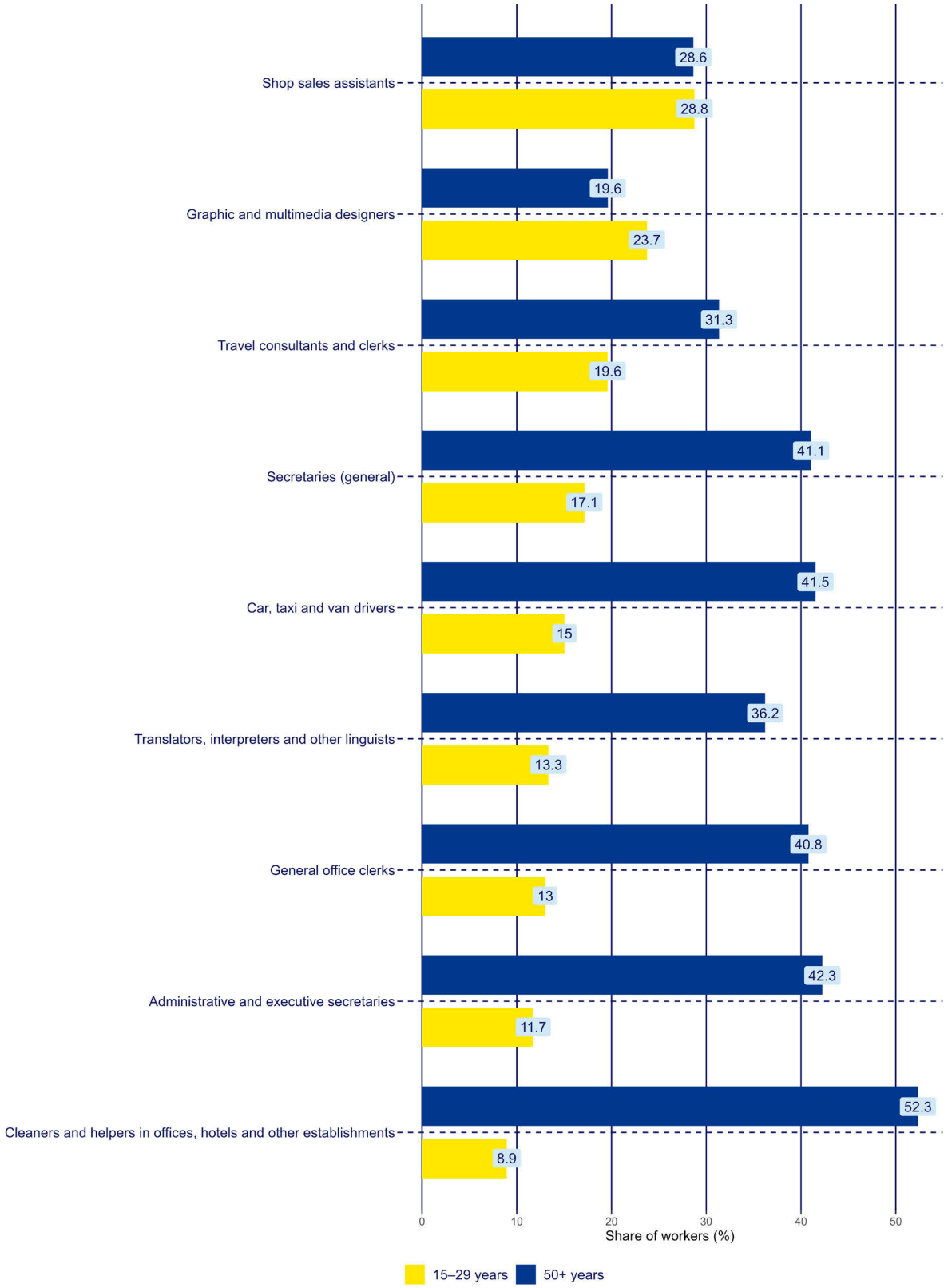
Source: EU-LFS special data extractions.

The above-average shares of older workers observed across widespread surplus occupations (see Figure 35) are concerning, as they suggest that this vulnerable population will be faced with reduced employment security without intervention by policymakers. Workers aged over 50 accounted for more than 30 % of the workforce in widespread surplus occupations. This indicates that a relatively high number of older people are employed in roles where supply exceeds demand. For instance, clerical and secretarial roles, such as general office clerks, show a substantial proportion of workers over 50. The relative over-representation of older workers in widespread surplus occupations may reflect the lower relative attractiveness of these roles, which could discourage younger workers from entering them (for example, cleaners and assistants in offices, hotels and similar establishments). Without an adequate replacement of this labour by new cohorts, this ageing workforce could potentially lead to future labour shortages. For example, occupations such as general office clerks, with 40.8 % of workers over the age of 50 years, and secretaries, with over 41 % in the same age group, will face substantial retirement numbers in the coming two decades. As such, there is a possibility that this decline in the labour supply may shift some of these occupations from surpluses to shortages. The most susceptible occupations, that is, those exhibiting the largest age differences, include cleaners and helpers in offices, hotels and other establishments, and general office clerks.

Furthermore, the occupation that is most widely reported to be in surplus (graphic and media designers) is the only occupation where youth employment exceeds employment of those aged 50 and above. The discrepancy between this observation and the low representation of youth in shortage occupations further underlines the need to reshape the incentive structures to better accommodate the needs of the younger labour cohorts.

To replace this departing workforce, it is essential to attract younger workers. This can be achieved by improving awareness of opportunities, ensuring job security, enhancing working conditions and contract terms, offering flexible hours and providing competitive salaries. Measures such as reducing working hours, increasing access to training, and establishing clear career progression paths could make these roles more appealing to younger people.

Figure 35: Shares of workers aged under 30 years and aged 50+ years in widespread surplus occupations in the EURES countries, 2024

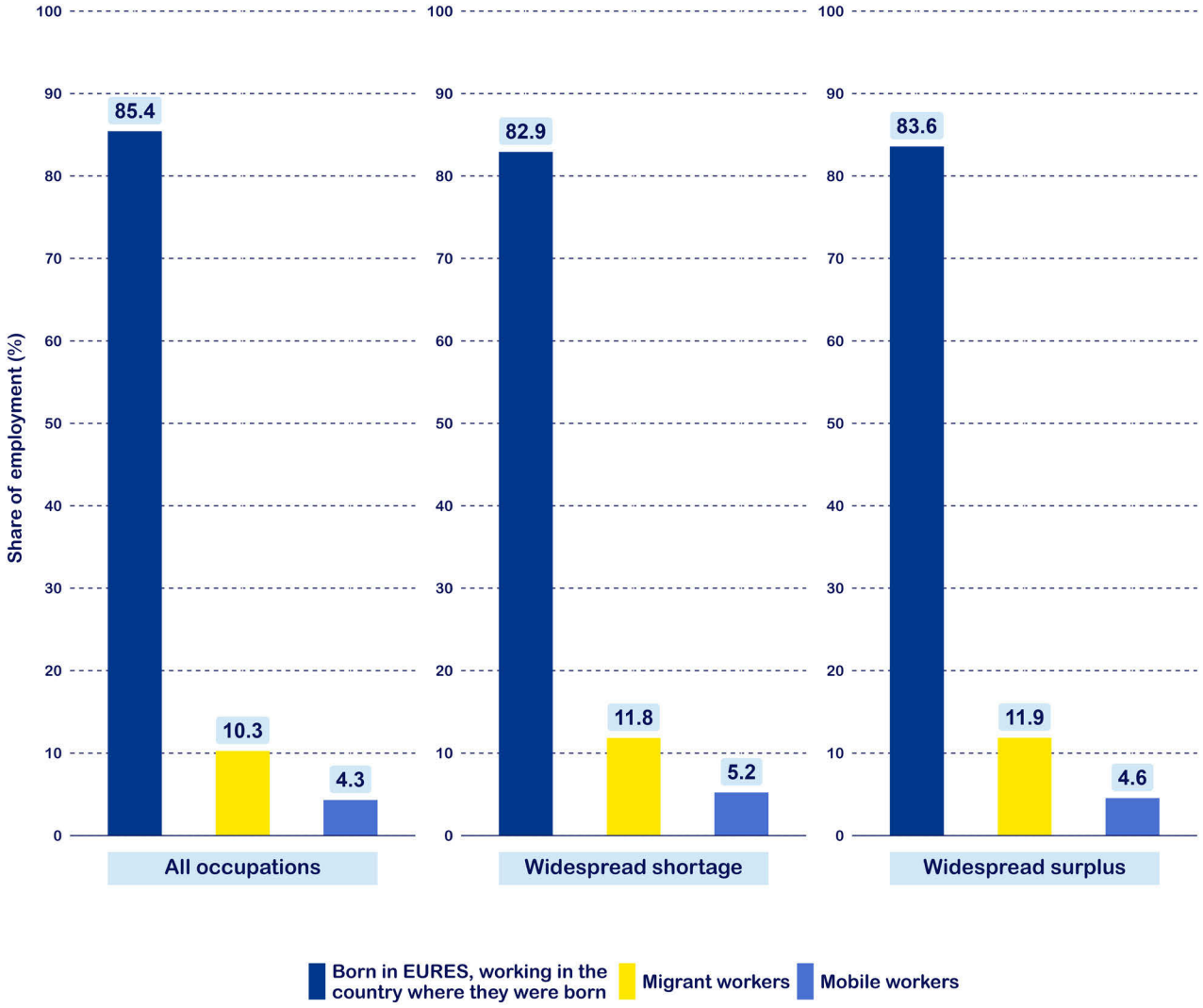


Source: EU-LFS special data extractions.

4.4. Country of origin

In 2024, the majority of workers employed in the 24 most common shortage occupations were nationals of the country in which they worked (see Figure 36). Meanwhile, 5.2 % were mobile workers from other Member States, and 11.8 % were migrant workers from non-EURES countries. A similar pattern by country of origin was observed for the total workforce of widespread surplus occupations in the same year: mobile workers accounted for 4.6 %, while migrant workers represented 11.9 %.

Figure 36: Overall employment in widespread shortage and surplus occupations in the EURES countries, by country of origin, 2024 (people aged 15+ years)



NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

The modest over-representation of migrant workers in 2024 is anticipated, given that numerous EU-27 and EFTA countries have work permit systems aimed at attracting foreign workers who have skills that are in short supply.

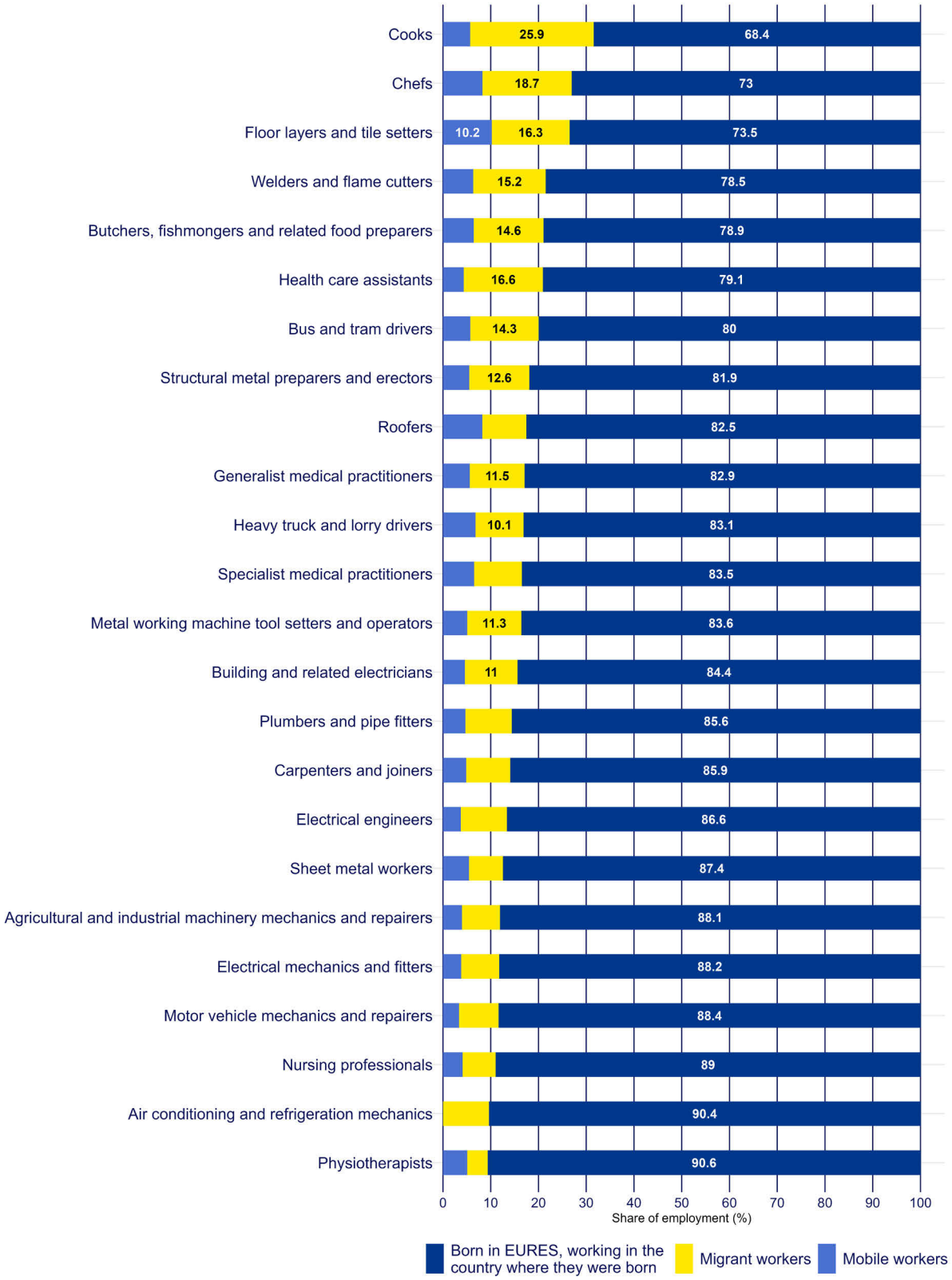
From Figure 37, it can be seen that migrant and mobile workers make up a relatively larger share of the workforce among hospitality-related occupations such as cooks; chefs; and butchers, fishmongers and related food preparers. They are also relatively more represented among some construction-related occupations such as floor layers and tile setters and welders and flame cutters.

Based on Figure 38, the combined share of mobile and migrant workers exceeds 20 % for surplus occupations requiring low-skill qualifications (e.g. cleaners), whereas it is lower than 10 % for most occupations requiring higher levels of education (e.g. general office clerks).

Recent data corroborate this pattern. In the EU, for instance, overqualification rates are higher among non-EU citizens than among EU nationals, indicating a tendency for migrants to occupy lower-skilled roles despite possessing higher qualifications. In 2024, employed non-EU citizens in the EU were almost twice as likely to be overqualified for their job than nationals, with an overqualification rate of 39.6 % for non-EU citizens, 30.3 % for citizens of other EU countries and 20.2 % for nationals (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2025b; Eurostat, 2025e). This finding was also highlighted in the latest release of the Employment and Social Developments in Europe report in September 2025 (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2025b). In it, the authors underline that overqualification remains a prevalent issue. The report supports this point by indicating that the overqualification rate has barely decreased in recent years. They also point out that the overqualification rate is inversely related to the level of skills, with less complicated occupations showcasing higher rates of overqualification in their labour (e.g. accommodation and food-related occupations) than occupations requiring higher levels of skills (e.g. occupations related to the health and care sector).

The influx of Ukrainians into other European countries since 2022 as a result of the Russian war of aggression offers evidence consistent with these findings. Member States have achieved some success in integrating these refugees into their labour markets; however, the policies implemented to date have certain shortcomings (Kosyakova et al., 2024). Some countries implemented 'work first' policies, which prioritise rapid job entry. This approach was shown to heighten skills mismatch by steering refugees into low-skilled employment. By contrast, countries investing in language learning, upskilling and qualification recognition, as in Scandinavia and central Europe, achieved better skill alignment and more sustainable employment outcomes over time.

Figure 37: Shares of employment in widespread shortage occupations in the EURES countries, by country of origin, 2024 (people aged 15+ years)



NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

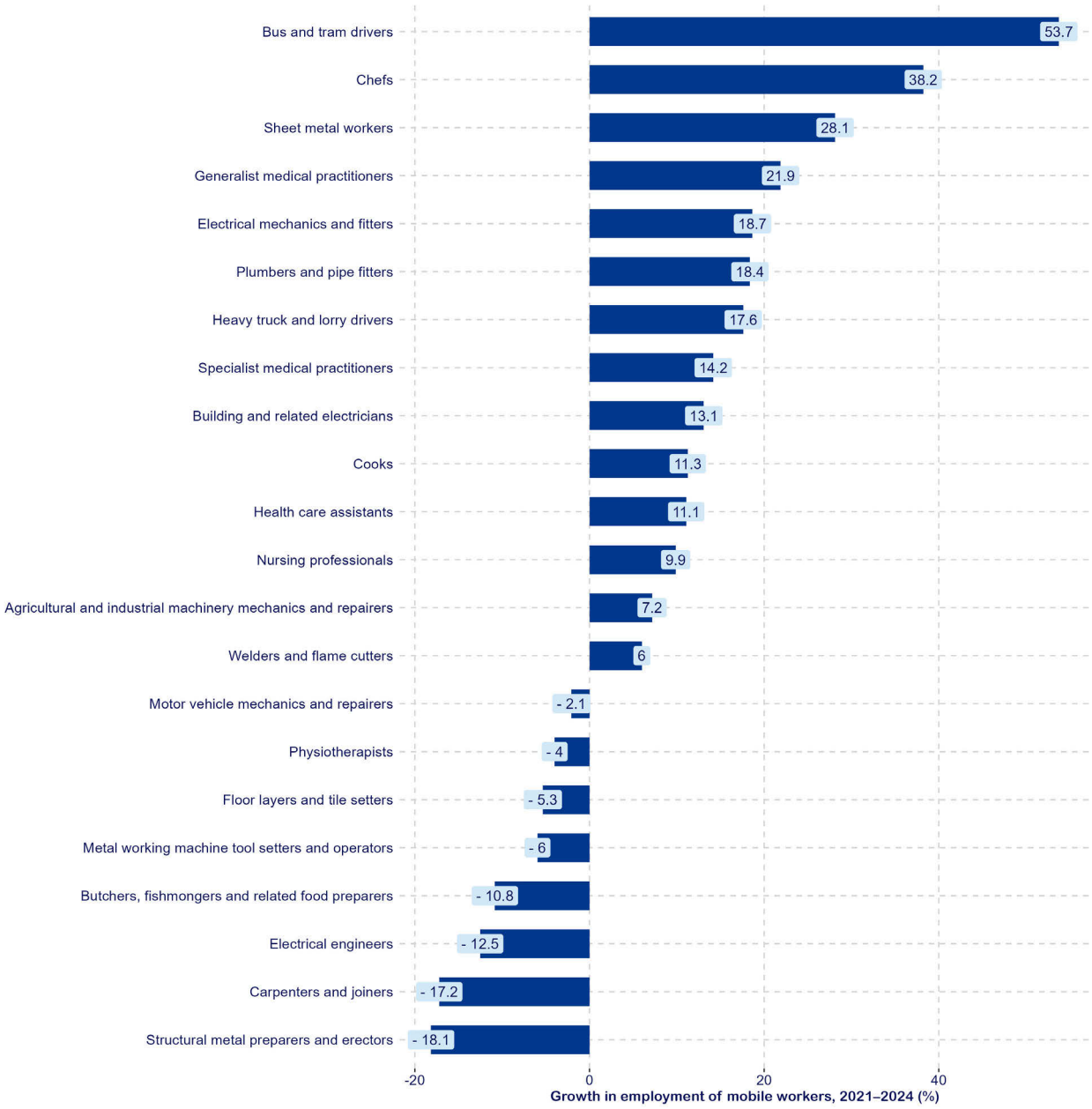
Figure 38: Shares of employment in widespread surplus occupations in the EURES countries, by country of origin, 2024 (people aged 15+ years)

NB: The percentages might not add up to exactly 100 % due to rounding.

Source: EU-LFS special data extractions.

Figure 39 illustrates the growth rates of the employment of mobile workers in widespread shortage occupations between 2021 and 2024. Out of 24 widespread shortage occupations, 11 experienced at least a 10 % increase in the employment of mobile workers. Consistent with earlier findings regarding education, this growth was predominantly observed in lower-skilled occupations directly or indirectly linked to the construction and hospitality sectors. Literature identifies both the construction (European Commission: Directorate-General for Employment, Social Affairs and Inclusion et al., 2025) and healthcare sectors (Williams et al., 2020; Panteli et al., 2021) as frequent users of foreign-born labour, and both sectors are expected to continue relying on mobile and migrant workers for low- and mid-level roles.

Figure 39: Growth rates of mobile workers in widespread shortage occupations in the EURES countries, 2021–2024 (people aged 15+ years)



NB: Roofers were removed due missing data for 2021. Air conditioning and refrigeration mechanics were removed due to no data in 2023.

Source: EU-LFS special data extractions.

4.5. Multiple vulnerabilities linked to labour surpluses

The analysis indicates that, in many surplus occupations, workers in multiple vulnerability groups (gender, age, education and country of birth) identified in this chapter are disproportionately represented (see Table 8). For example, secretaries are notable for having a particularly high proportion of employees belonging to two of the four vulnerable groups, namely women and older workers. More striking still, cleaners and assistants exhibit high proportions across all four groups.

The data also reveal clear differences across occupational groups. Elementary occupations, while varying in the representation of women and older workers, consistently employ a higher proportion of migrants and low-educated labour. Clerical support roles, by contrast, stand out for their above-average share of women but below-average shares of younger, low-educated and migrant workers. Among professionals, gender composition and migration background vary considerably across countries and contexts; however, these occupations uniformly exhibit a low presence of workers with low educational attainment.

This concentration of vulnerabilities in low-demand, relatively lower-skilled roles suggests a compounded disadvantage, as individuals in these occupations are often the least well placed to move into more sustainable employment opportunities.

Table 8: Vulnerability groups for surplus occupations reported by at least 10 NCOs, EURES countries, 2024

Group	Occupation	Women	Low education level	15–29 years	50+ years	Mobile/ migrant
EURES average across all occupations		46.7 %	15.7 %	17.3 %	35.2 %	14.6 %
Clerical support workers	Secretaries (general)	88.4 %	8.8 %	17.1 %	41.1 %	9.8 %
	Accounting and bookkeeping clerks	77.6 %	4.4 %	14.7 %	37.6 %	10.7 %
	General office clerks	74.6 %	6.3 %	13.0 %	40.8 %	7.4 %
Craft and related trades workers	Agricultural and industrial machinery mechanics and repairers	3.0 %	15.4 %	23.1 %	33.7 %	11.9 %
	Motor vehicle mechanics and repairers	2.6 %	21.1 %	26.5 %	28.6 %	11.6 %
	Building and related electricians	1.6 %	15.9 %	22.3 %	31.4 %	15.6 %
	Bricklayers and related workers	0.3 %	40.5 %	12.8 %	38.8 %	25.2 %
Elementary occupations	Domestic cleaners and helpers	93.6 %	48.7 %	6.8 %	50.7 %	50.5 %
	Cleaners and helpers in offices, hotels and other establishments	83.5 %	49.5 %	8.9 %	52.3 %	37.2 %
	Kitchen helpers	68.9 %	46.8 %	28.0 %	34.5 %	40.1 %
	Hand packers	54.1 %	43.6 %	24.3 %	30.6 %	30.1 %
	Freight handlers	21.1 %	41.6 %	24.8 %	28.5 %	30.9 %
Plant and machine operators and assemblers	Bus and tram drivers	10.4 %	25.4 %	4.6 %	53.8 %	20.0 %
	Car, taxi and van drivers	7.4 %	26.5 %	15.0 %	41.5 %	20.8 %
	Lifting truck operators	7.4 %	33.2 %	16.5 %	33.6 %	19.8 %
	Heavy truck and lorry drivers	1.9 %	30.2 %	8.8 %	44.2 %	16.9 %

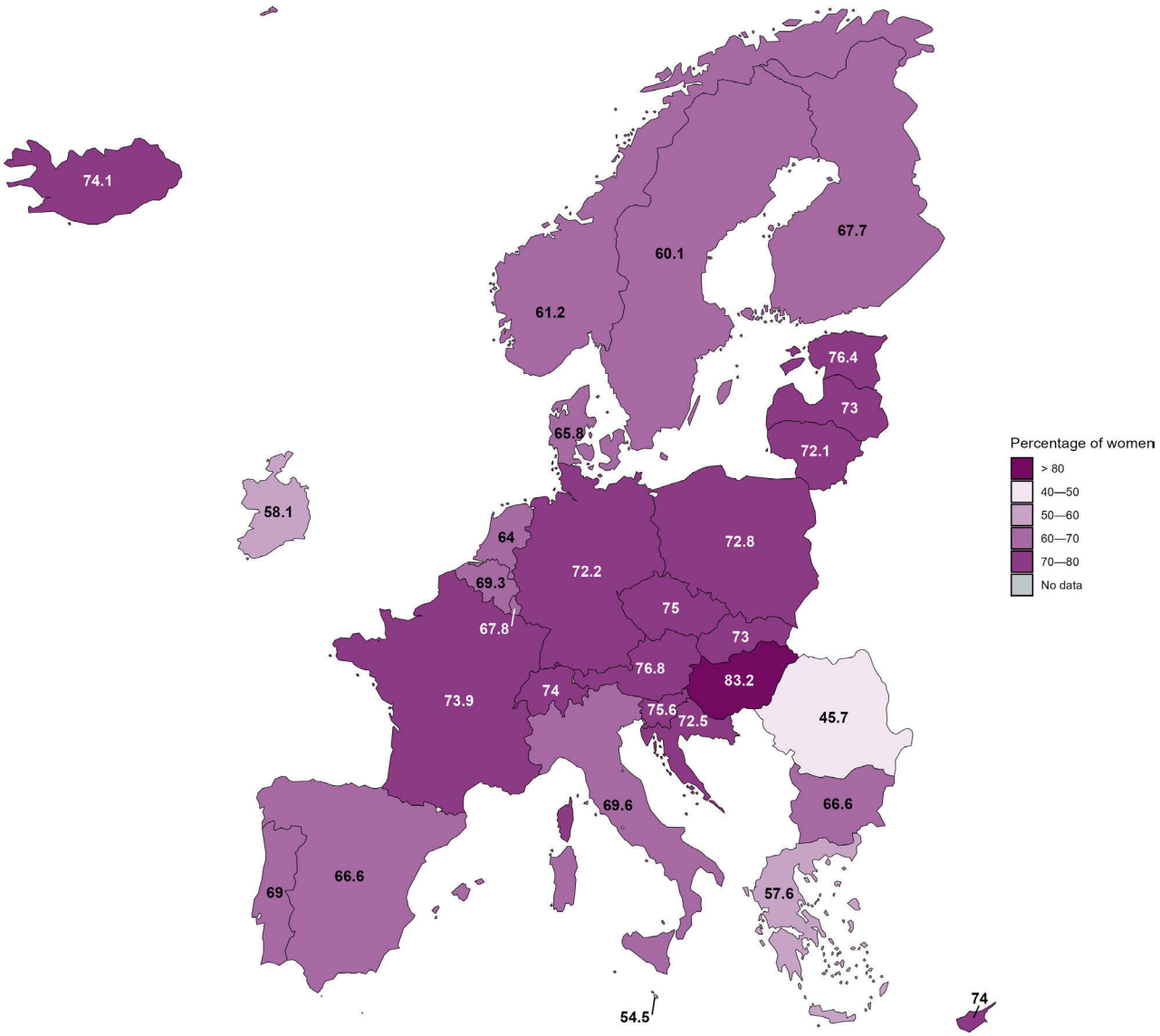
Group	Occupation	Women	Low education level	15–29 years	50+ years	Mobile/ migrant
Professionals	Early childhood educators	93.6 %	2.4 %	20.3 %	28.4 %	7.9 %
	Nursing professionals	87.4 %	0.0 %	15.2 %	34.9 %	11.0 %
	Primary school teachers	83.6 %	0.0 %	10.8 %	37.0 %	5.1 %
	Secondary education teachers	65.5 %	0.0 %	8.8 %	40.8 %	7.0 %
Services and sales workers	Health care assistants	85.7 %	15.8 %	16.6 %	40.9 %	20.9 %
	Shop sales assistants	70.1 %	21.0 %	28.8 %	28.6 %	12.9 %
	Waiters	62.1 %	30.6 %	45.4 %	20.6 %	26.3 %
Skilled agricultural, forestry and fishery workers	Tree and shrub crop growers	30.3 %	41.0 %	9.2 %	55.5 %	7.0 %
	Gardeners; horticultural and nursery growers	19.5 %	32.3 %	18.0 %	38.7 %	17.2 %
Technicians and associate professionals	Administrative and executive secretaries	77.8 %	3.2 %	11.7 %	42.3 %	8.5 %
	Social work associate professionals	77.1 %	6.5 %	19.2 %	33.5 %	10.1 %
	Manufacturing supervisors	14.5 %	11.6 %	8.0 %	41.1 %	10.7 %

Source: EU-LFS special data extractions.

These observations are in line with recent literature on the subject. Women are more likely to be overqualified in the occupations they work in. This tendency is more acute for women who are migrants or mobile workers (Eurostat, 2025e).

Patterns of overqualification also vary with age across Europe. Baran (2024) found that the age pattern of overqualification follows a broadly U-shaped relationship in the EU. The likelihood of being overeducated first declines with age, reaching its lowest point among workers in their 50s, but rises again slightly for those aged 60–64. The author found that the difference in overqualification between workers aged 60–64 and the youngest workers, aged 25–29, who face the highest risk of being overqualified, is not statistically significant. Baran (2024) also found that gender plays a critical role in the likelihood of overqualification at different points in life. The presence of children, particularly older children aged 6–17, is associated with higher overqualification risks for mothers, but lower risks for fathers, highlighting the persistent gendered divide in how parenthood influences occupational mismatch.

Figure 40: Shares of women in widespread surplus occupations in EURES countries, 2024 (%)



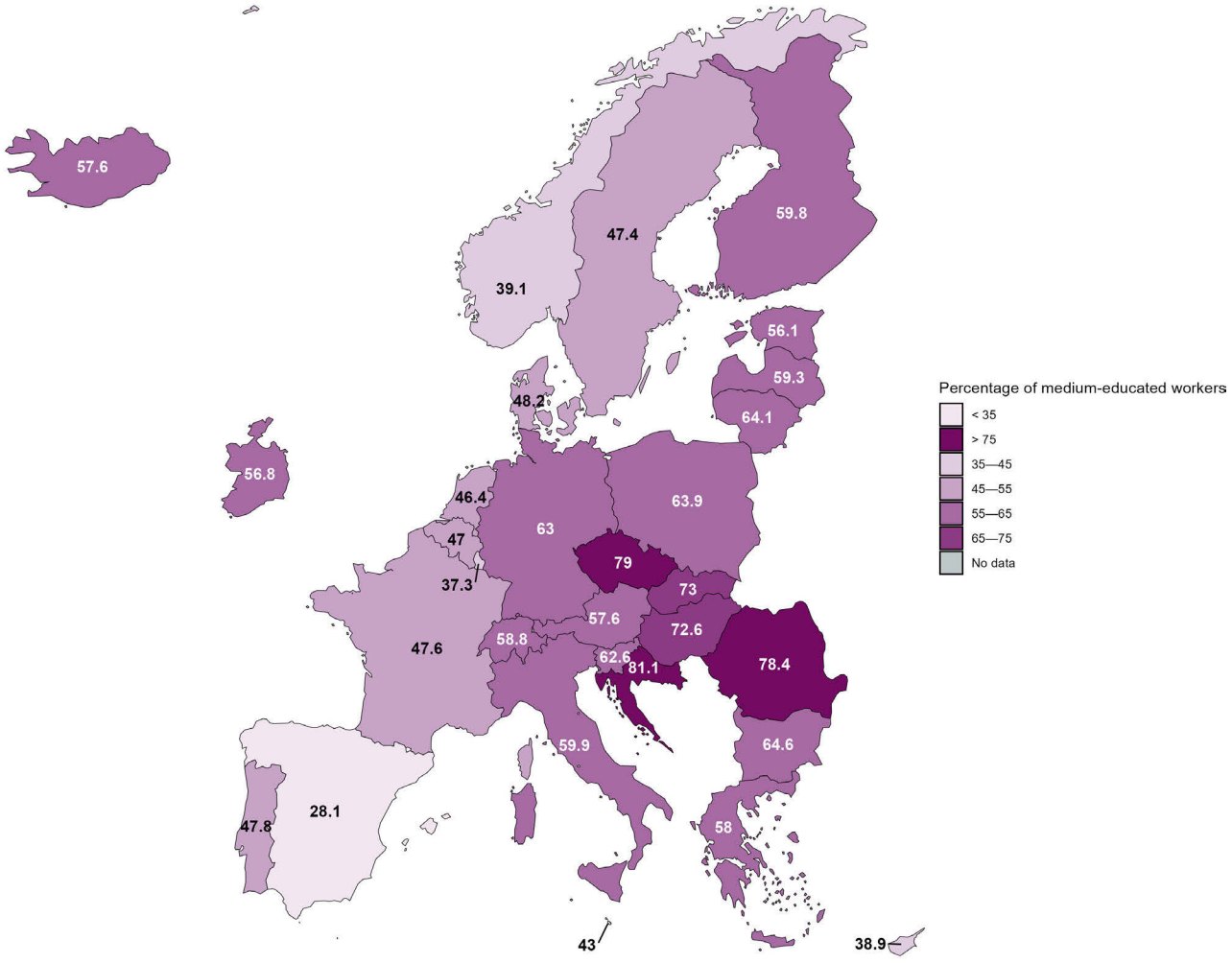
Source: EU-LFS special data extractions.

Country-level data also lay bare further relationships between and within these vulnerability groups.

As can be seen in Figure 40, most EURES countries exhibit shares of women in surplus occupations of between 65 % and 75 %. However, countries such as Hungary, Austria and Estonia exhibit higher shares than the average, while Romania, Greece and Ireland exhibit lower shares than the average.

The education split at the country level also reveals a clear geographical pattern in the concentration of workers with a medium level of education across the identified widespread surplus occupations, with shares ranging from 28.1 % in Spain to 81.1 % in Croatia (Figure 41). This variation most likely reflects structural differences across national economies, including the sectoral composition of employment, historical trends in educational attainment and the age distribution of workers in these occupations, which itself may be shaped by past educational patterns. Research has also revealed clear differences in the skills profiles of migrants across Europe. In particular, mobile workers from central and eastern Europe, originating from the newer Member States and moving into the labour markets of older Member States, are more likely to hold medium-level educational qualifications (Leschke et al., 2023). The relatively lower levels of surplus medium-skilled labour in Western countries are likely to continue being one of the drivers of this pattern in the coming years. Together, these factors may help explain the spread in gender composition of the employment pool of widespread surplus occupations at the country level.

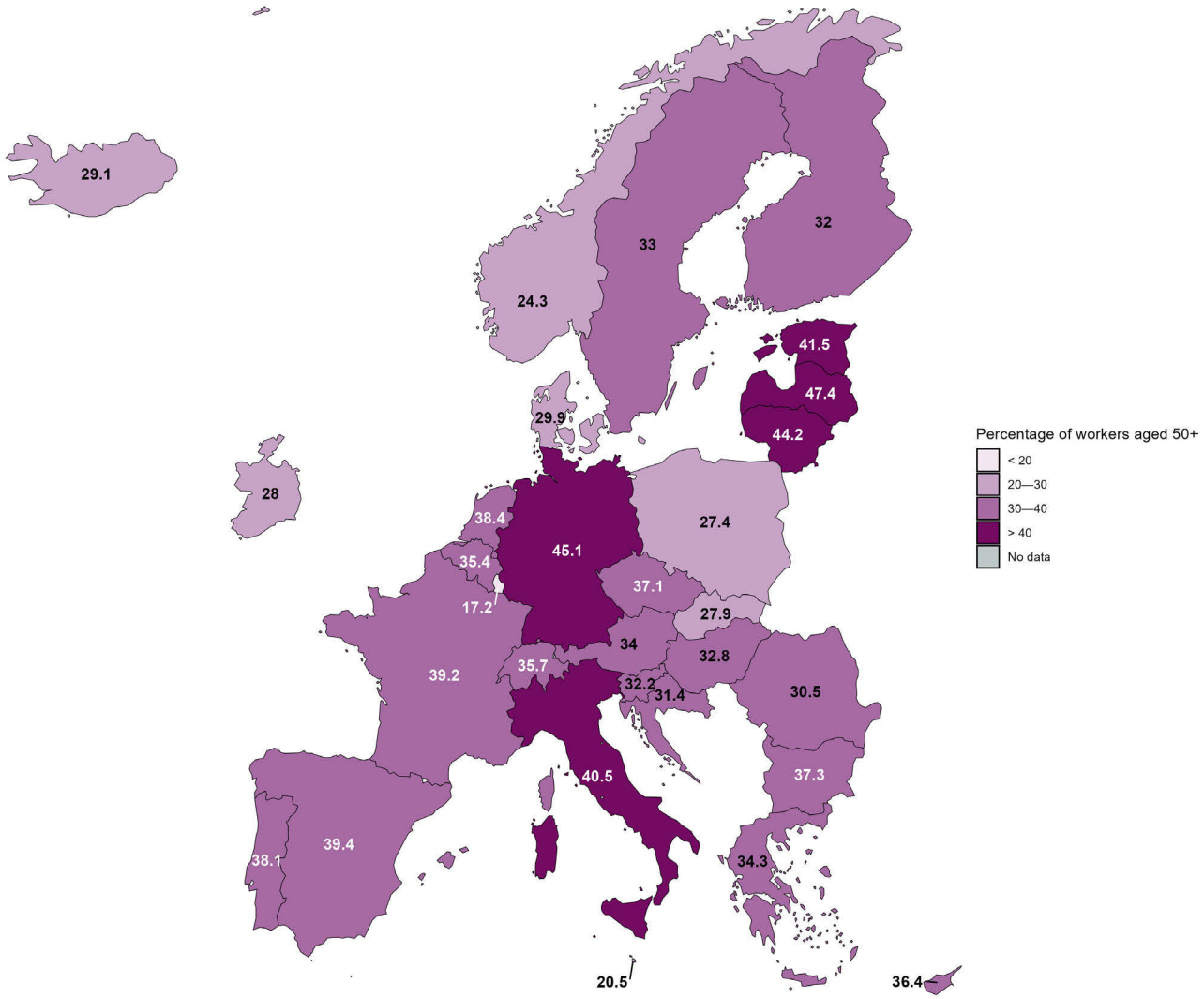
Figure 41: Shares of workers with a medium level of education in widespread surplus occupations in EURES countries, 2024 (%)



Source: EU-LFS special data extractions.

Furthermore, looking at the spread of older workers in widespread surplus occupations across EURES countries reveals a homogeneous spread. As can be seen in Figure 42, the shares of workers aged 50 years or more are around 30–40 % in most countries. The relatively homogeneous spread at the country level of this age group in employment in occupations in surplus emphasises the cross-cutting nature of the demographic issue faced by all European countries. It further underlines the vulnerability of this employment group to economic fluctuations and the changing economic landscape.

Figure 42: Shares of workers aged 50+ years in widespread surplus occupations in EURES countries, 2024 (%)



Source: EU-LFS special data extractions.

These findings underline the likelihood of intersections between these vulnerable groups and underline the importance of a holistic policy response that addresses these patterns, taking into account these factors.

4.6. Summary

This chapter examined the characteristics of workers to highlight intersections between vulnerable groups, such as women and youth, and labour shortages and surpluses. Women are predominantly employed in surplus occupations, increasing their risk of unemployment. This reflects observed trends, as women are heavily represented in healthcare roles and clerical positions, both of which often fall within surplus categories.

Workers under 30 years of age are consistently under-represented, with a persistent employment disparity when compared with those over 50. This pattern is evident across both widespread shortage and surplus occupations. Older workers are concentrated in surplus occupations, which may create risks to employment stability unless opportunities for upskilling and reskilling are provided. These trends indicate that demographic change is likely to reduce future labour supply and further exacerbate current labour shortages.

Highly educated workers are mostly employed in shortage occupations, reflecting the specific qualification requirements of these roles. Increasing the number of highly educated jobseekers alone will not resolve all shortages, but it could help address gaps in sectors such as healthcare. By contrast, surplus occupations show a more dispersed distribution of highly educated workers due to broader and more general qualification requirements.

Migrant workers are slightly over-represented in both widespread shortage and surplus occupations, compared with the overall EURES labour market. Their presence in shortage occupations aligns with programmes designed to facilitate the entry of non-EURES nationals into vacancies. Their high representation in surplus occupations may be explained by the lower skill barriers for some of these roles.

Multiple vulnerabilities converge in surplus occupations, particularly in low-skilled roles such as cleaners and kitchen assistants, in which women, older workers and migrants are strongly represented. These vulnerabilities are less pronounced in surplus occupations such as gardening, horticulture, nursery work and technician or associate professional roles. At the national level, demographic change and gender segregation are consistent factors shaping surplus occupations across all EURES countries. Finally, the skills composition of the labour force in widespread surplus occupations appears to reflect broader structural factors, including the sectoral composition of the workforce.

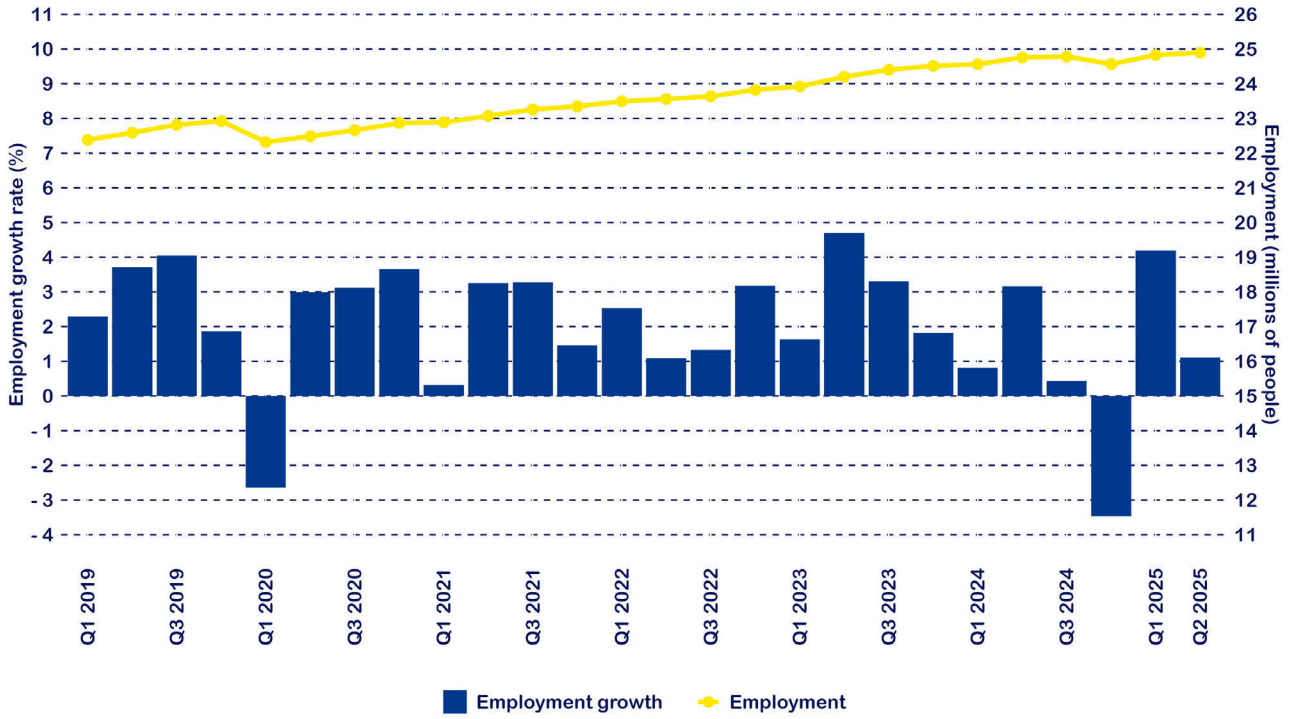
5. Labour market imbalances in the health and care sector

5.1. Sector overview

Beyond protecting and improving population health, the health and care sector provides the foundation for economic growth, social cohesion, public trust in government and democracy and resilience against future challenges faced by the EURES countries (OECD / European Commission, 2024; European Parliament: Directorate-General for Economy, Transformation and Industry et al., 2025). Public health services are instrumental in reducing poverty and inequality in the EU (European Commission: Directorate-General for Health and Food Safety et al., 2025). The health and care sector is also key in supporting migrants' labour market integration, as access to healthcare is a key driver of migrants' labour market participation. The quality of public health and care systems is one of the areas that the EU should address as a priority, as indicated by 21 % of EU citizens in the Eurobarometer (European Commission: Directorate-General for Communication et al., 2024). Overall, improvements in health and life expectancy of the working-age population have contributed to an increase in labour participation rates from 75 % in 2013 to 80.4 % in 2024 in the EU, fuelling economic growth and improving social inclusion (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2025b). Health issues are a key driver for early labour force exit, causing 27 % of the workforce aged 55–64 to exit (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 2025b).

The health and care sector is a key employer in EURES countries. Driven by population growth and population ageing, total employment in the sector has steadily risen since 2020, with around 25 million people employed across all EURES countries in Q2 2025 (see Figure 43). In Q2 2025, 11.3 % of the EURES countries' workforces were employed in the sector (Eurostat, n.d.-e).

Figure 43: Employment levels and employment growth in the health and care sector (NACE Rev. 2 Q), EURES countries, Q1 2019–Q2 2025

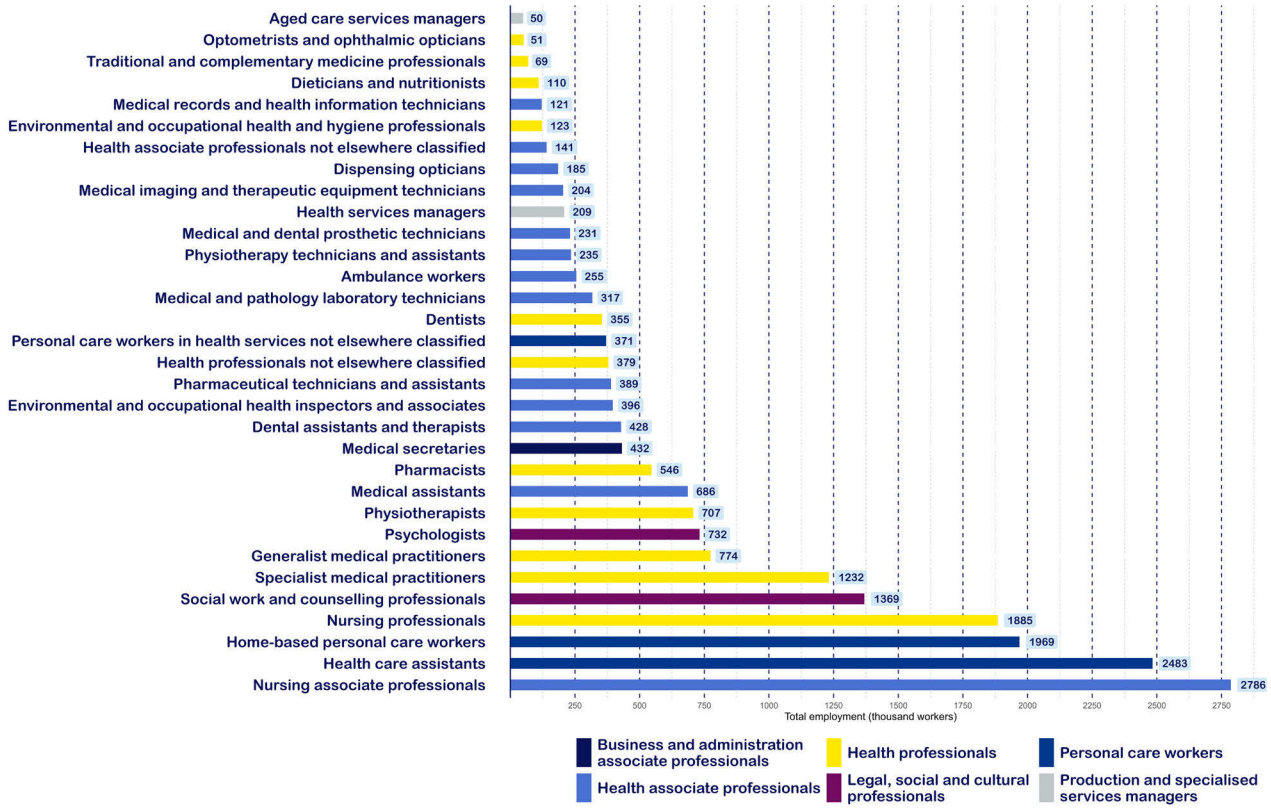


NB: Workers aged 15+ years.

Source: Eurostat dataset (lfsq_egdn2) (12 September 2025).

When looking at employment by occupation, nurses are the largest health and care occupational group, with nursing professionals and nursing associate professionals accounting for 1.9 and 2.8 million workers, respectively, across EURES countries (see Figure 44). While most healthcare occupations are part of the health professionals and health associate professionals category (ISCO 2008 two-digit classification), personal care work is a key category of health occupations, but is classed with services and sales workers. The second and third largest occupations in terms of employment levels are health care assistants and home-based personal care workers, which highlights their importance in the sustainability of European health and care systems.

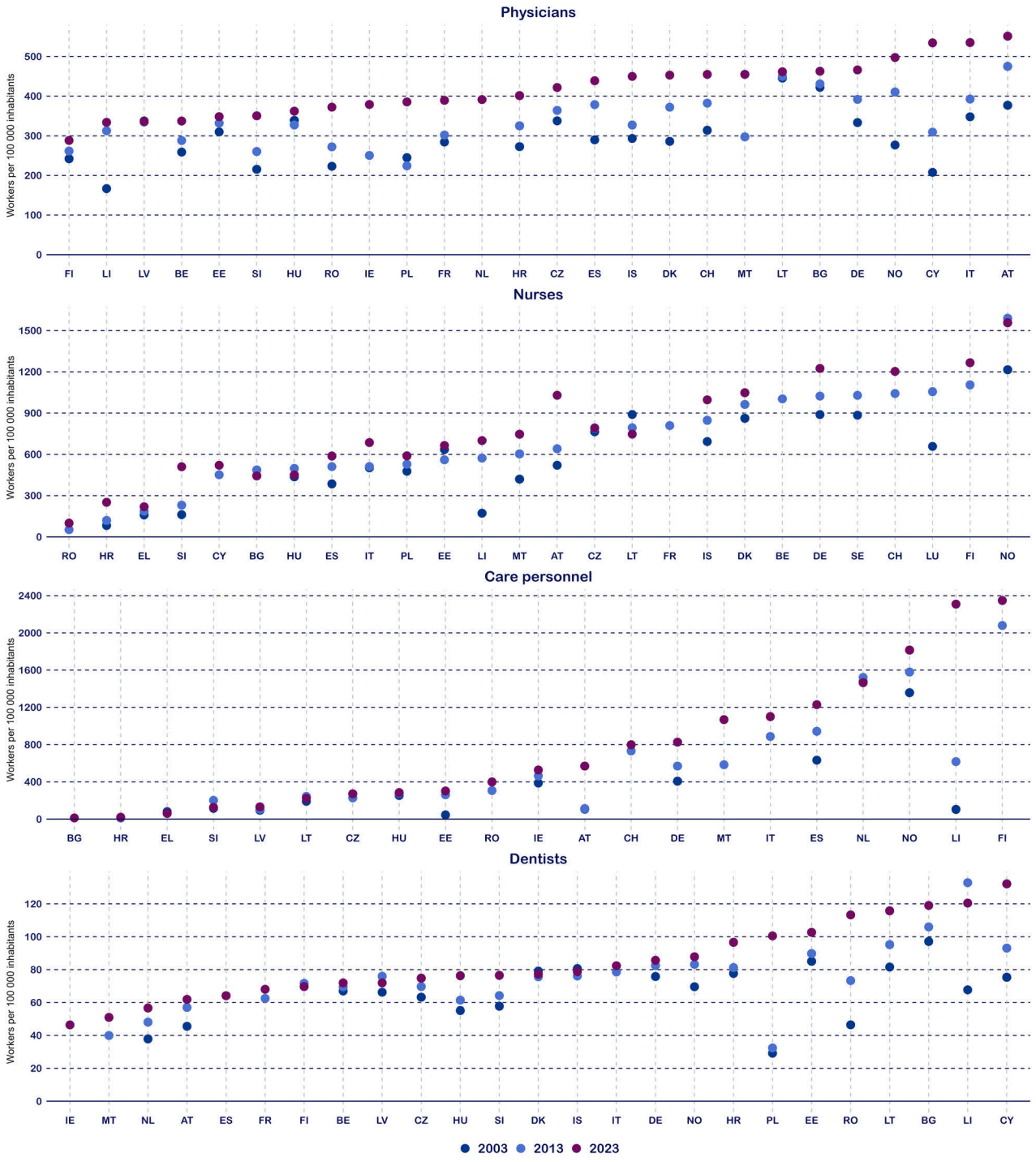
Figure 44: Total employment in healthcare occupations, EURES countries, 2024 (people aged 15+ years)



Source: EU-LFS special data extractions.

However, EURES countries' health and care systems are facing several difficulties. The healthcare workforce has grown over the last few decades, achieving the highest levels of employment in history in most EU countries (OECD / European Commission, 2024). Across all EURES countries, the numbers of physicians, nurses, dentists and care personnel per 100 000 inhabitants are currently the highest they have ever been (see Figure 45). However, the increase in healthcare professionals has not been sufficient to keep pace with the growing demand for health services, driven by population ageing (European Commission et al., 2024; OECD / European Commission, 2024).

Figure 45: Evolution of health personnel density for selected medical occupations, selected EURES countries (1), 2003, 2013, 2023



(1) The EURES countries shown in the graph are based on the data availability in the published dataset.

Source: Eurostat dataset (hlth_rs_prs2) (15 July 2025).

In the past, difficulties in forecasting population needs and labour and skills demands in the health and care sector hindered workforce planning (European Commission et al., 2024). National reports also show that, in recent years, significant numbers of doctors and nurses (whether newly trained or experienced) have opted to take on temporary jobs through interim agencies rather than seeking permanent employment in hospitals or with other employers in the health and care sector, most likely to achieve greater earnings and more flexibility in work schedules (OECD / European Commission, 2024). However, this phenomenon creates added pressures on health and care finances and

the workforce. Furthermore, wide variations in the geographical distribution of doctors and other health and care professionals, and facilities, result in medical deserts. Capital regions tend to have higher densities of healthcare workers, while other areas may face local shortages of professionals, or long distances to reach healthcare providers. This issue affects regions with diminishing or ageing populations, but also densely populated countries such as the Netherlands and Luxembourg (OECD / European Commission, 2024).

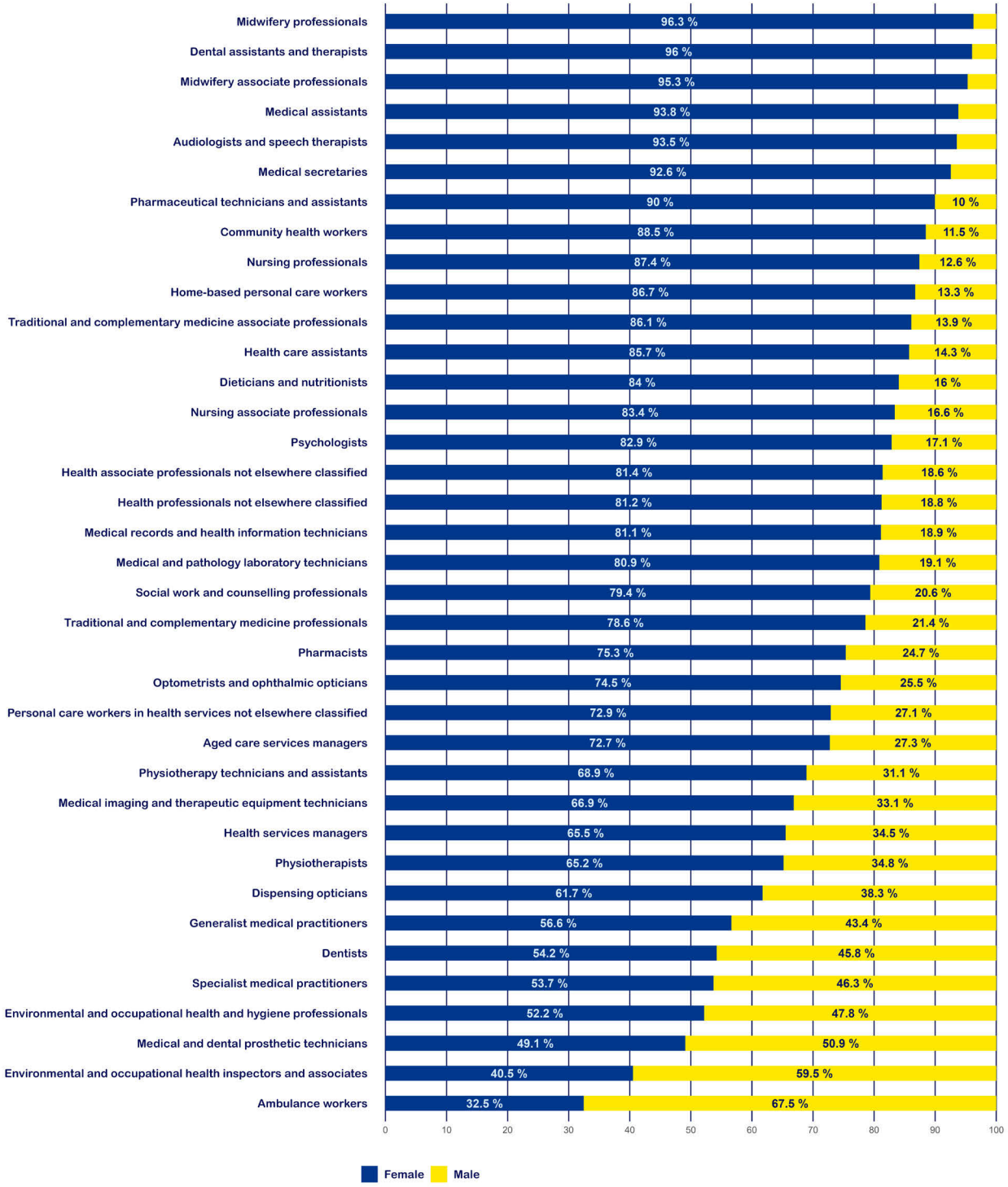
The COVID-19 crisis highlighted the vulnerabilities of EURES countries' health and care systems. Countries with more health and social care workers experienced fewer excess deaths (defined as deaths in excess of the historical baseline) than countries with fewer health and social care workers, which underlines the critical importance of investing in securing an adequate, properly skilled workforce to nurture the resilience capacity of health systems (OECD / European Commission, 2024). The pandemic led to a 62 % increase in worker absences (Zapata et al., 2023) and took the lives of around 49 000 health and care workers in Europe alone (WHO, 2021). Surveys conducted on healthcare staff during the COVID-19 pandemic showed an increase in perceived degradation of working conditions and growing job dissatisfaction (OECD / European Commission, 2024). Following the pandemic, many health and care workers left the sector, further increasing staffing difficulties (Wismar et al., 2023). In 2020, 20 % of the national nurses' associations that make up the International Council of Nurses reported an increased rate of nurses leaving the profession (International Council of Nurses, 2021).

Finally, health and care systems in the EU are facing multiple transformations, such as changes in population health needs, welfare state policies and economic and political landscapes (European Parliament: Directorate-General for Economy, Transformation and Industry et al., 2025). In particular, population ageing, driven by declining birth rates and increasing life expectancy, is resulting in a demographic shift and a growing demand for health and care services (OECD / European Commission, 2024). Furthermore, the health and care sector labour force is itself ageing, which creates the need to replace them with newly trained workers. Concurrently, a digital skill gap has appeared among healthcare workers while Europe's health and care sector moves towards using more digital technologies (European Commission et al., 2024; European Commission: Directorate-General for Employment, Social Affairs and Inclusion et al., 2025).

5.2. Characteristics of health and care sector occupations

Most healthcare occupations are heavily gendered, with a high prevalence of female employment. In particular, more than 90 % of midwifery professionals and associate professionals, dental assistants and therapists, and medical assistants are women (see Figure 46). The more balanced gender ratios can be observed for generalist medical practitioners (57 % women), dentists (54 %), environmental and occupational health and hygiene professionals (52 %), medical and dental prosthetic technicians (49 %) and environmental and occupational health inspectors and associates (41 %). The only occupation with a strong prevalence of male employment is ambulance workers (32 % women). In the EU, many of the skills gaps can be traced back to the underuse of existing talent (European Commission, 2024b). In health and care occupations, the low prevalence of male employment is therefore limiting the available pool of candidates and possibly reinforcing labour shortages.

Figure 46: Gender shares for healthcare occupations, EURES countries, 2024 (people aged 15+ years)

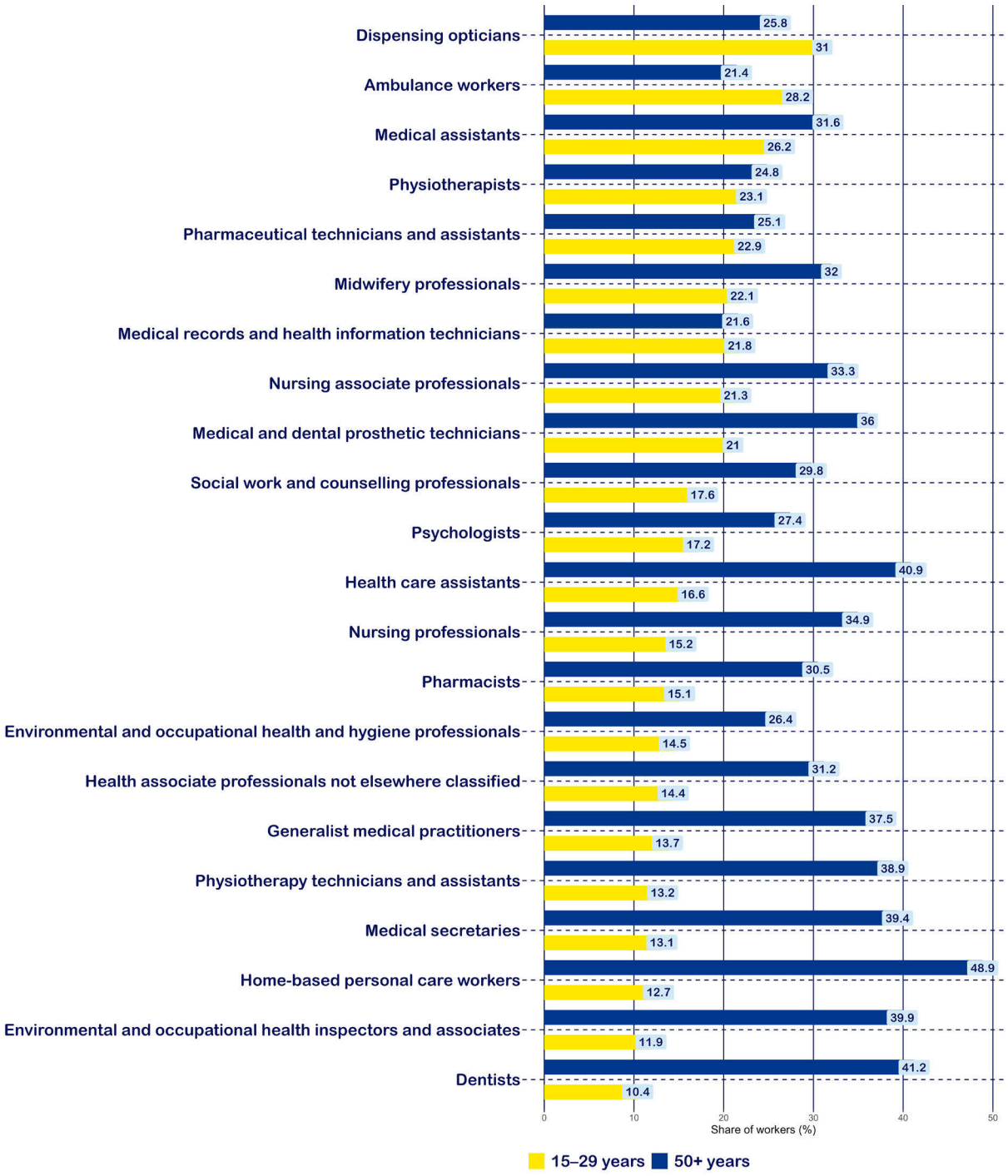


Source: EU-LFS special data extractions.

The age structure of healthcare occupations reveals large shares of older workers (aged 50+) and small shares of young workers (under 30 years old) (see Figure 47). In particular, workers aged 50+ account for 40.9 % and 48.9 % of health care assistants and home-based personal care workers, respectively. Only five occupations have a share of older workers equal to or lower than 25 %: ambulance workers, physiotherapists, medical records and health information technicians, dispensing opticians and pharmaceutical technicians and assistants. The lowest rates of employment of younger workers are among dentists (10.4 %), environmental and occupational health inspectors and associates (11.9 %) and home-based personal care workers (12.7 %).

The small shares of workers aged 15–29 years are explained by the qualification requirements for some regulated professions. In particular, Directive 2005/36/EC on the recognition of professional qualifications sets minimum periods of study for dentists, midwives, nurses and general and specialist medical practitioners (European Commission, 2005). However, these occupations are still characterised by a high prevalence of workers aged 50+, symptomatic of workforce ageing. In 2024, 41.2 % of dentists, 37.5 % of generalist medical practitioners, 34.9 % of nursing professionals and 32 % of midwifery professionals were aged 50+, on average, across all EURES countries. However, some large discrepancies can be observed at the national level (see Table 9). For example, the share of generalist medical practitioners aged 50+ was almost five times higher in Italy than in Sweden.

Figure 47: Shares of workers aged under 30 and over 50 in healthcare occupations, EURES countries, 2024



Source: EU-LFS special data extractions.

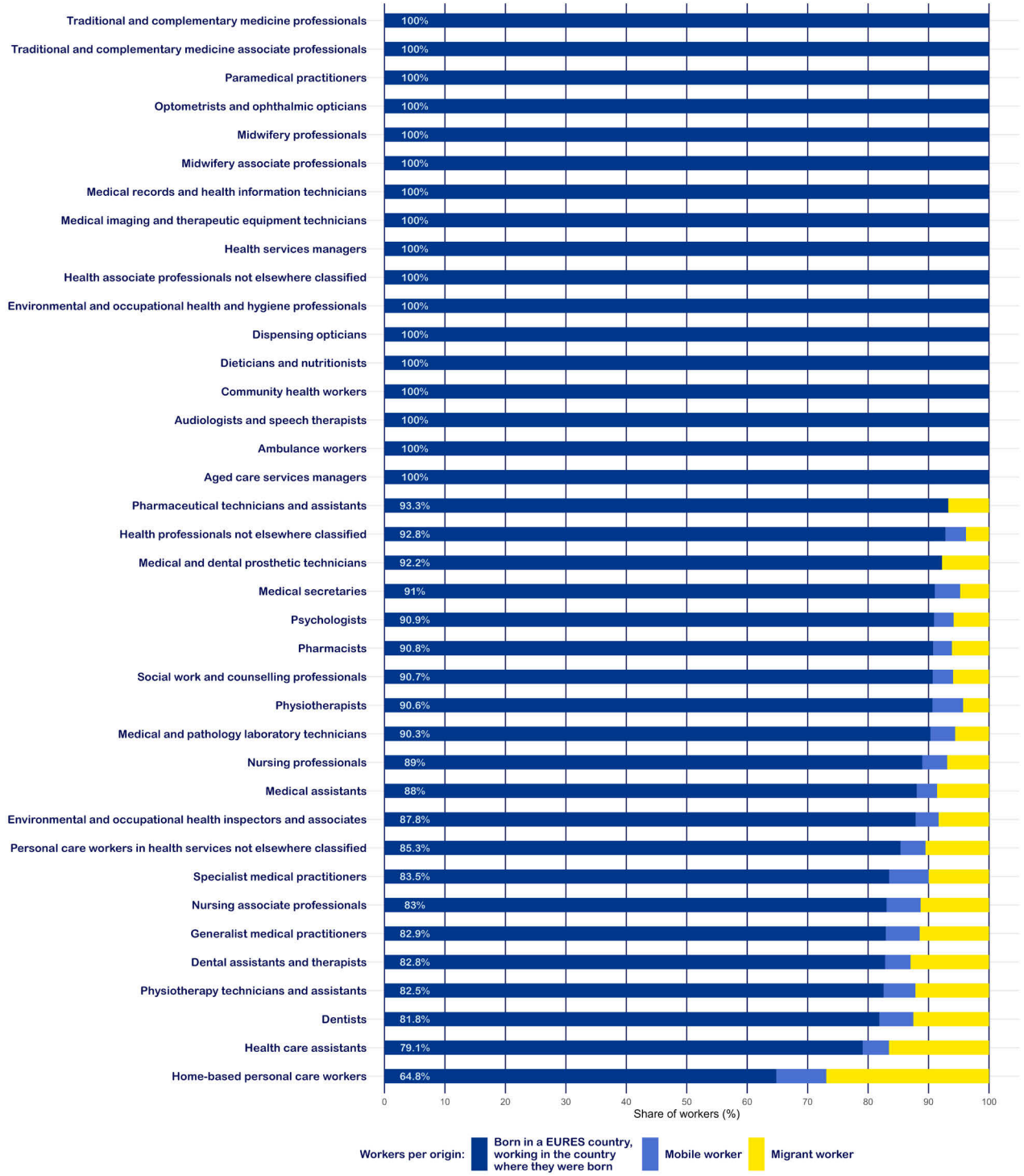
Table 9: Highest and lowest shares of workers aged 50+ for selected regulated occupations, EURES countries, 2024

Regulated professions	Highest reliance on workers aged 50+	Lowest reliance on workers aged 50+
Generalist medical practitioners	Italy (59 %) Czechia (57 %) Austria (53 %)	Sweden (12 %) Greece (19 %) Malta (20 %)
Specialist medical practitioners	Bulgaria (65 %) Greece (60 %) Lithuania (55 %)	Netherlands (21 %) Romania (24 %) Slovenia (30 %)
Nursing professionals	Lithuania (63 %) Bulgaria (60 %) Latvia (55 %)	Croatia (22 %) Malta (23 %) Portugal (24 %)

Source: EU-LFS special data extractions.

Most health and care sector occupations rely on the nationals of EURES countries working in the country where they were born (see Figure 48). However, large shares of EU mobile workers and migrant workers are employed in some professions. For example, of home-based personal care workers, 8 % and 26 % are EU mobile workers and migrant workers, respectively. Regulated professions held by highly educated workers such as dentists, generalist medical practitioners and specialist medical practitioners also employ large shares of foreign employees (18 %, 17 % and 17 %, Regulated professions held by highly educated workers). EU nationals holding diplomas for regulated professions benefit from qualification recognition in all Member States by Directive 2005/36/EC, which facilitates intra-EU mobility (European Commission, 2005). However, a large share of foreign workers are nationals from non-EURES countries. Indeed, health and care shortages and growing population needs have coincided with an increased reliance on international recruitment to meet the demand for medical care. This trend has also been facilitated by schemes easing the qualification recognition procedures for healthcare professionals (see Box 6).

Figure 48: Country of origin of workers in healthcare occupations, EURES countries, 2024 (people aged 15+ years)



Source: EU-LFS special data extractions.

Box 6: Healthcare worker qualification recognition in the EU

The recognition of foreign qualifications and the licensing of healthcare professionals is a particularly complex, time-consuming and multistage process, designed to ensure that healthcare workers meet the standards of their host country. These procedures are essential for maintaining the quality and safety of health and care services, but they can be lengthy and significantly delay the integration of skilled migrant health professionals into the workforce.

For migrant healthcare professionals, entering regulated health professions requires completing an equivalency process, at the national or regional level. This process may include theoretical and practical examinations and language proficiency tests. Degrees, diplomas and transcripts from foreign institutions must be authenticated and assessed for equivalence with national educational standards. An evaluation of the completed clinical training, internships and specialisations is also conducted to ensure that they meet national professional requirements. Finally, registration with the relevant professional body is usually necessary before full authorisation to practise is granted. For some occupations, non-EU degrees are not recognised, and workers will have to repeat some components of their studies (nursing degrees in France, for example). The validation of credentials, including education and work experience, is typically overseen by ministry of health or designated regulatory bodies.

Faced with increasing shortages in health and care occupations, EURES countries have set up designated pathways for qualified migrant workers. In Member States, the EU blue card system [1] provides an important additional pathway for admitting skilled foreign health workers. Mutual recognition agreements have also been set up between individual states and regions, such as the France–Quebec agreement and Spain's adhesion to the Ibero-American degree recognition accord. Shortages lists are also a common tool to streamline recruitment processes for migrant workers in occupations with high demand for which the supply of local workers is insufficient. For example, healthcare workers are included in such lists in Belgium (Flanders and the Walloon Region), Denmark, Germany, Ireland, France, Italy, Austria, Slovakia and Finland.

As part of the quality jobs roadmap, the implementation of several policies and initiatives will benefit health professionals' intra-EU mobility and migration. First, the European Commission will propose a skills portability initiative to simplify and facilitate the recognition of skills and qualifications, including via strengthened digitisation, which will also be applicable to non-EU nationals. Furthermore, the EU aims to establish a talent pool and enhance talent partnerships to attract non-EU nationals of different skill levels to shortage occupations. Finally, the upcoming EU visa policy strategy will include measures to facilitate the arrival of top students, researchers and skilled workers, including in the health and care sector.

(1) https://home-affairs.ec.europa.eu/policies/migration-and-asylum/eu-immigration-portal/eu-blue-card_en.

Sources: European Commission (2025e); OECD (2025b).

Employment of EU mobile workers and migrant workers varies greatly across EURES countries (see Table 10). On the one hand, EURES countries' reliance on foreign workers varies substantially: for example, among generalist medical practitioners, 34.3 % and 29 % in Switzerland and Sweden, respectively, are non-nationals, whereas almost none in Slovakia and Croatia are non-nationals. Globally, differences in remuneration have been identified as a key driver of medical profession mobility, in particular for generalist and specialist medical practitioners (OECD, 2025c).

Table 10: Highest and lowest reliance on EU mobile workers and migrant workers for selected regulated occupations, EURES countries, 2024

Regulated profession	Highest reliance on EU mobile workers and migrant workers	Lowest reliance on EU mobile and migrant workers
Generalist medical practitioners	Switzerland (34.3 % EU mobile workers) Sweden (13.8 % EU mobile workers, 15.2 % migrant workers) Germany (8.5 % EU mobile workers, 17.8 % migrant workers)	Slovakia (100 % national workers) Croatia (100 % national workers) Romania (99 % national workers)
Specialist medical practitioners	Switzerland (49.6 % EU mobile workers) Sweden (23.3 % EU mobile workers, 14.4 % migrant workers) Austria (20.3 % EU mobile workers, 6.4 % migrant workers)	Slovakia (100 % national workers) Romania (99 % national workers) Poland (98 % national workers)
Nursing professionals	Ireland (45.6 % migrant workers) Malta (7.7 % EU mobile workers, 36.5 % migrant workers) Switzerland (22.4 % EU mobile workers, 11.6 % migrant workers)	Romania (100 % national workers) Bulgaria (100 % national workers) Lithuania (100 % national workers)

Source: EU-LFS special data extractions.

The countries of origin of migrant and mobile workers also vary across destination countries (see Table 11). Although data on the destination and origin of healthcare staff movements are limited, looking at the main origin countries for foreign medical doctors and nursing staff in France, Germany, Ireland and Switzerland highlights the influence of language and proximity on foreign healthcare staff composition. In these four countries, foreign staff often come from neighbouring countries where a common language is spoken (e.g. Belgium and France, Germany and Switzerland, United Kingdom and Ireland). It is to be noted that Ireland presents a paradox: despite becoming an international training hub for the medical field, with half of its students coming from abroad, the country increasingly recruits fully trained doctors from abroad as many of its own graduates leave after graduation (OECD, 2025c).

Notably, a substantial share of foreign-trained medical staff (in particular medical doctors) are actually citizens working in the EURES country where they were born, and who obtained their first medical degree abroad before returning home for postgraduate training and practice. They account for 80 % of foreign-trained physicians in Greece, 57 % in Norway and 25 % in Sweden (OECD, 2025b). This overall reflects an increased internationalisation of medical education and of the market for medical professionals, which within the EU is greatly facilitated by qualification recognition schemes for regulated professions (European Commission, 2005). Students may move to benefit from higher-quality education (Martella, 2025) or simply because of a lack of places in medical training in their home country (van Liemt, 2022).

Table 11: Distribution of foreign-trained medical doctors and nursing personnel, by country of training (%), selected destination countries, 2022

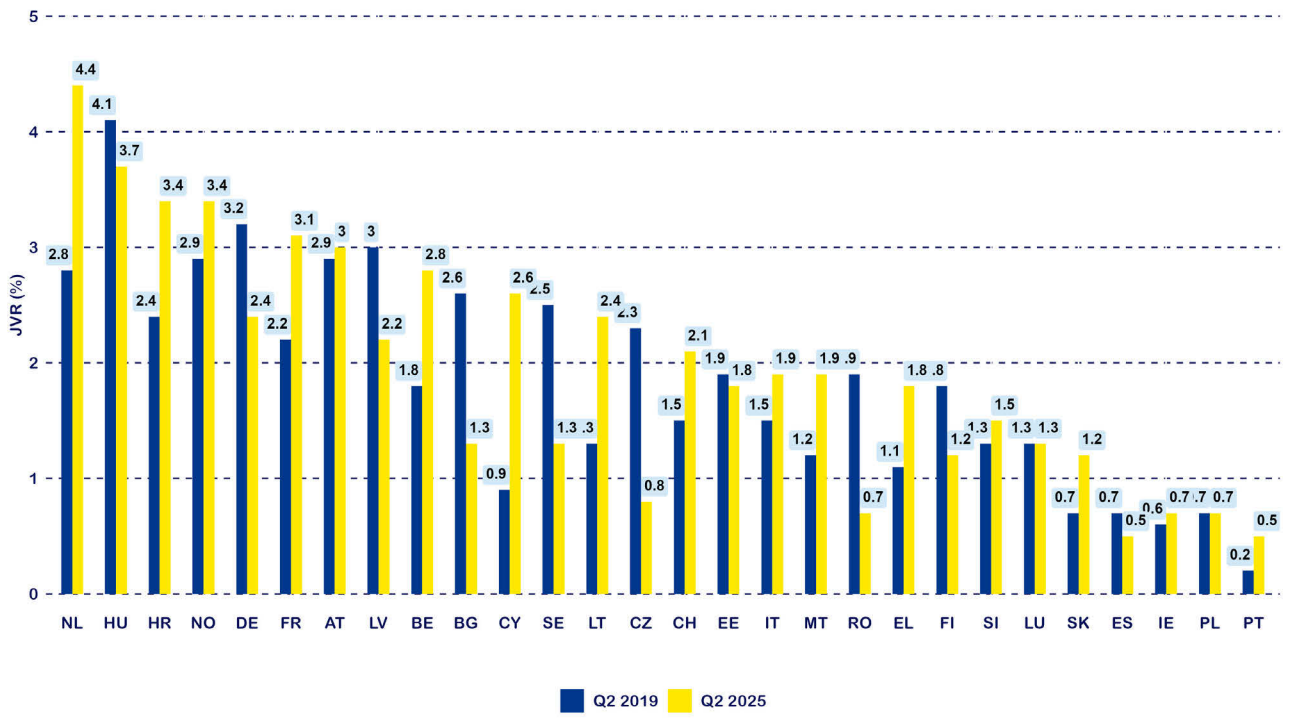
France		Germany	Ireland	Switzerland
Medical doctors	**Nursing personnel**	**Medical doctors**	**Nursing personnel**	**Medical doctors**
Romania: 18.6	Belgium: 43	Syria: 8.6	United Kingdom: 36.1	Germany: 52.6
Algeria: 14.7	Morocco: 14.4	Romania: 8.4	India: 24.1	Italy: 9.1
Belgium: 6.6	Spain: 6.9	Greece: 5.4	Philippines: 20.4	France: 7.1
Italy: 6.3	Portugal: 5.2	Russia: 4.6	United States: 3.1	Austria: 6
Syria: 3.9	Tunisia: 4.4	Austria: 4.3	Poland: 2.6	Romania: 2.7
Morocco: 3.5	Germany: 2.4	Poland: 3.7	Nigeria: 2.2	Greece: 1.8
Tunisia: 3.3	United Kingdom: 2.2	Bulgaria: 3.3	Germany: 1.1	Belgium: 1.5
Spain: 2.8	Other countries: 20.6	Ukraine: 3.2	South Africa: 1.1	Hungary: 1.4
Other countries: 40		Serbia: 3.1	Other countries: 9.9	Spain: 1.4
		Other countries: 55		Other countries: 15.6

Source: WHO (2023), Annex 2.

5.3. Labour market imbalances in healthcare occupations

In a context of rising needs due to the ageing population, the COVID-19 pandemic inflicted substantial stress on European health and care systems. A combination of higher mortality for healthcare workers and departure of a number of healthcare workers reinforced the pre-existing tensions on the health and care staff labour market. Notably, JVRs in the health and care sector have increased in 16 EURES countries since the pre-pandemic period (see Figure 49). In the Netherlands and Belgium, JVRs increased by 1.6 and 1.7 percentage points, respectively, between Q2 2019 and Q2 2025. In Q2 2025, the highest JVRs were observed in the Netherlands (4.4 %), Hungary (3.7 %), Croatia (3.4 %) and Norway (3.4 %).

Figure 49: JVRs in the health and care sector (NACE Rev. 2 Q), EURES countries, Q2 2019 and Q2 2025



NB: Countries in descending order by the highest JVR observed (across both years).

Source: Eurostat dataset (jvs_q_nace2) (15 September 2025).

The shortage of healthcare workers has been a recurring concern in Europe (OECD / European Commission, 2024). As seen in Table 12, many occupations in the health and care sector reported shortages in 2025. The most severe shortages are observed for specialist medical practitioners (21 countries facing shortages), nursing professionals (19 countries), generalist medical practitioners (18 countries) and health care assistants (17 countries). Among participating NCOs, only seven countries did not report shortages in specialist medical practitioners: Belgium, Denmark, Croatia, Lithuania, Hungary, Malta and Finland. The occupations with the most countries reporting surpluses are home-based personal care workers (nine countries), environmental and occupational health and hygiene professionals (seven countries) and pharmaceutical technicians and assistants (seven countries). The situation in the healthcare sector is particularly concerning for several reasons. First, many health and care professions are regulated in the EU and require long training periods (at least eight years for specialist medical practitioners or dentists for example), which means that even an immediate increase in workforce training would not influence the labour market situation in the short- or medium-term. Second, few opportunities for cross-national matching are observed due to the limited number of surpluses in most affected occupations. Some possibilities for matching between countries speaking a common language can nonetheless be identified: for example, NCOs report that pharmacists are in surplus in Austria, but in shortage in Germany.

Table 12: Frequency and severity of labour shortages or surpluses identified in health occupations, EURES countries, 2025

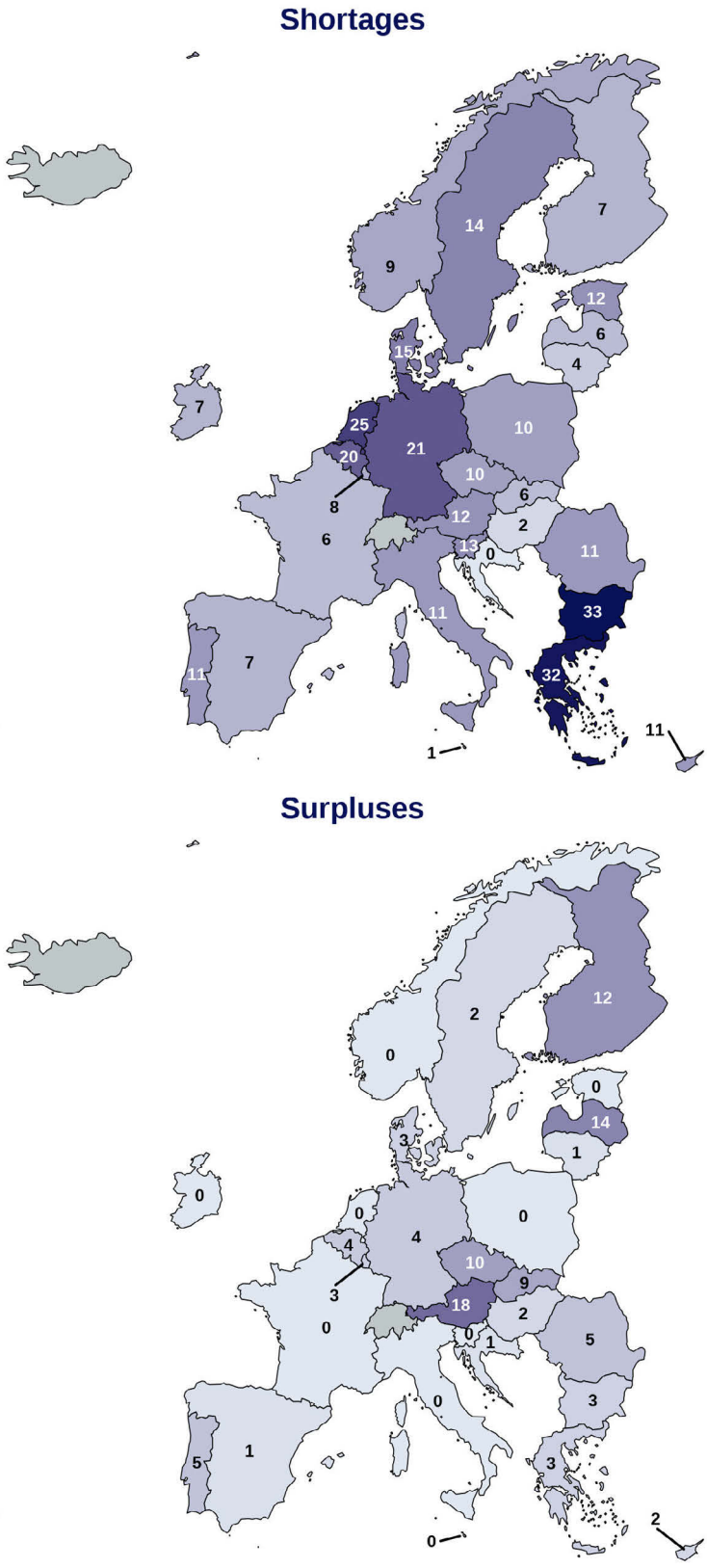
Occupation	Number of countries identifying a shortage	Percentage of shortages of high severity	Number of countries identifying a surplus	Percentage of surpluses of high severity
Health service managers	6	17 %	1	100 %
Aged care service managers	4	25 %	2	50 %
Generalist medical practitioners	18	39 %	0	–
Specialist medical practitioners	21	52 %	0	–
Nursing professionals	19	37 %	1	0 %
Midwifery professionals	7	29 %	1	100 %
Traditional and complementary medicine professionals	2	100 %	5	0 %
Paramedical practitioners	6	33 %	0	–
Dentists	13	38 %	4	25 %
Pharmacists	13	31 %	4	50 %
Environmental and occupational health and hygiene professionals	9	22 %	7	14 %
Physiotherapists	15	20 %	1	0 %
Dieticians and nutritionists	2	0 %	3	33 %
Audiologists and speech therapists	11	36 %	1	0 %
Optometrists and ophthalmic opticians	9	11 %	3	0 %
Health professionals not elsewhere classified	10	50 %	2	0 %
Psychologists	10	10 %	5	20 %
Social work and counselling professionals	3	33 %	4	75 %
Medical imaging and therapeutic equipment technicians	11	36 %	0	–
Medical and pathology laboratory technicians	7	14 %	2	50 %
Pharmaceutical technicians and assistants	5	40 %	7	14 %
Medical and dental prosthetic technicians	6	33 %	3	0 %
Nursing associate professionals	13	54 %	0	–
Midwifery associate professionals	4	25 %	1	0 %
Traditional and complementary medicine associate professionals	3	33 %	2	0 %
Dental assistants and therapists	8	38 %	2	50 %
Medical records and health information technicians	3	67 %	4	25 %

Occupation	Number of countries identifying a shortage	Percentage of shortages of high severity	Number of countries identifying a surplus	Percentage of surpluses of high severity
Community health workers	2	50 %	0	–
Dispensing opticians	6	33 %	2	0 %
Physiotherapy technicians and assistants	6	33 %	3	33 %
Medical assistants	6	17 %	2	50 %
Environmental and occupational health inspectors and associates	4	25 %	3	0 %
Ambulance workers	8	38 %	1	100 %
Health associate professionals not elsewhere classified	4	50 %	5	20 %
Medical secretaries	6	17 %	2	50 %
Health care assistants	17	24 %	4	0 %
Home-based personal care workers	12	0 %	9	33 %
Personal care workers in health services not elsewhere classified	6	17 %	6	17 %

Source: Data submitted by EURES NCOs.

Labour market imbalances in the healthcare occupations have an uneven distribution across EURES countries (see Figure 50). Bulgaria and Greece both report a very high number of shortages (33 and 32), while Croatia, Malta and Hungary are little impacted by healthcare occupation shortages (0, 1 and 2 shortages reported, respectively). The Netherlands (25 shortage occupations), Germany (21 shortage occupations) and Belgium (20 shortage occupations) are also substantially affected by labour shortages in the sector. On the other hand, three countries report several occupations with surpluses that are substantially higher than in other EURES countries: Austria (18 reported occupation surpluses), Latvia (14 reported surpluses) and Finland (12 reported surpluses). Nine countries report no surplus at all.

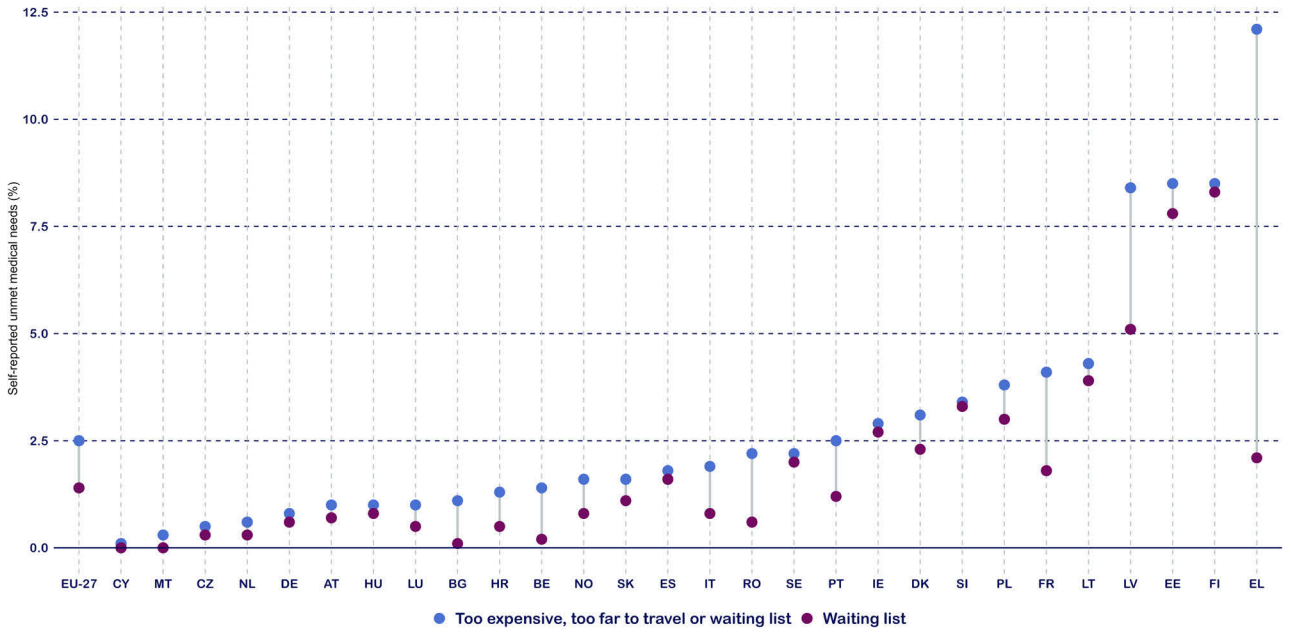
Figure 50: Number of shortages and surpluses across healthcare occupations, EURES countries, 2025



Source: Data submitted by EURES NCOs.

Labour shortages can translate into degraded access to health and care services for the general population. For example, in Greece, which reports the second highest number of healthcare occupation shortages, nearly 12.5 % of the population reports unmet medical needs, and around 2 % reports unmet medical needs specifically due to a waiting list to see their practitioners (see Figure 51). Waiting lists, which are driven by a lack of medical appointment availability, can be caused by the undersupply of medical professionals relative to the demand of the population. For many EURES countries, waiting lists are the most stated reason for unmet medical needs. For Ireland, Slovenia, Finland and Sweden, almost all unmet needs are driven by waiting lists, which are potentially caused by labour shortages.

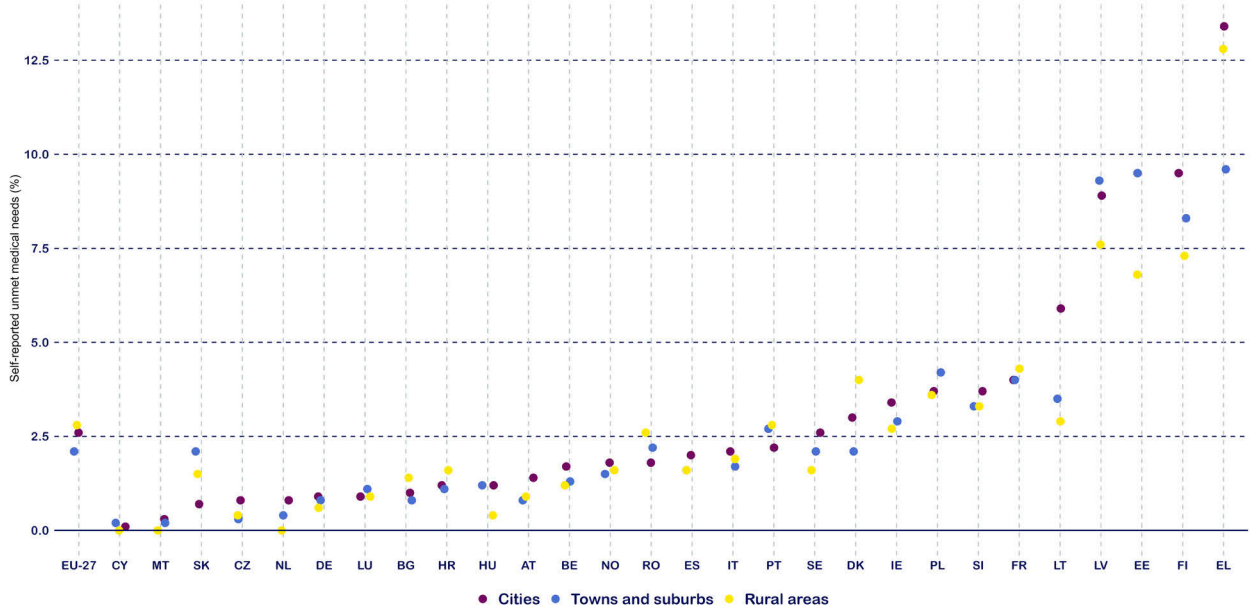
Figure 51: Self-reported unmet medical needs, by reason, EURES countries, 2024



NB: The list of EURES countries is based on data availability for those aged 16+ years.
Source: Eurostat dataset (hlth_silc_21) (28 October 2025).

Difficulties in accessing healthcare vary depending on the degree of urbanisation, although the relationship between population density and unmet medical needs varies across countries (see Figure 52). In the five countries reporting the highest shares of unmet medical needs, namely Greece, Finland, Estonia, Latvia and Lithuania, rural areas are less affected than more densely populated area such as towns and suburbs or cities. However, many other countries, such as France, Denmark, Portugal and Romania, report that the highest shares of unmet medical needs are found in rural areas. The spatial impact of labour shortages across EURES countries therefore varies depending on countries' geographical characteristics and other socioeconomic factors, such as high degrees of centralisation.

Figure 52: Self-reported unmet medical needs, by degree of urbanisation, EURES countries, 2024



NB: Self-reported unmet medical needs for the following reasons: too far to travel, too expensive or waiting list. The list of EURES countries is based on data availability for those aged 16+ years.

Source: Eurostat dataset (hlth_silc_21) (28 October 2025).

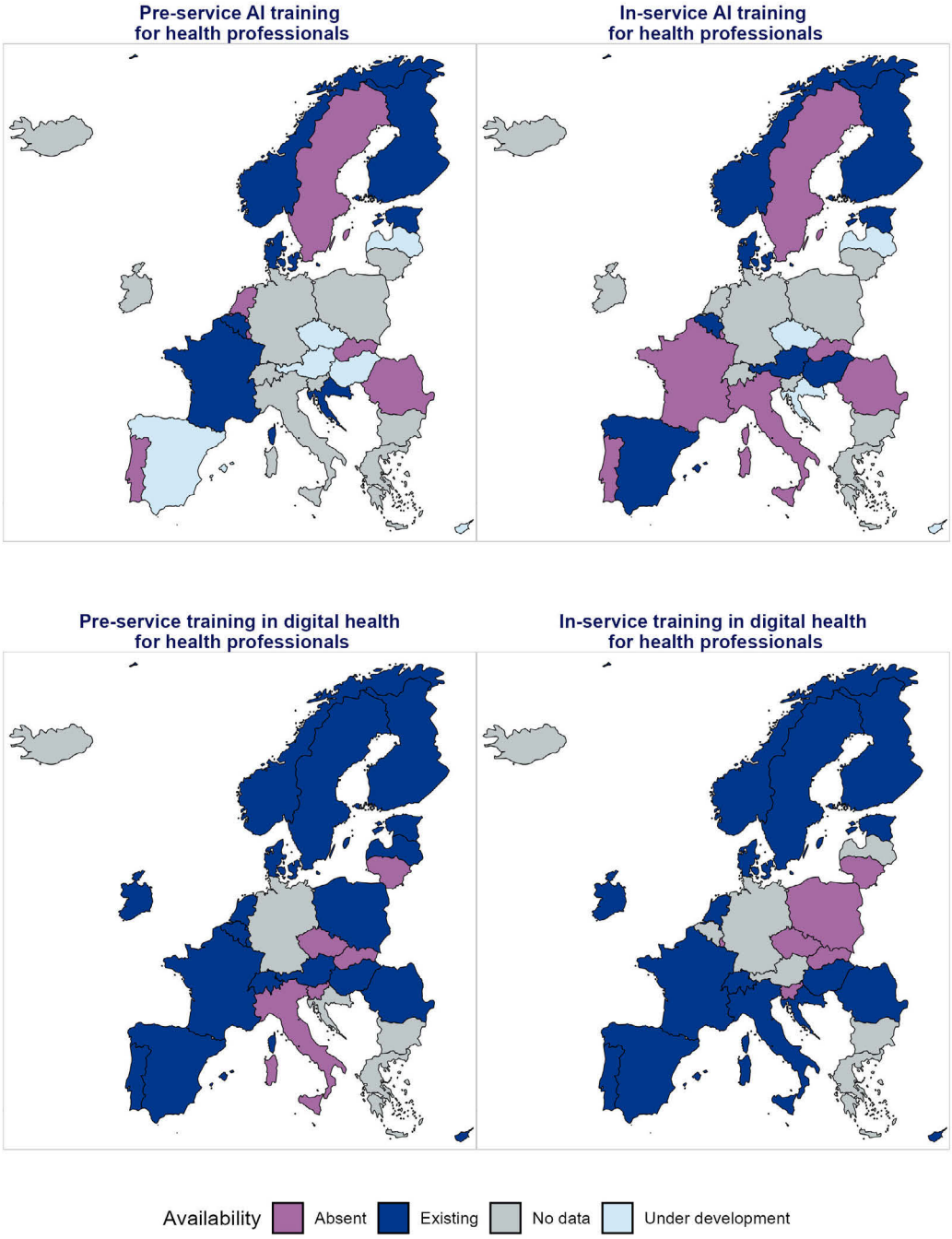
Finally, healthcare occupations face skill shortages in addition to labour shortages. The uneven and inefficient use of skills and talent has been identified as a driver of the healthcare worker crisis, further reinforcing pre-existing labour market tensions (European Observatory on Health Systems and Policies et al., 2022; European Parliament: Directorate-General for Economy, Transformation and Industry et al., 2025). Restructuring the EU health and care systems to better cater to changing and growing population will also require transformation of the skill mix of the healthcare workforce, which may imply task shifting between professional groups. In this case, skills gaps, lack of flexibility in workplace organisation and resistance to change in the workplace may hinder the efforts to improve health and care system efficiency (European Observatory on Health Systems and Policies et al., 2022).

This trend is reinforced by the digital and green transitions. Digital health technologies in particular play an increasingly pivotal role in the delivery of health and care services in the EURES countries. Notably, the COVID-19 pandemic saw the generalisation of the use of digital tools for healthcare provision, such as teleconsultation and telediagnosis. This also means that the continuous advancement of technology in healthcare is creating new competency requirements for professionals, such as skills for data management and the adoption of new technologies, understanding the effect of digitalisation on clinical processes and evaluating clinical safety and ethics within the context of digitalisation (Kaihlanen et al., 2024). The use of digital healthcare tools such as the European Health Data Space (adopted in 2024 by the European Parliament) is becoming more widespread and will become a critical part of healthcare workers' everyday tasks (European Commission, 2025d). Digital technologies and big data have the potential to transform care delivery and to improve patient outcomes, engagement and health system resilience (European Parliament: Directorate-General for Economy, Transformation and Industry et al., 2025; Williams et al., 2025a). As a result, several initiatives have been launched to support the improvement of digital skills and competencies in EU health systems (see Box 7). Policy efforts also include the update of European Directive 2013/55/EU (Commission Delegated Directive (EU) 2024/782) to include minimum training requirements related to digital knowledge and skills of nurses, dental practitioners and pharmacists, which must be implemented by Member States by May 2026 (European Commission, 2024c). Green skills requirements are also of growing importance, in particular to allow the health and care workforce to face the health impacts of climate change, raise public awareness of climate-induced health risks, and promote good practices to reduce the contribution of health systems to climate change (Schmidt et al., 2025).

Significant skills gaps still persist in the health and care sector (European Parliament: Directorate-General for Economy, Transformation and Industry et al., 2025; Williams et al., 2025a, 2025b). According to the second European Skills and Jobs Survey, 11 % and 33 % of EU health and social care workers, respectively, reported needing to further develop their computer and information technology skills to a great or moderate extent to do their main job better (Cedefop, n.d.-f). However, the development of training

structures for health and care staff remains uneven across the EU, with significant differences in workforce capacity, education and training opportunities, digital infrastructure and readiness (Williams et al., 2025b). In 2025, only eight EURES countries included AI training in the pre-service curriculum of healthcare professionals, while nine included it in their in-service training (see Figure 53). Although development is still ongoing in Czechia, Greece, Spain, Cyprus, Latvia, Austria and Slovakia, many countries had, as of 2025, still not started the construction of their health-care AI training curriculum. Furthermore, the existence of a digital health curriculum is uneven across EURES countries. Notably, Czechia, Latvia, Slovenia and Slovakia had neither pre-service nor in-service training on digital health in 2022.

Figure 53: Availability of AI training and digital health training for health professionals, EURES countries, 2022 (top) and 2025 (bottom)



Sources: World Health Organization (WHO) dataset DH (16 April 2024); WHO dataset AIRA (12 November 2025).

Reskilling and upskilling the health and care sector workforce may prove particularly difficult, not least due to labour supply tensions and the degraded working conditions faced by healthcare staff. The time allocated for training is likely to compete with daily tasks, in a context of staff shortages and heavy workloads (European Parliament: Directorate-General for Economy, Transformation and Industry et al., 2025; Williams et al., 2025a). Efforts to upskill and reskill the health and care workforce will therefore need to be addressed conjointly with labour shortage issues, through measures targeting workforce planning, education, retention and attraction back to the workforce (Williams et al., 2025a).

Box 7: The BeWell initiative (blueprint alliance for a future health workforce strategy on digital and green skills)

The skills shortage in the health and care sector lies at the intersection of two priorities of the European Commission: the upskilling and reskilling of the European workforce and the strengthening of EU health systems. Among the several actions and projects launched to support these policy objectives, the European Commission has launched the BeWell initiative (2022–2026), a multistakeholder partnership funded under the Erasmus+ programme.

This international partnership, encompassing beneficiaries and partners from 11 EURES countries, aims at promoting the upskilling and reskilling of the European healthcare workforce. A green and digital skills strategy for the health ecosystem is to be developed as part of this project, and should then be implemented at the local, regional, national and, ultimately, European levels, hence contributing to the European Commission's pact for skills and aligning with the EU's roadmap for skills.

So far, the project has launched a digital skills monitor that lists digital and green upskilling and reskilling courses targeting healthcare workers. The initiative also plans to launch a large-scale skills partnership under the pact for skills, and to design and implement a pilot training programme focused on digital and green skills for the healthcare sector.

Source: BeWell (n.d.); Williams et al. (2025b).

5.4. Structural factors affecting labour market imbalances

Workforce shortages in the health and care sector are shaped by a complex interplay of structural factors, including demographic, educational, mobility and organisational dimensions.

Demographic ageing exerts a dual impact on labour shortages. On the demand side, the rising number of older adults in the population is increasing the need for health and care professionals. According to Eurostat projections, the proportion of EU nationals aged 65 and older will rise from 21 % in 2022 to nearly 30 % by 2050 (OECD / European Commission, 2024). As older adults are more likely to suffer from multiple chronic conditions and require long-term assistance, this trend is expected to increase the need for care across all health and care settings, including hospitals, long-term care (LTC) and community-based services.

On the supply side, ageing is a major issue affecting the workforce itself. A significant proportion of health and care professionals are aged 50 or above, resulting in high retirement rates that are difficult to replace through younger cohorts. For example, among specialist medical practitioners in the EURES countries, approximately 40 % were aged 50 or older in 2024 (OECD / European Commission, 2024). For nurses, over a third of the workforce was aged 50 or above in 2024 (WHO, 2022). In the case of health care assistants, the proportion reaches 66 % in Greece. In Italy, it is projected that 70 % of the current general practitioner workforce could retire in the near future (Valle et al., 2024).

Requirements for education and qualifications vary considerably across European countries, leading to uneven preparedness and limiting mobility. This is particularly evident in specialist nurse roles, such as geriatric or paediatric nursing, which are inconsistently defined and recognised across countries (Decock et al., 2022). For example, in some countries, specialist nurses must complete a university-accredited master's pathway, while in others, informal certification suffices. Similarly, physiotherapy training ranges from three-year post-secondary programmes in Slovenia to five-year master's degrees in Poland and France (Sow-

ada et al., 2019). For health care assistants, the situation is even more heterogeneous: entry requirements range from no formal education in Bulgaria and Latvia to multi-year programmes in Latvia, and continuous professional development is unevenly implemented (Kroezen et al., 2018). These differences can create significant barriers to recognising the professional qualifications of workers who wish to work in a different country. In these cases, professionals must undergo a general system of recognition before being able to exercise their profession in another EURES country, including compensation measures or bridging courses, which are required inconsistently or are unclear in their application.

A further structural driver is the presence of skills gaps resulting from the misalignment of certain health and care education curricula with evolving care needs. Many national curricula remain overly focused on hospital-based care, leaving graduates underprepared for roles in community, long-term and home care settings. For instance, nursing, geriatrics, chronic disease management and palliative care are under-represented in some national curricula (Eurofound, 2020). In physiotherapy, professional education in rehabilitation has traditionally placed disproportionate emphasis on rheumatology rather than on comprehensive rehabilitation approaches, as seen in Croatia (Dzakula et al., 2021). Digital health training is also inconsistent: a 2024 review found that one in five countries offered no digital health courses for health science students, and one third had no in-service digital training (Williams et al., 2025a).

Labour migration and mobility patterns are another factor shaping workforce shortages, acting as a policy lever to mitigate domestic shortages in some countries, while being a driver of 'brain drain' in others. The overall direction of this pattern tends to follow an east-to-west, south-to-north gradient. For example, Luxembourg and Cyprus are among the countries with the highest shares of foreign-trained doctors, reaching up to 100 % in Luxembourg. Conversely, several eastern European countries struggle with outward migration: Romania has lost over 23 000 nurses to emigration, prompting initiatives to promote retention or return of qualified professionals (Zapata et al., 2025).

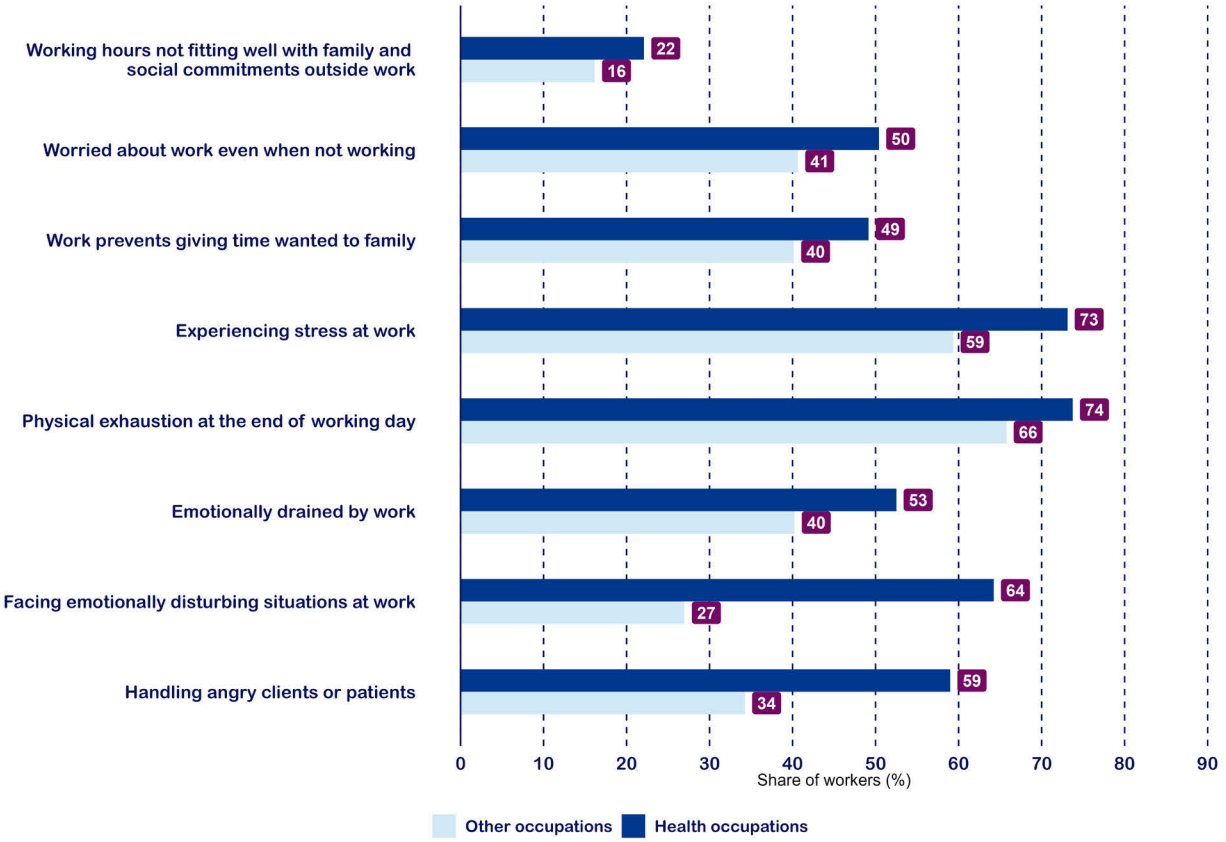
Internal mobility further exacerbates shortages in less attractive locations or roles. Professionals frequently move from rural to urban areas or from public to private sectors, intensifying shortages in underserved regions. In Denmark, 1.8 million people live in areas with a shortage of general practitioners, predominantly rural or disadvantaged urban zones (Birk et al., 2024). In Germany, 14 out of 16 states reported a shortage of physiotherapists in 2018, with rural areas particularly affected (Blümel et al., 2020).

The attractiveness of health and care occupations is shaped by long working hours and stress levels, health and safety concerns, work organisation and the nature of employment contracts. These factors interact with and influence both recruitment and retention.

People in health and care sector occupations are more likely to face difficult work conditions than other workers. Based on the 2024 European Working Conditions Survey, workers in healthcare occupations are more likely to be emotionally drained from their work (53 %, compared with 40 % in non-healthcare occupations), more likely to face emotionally disturbing situations at work (64 %, compared with 27 % in non-healthcare occupations) and more likely to handle angry clients or patients in their activity (59 %, compared with 34 % in non-healthcare occupations). Workers in healthcare occupations also report experiencing stress at work more often (73 %, compared with 59 % in non-healthcare occupations) (see Figure 54).

The constraints of healthcare professions also impact work–life balance. Almost half (49 %) of workers report that working hours are more likely to prevent them to spend the time they would want with their family, while this share stands at 40 % among workers in non-healthcare occupations. Among healthcare workers, 22 % say that their working hours do not fit well with their family and social commitments outside work (16 % in non-healthcare occupations), and 50 % signal being worried about work even when not working, 9 percentage points more than non-healthcare workers (41 %).

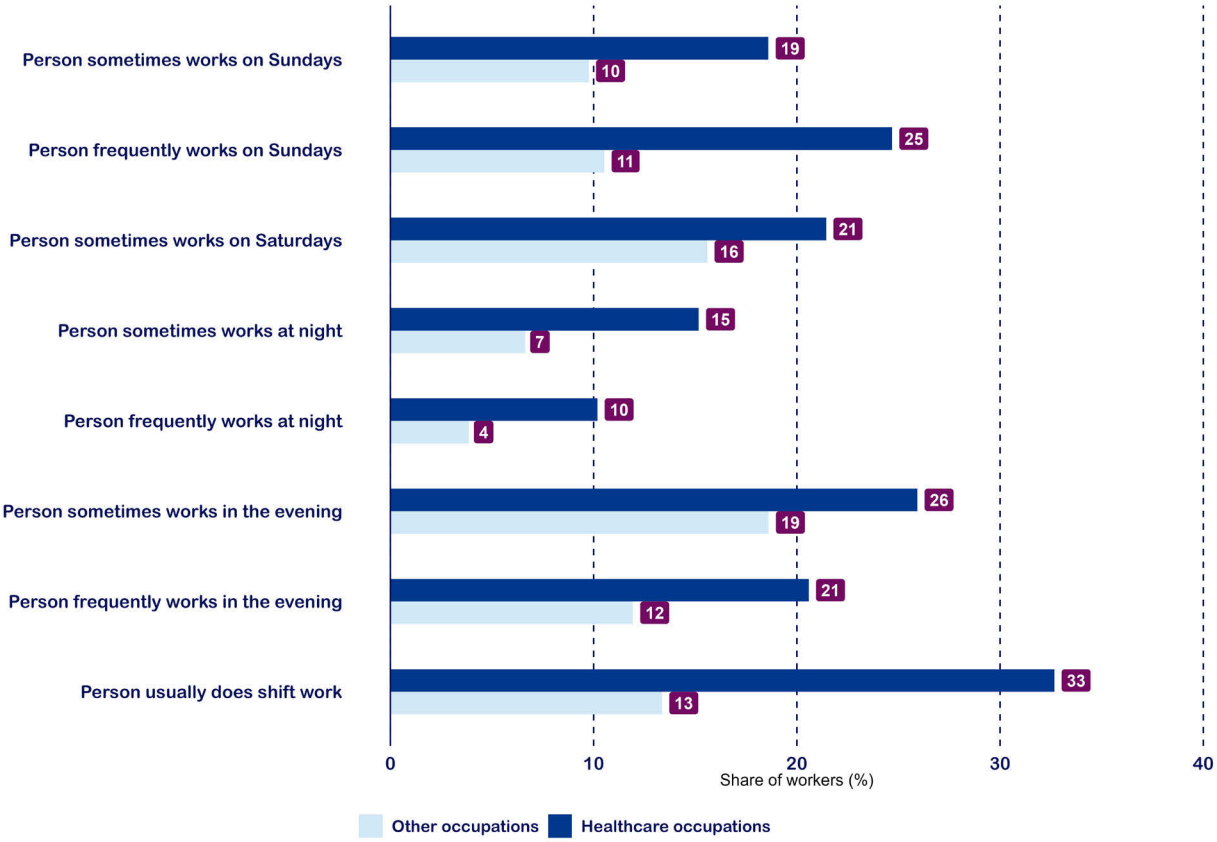
Figure 54: Reported working conditions for healthcare occupations and other occupations, EURES countries, 2024



NB: All EURES countries except Iceland and Liechtenstein. Workers reported facing the listed situations always, often or sometimes.
Source: European Working Conditions Survey, 2024.

Many health and care sector jobs are characterised by constraining working arrangements (see Figure 55). Shift work is a common occurrence, compared with non-healthcare occupations. Moreover, workers in health and care sector occupations are more likely to work evening hours. To ensure the continuous provision of healthcare services, workers in the sector are also likely to work during weekends. This is likely to have a detrimental effect on health and care sector staff work–life balance and may negatively affect the attractiveness of these professions.

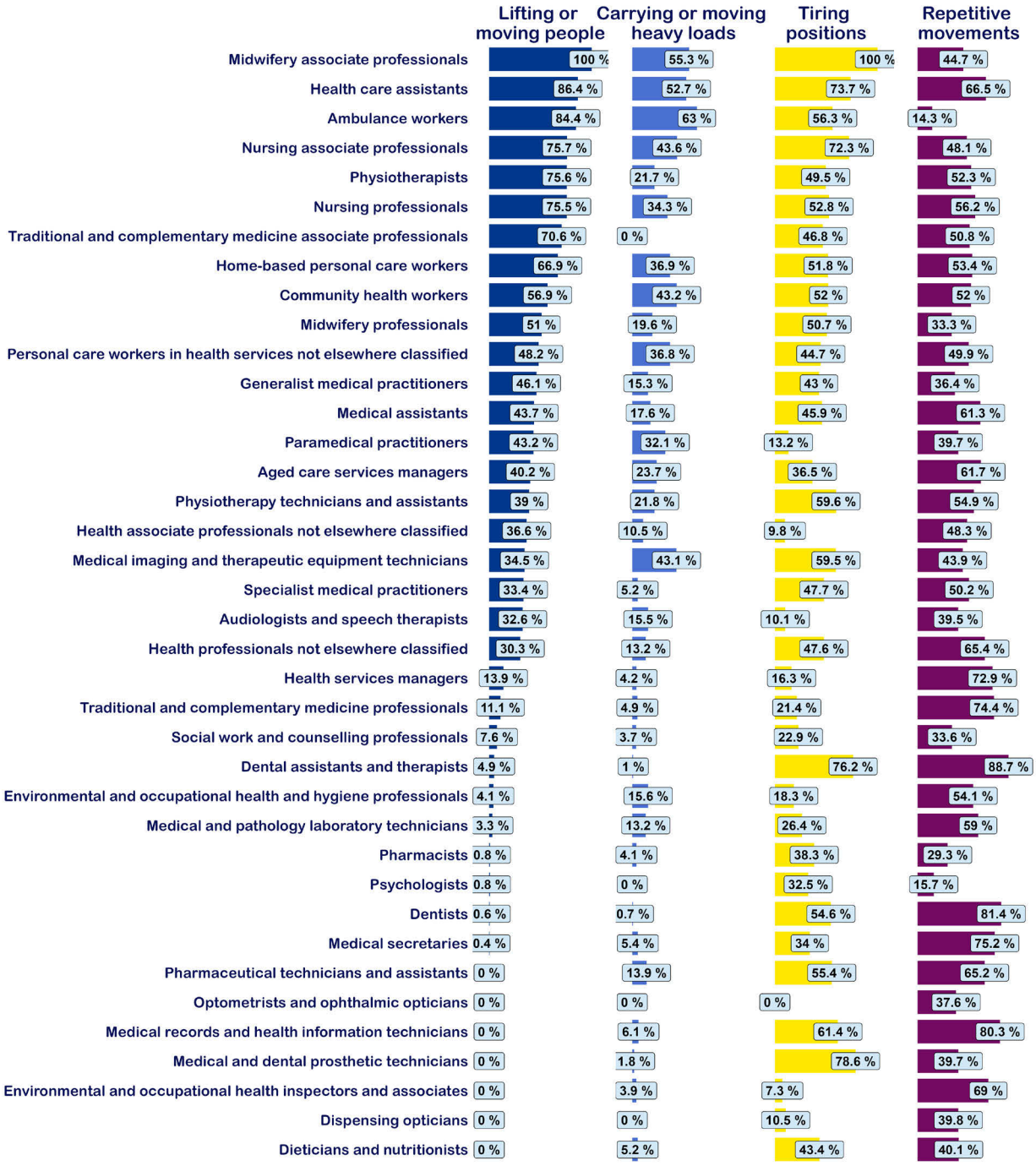
Figure 55: Shift work and working weekends and evenings among healthcare occupations, EURES countries, 2023



NB: These questions are present only every two years in the EU-LFS microdata and 2023 was the latest available year with data.
Source: EU-LFS microdata.

Healthcare professions are often characterised by physically demanding tasks, although this varies largely across occupations (see Figure 56). Many occupations require lifting or moving people, or carrying or moving heavy loads, which can have a detrimental impact on workers' health in the long run. In particular, 100 % of midwifery associate professionals, 86.4 % of health care assistants and 84.4 % of ambulance workers report that lifting or moving people is a component of their job. Tiring positions are also very common among specific occupations: 100 % of midwifery associate professionals, 78.6 % of medical and dental prosthetic technicians and 76.2 % of dental assistants and therapists work in tiring positions. Repetitive movements are the most commonly reported work component, notably affecting 88.7 % of dental assistants and therapists. Beyond increasing the strain of daily work, these factors correlate with the occurrence of musculoskeletal disorders, which can lead healthcare professionals to leave the professions to protect their health, or because they are rendered unable to accomplish their tasks. Shift work and long hours, both common in healthcare professions, are additional risk factors for these disorders (European Agency for Safety and Health at Work, n.d.).

Figure 56: Reported working conditions, by healthcare occupation, EURES countries, 2024



NB: All EURES countries except Iceland and Liechtenstein. Workers reported facing the listed situations always, often or sometimes.
Source: European Working Conditions Survey, 2024.

Furthermore, the health and care sector shows a high prevalence of work accidents. In 2022, 79 fatal accidents were recorded in the health and care sector, leading to the death of a victim within one year of such an accident. In the same year, 469 685 non-fatal accidents resulting in at least four full calendar days of absence from work occurred in the EU health and care sector, representing 16 % of all non-fatal work accidents in 2022 (European Agency for Safety and Health at Work et al., 2025). Worryingly, this share has nearly doubled in 10 years, from 9 % in 2012. The incidence rate of non-fatal accidents (accidents per 100 000 workers) has also largely increased, from 1 462 in 2012 to 2 134 in 2022, with substantially higher rates from 2020 onwards. This phenomenon negatively impacts labour supply in the sector as workers experiencing work accidents are more likely to face chronic conditions, absen-

teeism, permanent disability and a lower level of work ability (European Agency for Safety and Health at Work et al., 2025). Occasional absences also negatively affect organisations, further increasing the workloads and degrading the working conditions of other staff, in a vicious cycle.

Working conditions and labour shortages are key determinants of a healthcare worker's decision to quit their job. In Germany, 14 % of registered nurses reported intending to leave in 2021 (Wendsche et al., 2022). In 2018, this share stood at 36.6 % in Sweden (Pennbrant et al., 2021) and 29 % in the Netherlands (Van der Heijden et al., 2019). Even prior to the COVID-19 pandemic, physicians also reported high levels of intention to leave: 28.2 % in Germany in 2017 (Koch et al., 2020), 21 % in Norway in 2016 (Martinussen et al., 2020) and 22.7 % in Poland in 2018 (Domagała et al., 2019). For both occupations, reported push factors include the stressful nature of the work, the irregular working hours, emotional exhaustion, inadequate nurse staffing, heavy workload and job strain, conflicts with family life and lack of job satisfaction. On the other hand, pull factors include high job satisfaction, adequate staffing, good personal health, moderate work pace and good wages (de Vries et al., 2023). Relatedly, limited opportunities for career advancement or progression pathways among nursing professionals and health care assistants further exacerbate dissatisfaction with the occupation (Eurofound, 2020).

Satisfaction with wages is an important factor contributing to the attractiveness of healthcare professions and the retention of the existing workforce. However, some healthcare occupations are characterised by low hourly gross wages, which drastically affects their attractiveness. Notably, in Estonia and Italy, wages in the residential and non-residential care subsectors were lower than 70 % of the wages in the total economy (OECD, 2023b).

Even among higher-paid professions, healthcare professionals often consider that their work is underpaid. In 2022, less than half of primary care physicians reported being satisfied with their income in several EURES countries: 44 % in Sweden, 41 % in Switzerland, 40 % in the Netherlands and 33 % in Germany and France (Gumas et al., 2023). National authorities have reported that medical staff have been increasingly drawn to temporary and interim contracts, due to their better flexibility with schedules and higher pay (OECD / European Commission, 2024). For example, in France, interim doctors can earn two to three times more than their counterparts with a regular contract with a hospital, while interim nurses are able to earn about 30 % more (Cour des comptes, 2022). While the health and care sector increasingly relies on temporary staff to overcome labour shortages, this trend has a detrimental impact on the cost of health services and on the continuity of care in hospitals and among health and care service providers (OECD / European Commission, 2024).

In this context, national initiatives to address labour shortages in the health and care sector were introduced in several Member States, as indicated in Box 8.

Box 8: National initiatives to address labour shortages in the health and care sector

Several EURES countries have introduced targeted measures to address labour shortages in the health and care sector. To illustrate the diversity of the approaches in place, this box provides an overview of the initiatives submitted by NCOs from six EURES countries, outlining their aims, scope and main features.

Six countries reported a total of 19 initiatives addressing labour shortages in the health and care sector. The table below provides an overview of their distribution by country.

	BULGARIA	FINLAND	GERMANY	LUXEMBOURG	ROMANIA	SLOVAKIA
Reported (total)	3	2	1	4	4	5
Currently active		1	1	4	4	4
Planned	3					
Ended		1				1

Most initiatives operate at the national level, while two Slovak financial incentive schemes are implemented regionally. The initiatives target a wide range of occupations, including nurses, midwives, doctors, physiotherapists, paramedics, social care workers and health care assistants.

Type of instruments and support provided

The initiatives implemented to address labour shortages in the health and care sector tend to focus on a few recurring types of intervention. Typically, these initiatives combine several forms of support simultaneously.

The first type of initiative aims to provide information to workers and employers on their rights and obligations (13 out of 19). These initiatives aim to reduce administrative uncertainty, improve awareness of procedures and

support smoother transitions into employment, particularly for mobile or newly arriving workers. Examples include recognition guidance services, employer advisory platforms and information channels operated by PESs.

A second type centres on job finding, matching and recruitment (10 out of 19). These measures strengthen access to vacancies, improve pre-selection processes, facilitate job fairs or enhance coordination between jobseekers and employers. They are used both in domestic labour markets and in the context of recruiting workers from abroad.

Financial incentives form another type of intervention (7 out of 19). These measures use bonuses, scholarships or allowances to make health and social care jobs more attractive to new entrants or to workers who might otherwise leave the sector.

Some initiatives involve legislative or regulatory changes (2 out of 19). These include simplified procedures for work permits or standardised salary structures designed to remove structural barriers and provide more predictable conditions for employers and workers.

Training and employability measures (9 out of 19) represent a further theme. These include vocational training for unemployed or inactive persons, language courses to support integration into healthcare settings and pre-departure training for internationally recruited staff, all aimed at increasing the pool of qualified workers.

Finally, several initiatives explicitly target foreign workers (13 out of 19), either by supporting employers in managing international staff or by attracting EU and non-EU nationals through mobility and recruitment measures. These measures include mobility services, recruitment guidance, visa and permit procedures, quota systems and support for employers managing international staff. They play a central role in countries where domestic supply is insufficient to meet demand.

Examples of initiatives

In Germany, the Service Centre for professional recognition (*Zentrale Servicestelle Berufsanerkennung*) addresses barriers faced by foreign-trained health professionals entering the German labour market by providing centralised guidance on qualification recognition. Many applicants encounter fragmented information and complex procedures, which slow their ability to secure employment. The service offers consultations by email, phone and video, explaining legal requirements, directing applicants to the correct recognising authority and supporting document preparation. Between 2020 and 2025, around 700 jobseekers used the service. By reducing administrative bottlenecks and improving clarity around recognition procedures, the initiative facilitates faster labour market entry for qualified foreign workers.

The Expert Service – International Recruitment in Social and Health Care (Sote-alan kansainvälisen rekrytoinnin asiantuntijapalvelu) was introduced in Finland to address employers' limited capacity to conduct international recruitment in a structured and compliant way. Many health and social care providers have little experience with transnational hiring, which leads to delays and administrative inconsistencies. The service offers practical guidance on planning and implementing international recruitment, including online consultations, written materials, webinars and tools on partner selection, responsible recruitment principles and preparation for incoming workers. At the time of reporting, the service had been operational for two months, and only two employers had used the service. No outcome data are yet available, but the mechanism is clear: providing standardised information and procedural support to reduce administrative uncertainty and help employers conduct international recruitment more efficiently.

The Work-in-Luxembourg recruitment portal (*Portail de recrutement Work-in-Luxembourg*) was developed to support recruitment into shortage occupations by centralising information and improving matching between employers and candidates. The platform allows employers to submit their staffing needs and receive validated profiles that meet predefined occupational and qualification criteria. Only candidates with the required qualifications or professional experience in shortage occupations are validated and made visible to employer advisors and recruiters. Individuals interested in working in Luxembourg in an occupation not covered in the shortage lists can still register via the EURES platform. The portal was redesigned in June 2024, and from then to the end of that year, nearly 9 000 profiles meeting the criteria were accepted through the portal.

In Bulgaria, the training programme for unemployed and inactive persons aims to increase the domestic supply of health and social care workers by providing vocational training to unemployed and inactive individuals. It focuses on qualifications in the healthcare and therapy fields. It includes face-to-face training with a strong practical component, accounting for around two-thirds of the programme, combined with guaranteed internship placements designed to support the transition into employment. Participation is facilitated through measures such as childcare and family support for participating parents, allowances and subsidised employment.

The initiative will be implemented in 2026. The programme has established a wide network of employers prepared to host internships and later hire trained participants, including university and specialised hospitals, emergency medical centres, social and rehabilitation facilities and municipal centres for social and health services. This set-up suggests a strong capacity to absorb new entrants once the programme becomes operational.

Slovakia uses several financial instruments to address shortages in healthcare, including recruitment bonuses for nurses (*Náborový príspevok pre sestry*), company scholarships for students in health-related fields (*Podnikové štipendium pre študentov*) and a stabilisation allowance for existing staff (*Stabilizačný príspevok pre zdravotníckych pracovníkov*). These measures aim to increase the attractiveness of entering or remaining in the sector by providing direct monetary incentives linked to priority occupations and regional needs. Together, these instruments seek to stabilise staffing levels by supporting both new entrants and the existing workforce.

The recruitment bonus offers payments of up to EUR 1 500–8 000 depending on specialisation and employer requirements. At the same time, the company scholarship provides monthly financial support to students in nursing, midwifery and pharmacy programmes, along with a guaranteed job upon graduation. The stabilisation allowance, which has now ended, offered payments of up to EUR 5 000 for healthcare and social services workers who committed to staying with their employer for three years.

Vocational training services provided by the PES (*servicii de formare profesionala furnizate de catre Agenția Națională pentru Ocuparea Forței de Muncă (ANOFM) persoanelor in cautarea unui loc de munca*) in Romania aim to increase the supply of workers to health and social care by providing free vocational training to jobseekers. Training covers initiation, qualification, retraining and specialisation and is planned annually at the county level according to employer demand. Although the PES does not train regulated health professions, it offers certified training for roles relevant to the sector, such as nursing aides and home-based personal care workers. Access is open to unemployed persons, recent graduates, refugees, foreign citizens with the right to work and other groups defined in national legislation.

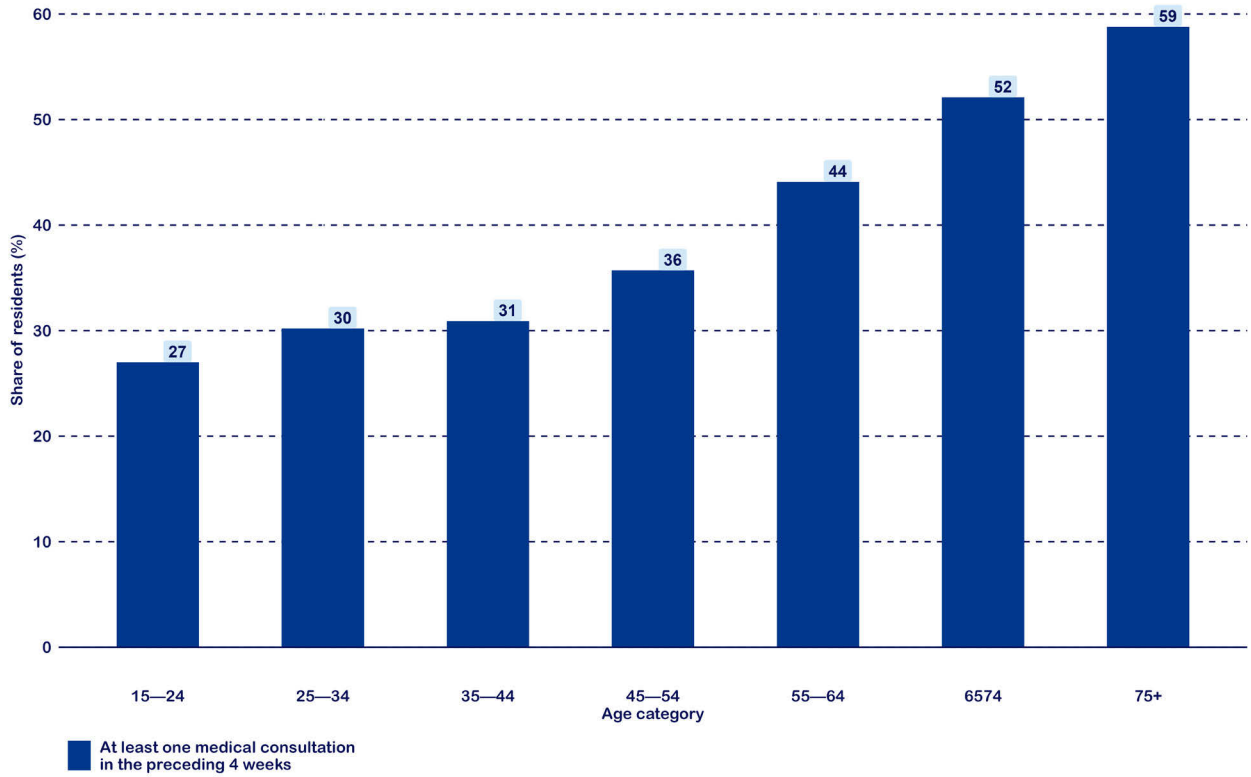
The programme operates nationwide through PES training centres and authorised providers. Between 2024 and June 2025, 26 051 individuals participated in PES training out of a planned 37 000, including 1 131 participants in healthcare-related occupations. The mechanism reduces shortages by increasing the number of certified candidates for non-regulated care roles and aligning training provision with local employer needs.

5.5. The future of healthcare occupations

The health and care sector is facing multiple trends that will affect its labour market and workforce in the long run: population ageing, change in disease burden, tensions in healthcare funding, migration patterns and new tools and technologies.

First, the EU has one of the oldest populations in the world. Driven by improvement in life expectancy, rising living standards and advances in healthcare and medicine, this long-term trend began several decades ago and is associated with a declining share of working-age people in the overall population (European Commission et al., 2024). Between 2025 and 2050, the EU population of persons aged 65+ will grow from 99 million to 130 million. Over the same period, the working-age population (aged 15–64) will diminish by almost 30 million people, from 287.5 million in 2025 to 257.2 million in 2050 (Eurostat, n.d.-f). This implies added demand for health and care services; for example, the number of medical consultations undertaken by patients increases with their age. Notably, people aged 75+ have medical appointments more than twice as often as people aged 15–24 (see Figure 57). This trend is combined with a reduction of the workforce available to provide these services, and will exert considerable pressure on EURES countries' health and care systems.

Figure 57: Self-reported consultations with a medical professional, by age group, EU-27, 2019



Source: Eurostat dataset (hlth_ehis_am2e) (13 May 2022).

Simultaneously, population ageing is exerting high levels of pressure on LTC services, in a context where the availability, accessibility and quality of these services is uneven in the EU. Older age implies limitations in the ability to accomplish certain activities, with autonomy diminishing sharply with age. However, a substantial share of LTC needs are not met in EURES countries. For example, 30 % of people aged 65+ with at least three limitations in daily living were not receiving LTC in Czechia, Greece, Italy, Luxembourg, Austria and Slovenia, and up to 50 % in Denmark, Latvia, Lithuania and Sweden (OECD, 2023b). This means that ensuring the availability of LTC services will require an increase of staffing to meet both the current underserved or unserved demand and the future needs of the ageing population.

Additional factors driving up the demand for health and care services are increases in the incidences of non-communicable diseases (NCDs) and neurodegenerative diseases, the increased importance of mental health in healthcare policies and antimicrobial resistance. In particular, NCDs (which encompass, for example, diabetes, cardiovascular diseases and cancer) are often driven by risk factors such as air pollution, obesity, smoking and alcohol consumption. For these conditions, prevention can mitigate the growth in long-term healthcare costs and reduce the pressures on healthcare staff (OECD, 2025b; WHO et al., 2025). Climate change is also driving the incidence of new diseases, and the rise of allergies and infectious diseases (Schmidt et al., 2025). The subsequent additional workload, and the efforts to vaccinate the population, will fall on the shoulders of the health workforce (Letta, 2024).

Importantly, the healthcare workforce is itself ageing. For some occupations, replacing the retiring workforce will be critical in the medium-term: in particular, 40.9 % of health care assistants, 37.5 % of generalist medical practitioners and 34.9 % of nursing professionals are older than 50 (see Figure 47). In this context, retaining the existing workforce and training new graduates are of critical importance. The improvement of working conditions in the sector is thus paramount to ensure it is attractive (European Commission, 2024b). Furthermore, in the health and care sector, the large gender gap observed in most occupations is contributing to limiting the available pool of candidates (see Figure 46), due to care occupations being perceived as 'women's work' (OECD, 2023c).

Following the COVID-19 pandemic, many EURES countries have increased the number of students in medical and nursing education programmes to address current and future shortages. For example, France increased the legal quotas for medical students by 20 % for 2021–2025, compared with 2016–2020. The number of students admitted to medical schools in Germany has also grown over the

past few years (OECD, 2023c). For some professions, the effects of these measures will show only in the medium- to long-term, due to the long training periods required in regulated medical professions. Policies aiming at improving the attractiveness of health and care jobs must, in any case, be complemented by investment in increased training capacity to prove effective.

Another strategy adopted by Member States is to construct targeted immigration policies for qualified health and care workers (OECD, 2023c). Indeed, while training students takes several years, recruiting international talent may prove a faster solution to alleviate current shortages. As a result, over the last 20 years, the number of foreign-born doctors has more than tripled in several countries, including Finland, Germany, Luxembourg, Norway, Spain and Switzerland (OECD, 2025c). Several initiatives have been set up or are planned to develop these recruitment channels and facilitate the installation of skilled migrant workers. In Austria, the Red-White-Red card allows foreign-trained doctors and nurses to work in qualified roles while completing compensatory measures for full recognition. Similarly, Denmark and Germany issue visas and residence permits to facilitate the recognition of professional qualifications in the health and care sector obtained abroad. France also announced plans for a multi-year residence permit for medical and pharmacy professionals, aiming to attract trained doctors, dental surgeons, midwives and pharmacists who are non-EU nationals and who are licensed by French health authorities to practise and meet the required salary thresholds (OECD, 2025c). As part of the quality jobs roadmap, the upcoming EU visa policy strategy will also include measures to facilitate the arrival of top students and skilled workers (European Commission, 2025e). However, heavy reliance on migrant or mobile staff to fill shortages can create brain drain in origin countries, including among EURES countries. Emigration rates are notably high for Romanian doctors (28 %) and nurses (24 %), for Irish doctors (25 %) and for Latvian (23 %), Polish (23 %) and Slovak (21 %) nurses (OECD, 2025c).

At the EU level, a Joint Research Centre study (European Commission et al., 2024) projects that, if inflows and outflows remain at the current levels, the numbers of doctors and nurses in the EU would increase by 16 % for doctors and by 8 % for nurses between 2021 and 2071. This increase would, however, still fall short of the projected demand based on future demographic changes and individuals' actual use of health services or health status. Their results indicate that the need to recruit doctors and nurses will be at its most pressing in the next 10 years (up to 2036). In the long run, a reduction in the disease burden driven by medical advancements and investment in health and care systems could substantially reduce the need for recruitment. Similarly, the generalisation of healthy ageing, meaning promoting Europeans' good health in old age, could reduce the need for recruitment. Other studies show that shortages in the medium-term may persist for some health occupations at the national level, while other may resolve (see Box 9).

Box 9: National forecasts for healthcare occupations

National-level forecasts are a useful source of information to understand future labour shortages in healthcare occupations.

In France, the Directorate of Research, Economic Studies and Statistics (Dares), a directorate of the Ministry of Labour, Employment and Economic Inclusion, produced a forecast of occupation supply and demand for 2030. The reference scenario reports supply gaps of 103 900 health assistants and 2 800 medical practitioners in 2030. However, results show surpluses of 4 700 nurses and midwifes and 60 500 paramedical practitioners in 2030. The forecast also provides an assessment of expected tensions relative to the current labour market situation: for example, the future supply surplus in paramedical practitioners would alleviate the current severe labour shortage in this occupation.

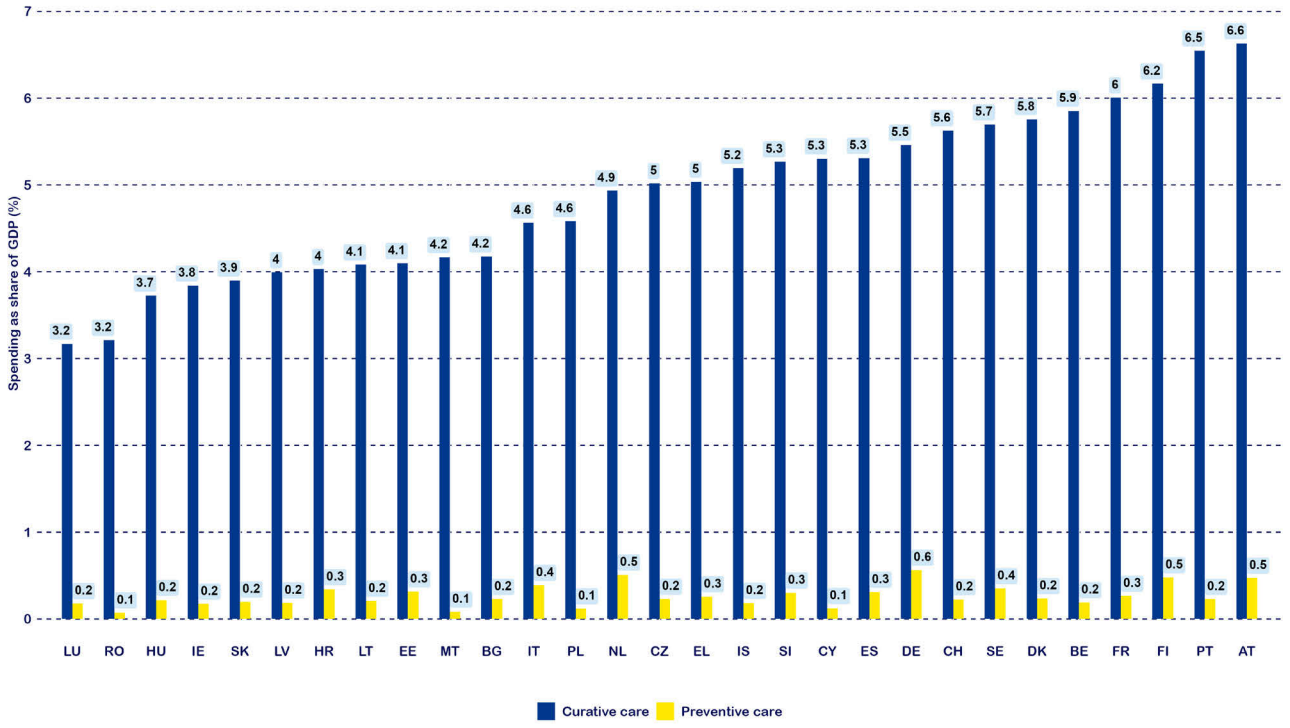
In Finland, the forecast of supply of and demand for labour by vocational field for the year 2031, compared with 2022, was published. The labour market for health care assistants and practical nurses is expected to be in balance in 2031, as for 2022. Other healthcare experts were in undersupply in 2022 and are expected to return to balance in 2031. Similarly, the tensions on the labour supply of medical doctors is expected to ease in 2031.

Sources: Dares (2023); Vipunen (n.d.).

Health and care systems are facing increasing pressures in a context of budget constraints, and rising defence- and climate-related expenditures. The competition for public funds with other types of expenditure implies that countries may be limited in their abilities to expand or even maintain the current levels of health expenditure (WHO et al., 2025). Reforms of the overall structure of EURES countries' health systems will therefore require solving both labour issues and service delivery efficiency (European Parliament: Directorate-General for Economy, Transformation

and Industry et al., 2025). Investments in advanced and localised healthcare infrastructure and screening centres will be required to face changes in disease burden (Letta, 2024). Furthermore, EURES countries have been characterised by underinvestment in preventive care, which receives typically around 10 times less funding than curative care (see Figure 58). Preventive care, which is less expensive and labour-intensive than curative care, could contribute to alleviating financial pressures and staff workloads by detecting illnesses at an earlier stage and reducing the occurrence of NCDs, for example. Other reforms aim to transform primary care into a more integrated system that improves access, patient-centredness and efficiency, while at the same time enhancing its role of gatekeeper to reduce hospital use (WHO et al., 2025).

Figure 58: Spending on curative and preventive care, EURES countries, 2023



NB: Norway is missing from the EURES countries.

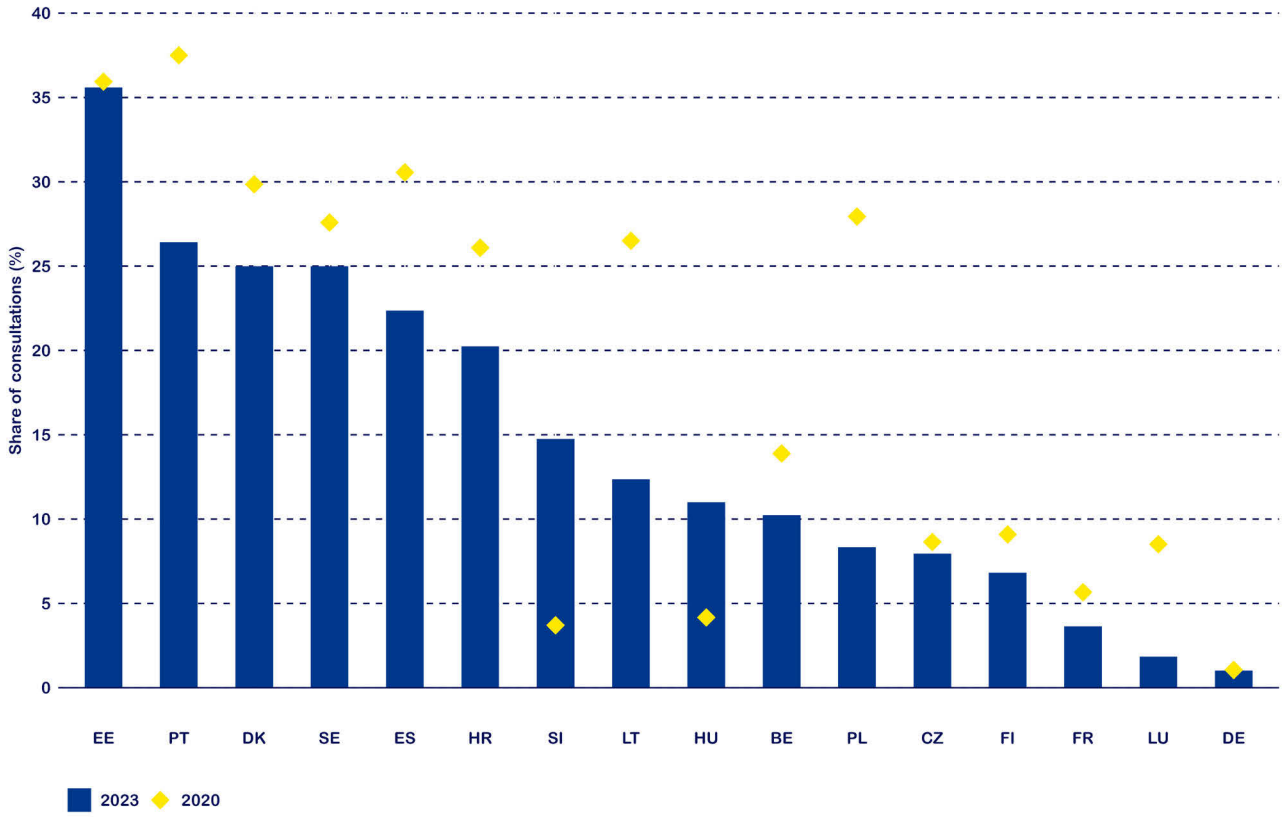
Source: OECD dataset DSD_SHA@DF_SHA (29 October 2025).

In the short-term, the adoption and leveraging of new technologies can dramatically improve efficiency and effectiveness in healthcare delivery (Letta, 2024; WHO et al., 2025). The COVID-19 pandemic accelerated the digital transformation of health and care systems, demonstrating how digital tools can help ensure care continuity and improve health and care service provision and coordination (WHO et al., 2025). Digital health tools, when implemented strategically, can extend access to medical services through remote care, allow for increased personalisation of health and care services, reduce waiting times via automated triage and scheduling and have the potential to alleviate workforce pressures by supporting task shifting and minimising administrative burdens (WHO et al., 2025). These factors can improve working conditions for healthcare workers by reducing their workloads while simultaneously increasing their productivity. However, the maturity of online health-related services varies greatly across Member States, as measured by the eGovernment Benchmark [9]. In 2025, the share of administrative steps that can be undertaken online for major health-related life events varied from 47 % in France and 51 % in Poland to 95 % in Luxembourg and 100 % in Malta (European Commission: Directorate-General for Communications Networks, Content and Technology et al., 2025). Similarly, in 2023, the share of medical consultations conducted remotely varied

9 The eGovernment Benchmark is a tool developed by the European Commission to monitor the EU's digitalisation of key public services (see European Commission (2025c)).

from more than 35 % of teleconsultations in Estonia to less than 5 % in France, Luxembourg and Germany (see Figure 59).

Figure 59: Share of teleconsultations among visits to medical doctors, EURES countries, 2020 and 2023



NB: Not all EURES countries are included due to data availability.

Source: OECD dataset DSD_HEALTH_PROC@DF_CONSULT *(24* November 2025).

Investment in digital health technologies is fundamentally reshaping health and care provision in EURES countries. Electronic health registers, e-prescriptions and e-dispensation enable real-time data exchange, integrated workflows and more data-driven decision-making. Many countries are leveraging these tools to shift from reactive to preventive care, automating reminders for screening, vaccination and chronic disease reviews, and offering online booking, as seen in Estonia, France, Iceland and Lithuania. Coordination is also being improved through e-referrals, which reduce administrative burden and make specialist access more transparent and traceable (WHO et al., 2025).

Some other technologies can even reduce the workload of healthcare workers by allowing patients to rely less on health and care staff. Examples include self-management technologies, which allow patients to take control of personal health and care management, and remote care and disease management software, which allows remote monitoring of treatments administered in a patient's home. In LTC, for example, the implementation of new technologies can boost the productivity of healthcare workers and reduce the difficulty of straining tasks. Eventually, the subsequent improvement in working conditions could reduce the dropout of workers from the sector (OECD, 2023b).

Technological progress in AI development for healthcare provision offers further possibilities to improve performance and reduce the workloads of health and care staff. Potential uses include interpreting medical imaging, predicting clinical progression, automating administrative tasks and supporting clinical decision-making through data-driven insights (WHO et al., 2025). However, the adoption of these technologies requires training the existing workforce, which may prove challenging in the present context of heavy workloads and staffing difficulties. This also involves adapting vocational and academic curricula and improving lifelong learning systems to upskill and reskill existing and future health and care workers (Wismar et al., 2023).

5.6. Summary

Overall, health and care occupations are heavily gendered, with low male representation. Disproportionately more highly educated and female workers are employed in health occupations than in other areas. Moreover, large shares of older workers are employed in many health and care occupations, which means that those workforces will face substantial replacement needs in the next decade. Finally, the reliance of the sector on foreign workers, of EU and non-EU origin, has been rising in the last few years, driven by the need to address recurring labour shortages.

Labour shortages are prevalent in health and care occupations, in particular among generalist and specialist medical practitioners, nursing professionals and health care assistants. These shortages are driven by tough working conditions, which impede the retention of the existing workforce, and difficulties in training enough younger workers to compensate for the retirement of the ageing workforce and the growing demand for health and care services in the EURES countries. Health and care jobs are not attractive to men, which further restricts the available pool of candidates, thereby increasing recruitment tensions.

Looking ahead, health and care occupations will undergo significant transformations due to digitalisation, population ageing and the green transition, presenting both opportunities and challenges. Many workers must adapt to new digital tools and technologies, which will require extensive training, in the difficult context of labour shortages, heavy workloads and pre-existing skills shortages. Technological progress, however, represents an opportunity to improve working conditions and service delivery efficiency, and to restructure the EU health and care systems to better cater to changing and growing population needs. This may, however, require the transformation of the skills mix of the health workforce, which may imply task shifting between professional groups.

6. Summary of findings

6.1. Labour market imbalances

The NCO data indicate that, in 2025, labour shortages were present in at least one country for 97 % of the 436 four-digit ISCO 2008 occupations. The concentration of these shortages in a small number of countries, particularly Italy, the Netherlands, Bulgaria, Belgium and Romania, highlights notable regional differences in the labour market (see Figure 2). The occupational groups most affected, including professionals, craft and related trades workers and plant and machine operators and assemblers, suggest that both highly skilled and technical roles are in demand, driven by wider economic developments and demographic shifts.

The health and care sector, which has been the focus of this year's EURES labour shortage report, continues to face deepening workforce shortages across the EURES countries, particularly among nursing professionals, specialist medical practitioners and health care assistants. Data show that specialist medical practitioners became the most widespread shortage occupation in 2025, moving up from third place in 2024 (see Table 14). Generalist medical practitioners followed a similar trajectory, rising from sixth to fourth over the same period. Several factors underpin this trend. The COVID-19 pandemic exacerbated existing pressures, as burnout and deteriorating working conditions drove many healthcare professionals to exit the sector (OECD / European Commission, 2024; European Union of Medical Specialists, 2025). The resulting staff shortages have perpetuated a self-reinforcing cycle: reduced staffing levels increase workloads and stress, prompting further attrition.

These developments indicate that healthcare workforce shortages are increasingly structural in nature. They are sustained by long-term demographic and systemic drivers, including Europe's ageing population and the extended training pathways required for medical and nursing professions.

Labour shortages in occupations related to the green transition have also intensified. Even as employment in occupations related to renewable industry has increased (see Figure 26), the shortages have become more acute. For instance, building and related electricians are listed as the occupation with the second-most shortages in 2025, up from seventh in 2021. Similarly, electrical engineers jumped from 13th in 2022 to 7th in 2025. The demand is also broad-based and more acute than previously, with a shortage of building and related electricians reported in 21 countries, 29 % of which shortages are of high severity (see Table 2). Similarly, the occupation of electrical mechanics and fitters was reported as being in shortage in 17 countries; 24 % of these shortages were high severity in 2025.

Like shortage occupations, the distribution of surplus professions is highly concentrated in a few countries (see Figure 6). Austria, Finland, Latvia, Czechia and Greece together account for 55 % of all reported surpluses. Occupations with relatively low skill barriers to entry, such as those in the broad group of clerical support workers, were often identified as in surplus.

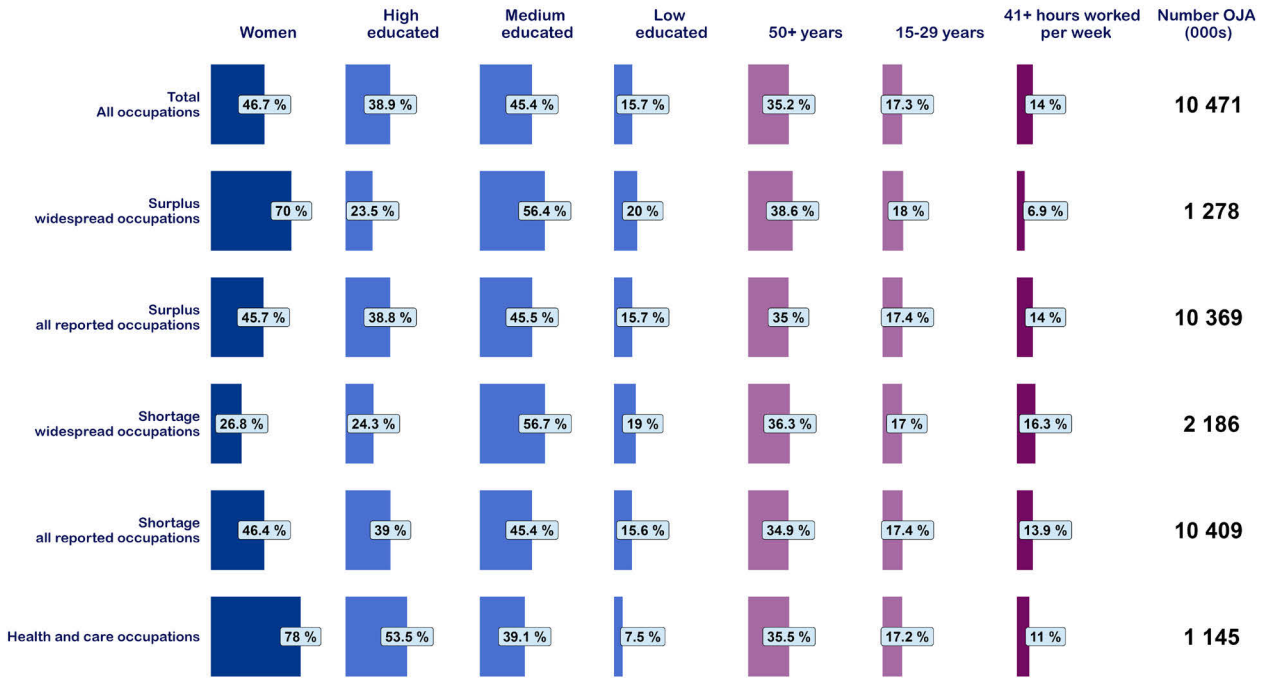
Automation and digitalisation are reinforcing the increasing trend in surplus occupations, as routine tasks are increasingly being substituted by automated systems. Moreover, advances in technology and the rapid adoption of AI are extending automation into creative domains, resulting in labour surpluses in design-oriented occupations, including graphic and multimedia designers.

Labour shortages across the EURES countries could be mitigated by further enabling labour mobility. Analysis shows that, of the 423 occupations facing shortages in at least one country, 416 (98 %) are in surplus in others, indicating potential for rebalancing labour markets. However, this potential remains underutilised due to persistent obstacles, including difficulties in recognising qualifications, insufficient information and awareness, and language-related challenges.

6.2. Characteristics of workers employed in imbalanced occupations

Consistent with previous reports, women remain under-represented in shortage occupations and over-represented in surplus occupations. In 2024, they accounted for just 26.8 % of workers in widespread shortage roles, compared with 70 % in surplus occupations (see Figure 60). This over-representation in surplus occupations renders women more vulnerable to labour market fluctuations than their male counterparts. Furthermore, the gender concentration is more acute in health and care occupations, with women representing 78 % of employment in these occupations.

Figure 60: Vulnerabilities identified among workers



OJA, online job advertisement.

Sources: EU-LFS special data extractions; EURES job vacancy insights.

Among workers in widespread shortage occupations, 24.3 % had attained a tertiary level of education (International Standard Classification of Education (ISCED) 5–8), compared with 23.5 % in widespread surplus occupations (see Figure 30). Those with a medium level of education (ISCED 3–4) made up 56.7 % of the workforce in widespread shortage roles and 56.4 % in widespread surplus roles. Meanwhile, the shares of workers with a low level of education (ISCED 0–2) stood at 19 % in widespread shortage occupations and 20 % in widespread surplus occupations.

The analysis indicates that workers under the age of 30 are under-represented in most shortage occupations, particularly in the health and care sector. The extended periods of education and training required for general and specialised medical practitioners and nurses shape the age profile of qualified professionals in these fields, skewing it towards older cohorts. Elsewhere, the low proportion of workers under 30 across both shortage and surplus occupations more broadly points to a waning interest in apprenticeships and vocational education pathways throughout Europe, particularly in craft trades (European Labour Authority, 2024b). This scarcity of young workers in shortage occupations is a matter of concern, as it suggests that these shortages are likely to continue unless policies are implemented to incentivise new generations to choose these career paths.

An examination of the demographic characteristics of workers in occupations experiencing widespread shortages highlights a range of vulnerabilities that intensify labour market imbalances. Roles such as bus and tram drivers, specialist medical practitioners and heavy truck and lorry

drivers are marked by ageing workforces and often strenuous working conditions. For example, more than 40 % of bus and tram drivers and health care assistants are aged 50 or above, meaning that upcoming retirements will place additional pressure on these sectors.

Many shortage occupations have a high proportion of older workers who are likely to retire soon, which will probably exacerbate labour shortages in the future (see Figure 33). This will particularly affect occupations in the health and care sector, where shortages have been reported to be more severe. In the most acute case, shortages in specialist medical practitioners were reported by 12 countries as being severe.

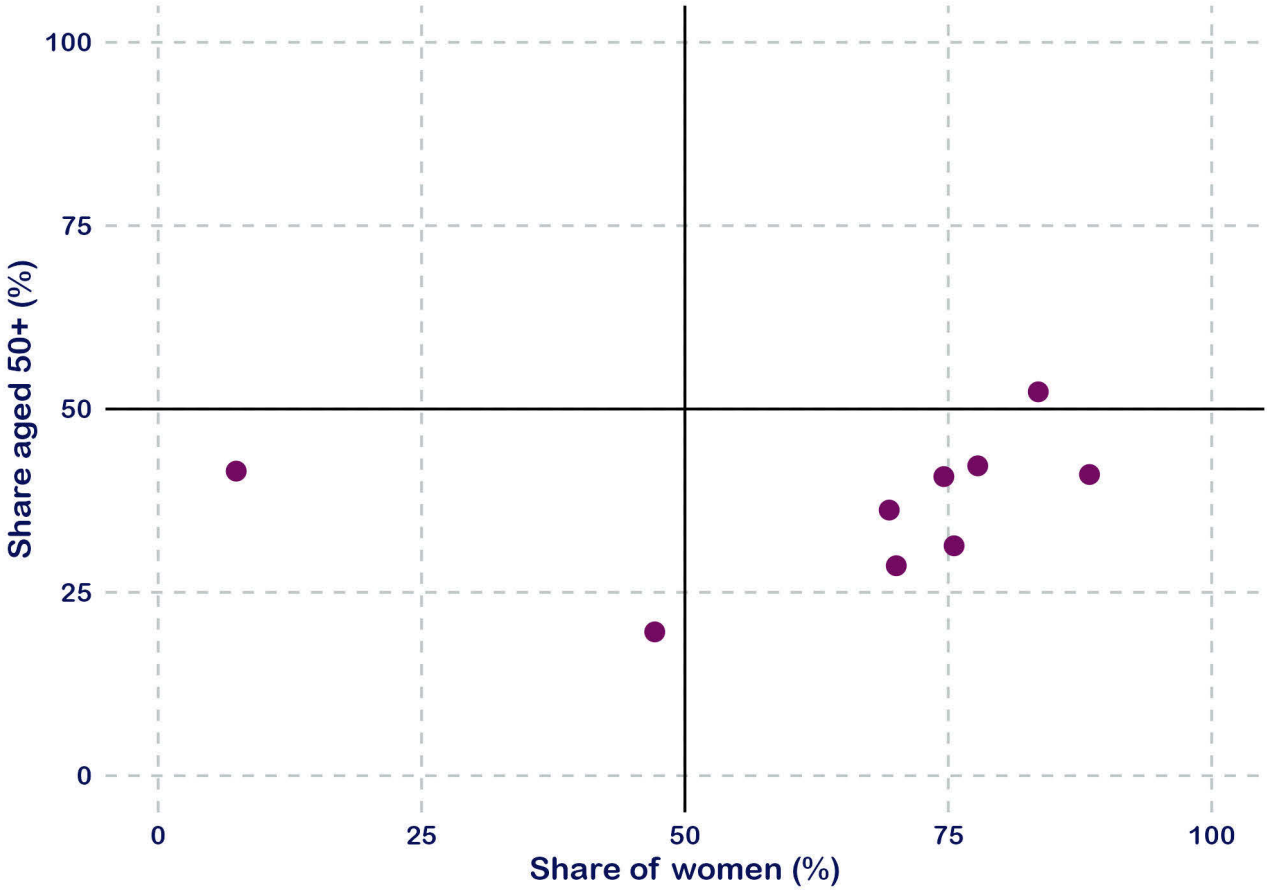
Moreover, there appears to be clustering among demographic groups by sector. Data presented in Figure 61 suggest an intersection between education and gender patterns across occupations experiencing widespread shortages. In shortage occupations, healthcare roles are predominantly occupied by women, many of whom are highly educated. Conversely, numerous construction-related occupations tend to have lower proportions of highly educated workers and fewer women. This apparent correlation between gender and education level in shortage occupations may provide insight into some of the skills shortages currently affecting the labour market.

Figure 61: Shares of women and highly educated people in widespread shortage occupations, EURES countries, 2024 (people aged 15+ years)

Source: EU-LFS special data extractions.

Member States have already introduced policies aimed at reducing gender imbalances in education. For instance, in February 2025, the Swedish government launched a comprehensive science, technology, engineering and mathematics (STEM) strategy covering education from preschool to postgraduate level, with clear objectives to increase women's participation in STEM subjects and to establish a new STEM delegation to promote uptake (Government Offices of Sweden, 2025). This initiative seeks to address the persistent under-representation of women in these technical study programmes, which continue to exhibit a gender gap favouring men (European Commission, 2024c).

Figure 62: Shares of women and those aged 50+ in widespread surplus occupations, EURES countries, 2024



Source: EU-LFS special data extractions.

Finally, an examination of occupations experiencing widespread surpluses points to demographic vulnerabilities that may aggravate labour market imbalances. Ageing workforces and unattractive working conditions are particularly pronounced in roles such as cleaners, secretaries (general) and graphic and multimedia designers (European Labour Authority, 2024b). Many of these surplus occupations are also characterised by a high concentration of female workers (see Figure 62), a pattern that contrasts with sectors where women are under-represented. In the case of graphic and multimedia designers, for example, a significant share of them are young, highly educated women, highlighting that even well-qualified individuals may be concentrated in areas of labour surplus.

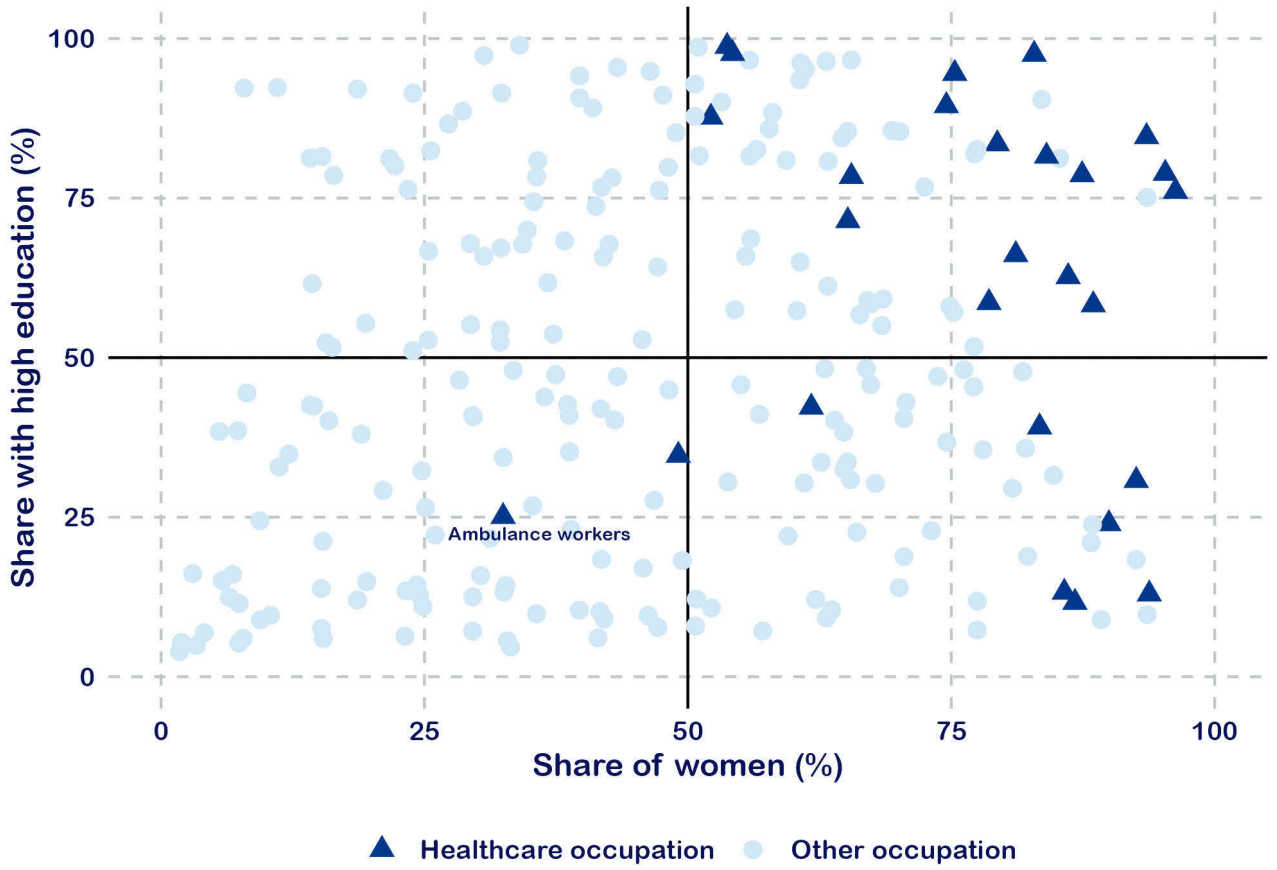
Figure 62 shows that there is a slight positive correlation within widespread surplus occupations between the share of women and the share of older workers in those occupations. This further underlines the relatively high exposure of older cohorts and women to surplus occupations. Looking to the future, the large shares of older workers in these professions, compared with the relatively small shares of younger workers, may indicate that demographic change will probably decrease the extent of surpluses in those occupations as the labour supply declines with retirements.

6.3. Labour market imbalances and characteristics of occupations in the health and care sector

The analysis of healthcare occupations highlighted the high prevalence of shortages in the sector. Of the 10 occupations reporting the highest numbers of shortages across EURES countries, four are healthcare occupations: specialist and generalist medical practitioners, health care assistants and nursing professionals. For specialist medical practitioners, 22 out of the 28 EURES countries report a shortage, the highest number observed by EURES NCOs. The analysis also highlighted the geographical concentration of these shortages. Notably, Bulgaria and Greece report more than 30 healthcare occupation shortages.

The analysis of the characteristics of occupations in the health and care sector showed that they employ disproportionately more women and highly educated workers than other occupations (see Figure 63). The only exception is ambulance workers, which is the only health and care sector profession in which the majority are male and in which workers with an education level of ISCED 5–8 are in the minority.

Figure 63: Shares of women and highly educated workers (ISCED 5–8), by occupation, EURES countries, 2024 (people aged 15+ years)



Source: EU-LFS special data extractions.

Occupations in the health and care sector do not strongly diverge from other occupations when it comes to the employment of workers aged 50+ and of workers born in EURES countries and working in the country where they were born (see Figure 64). The only exception is home-based care workers, which encompasses workers more likely to be non-nationals and older than 50 years.

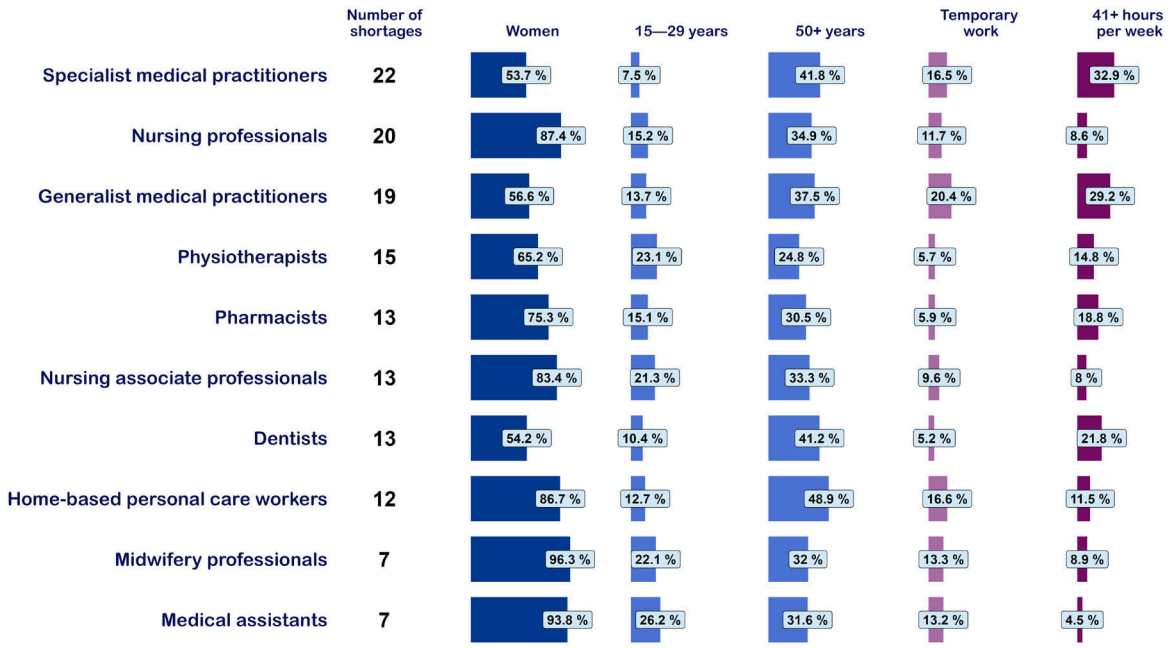
Figure 64: Shares of workers working in the country where they were born and of workers aged 50+, by occupation, EURES countries, 2024 (people aged 15+ years)

Source: EU-LFS special data extractions.

Finally, analysis of the 10 healthcare occupations for which the highest numbers of shortages are reported in EURES countries shows the prevalence of several vulnerabilities (see Figure 65), the main one being that their workforces are mostly made up of women. For five of these occupations, the share of women employed is higher than 80 %. The difficulty in attracting men to these jobs leads to a limited pool of available candidates, possibly further worsening existing shortages. The high prevalence of workers aged 50+ in some occupations also shows the important need for workforce replacement in the next decade, in particular for home-based personal care workers (48.9 % of workers aged 50+), specialist medical practitioners (41.8 %) and dentists (41.2 %).

In this context, attracting new workers and retaining existing workers is critical. However, recent years have seen a rise in temporary contracts in the healthcare sector, mainly motivated by the higher wages received in interim or temporary positions. Notably, the three occupations reporting the highest numbers of shortages, specialist medical practitioners, nursing professionals and generalist medical professionals, also display high rates of temporary employment, for example, more than 20 % for generalist medical professionals. Furthermore, the heavy workload characterising healthcare occupations can be a deterrent for potential newcomers. For example, 32.9 % of specialist medical practitioners, 29.2 % of generalist medical practitioners and 21.8 % of dentists work more than 41 hours per week.

Figure 65: Vulnerabilities of the 10 healthcare occupations with the highest number of shortages, EURES countries, 2024



Sources: EU-LFS special data extractions; data submitted by EURES NCOs.

6.4. Facilitate labour mobility

Given the uneven distribution of shortages and surpluses across countries and regions, facilitating both intra-EU and international labour mobility is essential for rebalancing the European labour market (European Labour Authority, 2026). One of the main barriers to mobility is the recognition of skills and qualifications across borders. The EU skills portability initiative (European Commission, 2025b) and the EU union of skills strategy (European Commission, 2025f) are critical in this regard, aiming to harmonise procedures, improve transparency and support efficient mobility pathways. Policy should focus on:

- developing standardised frameworks for the recognition of formal, non-formal and informal learning;
- supporting the digitisation of credentials and the creation of interoperable skills passports;
- providing structured bridging programmes for regulated professions, especially in health and care, where qualification requirements vary widely.

Administrative complexity and language requirements often deter potential mobile workers. National and EU level action should aim to reduce these burdens by:

- centralising and simplifying application processes for work permits and professional recognition;
- offering language training and integration support, particularly for migrants and mobile workers in shortage sectors;
- providing clear, accessible information on rights, obligations and available support services.

Employers, especially SMEs, often lack the capacity to recruit internationally or navigate complex mobility procedures. Policy should provide practical guidance, recruitment support and financial incentives for hiring from abroad. For workers, mobility support should include relocation assistance, housing, family services and protection against exploitation and precarious employment.

While mobility can help address shortages, it must not come at the expense of the regions people are leaving, particularly those already facing demographic decline. The European Commission (2025a) and the OECD (2025d) recommend safeguards such as wage reforms, incentives for service in underserved areas and bilateral agreements to ensure balanced flows and mutual benefit.

The union of skills strategy (European Commission, 2025f) provides scalable models for cross-border upskilling and mobility, particularly in sectors critical to the green and digital transitions. These initiatives should be expanded and integrated with national policies to maximise their impact on labour shortages.

References

Autor, D. H., Dorn, D. and Hanson, G. H. (2013), 'The China syndrome: Local labour market effects of import competition in the United States', *American Economic Review*, Vol. 103, No 6, pp. 2121–2168, https://doi.org/10.1257/aer.103.6.2121.

Bächmann, A.-C. (2023), 'Are female-dominated occupations a secure option? Occupational gender segregation, accompanied occupational characteristics, and the risk of becoming unemployed', *European Sociological Review*, Vol. 39, No 6, pp. 876–889, https://doi.org/10.1093/esr/jcac068.

Baker, S. R., Bloom, N. and Davis, S. J. (2016), 'Measuring economic policy uncertainty', *The Quarterly Journal of Economics*, Vol. 131, No 4, pp. 1593–1636, https://doi.org/10.1093/qje/qjw024.

Baran, J. A. (2024), 'Overeducation in the EU: Gender and regional dimension', *Labour Economics*, Vol. 90, 102603, https://doi.org/10.1016/j.labeco.2024.102603.

BeWell (n.d.), 'Blueprint alliance for a future health workforce strategy on digital and green skills', BeWell website, accessed 8 December 2025, https://bewell-project.eu/.

Birk, H. O., Vrangbæk, K., Rudkjøbing, A., Krasnik, A., Eriksen, A. et al. (2024), 'Denmark: Health system review', *Health Systems in Transition*, Vol. 26, No 1, European Observatory on Health Systems and Policies, Copenhagen.

Blanco Moreno, A. (2024), 'An overview of health workforce mobility in the European Union under the current supply challenges. Sespas Report 2024 [Panorámica de la movilidad de trabajadores sanitarios en la Unión Europea ante los actuales retos de oferta de trabajo. Informe Sespas 2024]', *Gaceta Sanitaria*, Vol. 38, Suppl. 1, 102393, https://doi.org/10.1016/j.gaceta.2024.102393.

Blümel, M., Spranger, A., Achstetter, K., Maresso, A. and Busse, R. (2020), 'Germany: Health system review', *Health Systems in Transition*, Vol. 22, No 6, European Observatory on Health Systems and Policies, Copenhagen.

Broersma, L., Edzes, A. and Dijk, J. (2022), 'Commuting between border regions in the Netherlands, Germany and Belgium: An explanatory model', *Journal of Borderlands Studies*, Vol. 37, No 3, pp. 551–573, https://doi.org/10.1080/08865655.2020.1810590.

Brucker Juricic, B., Galic, M. and Marenjak, S. (2021), 'Review of the construction labour demand and shortages in the EU', *Buildings*, Vol. 11, No 1, 17, https://doi.org/10.3390/buildings11010017.

Causa, O., Abendschein, M., Luu, N., Soldani, E. and Soriolo, C. (2022), 'The post-COVID-19 rise in labour shortages', *OECD Economics Department Working Papers*, No 1721, OECD Publishing, Paris, https://doi.org/10.1787/e60c2d1c-en.

Causa, O., Soldani, E., Nguyen, M. and Tanaka, T. (2025), 'Labour shortages and labour market inequalities: Evidence and policy implications', *OECD Economics Department Working Papers*, No 1832, OECD Publishing, Paris, https://read.oecd-ilibrary.org/content/dam/oecd/en/publications/reports/2025/03/labour-shortages-and-labour-market-inequalities_798f8a8f/14e62ec0-en.pdf.

Cedefop (European Centre for the Development of Vocational Training) (2025), 'Norway: New spring for higher vocational education', Cedefop website, 13 May 2025, accessed 16 October 2025, https://www.cedefop.europa.eu/en/news/norway-new-spring-higher-vocational-education.

Cedefop (n.d.-a), 'Greenness and green pervasiveness in occupations', Cedefop website, accessed 5 December 2025, https://www.cedefop.europa.eu/en/tools/skills-online-vacancies/greenness-and-green-pervasiveness-occupations.

Cedefop (n.d.-b), 'Terminology of European education and training policy – disadvantaged group / vulnerable group / group at risk', Cedefop website, accessed 12 December 2025, https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary/achterstandsgroep-kansarme-groep-kwetsbare-groep-risicogroep#:~:text=In%20the%20European%20policy%20agenda,%20group%20of,discrimination%20and%20violence%20than%20the%20general%20population.

Cedefop (n.d.-c), 'Digitalness and digital pervasiveness in occupations', Cedefop website, accessed 28 October 2025, https://www.cedefop.europa.eu/en/tools/skills-online-vacancies/digitalness-and-digital-pervasiveness-occupations.

Cedefop (n.d.-d), 'Greenness and green pervasiveness in sectors', Cedefop website, accessed 7 October 2025, https://www.cedefop.europa.eu/en/tools/skills-online-vacancies/greenness-and-green-pervasiveness-sectors.

Cedefop (n.d.-e), 'Renewable energy and related occupations', Cedefop website, accessed 29 October 2025, https://www.cedefop.europa.eu/en/tools/skills-online-vacancies/renewable-energy-and-related-occupations.

Cedefop (n.d.-f), 'European Skills and Jobs Survey – Use of digital communication tools', Cedefop website, accessed 8 December 2025, https://www.cedefop.europa.eu/en/tools/european-skills-jobs-survey/data/explorer.

Cedefop and ReferNet (2022), 'Belgium: Wallonia boosts dual training in construction sector', News on VET, 16 May 2022, accessed 20 October 2025, https://www.cedefop.europa.eu/en/news/belgium-wallonia-boosts-dual-training-construction-sector.

Cedefop and ReferNet (2026), 'Timeline of VET policies in Europe – Walloon recovery plan', Cedefop website, ac-

cessed 20 October 2025, https://www.cedefop.europa.eu/en/tools/timeline-vet-policies-europe/search/41495.

Cour des comptes (2022), *Releve d'Observations Definitives – Interim medical et permanence des soins dans les hopitaux publics*, Paris, https://www.ccomptes.fr/sites/default/files/2024-07/20240723-S2024-0749-Interim-medical-et-permanence-des-soins.pdf.

Dares (Directorate of Research, Economic Studies and Statistics) (2023), 'Les métiers en 2030 : Choisissez un métier, consultez les perspectives d'emploi', Dares website, 30 May 2023, accessed 6 November 2025, https://dares.travail-emploi.gouv.fr/donnees/les-metiers-en-2030-choisissez-un-metier-consultez-les-perspectives-demploi.

de Vries, N., Boone, A., Godderis, L., Bouman, J., Szemik, S. et al. (2023), 'The race to retain healthcare workers: A systematic review on factors that impact retention of nurses and physicians in hospitals', *Inquiry: The Journal of Health Care Organisation, Provision, and Financing*, Vol. 60, https://doi.org/10.1177/00469580231159318.

Decock, N., Friganovic, A., Kurtovic, B., Oomen, B., Crombez, P. et al. (2022), 'Temper the specialist nurses heterogeneity in the interest of quality practice and mobility – 18 EU countries study', *Healthcare (Basel)*, Vol. 10, No 3, 435, https://doi.org/10.3390/healthcare10030435.

Domagała, A. and Dubas-Jakóbczyk, K. (2019), 'Migration intentions among physicians working in Polish hospitals – insights from survey research', *Health Policy*, Vol. 123, No 8, pp. 782–789, https://doi.org/10.1016/j.healthpol.2019.06.008.

Duxfield, I. and Allen, H. (2025), 'Gender imbalance in the transport sector – an international review', in McNally, C., Carroll, P., Martinez-Pastor, B., Ghosh, B., Efthymiou, M., et al. (eds), *Transport Transitions: Advancing sustainable and inclusive mobility*, Springer Nature Switzerland, Cham, pp. 767–780, https://doi.org/10.1007/978-3-031-85578-8_104.

Dzakula, A., Vočanec, D., Banadinovic, M., Vajagic, M., Lončarek, K. et al. (2021), 'Croatia: Health system review', *Health Systems in Transition*, Vol. 23, No 2, European Observatory on Health Systems and Policies, Copenhagen.

Edzes, A. J. E., van Dijk, J. and Broersma, L. (2022), 'Does cross-border commuting between EU-countries reduce inequality?', *Applied Geography*, Vol. 139, 102639, https://doi.org/10.1016/j.apgeog.2022.102639.

Eurofound (European Foundation for the Improvement of Living and Working Conditions) (2012), *Industrial relations and working conditions developments in Europe 2011*, Publications Office of the European Union, Luxembourg, https://doi.org/10.2806/41898.

Eurofound (2020), *Long-Term Care Workforce: Employment and working conditions*, Publications Office of the European Union, Luxembourg, https://doi.org/10.2806/36712.

Eurofound (2021), *Tackling Labour Shortages in EU Member States*, Publications Office of the European Union, Luxembourg, https://doi.org/10.2806/363602.

Eurofound (2023), *Measures to Tackle Labour Shortages: Lessons for future policy*, Publications Office of the European Union, Luxembourg, https://doi.org/10.2806/216577.

Eurofound (2024), *Youth Integration in the EU: Navigating digitalisation and labour shortages – Background paper*, Eurofound, Dublin, https://eurofound.link/ef24050.

Eurofound (2025), *Living and Working in Europe 2024*, Publications Office of the European Union, Luxembourg, https://doi.org/10.2806/1894535.

European Agency for Safety and Health at Work (n.d.), 'Musculoskeletal disorders', European Agency for Safety and Health at Work website, accessed 13 November 2025, https://osha.europa.eu/en/themes/musculoskeletal-disorders.

European Agency for Safety and Health at Work, Clarke, M., de Kok, J., de Oliveira Sadilek, M.-L., Snijders, J. et al. (2025), *Accidents at work in the health and social care sector – Report*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2802/9632926.

European Climate and Health Observatory and EU-OSHA (European Agency for Safety and Health at Work) (2021), 'Effects on occupational health and safety', Climate-ADAPT website, accessed 9 October 2025, https://climate-adapt.eea.europa.eu/en/observatory/topics/health-impacts/occupational-safety-health/effects-on-occupational-health-and-safety.

European Commission (2005), Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications (OJ L 255, 30.9.2005, pp. 22–142, ELI: http://data.europa.eu/eli/dir/2005/36/oj).

European Commission (2020), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A union of equality: Gender equality strategy 2020–2025, COM(2020) 152 final of 5 March 2020, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A52020DC0152.

European Commission (2022), 'Women's situation in the labour market', European Commission website, 7 September 2022, accessed 16 October 2025, https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/women-labour-market-work-life-balance/womens-situation-labour-market_en.

European Commission (2024a), 'With the Net-zero industry academies, the Commission acts to train Europe's workforce for the net-zero economy', European Commission website, 20 March 2024, accessed 23 October 2025, https://ec.europa.eu/newsroom/growth/items/823315/en.

European Commission (2024b), *The Future of EU Competitiveness – Part B – In-depth analysis and recommendations*, European Commission, Brussels, https://commission.europa.eu/document/download/ec1409c1-d4b4-4882-8bdd-3519f86bbb92_en?filename=The%20future%20

of%20European%20competitiveness_%20In-depth%20analysis%20and%20recommendations_0.pdf.

European Commission (2024c), Commission Delegated Directive (EU) 2024/782 of 4 March 2024 amending Directive 2005/36/EC of the European Parliament and of the Council as regards the minimum training requirements for the professions of nurse responsible for general care, dental practitioner and pharmacist (OJ L, 2024/782, 31.5.2024, ELI: http://data.europa.eu/eli/dir_del/2024/782/oj).

European Commission (2025a), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A roadmap for women's rights, COM(2025) 97 final of 7 March 2025, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025DC0097.

European Commission (2025b), 'Commission seeks views on skills portability initiative', European Commission website, 5 December 2025, accessed 8 December 2025, https://employment-social-affairs.ec.europa.eu/news/commission-seeks-views-skills-portability-initiative-2025-12-05_en.

European Commission (2025c), 'Digital decade 2025: eGovernment Benchmark 2025', 16 June 2025, accessed 17 December 2025, https://digital-strategy.ec.europa.eu/en/library/digital-decade-2025-egovernment-benchmark-2025.

European Commission (2025d), 'European Health Data Space regulation (EHDS)', European Commission website, accessed 8 December 2025, https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space-regulation-ehds_en.

European Commission (2025e), 'Commission sets out roadmap for future-proof quality jobs in a competitive EU', European Commission website, 4 December 2025, accessed 8 December 2025, https://ec.europa.eu/commission/presscorner/detail/en/ip_25_2917.

European Commission (2025f), Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions – The union of skills, COM(2025) 90 final of 5 March 2025, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025DC0090.

European Commission, Joint Research Centre, Bernini, A., Icardi, R., Natale, F. et al. (2024), *Healthcare Workforce Demand and Supply in the EU27 – Projections for the Period 2021–2071*, Publications Office of the European Union, Luxembourg, JRC139503, https://doi.org/10.2760/1683259.

European Commission: Directorate-General for Communication and IPSOS (2024), *EU Challenges and Priorities: Eurobarometer summary*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2775/691136.

European Commission: Directorate-General for Communications Networks, Content and Technology, Capgemini, Sogeti, IDC and Politecnico di Milano (2025), *eGovernment Benchmark 2025 – Building online, user-friendly, and interoperable services – Factsheets*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2759/9177128.

European Commission: Directorate-General for Economic and Financial Affairs (2025a), 'European economic forecast – Spring 2025', *European Economy Institutional Papers*, No 318, May 2025, Publications Office of the European Union, Luxembourg, https://economy-finance.ec.europa.eu/publications/european-economic-forecast-spring-2025_en.

European Commission: Directorate-General for Economic and Financial Affairs (2025b), *2026 European Macroeconomic Report*, Publications Office of the European Union, Luxembourg, https://economy-finance.ec.europa.eu/publications/2026-european-macroeconomic-report_en.

European Commission: Directorate-General for Employment, Social Affairs and Inclusion (2023a), *Employment and Social Developments in Europe – Addressing labour shortages and skills gaps in the EU – 2023 annual review*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2767/089698.

European Commission: Directorate-General for Employment, Social Affairs and Inclusion (2023b), 'The youth guarantee country by country', accessed 17 October 2025, https://employment-social-affairs.ec.europa.eu/policies-and-activities/eu-employment-policies/youth-employment-support/reinforced-youth-guarantee/youth-guarantee-country-country_en.

European Commission: Directorate-General for Employment, Social Affairs and Inclusion (2024), *Labour Market and Wage Developments in Europe – Annual review 2024*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2767/888580.

European Commission: Directorate-General for Employment, Social Affairs and Inclusion (2025a), *Employment and social developments in Europe – Increasing single adult households: Implications for poverty and loneliness – Quarterly review – October 2025*, Publications Office of the European Union, Luxembourg, https://employment-social-affairs.ec.europa.eu/employment-and-social-developments-europe-quarterly-review-october-2025_en.

European Commission: Directorate-General for Employment, Social Affairs and Inclusion (2025b), *Employment and Social Developments in Europe – Unlocking the potential of people: Promoting higher employment in the EU – Annual review 2025*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2767/9505984.

European Commission: Directorate-General for Employment, Social Affairs and Inclusion, Network of Experts on Free Movement of Workers and Social Security Coordination, Gasperini, M., Cinova, D., Petracco, C. et al. (2025),

Annual Report on Intra-EU Labour Mobility – Edition 2024, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2767/2077850.

European Commission: Directorate-General for Employment, Social Affairs and Inclusion, Network of Experts on Free Movement of Workers and Social Security Coordination, Petracco, C., Carletti, G., Gasperini, M. et al. (2026), *Annual Report on Intra-EU Labour Mobility – 2025 edition – Final report*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2767/0650998.

European Commission: Directorate-General for Health and Food Safety, Cruces, H., Riera Mallol, G. and De Agostini, P. (2025), *The role of healthcare in reducing inequalities and poverty in the EU*, Publications Office of the European Union, Luxembourg, https://data.europa.eu/doi/10.2875/4749240.

European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (2023a), *Transition Pathway for Construction*, European Union, Brussels, https://transition-pathways.europa.eu/system/files/2025-06/Transition%20Pathway%20Construction%2015%20March%202023%20final.pdf.

European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (2023b), 'Net Zero Industry Act', European Commission website, https://single-market-economy.ec.europa.eu/publications/net-zero-industry-act_en.

European Construction Industry Federation (2023), *Position Paper – Shortage of labour in the construction industry*, European Construction Industry Federation, Brussels, https://www.fiec.eu/application/files/6216/9711/5277/2023-10-12_Shortage_of_Labour_in_the_Construction_industry.pdf.

European Environment Agency (2020), 'Climate change threatens future of farming in Europe', European Environment Agency website, 4 September 2019, updated 23 November 2020, accessed 9 October 2025, https://www.eea.europa.eu/highlights/climate-change-threatens-future-of.

European Institute for Gender Equality (EIGE) (2017), 'Health', EIGE website, accessed 16 October 2025, https://eige.europa.eu/gender-mainstreaming/policy-areas/health?language_content_entity=en.

European Labour Authority (2024a), *Glossary – Strategic foresight – 2024*, European Labour Authority, Bratislava, https://www.ela.europa.eu/sites/default/files/2025-01/ela-strategic-foresight-report-glossary.pdf.

European Labour Authority (2024b), *EURES – Report on labour shortages and surpluses – 2023*, Publications Office of the European Union, Luxembourg, https://www.ela.europa.eu/en/publications/labour-shortages-and-surpluses-europe-2023.

European Labour Authority (2025), *EURES – Report on labour shortages and surpluses – 2024*, Publications Office of the European Union, Luxembourg, https://www.ela.europa.eu/sites/default/files/2025-06/EURES_Report_on_labour_shortages_and_surpluses_2024.pdf.

European Labour Authority (2026), *Annex: Transnational matching possibilities to alleviate labour market imbalances in the European employment services countries*, Bratislava.

European Observatory on Health Systems and Policies, Maier, C. B., Kroezen, M., Busse, R. and Wismar, M. (eds) (2022), *Skill-Mix Innovation, Effectiveness and Implementation: Improving primary and chronic care*, Cambridge University Press, Cambridge, https://doi.org/10.1017/9781009031929.
European Parliament: Directorate-General for Economy, Transformation and Industry and Kuhlmann, E. (2025), *The Health Workforce Crisis in the European Union – Policy options for improving the sustainability of healthcare systems and employment and working conditions in the healthcare sector*, European Parliament, Brussels https://data.europa.eu/doi/10.2861/3098897.

European Union of Medical Specialists (2025), 'Joint policy on health workforce crisis', European Union of Medical Specialists website, 13 January 2025, accessed 30 October 2025, https://www.uemsemergencymedicine.eu/blog/uems-publications-releases-5/joint-policy-on-health-workforce-crisis-82.

Eurostat (2024a), 'Eurostat article: Employment trends in the EU's accommodation and food services sector', EU Transition Pathways Platform website, 8 November 2024, accessed 9 October 2025, https://transition-pathways.europa.eu/tourism/data/eurostat-article-employment-trends-eus-accommodation-and-food-services-sector.

Eurostat (2024b), 'Jobs with the highest shares of women in Q3 2023', Eurostat website, 4 March 2024, accessed 16 October 2025, https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20240304-1.

Eurostat (2025a), 'GDP and employment both up by 0.1 % in the euro area', Eurostat website, 5 September 2025, accessed 8 October 2025, https://ec.europa.eu/eurostat/en/web/products-euro-indicators/w/2-05092025-ap.

Eurostat (2025b), 'Euro area unemployment at 6.3 %', Eurostat website, 2 October 2025, accessed 8 October 2025, https://ec.europa.eu/eurostat/en/web/products-euro-indicators/w/3-02102025-ap.

Eurostat (2025c), 'Euro area job vacancy rate at 2.2 %', Eurostat website, 15 September 2025, accessed 8 October 2025, https://ec.europa.eu/eurostat/en/web/products-euro-indicators/w/3-15092025-bp.

Eurostat (2025d), 'Medical workforce in the EU: An ageing profession', Eurostat website, 16 January 2025, accessed 28 October 2025, https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20250116-2.

Eurostat (2025e), 'Migrant integration statistics – over-qualification', Eurostat website, 16 July 2025, accessed 17 October 2025, https://ec.europa.eu/eurostat/statis-

tics-explained/index.php?title=Migrant_integration_statistics_-_over-qualification.

Eurostat (n.d.-a), 'Glossary: Employment', Eurostat website, accessed 8 October 2025, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Employment.

Eurostat (n.d.-b), 'Glossary: Labour market slack', Eurostat website, accessed 8 October 2025, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Labour_market_slack.

Eurostat (n.d.-c), 'Glossary: Old-age dependency ratio', Eurostat website, accessed 8 October 2025, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Old-age_dependency_ratio.

Eurostat (n.d.-d), 'Job vacancy statistics by occupation and NUTS 1 region (OJA breakdowns) – annual data – experimental statistics', last updated 17 February 2026, accessed 22 December 2025, https://doi.org/10.2908/JVS_A_ISCO3_R1.

Eurostat (n.d.-e), 'Employed persons by job tenure and economic activity (NACE Rev. 2) (2008–2026) – quarterly data', last updated 13 March 2026, accessed 30 October 2025, https://doi.org/10.2908/LFSQ_EGDN2.

Eurostat (n.d.-f), 'Population on 1st January by age, sex and type of projection', last updated 28 June 2023, accessed 9 October 2025, https://doi.org/10.2908/PROJ_23NP.

Gmyrek, P., Berg, J. and Bescond, D. (2023), 'Generative AI and jobs: A global analysis of potential effects on job quantity and quality', ILO Working Papers, No 96, International Labour Organization, Geneva, https://doi.org/10.54394/FHEM8239.

Gumas, E. D, Gunja, M. Z, Shah, A. and Williams II, R. D. (2023), 'Overworked and undervalued: Unmasking primary care physicians' dissatisfaction in 10 high-income countries – findings from the 2022 International Health Policy Survey', The Commonwealth Fund website, 16 August 2023, accessed 8 November 2025, https://doi.org/10.26099/t0y2-6k44.

Han, S., Dong, L., Weng, Y. and Xiang, J. (2024), 'Heat exposure and productivity loss among construction workers: A meta-analysis', *BMC Public Health*, Vol. 24, No 1, 3252, https://doi.org/10.1186/s12889-024-20744-x.

Handley, K. and Limão, N. (2017), 'Policy uncertainty, trade, and welfare: Theory and evidence for China and the United States', *American Economic Review*, Vol. 107, No 9, pp. 2731–2783, https://doi.org/10.1257/aer.20141419.

International Council of Nurses (2021), 'ICN policy brief – the global nursing shortage and nurse retention', International Council of Nurses website, 11 March 2021, accessed 31 October 2025, https://www.icn.ch/node/1297.

International Labour Organization (n.d.), 'ILO helpdesk: Questions and answers on business and labour migration', accessed 8 December 2025, https://www.ilo.org/ilo-helpdesk-questions-and-answers-business-and-labour-migration.

International Road Transport Union (2022), *Europe driver shortage to triple by 2026 if no action: New IRU report*, International Road Transport Union, Geneva.

Ionașcu, C. M. (2025), 'Artificial intelligence adoption in the European Union: A data-driven cluster analysis (2021–2024)', *Economies*, Vol. 13, No 5, 145, https://doi.org/10.3390/economies13050145.

Jiménez-Donaire, M. d. P., Giráldez, J. V. and Vanwalleghem, T. (2020), 'Impact of climate change on agricultural droughts in Spain', *Water*, Vol. 12, No 11, 3214, https://doi.org/10.3390/w12113214.

Kaihlanen, A.-M., Virtanen, L., Kainiemi, E., Sulosaari, V. and Heponiemi, T. (2024), 'Continuing education in digital skills for healthcare professionals – mapping of the current situation in EU Member States', *International Journal of Health Policy and Management*, Vol. 13, No 1, pp. 1–7, https://doi.org/10.34172/ijhpm.8309.

Koch, P., Zilezinski, M., Schulte, K., Strametz, R., Nienhaus, A. et al. (2020), 'How perceived quality of care and job satisfaction are associated with intention to leave the profession in young nurses and physicians', *International Journal of Environmental Research and Public Health*, Vol. 17, No 8, p. 2714, https://doi.org/10.3390/ijerph17082714.

König, A., Schmelzer, A., Kelemen, Z., Benus Jr, F., Margeta, E. et al. (2021), 'Skilled labour shortage – reasons – effects – potential solutions', *Engineering Technologies in Manufacturing of Welded Constructions and Products, SBW 2021*, Slavonski Brod, https://drinvet-project.eu/assets/papers/Skilled%20labour%20shortage%20final.pdf.

Kosyakova, Y., Gatskova, K., Koch, T., Adunts, D., Braunfels, J. et al. (2024), 'Labour market integration of Ukrainian refugees: An international perspective', IAB Research Reports, No 16/2024en, Institute for Employment and Research (IAB), Nuremberg, https://doi.org/10.48720/IAB.FB.2416EN.

Kroezen, M., Schäfer, W., Sermeus, W., Hansen, J. and Batenburg, R. (2018), 'Healthcare assistants in EU Member States: An overview', *Health Policy*, Vol. 122, No 10, pp. 1109–1117, https://doi.org/10.1016/j.healthpol.2018.07.004.

Leschke, J. and Weiss, S. (2023), 'Labour market hierarchies between intra-EU migrants: Why do mobile workers from the EU-West obtain better jobs and wages than those from the EU-East?', *Journal of Ethnic and Migration Studies*, Vol. 49, No 16, pp. 4092–4119, https://doi.org/10.1080/1369183X.2023.2207330.

Letta, E. (2024), *Much More than a Market – Speed, security, solidarity – Empowering the single market to deliver a sustainable future and prosperity for all EU citizens*, European Council, Brussels, https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf.

Levanon, A., England, P. and Allison, P. (2009), 'Occupational feminization and pay: Assessing causal dynamics using

1950–2000 U.S. census data', *Social Forces*, Vol. 88, No 2, pp. 865–891, https://doi.org/10.1353/sof.0.0264.

Ludden, V. and Jeyarajah, A. (2019), *Employment Barriers in Border Regions: Strategies and EU funding*, Study for the Committee on Employment and Social Affairs, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg, https://www.europarl.europa.eu/RegData/etudes/STUD/2019/631029/IPOL_STU(2019)631029_EN.pdf.

Martella, M. (2025), 'Intentions to move abroad among medical students: A cross-sectional study to investigate determinants and opinions', *Annali di Igiene, Medicina Preventiva e di Comunità*, Vol. 37, No 1, pp. 84–96, https://doi.org/10.7416/ai.2024.2659.

Martinussen, P. E., Magnussen, J., Vrangbæk, K. and Frich, J. C. (2020), 'Should I stay or should I go? The role of leadership and organisational context for hospital physicians' intention to leave their current job', *BMC Health Services Research*, Vol. 20, No 400, https://doi.org/10.1186/s12913-020-05285-4.

Ministry of Education and Research (2025), *Report No 11 to the Storting (2024–2025) – Skilled workers for a new era – With higher vocational education*, Ministry of Education and Research, Oslo, https://www.regjeringen.no/en/dokumenter/meld.-st.-11-20242025/id3091513/.

Morrone, A., Scrivens, K., Smith, C. and Balestra, C. (2011), 'Measuring vulnerability and resilience in OECD countries', *IARIW-OECD Conference on Economic Insecurity*, Paris, http://old.iariw.org/papers/2011/MorronePaper.pdf.

National Institute for Statistics – Romania (n.d.), 'TEMPO Online', National Institute for Statistics – Romania website, accessed 19 December 2025, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table.

Ng, W. and Acker, A. (2020), 'The gender dimension of the transport workforce', *International Transport Forum Discussion Papers*, No 2020/11, OECD Publishing, Paris, https://doi.org/10.1787/0610184a-en.

OECD (Organisation for Economic Co-operation and Development) (2023a), *Education at a Glance 2023: OECD indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en.

OECD (2023b), *Beyond Applause? Improving working conditions in long-term care*, OECD Publishing, Paris, https://doi.org/10.1787/27d33ab3-en.

OECD (2023c), 'Ready for the next crisis? Investing in health system resilience', *OECD Health Policy Studies*, OECD Publishing, Paris, https://doi.org/10.1787/1e53cf80-en.

OECD (2025a), *OECD Supply Chain Resilience Review – Navigating risks*, OECD Publishing, Paris, https://doi.org/10.1787/94e3a8ea-en.

OECD (2025b), *Health at a Glance 2025 – OECD indicators*, OECD Publishing, Paris, https://doi.org/10.1787/8f9e3f98-en.

OECD (2025c), *International Migration Outlook 2025*, OECD Publishing, Paris, https://doi.org/10.1787/ae26c893-en.

OECD (2025d), *OECD Skills Outlook 2025 – Building the skills of the 21st century for all*, OECD Publishing, Paris, https://doi.org/10.1787/26163cd3-en.

OECD / European Commission (2024), *Health at a Glance: Europe 2024 – State of health in the EU cycle*, OECD Publishing, Paris, https://doi.org/10.1787/b3704e14-en.

Panteli, D. and Maier, C. B. (2021), 'Regulating the health workforce in Europe: Implications of the COVID-19 pandemic', *Human Resources for Health*, Vol. 19, No 80, https://doi.org/10.1186/s12960-021-00624-w.

Pennbrant, S. and Dåderman, A. (2021), 'Job demands, work engagement and job turnover intentions among registered nurses: Explained by work–family private life inference', *WORK: A Journal of Prevention, Assessment & Rehabilitation*, Vol. 68, No 4, pp. 1157–1169, https://doi.org/10.3233/wor-213445.

Government Offices of Sweden (2025), 'A STEM strategy for Sweden – From preschool to postgraduate study', Government Offices of Sweden website, 25 February 2025, accessed 16 October 2025, https://www.government.se/press-releases/2025/02/a-stem-strategy-for-sweden—from-preschool-to-postgraduate-study/.

Rinz, K. (2025), 'Tariffs pose real risks to the U.S. labour market', Washington Center for Equitable Growth website, 12 May 2025, accessed 9 October 2025, https://equitablegrowth.org/tariffs-pose-real-risks-to-the-u-s-labor-market/.

Schmidt, A. E., Brugger, K., Horváth, I., Falkenbach, M., Williams, G. A. et al. (2025), 'Green skills for a sustainable future – building a climate-smart health and care workforce in the European Union', *Health Systems and Policy Analysis – Policy Briefs*, No 70, European Observatory on Health Systems and Policies and WHO Regional Office for Europe, Copenhagen, https://iris.who.int/server/api/core/bitstreams/3ffb77f1-5ff7-4a25-86b7-ceb32eaafb30/content.

Sowada, C., Sagan, A., Kowalska-Bobko, I., Badora-Musiał, K., Bochenek, T. et al. (2019), 'Poland: Health system review', *Health Systems in Transition*, Vol. 21, No 1, European Observatory on Health Systems and Policies, Copenhagen.

The Budget Lab at Yale (2025), 'Short-run effects of 2025 tariffs so far', The Budget Lab at Yale website, 2 September 2025, accessed 9 October 2025, https://budgetlab.yale.edu/research/short-run-effects-2025-tariffs-so-far.

UNDRR (United Nations Office for Disaster Risk Reduction) (n.d.), 'Definition: Vulnerability', UNDRR website, https://www.undrr.org/quick/11977.

Valle, Z. D., Signorelli, C. and Renzi, C. (2024), 'Primary care doctors retirements in the context of an ageing population in Italy', *Annali di Igiene, Medicina Preventiva e di Comunità*, Vol. 36, No 4, pp. 392–404, https://doi.org/10.7416/ai.2024.2602.

Van der Heijden, B., Brown Mahoney, C. and Xu, Y. (2019), 'Impact of job demands and resources on nurses' burnout and occupational turnover intention towards an age-moderated mediation model for the nursing profession', *International Journal of Environmental Research and Public Health*, Vol. 16, No 11, 2011, https://doi.org/10.3390/ijerph16112011.

van Liemt, G. (2022), 'The international mobility of the highly-skilled: Why has Sweden so many foreign-trained medical doctors and the Netherlands so few?', *E-Journal of International and Comparative Labour Studies*, Vol. 11, No 3, https://ejcls.adapt.it/index.php/ejcls_adapt/article/view/1138.

Vipunen (n.d.), 'Match between demand and supply of labour', Education Statistics Finland website, accessed 8 December 2025, https://vipunen.fi/en-gb/foresight/Pages/Ty%C3%B6voiman-kohtaanto.aspx.

Wendsche, J., Paridon, H. and Blasche, G. (2022), 'Nurses' rest breaks and organisational leaving intentions', *Psychology, Health & Medicine*, Vol. 27, No 8, pp. 1782–1792, https://doi.org/10.1080/13548506.2021.1950784.

WHO (World Health Organization) (2021), 'The impact of COVID-19 on health and care workers: A closer look at deaths', *Health Workforce Department Working Papers*, No 1, WHO, Geneva, https://www.who.int/publications/i/item/WHO-HWF-WorkingPaper-2021.1.

WHO (2022), *Health and Care Workforce in Europe: Time to act*, WHO Regional Office for Europe, Copenhagen, https://iris.who.int/server/api/core/bitstreams/3fcf2e52-6e12-4c39-b24a-9e5eb1665c55/content.

WHO (2023), *WHO Report on Global Health Worker Mobility*, WHO, Geneva, https://www.who.int/publications/i/item/9789240066649.

WHO (2025), 'Value gender and equity in the global health workforce', WHO website, accessed 15 October 2025, https://www.who.int/activities/value-gender-and-equity-in-the-global-health-workforce.

WHO, European Observatory on Health Systems and Policies and OECD (2025), *State of Health in the EU – Synthesis report 2025 – Health policy reform trends in the EU*, WHO, Geneva, https://eurohealthobservatory.who.int/publications/country-health-profiles/soheu2025/synthesis-report-2025.

Williams, G. A., Jacob, G., Rakovac, I., Scotter, C. and Wismar, M. (2020), 'Health professional mobility in the WHO European region and the WHO global code of practice: Data from the joint OECD / Eurostat / WHO-Europe questionnaire', *European Journal of Public Health*, Vol. 30, Supplement No 4, pp. iv5–iv11, https://doi.org/10.1093/eurpub/ckaa124.

Williams, G. A., Falkenbach, M., van Schaaijk, A., Batenburg, R. et al. (2025a), 'Closing the digital skills gap in health care – identifying core digital skills and competencies and education and training opportunities for health professionals in the European Union', *Health Systems and Policy Analysis – Policy Briefs*, No 71, European Observatory on Health Systems and Policies and WHO Regional Office for Europe, Copenhagen, https://iris.who.int/server/api/core/bitstreams/3357594e-17f7-45ec-8680-a24309d2521d/content.

Williams, G. A., Falkenbach, M. and Wismar, M. (2025b), 'Transforming digital skills and competencies in the health and care workforce', *Eurohealth*, Vol. 31, No 3, pp. 23–27.

Wismar, M. and Goffin, T. (2023), 'Tackling the health workforce crisis: Towards a European health workforce strategy', *Eurohealth*, Vol. 29, No 3, pp. 22–26.

World Maritime University (2019), *Transport 2040 – Automation – Technology – Employment – The future of work*, Malmö, http://dx.doi.org/10.21677/itf.20190104.

Zapata, T., Azzopardi Muscat, N., Falkenbach, M. and Wismar, M. (2023), 'From great attrition to great attraction: Countering the great resignation of health and care workers', *Eurohealth*, Vol. 29, No 1, pp. 6–10.

Zapata, T., Blidaru, T. C., Rafila, A., Comsa, R., Azzopardi Muscat, N. et al. (2025), 'Mitigating health workforce migration in Romania: Policy lessons for Europe', *Human Resources for Health*, Vol. 23, No 31, https://doi.org/10.1186/s12960-025-01003-5.

Zwysen, W. (2024), 'Labour shortages, job quality and workers' bargaining power – a European quantitative analysis', *European Trade Union Institute (ETUI) Working Papers*, No 2024.11, ETUI, Brussels, https://www.etui.org/publications/labour-shortages-job-quality-and-workers-bargaining-power.

Annexes

Annex 1: Methodology of the study

Data collection questionnaire for national coordination offices

The questionnaire (see Annex 2) was distributed to the NCOs of 30 countries and four regions, covering the EU-27 along with Iceland, Liechtenstein, Norway and Switzerland. In Belgium, separate data were provided by the NCOs representing the Flemish, Brussels and Walloon Regions.

Each NCO was asked to report on the (mis)match status of all 436 occupations classified under the four-digit ISCO 2008 system in its jurisdiction. In addition to indicating whether an occupation was in balance or experiencing a shortage, a surplus or both (suggesting regional variation), NCOs were also requested to supply contextual details. These included clarifications on the nature of the mismatch (whether it stemmed from a labour or skills shortage) and its severity, where applicable.

To maintain consistency with previous editions of the report, all data were submitted using the four-digit ISCO 2008 classification.

Once the data were received, they underwent a comprehensive quality review to ensure both completeness and consistency (see Box 10). Where clarification was needed, NCOs were contacted, and adjustments were made to improve the comparability of the results. Consequently, the number of occupations reported as being in shortage or surplus in the national questionnaire responses may differ slightly from the figures used in the final analysis database.

The (mis)match status 'Both shortage and surplus (e.g. regional differences)' required special handling during data processing. Occupations marked with this status were classified under both shortage and surplus categories. This means that a single occupation in a given country could appear in both lists simultaneously, although such cases represent only a small fraction of the total mismatches identified.

Box 10 provides more detailed information on the treatment of specific country data to ensure alignment and comparability.

Box 10: Notes on data cleaning

Italy

The submission from the Italian NCO included duplicate entries at the four-digit ISCO 2008 level. This is due to the way the NCO mapped occupations classified under the national Istituto Nazionale di Statistica (Istat) system to the international system of the ISCO. These duplicate entries were removed before the analysis by only considering the entry that was reported to have the highest shortage magnitude.

France

The submission from the French NCO included duplicate entries at the four-digit ISCO 2008 level. This is due to the way the NCO mapped occupations classified under the national system to the international system of the ISCO. The Italian NCO did not provide information on surplus occupations, but only on shortage occupations. However, there were differences in the reported magnitudes of shortages across duplicates. These duplicate entries were removed before the analysis, considering the following cases:

- when duplicates were reported with the same mismatch status (shortage or surplus), one of the duplicates was kept and the others removed;
- when two duplicate entries were present that diverged in their mismatch status, the occupation was considered to be without information on the mismatch status;

- when more than two duplicate entries were present with diverging mismatch status, the occupation was kept with the mismatch status that was most frequently reported for those duplicates.

Moreover, the following occupation codes (titles in French) were present in the NCO submission, but do not correspond to valid four-digit ISCO 2008 occupations and were therefore removed:

- 2000 – *Chercheurs (sauf industrie et enseignement supérieur)*,
- 2500 – *Chefs de projet et directeurs de service informatique*,
- 8100 – *Pilotes d'installation lourdes des industries de transformation et d'*énergie,
- 8150 – *Ouvriers, techniciens et agents de maîtrise du textile*.

Czechia

The list of shortage and surplus occupations received from the NCO was altered before the analysis. Specifically, occupations with a mismatch for which the absolute number of vacancies or jobseekers are very low were excluded. The rationale behind this decision was that, for these occupations, the indicator used to identify the mismatch, namely the ratio of jobseekers to vacancies, is deemed to not be robust enough. This resulted in the list of shortage occupations to be reduced from 173 to 140.

Moreover, while the NCO did not explicitly state the magnitude of a mismatch (i.e. low, medium, high), the ratio of jobseekers to vacancies was provided, allowing an indication of mismatch magnitude to be derived based on terciles.

Spain

The NCO did not provide an explicit indication (i.e. low, medium, high) for the magnitude of mismatches, but numeric values, so the same approach as described for Czechia was applied to derive these.

Belgium

The lists of shortages and surpluses obtained from the three autonomous regions were merged into a unified national Belgian response. The responses from the three Belgian regions (Brussels-Capital, Flanders, the Walloon Region) were consolidated by applying the following rules:

- if an occupation is reported to be in shortage/surplus by any single region, the occupation receives this mismatch status for the country;
- if at least one region reported an occupation to be in shortage, while at least one other region reported the same occupation to be in surplus, the occupation receives the mismatch status 'Both shortage and surplus (e.g. regional differences)'.

Concerning other information provided, such as the type of shortage, indicator, etc., instances where information did not align were addressed. For example, if the same shortage occupation received a high magnitude ranking from one autonomous region and a low magnitude ranking from another, the national result was designated as 'no clear convergence'. These particular outcomes, characterised by a lack of consensus, were subsequently excluded from the analysis to maintain the integrity and reliability of the overall findings.

Other NCOs also provided information on additional occupational groups, beyond the 436 occupations at the four-digit ISCO 2008 level, corresponding to variations in the application of ISCO classification frameworks at the national level. They were removed from the dataset before the analysis. These instances are described below.

Norway

- 2223 (nurses).

Romania

- 2429 (administration professionals not elsewhere classified),
- 3414 (teaching staff in primary education),
- 3415 (teaching staff in preschool education),
- 3416 (instructors and assimilated in education),

- 3419 (teaching staff not elsewhere classified).

Slovenia

- 2147 (logistics and transport technology professionals),
- 2357 (counselling and organisation of educational work professionals),
- 3335 (logistics and transport technology technicians and associate professionals),
- 7129 (building finishers and related trades workers not elsewhere classified).

Qualitative information on the health and care sector

The qualitative analysis aimed to analyse the determinants of labour shortages among key occupations in the health and care sector. The analysis covered five occupations: nursing professionals, specialist medical practitioners, physiotherapists, health care assistants and generalist medical practitioners.

These occupations include several sub-roles and profiles that fall under section Q of the NACE classification 'human health and social work activities'. This sector comprises three main activity categories: human health activities (e.g. primary and secondary care), residential care activities and social work activities without accommodation.

The qualitative analysis relied on:

- a review of the evidence and literature on the observed labour market imbalances, related causes and potential solutions;
- stakeholder consultations (interviews and focus groups) to explore the views of relevant stakeholders on these aspects.

The literature review drew on peer-reviewed and grey literature identified through searches that combined keywords related to each of the health and social care occupations under analysis, labour market imbalances (shortages, surpluses) and demand- and supply-side drivers of labour shortages. This literature review also served as the foundation for the development of discussion guides for the stakeholder consultations (see Annex 3).

Focus groups and interviews were held online in October and November 2025. Three occupation-specific focus groups were organised for nursing professionals, health care assistants and generalist medical practitioners. Additional interviews were held with stakeholders relevant to specialist medical practitioners, physiotherapists, nursing professionals and health care assistants. Each discussion was tailored to explore the specific factors contributing to the shortage in each profession.

The invited stakeholders included social partners representing both employers and employees, education and training institutions and labour market intermediaries. Participants were identified and recruited through a mapping of the relevant stakeholders per occupation based on the literature review, further online research and coordination with the European Labour Authority.

Evidence from these activities was triangulated to inform the write-up of profiles on five health and care occupations, which cover the following topics:

- overview of the occupation's demographics,
- evolution of the demand for the occupation and its skills,
- labour migration and mobility,
- skills and qualification gaps,
- working conditions and occupation attractiveness,
- recruitment practices and retention trends,
- measures to tackle labour market imbalances.

Data on characteristics of workers in widespread shortage/surplus occupations

For the 2025 edition of the report, eight extractions from the EU-LFS were requested, mostly in line with the extractions requested for the previous editions of the report. A full list of the datasets is available in Table 13.

Table 13: EU-LFS special extraction requests, by disaggregation

Disaggregation	Variables	Geographies
Gender	COUNTRY, SEX, ISCO08_4D	EU27_2020_EFTA, EU27_2020, EURES countries
Age	COUNTRY, AGE, ISCO08_4D	EU27_2020_EFTA, EU27_2020, EURES countries
Education	COUNTRY, HATLEV1D, ISCO08_4D	EU27_2020_EFTA, EU27_2020, EURES countries
Work hours	COUNTRY, HWUSUAL, ISCO08_4D	EU27_2020_EFTA, EU27_2020, EURES countries
Contract type	COUNTRY, TEMP, ISCO08_2D, NACE2_2D	EU27_2020_EFTA, EU27_2020, EURES countries
Country of origin	COUNTRY, COUNTRYB, ISCO08_4D	EU27_2020_EFTA, EU27_2020, EURES countries
Contract reason	COUNTRY, TEMPREAS, ISCO08_4D	EU27_2020_EFTA, EU27_2020
Part-time	COUNTRY, FTPT, ILOSTAT ISCO08_4D	EURES countries, EU27_2020

Source: EU-LFS special data extractions.

The 2025 data extractions do not contain any additional missing information when compared with the 2024 extractions. Missing information is primarily concentrated at the country level, with the most complete data observed for the one-digit occupational groups (00, 10, 20, 30 and so on).

At the aggregate level, the EU-27 and EURES aggregates are broadly comparable in terms of data availability, although the EURES aggregates show a slightly higher incidence of missing values. For share calculation purposes, missing information was imputed where feasible. Specifically, within each occupational grouping at the ISCO 2008 four-digit occupational level, where a single data point was missing, the value was derived by subtracting the available subgroup values from the reported total. For the calculation of shares, an imputed total was then calculated based on filled and available subgroups to ensure that the shares summed to 100 %. This approach ensured that aggregates could be calculated consistently without materially affecting data integrity and minimising confusion for the reader.

In line with data confidentiality requirements, no level data are displayed in the figures.

Quantification of labour shortages and surpluses across occupations and countries

This section describes the method of estimating the quantification of shortages and surpluses per occupation and country at time (annual). The methodology draws on multiple data sources and harmonised indicators to capture labour market imbalances, enabling systematic estimation of the number of workers in shortage or surplus.

The following formula calculates the labour shortage or surplus (LSS):

LSS = extended labour supply ([10]) *− (met demand + unmet demand) = (employed + unemployed + other slack) − (employed + all vacancies) = unemployed + other slack − all vacancies.* (1)

Terms are defined as follows.

- The extended labour supply is calculated as the sum of unemployed people whose previous jobs were in the same occupation, employed people and other labour market slack (to avoid double counting the underemployed). New entrants (graduates or migrants) to the labour market who are not yet part of the existing labour supply can also be added. Since unemployed and potentially active people without previous working experience cannot be allocated to an occupation, they are not covered by equation 1 and thus cannot be compared with the Eurostat variable of labour market slack. While all the other variables would be covered by the LFS, new entrants are potential workers on the labour market who are not yet accounted for in the LFS.
- Other labour market slack refers to people seeking a job but not immediately available to work, and people available to work but not seeking.
- Met demand includes all the persons employed during period *t*. It includes both existing jobs and vacancies filled during period *t* (from jobs created/lost,

10. The extended labour supply is the total number of all employed plus unemployed persons (the labour force), plus those seeking work but not immediately available to work, plus those available to work but not seeking a job (Eurostat, n.d.-b).

called also expansion demand); the latter would, in principle, be based on changes in output, productivity and working hours. Since the change in the definition of employment in 2021, workers on parental/maternity leave are counted as employed if they received the parental/maternity benefit.

- Unmet demand is the sum of all unfilled vacancies, either from previous periods or new job openings during period *t* due to growth or replacement need (people leaving the occupation due to retirement, death, long-term sickness, care responsibilities or occupational mobility).

Equation 1 is operationalised using **stock** perspective, that is, each variable taken in time *t* for occupation *o* and country *c*:

$$LSS_{oct} = Employed_{oct} + Slack_{oct} + NewEntrants_{qct} - (Employed_{oct} + All\ vacancies_{oct}) = Slack_{oct} + NewEntrants_{qct} - All\ vacancies_{oct}. \quad (2)$$

The sign of the result on the right-hand side in the equation 1 would indicate either surplus or shortage. The value of equation 2 indicates the estimated number of workers, but a threshold or a range would need to be decided before the occupation is labelled in shortage or surplus. The presence of small numbers of excess workers or workers needed is to be expected.

In equation 2, *t* will be the last year of available data for which all these variables are observed, and this stock perspective would allow the estimation of past LSSs. New entrants will be the sum of observed recent graduates (who are assumed to remain in the country of study) and potential new migrants looking for work.

Annex 2: Standardised questionnaire for data collection

Occupation	Information sought	Possible answers
ISCO 2008 code and title at the four-digit level	Indicate if labour shortage, labour surplus, in balance, information not available. Please assign a status for each occupation.	Shortage
		Surplus
		Both shortage and surplus (e.g. regional differences)
		In balance
		Information not available
	If shortage occupation and information is available, please indicate whether it is a labour or skills shortage.	Labour
		Skills
		Information not available
	If shortage, using an objective source or criterion (e.g. duration of vacancy filling etc.) please indicate if the labour shortage is high, medium or low. Otherwise answer 'information not available'.	High
		Medium
		Low
		Information not available
	If surplus, using an objective source or criterion (e.g. duration of vacancy filling; LM study etc.) please indicate if the labour surplus is high, medium or low. Otherwise answer 'information not available'.	High
		Medium
		Low
		Information not available

NB: LM, labour market.

Annex 3: Discussion modules for stakeholder consultations

Broad discussion modules	Specific discussion points
Evolution of demand for nursing professionals and their skills	Ways in which **ageing population and increasing chronic conditions** are changing the demand for healthcare professionals. Shifts in the type of healthcare professionals being hired or trained to meet these demographic changes. Shortages of staff or in specific roles during **seasonal peaks** (e.g. due to winter illnesses) and due to **COVID-19 backlogs**. Impact of seasonal pressures on long-term changes in workforce planning or staffing models. Changes in the **skills required** of healthcare professionals over the last 5–10 years. New essential skills compared with the past (e.g. digital literacy, remote care management). Future influence of the **climate crisis** on the demand for health and care professionals. Current health impacts of the climate crisis (e.g. heat-related illness, respiratory issues) that are creating new pressures on the system or on specific roles.
Labour migration and mobility	Key patterns in intra-EU **mobility** and the mobility of non-EU nationals. Member States that suffer from 'brain drain' and Member States that tend to benefit from inflows of healthcare workers. Main reasons for migration (e.g. better pay, more stable jobs, specific skills in demand). Specific roles across health and care sectors (primary care, outpatient care, residential care, etc.) most affected by migration flows. Role of national **mobility trends** on geographical distribution of healthcare professionals within the Member States. Prevalence of 'medical deserts' in the Member States, their causes (e.g. poor healthcare workforce planning, attractiveness of certain regions) and consequences on the provision of health and care services.
Skills and qualification gaps	Impact of **training standards** and **policies on the recognition of qualifications** to labour availability and mobility. Barriers they pose (e.g. language requirements). Suitability of the **medical education system** to prepare students to meet the needs of the labour market, in terms of both profiles and skills required. Current role of **healthcare workforce planning** in helping Member States meet the demand for health and care professionals.
Working conditions and occupation attractiveness	**Degree of attractiveness** of medical occupation and underlying factors (e.g. career prospects, workload, hours, stress). Impact of COVID-19 pandemic on attractiveness, for both incumbent and prospective workers. Variation in attractiveness by level of healthcare system (e.g. residential, home care) and type of employer (public, private, individuals, intermediaries). **Health and safety** of potential concern (e.g. violence or aggression, exposure to infectious diseases).
Recruitment practices and retention trends	Most common **types of employment contract** (e.g. full-time, part-time, temporary), prevalence of undeclared work and misclassification (e.g. bogus self-employment). Variation in attractiveness by level of healthcare system (e.g. residential, home care) and type of employer (public, private, individuals, intermediaries). Impact of different contract types on recruitment efforts and staff retention. Concerns regarding access to social security or employment rights. Trends in **staff leaving** the public health system for private practice or even leaving healthcare altogether. Main factors influencing these decisions.
Measures to tackle labour market imbalances	Effectiveness of **task shifting or role substitution** in addressing labour shortages and barriers. Availability and effectiveness of **reskilling or upskilling programmes**. Availability and effectiveness of **models to retain workers** (e.g. re-enter the workforce after a career break, improve work–life balance, improve job satisfaction and attrition, support for ageing professionals who wish to remain in the workforce longer).

Annex 4: Open questionnaire on measures taken to tackle labour shortages

	Category	Description
1	**Background information about the instrument**	
1.1	Country	Name of the country where the instrument is provided
1.2	Geographical scope of the instrument	Geographical scope of the instrument:
		If regional or local, please specify below
1.3	Name of the instrument	Name of the instrument in original language(s):
		Name of the instrument translated in English:
1.4	Rationale and aims (maximum 200 words)	Overview of the main aims of the instrument and rationale for its delivery, including why it was established, what it aims to achieve and its specific objectives (quantitative/qualitative), in relation to the specific aspects related to seasonal work
1.5	Supporting information about the instrument	Website and/or other sources where more information on the instrument can be found (including any reports or other materials produced about the instrument)
1.6	Time frame of the instrument	Is the instrument still active? (Please prioritise policies introduced after 2022)
1.7	Start date	Start date and indication of whether and why there have been adaptations to the instrument since its inception (if relevant)
2	**Type of instrument and support provided**	

	Category	Description
2.1	Types of support/service offered by the instrument (content)	A measure could fall into multiple categories. Please tick the boxes accordingly. Indication of which type of support/service is offered by the instrument from the following typology: • Provision of information on rights and obligations. • Support with job finding, matching and recruitment (i) at home and (ii) abroad. • Support on housing and accommodation issues, including temporary or transitional housing solutions. • Financial support: o increased basic salary, o increased or new allowances (specify what kind of allowances), o contribution towards living or accommodation cost, o contribution towards relocation expenses, o other, please specify below. • Legislation (including collective agreements, bilateral agreements). • Better working conditions: o fewer administrative tasks, o fewer working hours, o more days of leave, o more flexibility in work pattern, o access to personal protective equipment, o safe staffing levels (adequate staff-to-patient ratios to reduce stress), o infection control protocols (procedures for hygiene, sanitation and handling infectious diseases), o mental health support, o ergonomic workplace design, o training in emergency procedures, o regular drills and education on fire safety, evacuation and medical emergencies, o regular health checks and immunisations for staff, o violence prevention measures, o others, please specify. • Support related to employability, training (occupational skills, languages), training subsidies: o more places in education for training for the five medical professions, o studentships for trainees/students in the five professions, o support related to recognition of skills and qualifications, o provision of career advice, o language training, o provision of psychological support (especially against burnout, bullying and verbal abuse), o childcare and family services, including support to spouses/family moving or staying behind. • Measures to support employers in managing foreign workers in healthcare. • Measures to attract foreign workers (EU or non-EU nationals).

	Category	Description
2.2	Support offered (maximum 100 words)	Brief description of the instrument, including information on the format and the way it is delivered (online tools, printed materials, in-person services, etc.) and the support it provides (expanding on the typology listed above)
2.3	Key actors involved in the design and delivery	• International organisation • National ministry • Regional authority • Local authority • PES • Trade union • Employer organisation • Non-governmental organisation • Private organisation • Other (please specify)
2.4		Name of the organisation(s)/institution(s) in the native language and English
3	**Target groups**	
3.1	Eligibility criteria	Indication of eligibility criteria of the instrument
4	**Assessment of the instrument and lessons learnt on effectiveness**	
4.1	Performance and utilisation	Data (if available) on numbers of workers/employers reached by the services / using the service (wherever relevant), please also indicate the time horizon of your reply, for example, number of beneficiaries or participants in a given year.
4.2	Assessment of effectiveness and accessibility	Is there any evidence of, or studies that try to assess, the overall effectiveness of the instrument based on a set of measurable criteria (such as impact assessment, ongoing monitoring of implementation)?
		If yes, please elaborate on the results, with regard to strengths and weaknesses, lessons learnt from design and delivery, any unwanted side effects of the instrument or evidence of innovative practices, and provide the reference.
5	**References**	
5.1	References	Please list any studies, articles or sources that might be relevant to the measures taken to tackle labour shortages in your country.

Annex 5: Trends in widespread shortage occupations over time

Table 14: Ranking of widespread shortage occupations identified in 2025, compared with previous reports

Occupation	Change in ranking from 2024 to 2025	Ranking in current report (2025)	Ranking in previous editions of this report					
			2024	2023	2022	2021	2020	2019
Specialist medical practitioners	+	1	3	4	6	8		
Welders and flame cutters	=	1	1	1	4	3	3	2
Building and related electricians	=	2	2	6	2	7	5	4
Nursing professionals	–	3	2	5	1	2	1	6
Plumbers and pipe fitters	=	3	3	2	2	1	2	4
Generalist medical practitioners	+	4	6	6	5			
Heavy truck and lorry drivers	–	4	3	3	1	4	3	1
Bus and tram drivers	+	4	6	9	5			
Sheet metal workers	+	4	5	10	5			
Health care assistants	=	5	5	8	8	5	6	8
Cooks	–	6	2	7	5	10	3	5
Electrical mechanics and fitters	=	6	6	9	6	7		
Butchers, fishmongers and related food preparers	–	6	5	9	8			
Structural metal preparers and erectors	=	6	6	11	7			
Motor vehicle mechanics and repairers	=	7	7	5	5	8	7	6
Air conditioning and refrigeration mechanics	+	7	8	11	11			
Electrical engineers	+	7	8	12	13			
Carpenters and joiners	+	7	8	8	2	6	6	4
Agricultural and industrial machinery mechanics and repairers	+	7	8	10	7	7	6	3
Chefs	=	7	7	9	10			
Roofers	+	8	11	10	10			
Metal working machine tool setters and operators	–	8	6	5	1	9		
Physiotherapists	–	8	5	12	8			
Floor layers and tile setters	+	8	11	11	5			

NB: Due to methodological changes, there may be slight deviations from the previously published reports. For some widespread shortage occupations identified in 2025, the rankings for the years 2017–2021 could not be retrieved, as the data from those years could no longer be obtained. For the years 2017–2021, any rankings displayed are taken directly from previous reports.

Source: Data submitted by EURES NCOs.

Table 15: Ranking of high-severity shortage occupations identified in 2025, compared with previous reports

Occupation	Change in ranking from 2024 to 2025	Ranking in current report (2025)	Ranking in previous editions of this report					
			2024	2023	2022	2021	2020	2019
Specialist medical practitioners	+	1	2	4	4			
Nursing professionals	+	2	3	3	1	1	1	
Roofers	+	3	6	5	4			
Waiters	+	3	4	4	6			
Nursing associate professionals	+	3	5	8	7			
Generalist medical practitioners	+	3	6	4	2			
Welders and flame cutters	=	3	3	4	2	2	2	2
Motor vehicle mechanics and repairers	+	3	6	7	6			
Plumbers and pipe fitters	+	3	5	4	3	2	2	2
Bus and tram drivers	+	4	6	9	5			
Heavy truck and lorry drivers	–	4	1	1	1	3	2	1
Crop farm labourers	+	4	8	9	7			
Building and related electricians	+	4	5	5	4			
Electrical engineers	+	4	6	8	-			
Electrical engineering technicians	+	4	8	9	5			
Air conditioning and refrigeration mechanics	+	4	6	6	6			
Concrete placers, concrete finishers and related workers	+	4	7	7	3			
Health care assistants	+	5	6	7	6			
Dentists	+	5	8	9	7			
Paper products machine operators	+	5	7	11	-			
Cooks	+	5	7	6	4			
Health professionals not elsewhere classified	+	5	7	9	8			

NB: Due to methodological changes, there may be slight deviations from the previously published reports. For some widespread shortage occupations identified in 2025, the rankings for the years 2017–2021 could not be retrieved, as the data from those years could no longer be obtained. For the years 2017–2021, any rankings displayed are taken directly from previous reports.

Source: Data submitted by EURES NCOs.

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