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EURES Report on Labour Shortages and Surpluses

2025

Analysis of specialist medical practitioners

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Contents

Executive summary

- This occupational fiche on specialist medical practitioners (International Standard Classification of Occupations 2212) accompanies the 2025 European employment services (EURES) report on labour shortages and surpluses, and synthesises evidence on the causes of labour market imbalances affecting specialists across EURES countries.
- Data from most EURES countries indicate that the proportion of specialists exceeds that of general practitioners, and the overall number of physicians is rising. However, despite this growth, specialists are consistently reported as a shortage occupation across EURES countries. In the 2025 EURES national coordination offices survey, 22 countries reported shortages of specialists.
- The demand for specialists is increasing, driven by population ageing and the growing prevalence of multi-morbidity and chronic diseases. Seasonal peaks of flu and other respiratory infections place acute pressure on hospitals, with specialists in pulmonology, infectious diseases and emergency medicine facing heavier caseloads and greater clinical complexity, reducing capacity for routine care and heightening professional stress.
- The specialist medical workforce is characterised by a rapidly ageing specialist workforce, with 41.8 % aged 50+ in 2024. This share of the workforce is more pronounced in some countries, such as Bulgaria (65 %), Greece (60 %), Lithuania (55 %) and Poland (53 %). The gender composition of the profession has shifted significantly, with the share of female doctors rising from 45 % in 2010 to 53 % in 2022 across the EU.
- While most EURES countries have a low share of foreign-trained doctors (ranging between 1 % and 15 %), some countries rely heavily on physicians trained abroad. In Luxembourg and Cyprus, foreign-trained doctors account for nearly the entire physician workforce, at 100 % and 94 %, respectively. Norway (44 %), Ireland (43 %) and Switzerland (40 %) also report substantial shares, indicating a consistent inflow of foreign-trained professionals.
- Strategic health workforce planning is essential to address ongoing shortages, yet approaches vary significantly across EURES countries. While some have increased student intake, many still fail to train enough specialist medical practitioners to meet growing demand. Although the number of physician graduates rose in almost all EURES countries between 2014 and 2023 – with Malta, Bulgaria and Romania reporting the highest growth – this did not fully close the gap.
- The demanding nature of the medical profession, combined with the pressure to deliver high-quality care, can seriously impact doctors' well-being and mental health. Over 90 % of specialists report experiencing stress at work and worrying about work even during their time off. In 2024, more than one third of specialists worked over 41 hours per week.
- Measures to tackle imbalances among specialists aim to address the uneven distribution of specialised practitioners working in hospitals, such as schemes enabling visiting doctors from urban or regional centres to support rural hospitals. A common practice to support labour market entry observed in some EURES countries is an increase in funding for doctors in specialist training.

1. Introduction

This occupational fiche provides an overview of the labour market imbalances affecting specialist medical practitioners in European employment services (EURES) countries, focusing on the determinants and drivers of these imbalances. It accompanies the 2025 EURES report on labour shortages and surpluses, which includes a dedicated analysis of the health and care sector. The fiche covers specialists as defined under International Standard Classification of Occupations 2212.

An overview of the occupation's employment size and demographic characteristics is provided in Chapter 2. The drivers of labour market imbalances in this occupation were analysed in relation to the following topics:

- demand for specialists (Chapter 3),
- labour migration and mobility (Chapter 4),
- skills and qualification gaps (Chapter 5),
- working conditions and occupation attractiveness (Chapter 6),
- recruitment practices and retention trends (Chapter 7),
- measures to tackle labour market imbalances (Chapter 8).

This occupational fiche draws on a comprehensive review of the peer-reviewed and grey literature published between 2019 and 2025 across the 31 EURES countries, alongside secondary descriptive data and microdata or special data extractions. Each chapter presents EURES-level findings and, wherever possible, highlights sectoral and country-specific differences.

This fiche also includes key points from three stakeholder interviews. Participants in these interviews included one representative from a social partner and two representatives of health and care provider and professional groups ([1]). Insights from these consultations are presented in boxes throughout the fiche. Given the limited scope of the consultations, the insights presented reflect the comments made during these specific interviews and should not be interpreted as representing the views of all stakeholders relevant to this occupation.

([1]) Invitations were extended to representatives of labour market intermediaries and education, training and research institutions; however, participation could not be secured.

2. Overview of the occupation

Occupation definition and scope

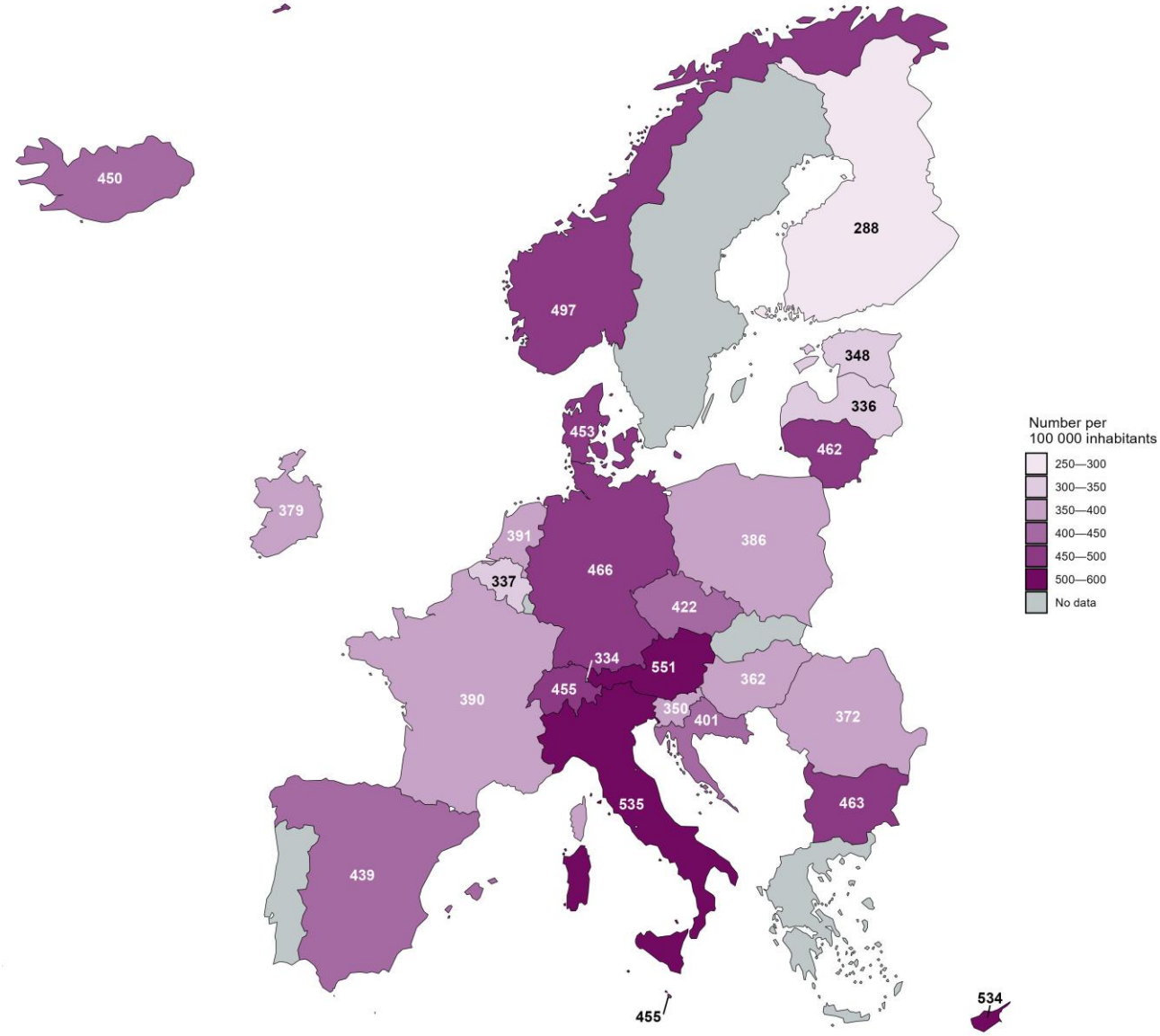
The scope of specialists' activity encompasses three principal health and care employment settings:

- specialist medical activity, where specialists provide expert diagnosis, treatment and management of complex or specific medical conditions that fall within their field of specialisation (e.g. cardiology, dermatology, oncology);
- hospital care, where specialists manage patients with acute or severe illnesses or injuries requiring intensive treatment, surgery or complex diagnostics;
- residential and home care, where specialists may oversee the ongoing medical needs of residents, often those with chronic, disabling or end-of-life conditions.

Size of the occupation as an employment category

The size of the physician workforce differs widely across EURES countries. As shown in Figure 1, in 2023, the density of physicians (whether general practitioners (GPs) or specialists) was as high as 500–600 per 100 000 inhabitants in countries such as Cyprus (534 per 100 000 inhabitants), Italy (535 physicians per 100 000 inhabitants) and Austria (551). In contrast, Finland and Belgium had just 250–300 physicians per 100 000 inhabitants (288 and 337 physicians, respectively, per 100 000 inhabitants). Norway (497 per 100 000 inhabitants), Germany (466 per 100 000 inhabitants), Bulgaria (463 per 100 000 inhabitants), Lithuania (462 per 100 000 inhabitants), Switzerland (455 per 100 000 inhabitants) and Denmark (453 per 100 000 inhabitants), , also show high shares of practising physicians compared with other EURES countries, all falling within the range of 450–500 physicians per 100 000 inhabitants.

Figure 1: Number of physicians (generalist or specialist medical practitioners) per 100 000 inhabitants by country, EURES, 2023

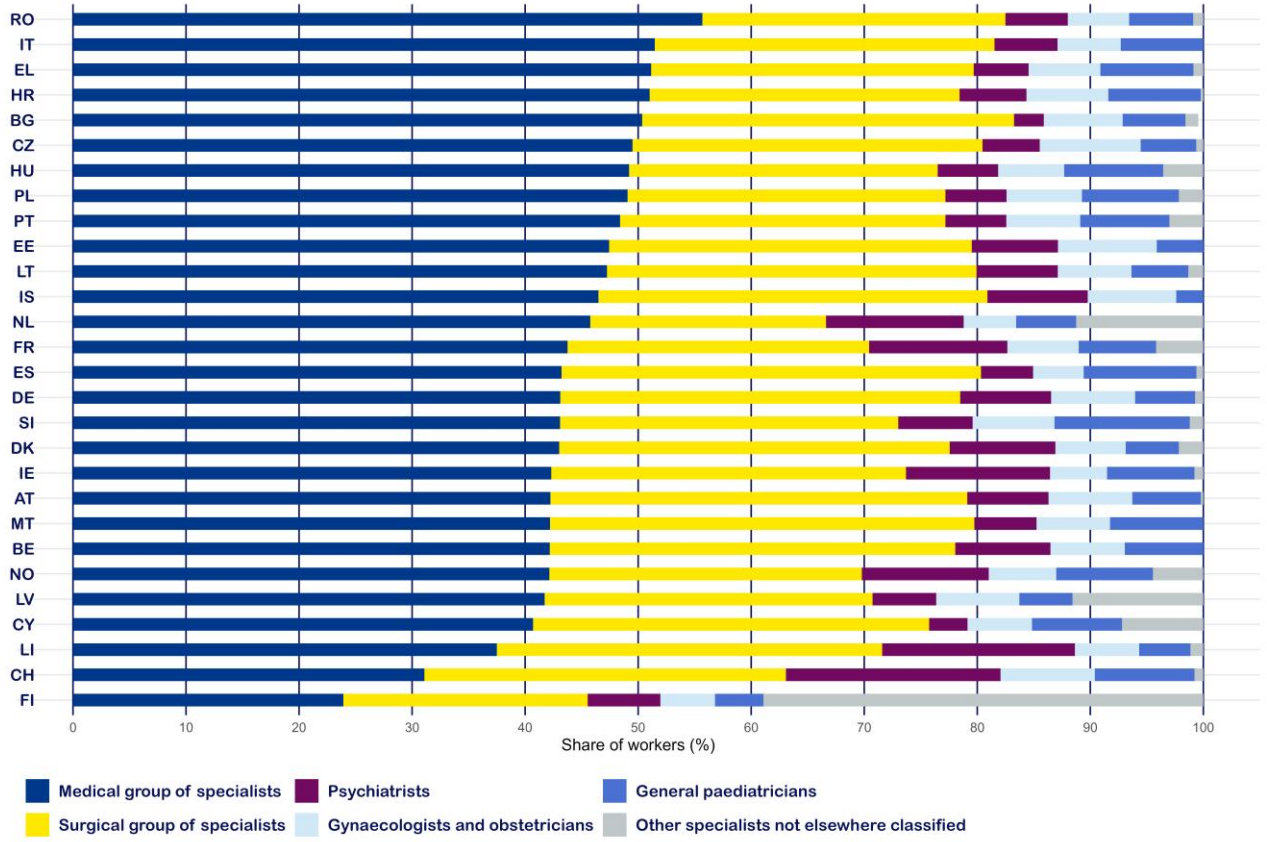


Source: Eurostat dataset (hlth_rs_prs2) (15 July 2025).

Data from 2023 (Figure 2) indicate the distribution of specialists across types of specialties. In most EURES countries with available data, the medical group of specialists represents the largest segment of the specialist workforce, with this group accounting for over half of all specialists working in medical fields in five countries (Romania, Italy, Greece, Croatia and Bulgaria). The share of surgical groups is also prominent across EURES countries, followed by psychiatrists and gynaecologists/obstetricians.

Other data show trends indicating a different distribution of physicians across specialisations. For instance, in Cyprus in 2019, there were 3 768 registered doctors, with 842 registered as GPs, 278 as paediatricians, 202 as gynaecologists and obstetricians, 113 as psychiatrists and 1 257 as other specialists, while 1 076 belonged to the surgical group of specialists (Theodorou et al., 2024). In France, the most common specialisations in 2021 were psychiatry and surgery (Or et al., 2023).

Figure 2: Employment of specialist medical practitioners by specialty, EURES, 2023



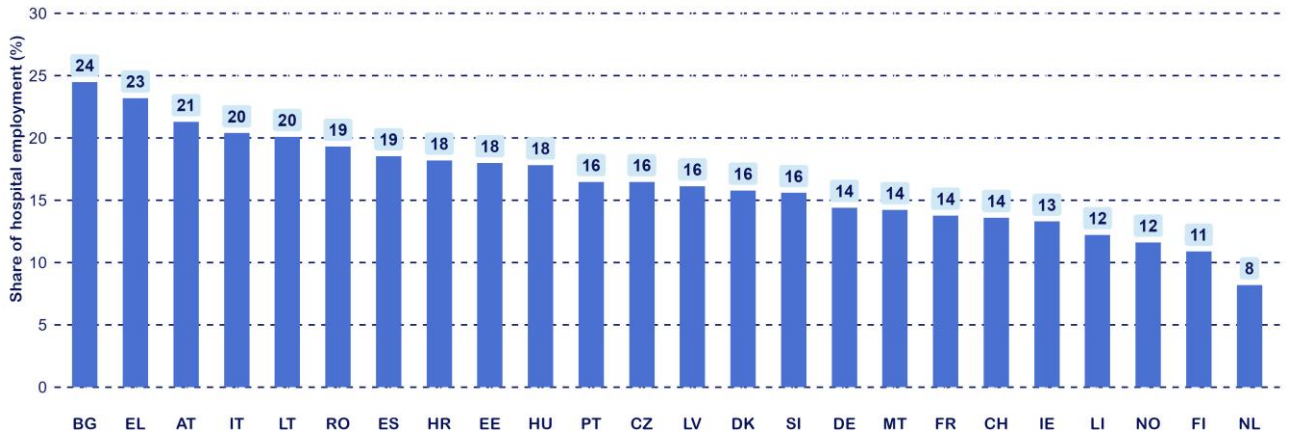
NB: Only for countries with available data.

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

In the EURES countries with data available, the share of specialist among physicians is higher than the share of GPs. In 2022, more than two thirds of the physician workforce were specialists, with a share of 67 % of specialists, 21 % GPs and 11 % other doctors (OECD et al., 2024). The highest shares of specialists were observed in Italy (81 %), Hungary (80 %) and Greece (80 %). Countries like Belgium, France, Portugal and Finland, have managed to achieve a more balanced distribution between GPs and specialists, with GPs representing at least 30 % of the total medical workforce (OECD et al., 2024).

The share of physicians (both GPs and specialists) working in hospitals varies across EURES countries, ranging from 24 % in Bulgaria to 8 % in the Netherlands (Figure 3). The countries with the highest shares of hospital-employed physicians include Bulgaria (24 %), Greece (23 %) and Austria (21 %), while the lowest shares are observed in the Netherlands (8 %), Finland (11 %) and Norway (12 %).

Figure 3: Share of physicians (generalist or specialist medical practitioners) in hospital employment, EURES, 2024



NB: Only for countries with available data.

Source: Eurostat dataset (hlth_rs_prshp2) (15 July 2025).

Specialist care is delivered by both public and private providers, with a growing shift towards the private sector in recent years. For instance, in Cyprus, many doctors work in the private sector, which has led to staffing challenges in public hospitals, especially during crises like the COVID-19 pandemic. Similarly, specialised ambulatory care, both outpatient and inpatient, is provided by public sector specialists working in hospital outpatient departments and by contracted private sector specialists operating in private hospitals, polyclinics or solo practices. As of October 2022, 66 % of the 2 030 specialists contracted by the Health Insurance Organisation were from the private sector, and 34 % were from the public sector (Theodorou et al., 2024). Similarly, in Slovenia, specialised secondary-level ambulatory care is predominantly delivered in hospitals or through individual or group practices of private specialists (Albreht et al., 2021).

Box 1: Stakeholder consultation: private sector shift

According to one stakeholder, financial pressures and inflation are making the private sector increasingly attractive to doctors. While younger doctors tend to remain in public systems during training, many transition to private practice once qualified, drawn by higher salaries, better working conditions and modern facilities. Private hospitals are often located in cosmopolitan cities and may operate in English, thus reducing language barriers and facilitating mobility. These settings also offer shorter waiting times and less administrative burden, which the stakeholders identified as a major source of dissatisfaction with public healthcare. In addition, private practices are expanding in areas with affluent international populations, responding to demand for English-speaking doctors and more personalised care.

Countries reporting labour shortages and surpluses

Data from most EURES countries indicate that the proportion of specialists exceeds that of GPs, and the overall number of physicians is on the rise (OECD et al., 2024). However, despite this growth, many countries still face a

shortage of specialists. Additionally, several countries report a geographically uneven distribution of physicians, resulting in certain regions experiencing significant gaps in specialist medical coverage.

As shown in Table 1, 22 EURES countries reported shortages of specialists in 2025, underscoring the widespread nature of this issue.

Table 1: Countries reporting labour market imbalances for specialist medical practitioners, 2025

	Countries
Labour shortage	22 countries (Austria, Bulgaria, Cyprus, Czechia, Estonia, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden)
Labour surplus	—

NB: NCOs from Iceland, Liechtenstein and Switzerland have not provided data on imbalances.

Source: Data submitted by EURES national coordination offices.

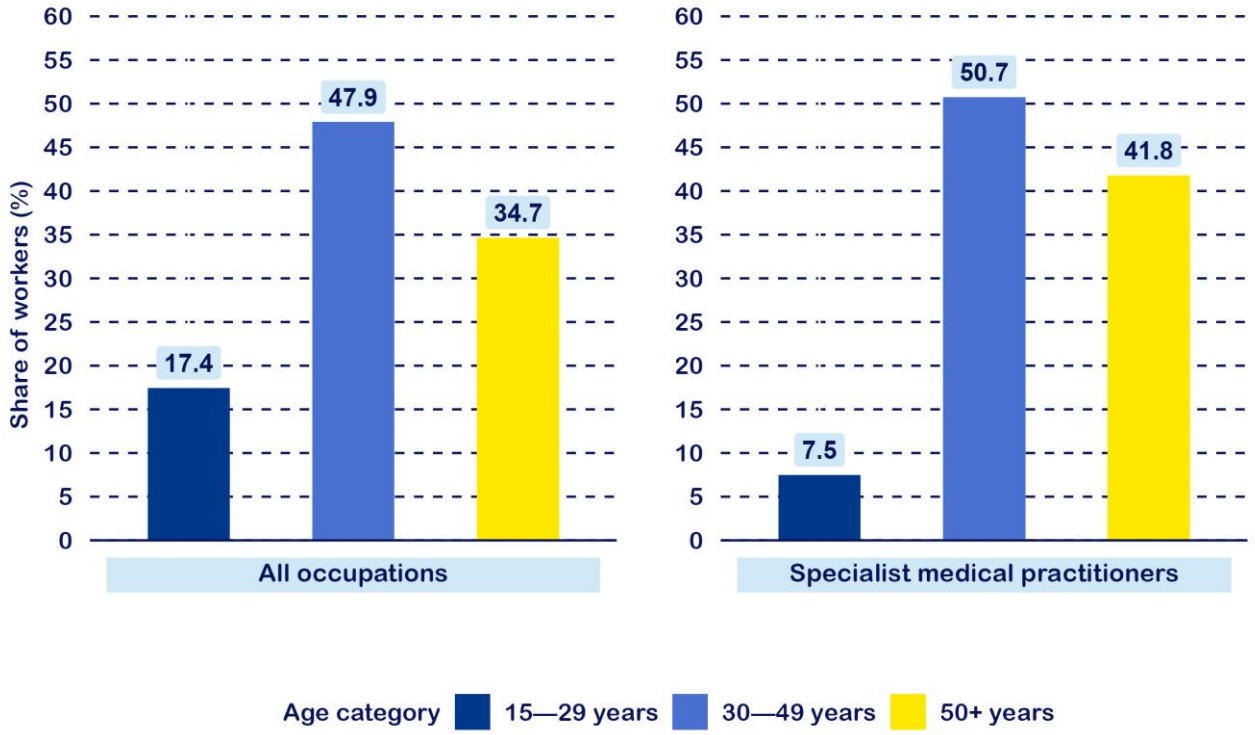
Although the overall number of specialists has increased in both hospital and outpatient settings in several countries, workforce shortages persist in specific medical specialties. For example, in Spain, the number of specialists rose from 181 to 214 per 100 000 inhabitants between 2014 and 2022. Despite this growth, challenges remain due to insufficient numbers of qualified professionals in certain specialties, such as anaesthesiology, geriatrics, psychiatry and radiology. These deficits are expected to persist through 2028. In contrast, specialties like clinical analysis, cardiac surgery and internal medicine were found to have a surplus of professionals (Bernal-Delgado et al., 2024). Denmark reports shortages within some medical specialties such as psychiatry and radiology. Current staffing challenges are particularly acute in anaesthesia departments, intensive care units, internal medicine units and operating rooms, where all regions report vacant positions (Okkels Birk et al., 2024). Estonia reports acute shortages among psychiatrists (Kasekamp et al., 2023). Cyprus reports shortages among specialties such as allergists, endocrinologists and cytologists (Theodorou et al., 2024).

Waiting times for specialist appointments are another indicator of constrained workforce capacity in certain healthcare specialties. For instance, in France, long waiting times have been reported for appointments with gynaecologists (44 days), cardiologists (50 days) and ophthalmologists (80 days) (Or et al., 2023). Similarly, in Sweden, waiting times are a persistent challenge, with initial consultations for specialised care and access to treatment or surgery often exceeding the guaranteed limits (Janlöv et al., 2023). Slovenia reports long waiting times as well, especially for secondary-level specialist ambulatory services (Albreht et al., 2021).

Occupation's demographics

The specialist workforce is rapidly ageing in most countries (OECD et al., 2024). In 2024, 42 % of the specialist workforce across EURES countries was aged 50 or older. This share is about 7 percentage points higher than the share of specialists aged 50+ in all occupations (Figure 4). Consequently, the number of physicians reaching retirement age is increasing, intensifying concerns about worsening existing shortages (WHO Regional Office for Europe, 2022).

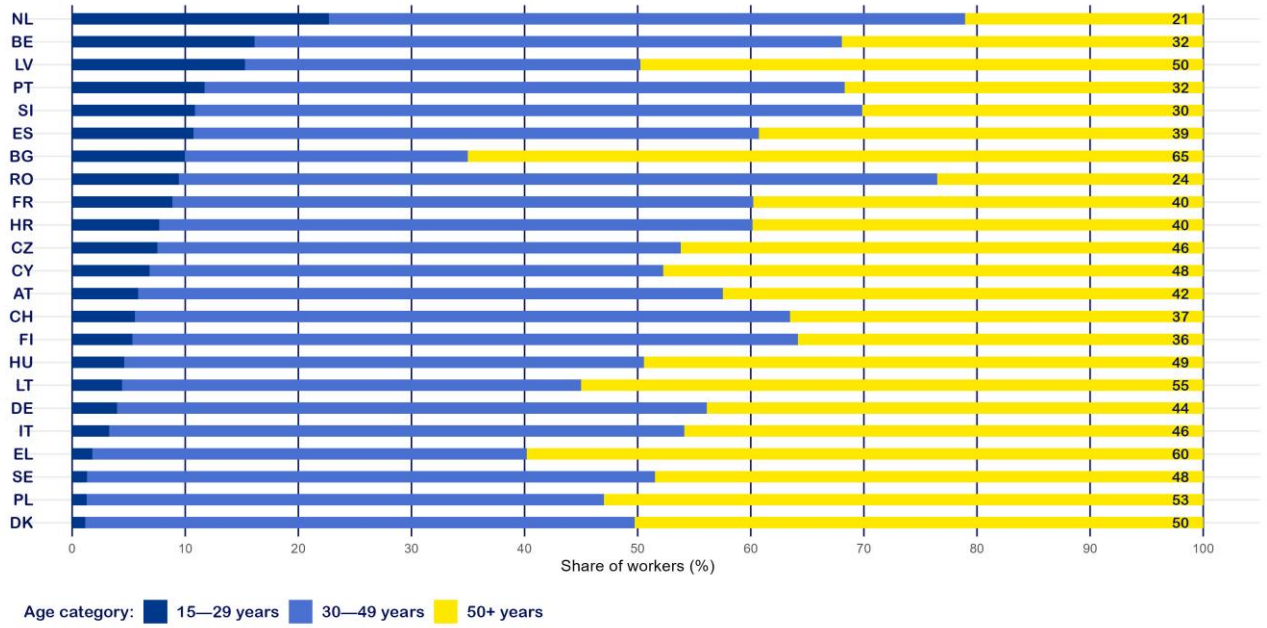
Figure 4: Specialist medical practitioners by age category, EURES, 2024



Source: EU Labour Force Survey special data extraction.

However, the age distribution of specialists differs significantly across EURES countries. Bulgaria and Greece are the countries with the oldest specialist workforces, with 65 % and 60 %, respectively, of specialists aged 50+ (Figure 5). In contrast, the Netherlands (21 %), Romania (24 %) and Slovenia (30 %) have some of the youngest specialist workforces, with a share of professionals aged below 50 that ranges from 70 % to 80 %.

Figure 5: Specialist medical practitioners by age category and country, EURES, 2024



NB: Only for countries with available data.

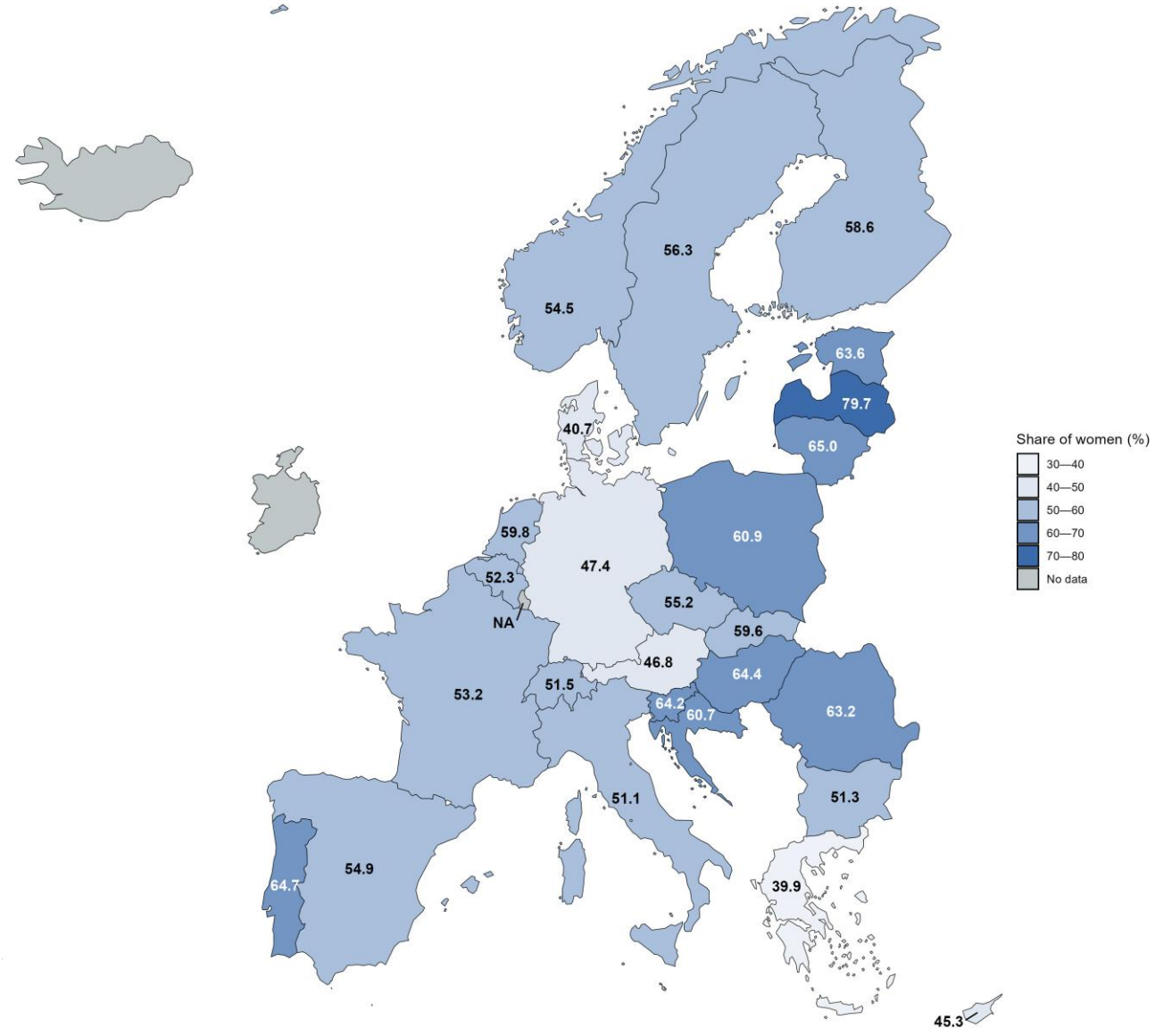
Source: EU Labour Force Survey special data extraction.

In Luxembourg, the specialist workforce is ageing, with 60 % of specialists over the age of 50 in 2017. The share of female specialists also increased during this period, rising from 25 % to 35 % between 2007 and 2017 (Rausch et al., 2024).

Over the past 20 years, the share of female doctors has risen significantly across many countries. By 2022, women made up 53 % of all doctors in the EU, compared with 45 % in 2010. The increase in female representation was identified as the sole driver of the overall growth in the number of doctors during that period, as the number of male physicians declined (OECD et al., 2024).

Data from 2024 (Figure 6) reveal a balanced gender distribution of specialists, with most EURES countries reporting a share of women of between 50 % and 60 %. Fewer countries with available data report a share above 60 %: Latvia, Lithuania, Portugal, Hungary, Slovenia, Estonia, Romania, Poland and Croatia. Among medical students, most EURES countries report a higher percentage of women. For instance, in Czechia in 2020, the percentage of female medical students was approximately 60 % (Džakula et al., 2021).

Figure 6: Share of women among specialist medical practitioners by country, EURES, 2024



Source: EU Labour Force Survey special data extraction.

3. Demand for specialist medical practitioners

Impact of demographic trends

The demand for specialists is driven by the need for health services, shaped by demographic trends, disease patterns and technological advancements. These factors influence both the overall need for health services and the distribution of demand across different medical specialties (OECD et al., 2024).

Demographic changes driven by rising life expectancy and persistently low fertility rates are leading to rapid population ageing. This shift is producing a growing cohort of older adults with chronic and complex conditions that require ongoing specialist care in fields such as cardiology, oncology, endocrinology and geriatrics. Even under conservative assumptions of constant disease prevalence, estimates suggest that the supply of doctors in the EU will need to increase by roughly 30 % by 2071 to meet future healthcare needs (European Commission: Joint Research Centre, 2024).

The increased prevalence of multi-morbidity and chronic diseases, combined with advances in diagnostic and therapeutic technologies, is driving a steady rise in specialist service utilisation. Consequently, the demand for specialists who manage multi-morbidity and chronic illness is projected to increase steadily in the next few decades (Bernal-Delgado et al., 2024). For instance, forecasts in Germany indicate a substantial increase in demand for oncology, radiology and surgical specialists due to the ageing population and the rising incidence of cancer. Between 2023 and 2050, cancer is projected to remain the second leading cause of premature mortality, accounting for approximately 26 % of deaths before the age of 75 (OECD, 2024). Correspondingly, demand for specialists providing cancer care is expected to increase significantly, driven by the growing need for oncologic therapeutics, radiation therapy and systemic treatments (Sonnhoff et al., 2024).

Box 2: Stakeholder consultation: demand for specialists

According to one stakeholder, healthcare demand has risen, driven by increased life expectancy and the growing prevalence of chronic diseases such as diabetes and asthma. Patients are also becoming more proactive in managing their health, which further contributes to the rising need for healthcare services.

These trends have an impact on the demand for specialists. Chronic conditions place additional pressure on specialists, while in some countries emergency departments face increasing demand due to the longer waiting times in primary care. Three stakeholders reported an increased demand for mental health services, which is placing additional strain on the healthcare system. Due to shortages of psychiatrists, GPs are increasingly required to manage a larger share of patients with mental health needs.

Another stakeholder emphasised that obesity is an emerging challenge in children, often accompanied by related conditions such as high blood pressure at younger ages. Mental health issues are also a major concern in child psychiatry, while respiratory diseases, allergies and lung conditions among teenagers are increasingly prevalent. This trend requires paediatricians to manage a broader range of conditions, including neurodevelopmental disorders and also illnesses that were once considered adult diseases, such as hypertension and type 2 diabetes.

Impact of seasonal peaks and health system pressure

European healthcare systems face recurring surges in demand, typically driven by flu and other seasonal respiratory diseases in the winter months. During such periods, emergency admissions spike, and hospitals struggle to maintain high-quality care due to limited beds, staffing and operational flexibility. These surges place acute pressure on hospitals, which often operate near full capacity.

Specialists in pulmonology, infectious diseases and emergency medicine face heightened caseloads and clinical complexity during these times, which can reduce their capacity for routine care and increase professional stress. As a consequence, medical practitioners within these specialties are at high risk of burnout. For example, a systematic review found that the prevalence of burnout among pulmonologists rose significantly during the COVID-19 pandemic: from 42 % pre-pandemic to 68 % during the pandemic (Bai et al., 2023).

Beyond acute crises, pressure on specialists can also stem from systemic inefficiencies. Examples include inadequate coordination between primary and secondary care, limited availability of specialists in certain regions, and administrative burden related to referral management and patient follow-up. In EURES countries, hospital care is primarily delivered through referrals. Specialists provide most secondary outpatient and inpatient services, accessible through referral from primary care physicians, other specialists or emergency services (Albreht et al., 2021). Nonetheless, when patients bypass GPs or personal doctors as first points of contact with health services, approaching specialists directly for referral, workload and operational challenges for specialists may arise.

Box 3: Stakeholder consultation: impact of peaks in demand for specialists

According to two stakeholders, the COVID-19 pandemic redirected much of the healthcare workforce towards treating COVID-19 patients. As a result, many medical specialties had to shift their focus, and several non-COVID-19 services were suspended. Beyond such emergencies, seasonal fluctuations, such as the rise in respiratory illnesses during winter, create additional pressures on healthcare systems and require careful workforce planning. To manage these peaks, strategies often include reallocating existing personnel to the areas of greatest need.

One stakeholder noted that expanding the vaccination of newborns against respiratory syncytial virus (RSV) has helped reduce the severity of infections and the number of hospitalisations among very young infants. In countries that introduced RSV vaccination programmes, such as Spain and France, the winter RSV seasons in 2024 and 2025 were milder. This reduction in severe cases eased pressure on paediatric and emergency services, helping stabilise the demand for specialists during seasonal peaks.

4. Labour migration and mobility

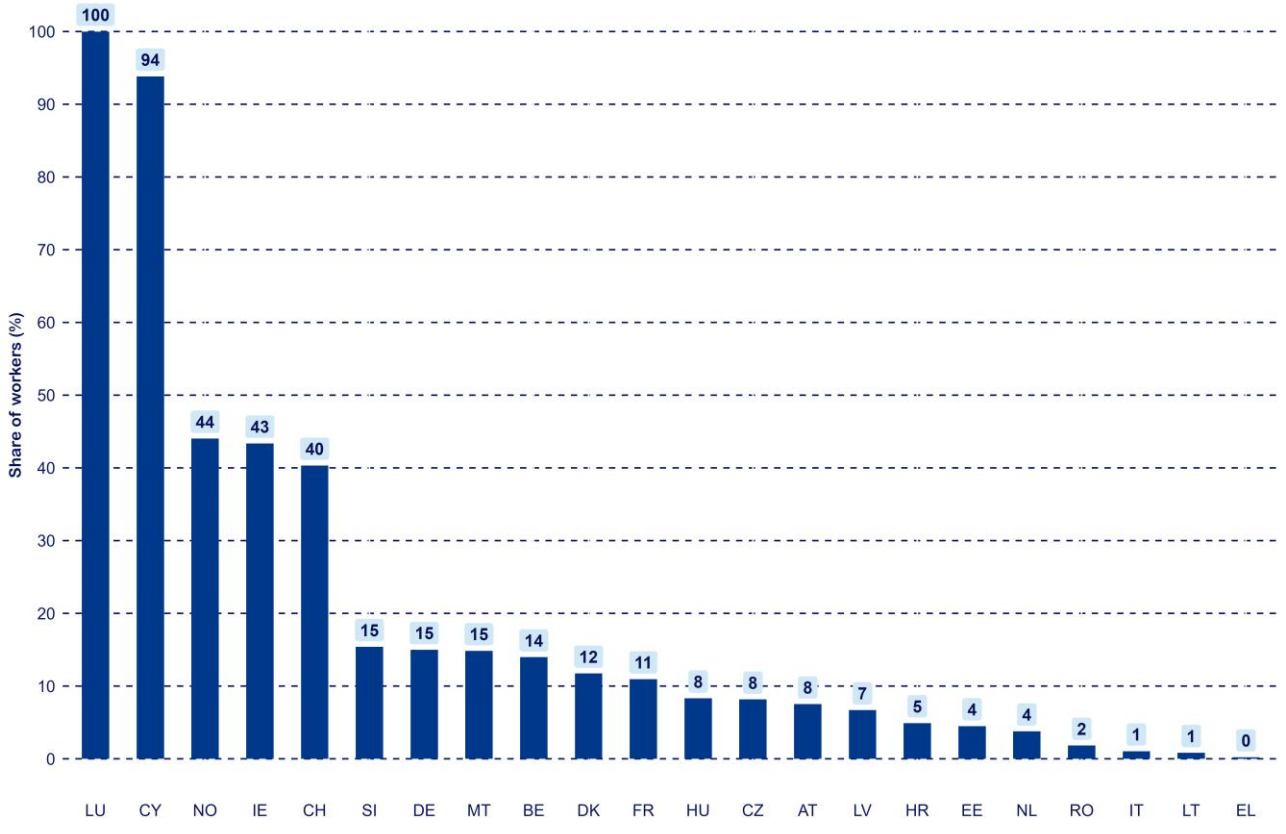
Patterns in intra-EU migration and migration from non-EURES countries

Several countries experience a positive net migration of healthcare professionals, with the proportion of foreign-trained physicians, both generalists and specialists, varying significantly across EURES countries. In seven countries, foreign-trained doctors represent 5 % or less of the total physician workforce, indicating a relatively low reliance on internationally educated medical professionals. Data from 2023 (Figure 7) show that Luxembourg and Cyprus are the countries with the greatest shares of foreign-trained physicians, with 100 % and 94 %, respectively.

Luxembourg's specialist medical workforce has seen a decline in the proportion of locally trained professionals due to the country's limited medical education infrastructure. Between 2007 and 2017, the percentage of Luxembourgish specialists dropped from 66 % to 49 %. In 2017, only 49 % were Luxembourgish specialists, while 20 % were German, 14 % Belgian and 10 % French. This reliance on foreign-trained specialists reflects broader challenges in sustaining a self-sufficient medical workforce (Rausch et al., 2024).

Norway, Ireland and Switzerland also heavily rely on doctors educated outside the country, with 40–45 % of their physician workforces trained abroad. The other EURES countries show percentages of foreign-trained physicians of between 1 % and 15 % (Figure 7).

Figure 7: Share of foreign-trained physicians (generalist or specialist medical practitioners) by country, EURES, 2023

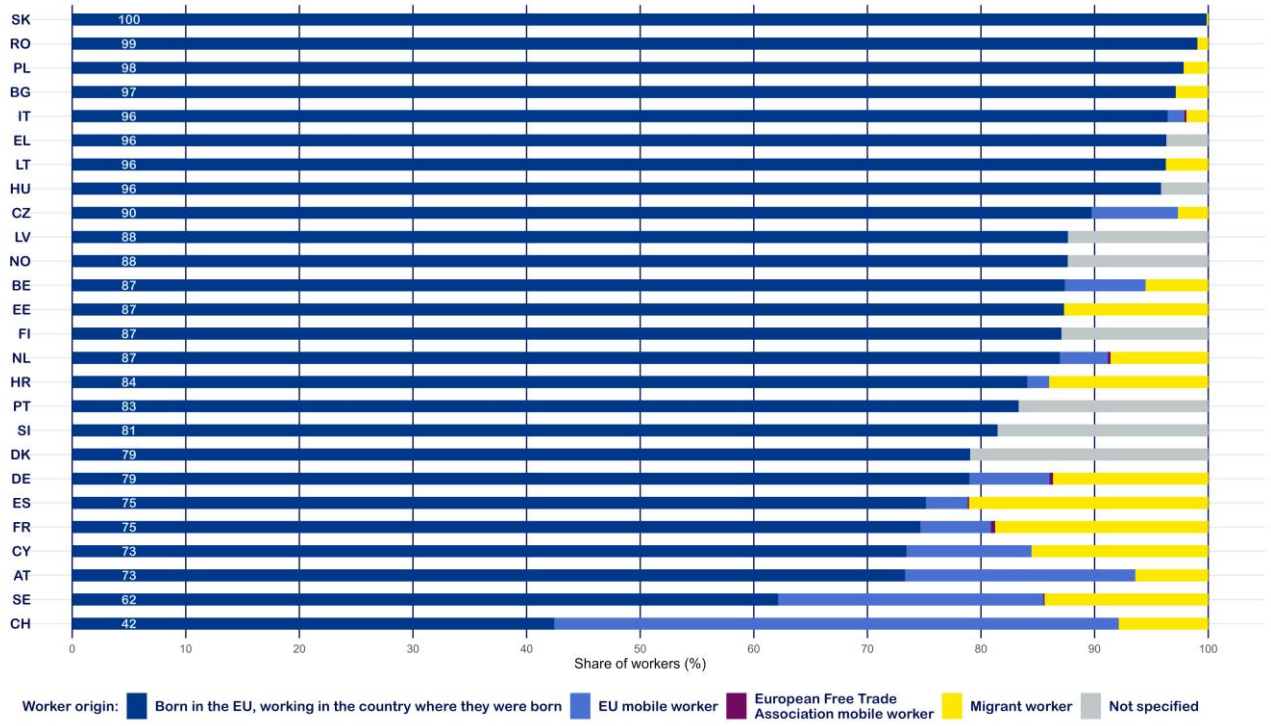


NB: Only for countries with available data.

Source: Eurostat dataset (hlth_rs_wkmg2) (15 July 2025).

In 9 out of 26 EURES countries, between 90 % and 100 % of the specialist physician workforce is composed of individuals who were born in the country and continue to work there, indicating a strong reliance on domestically trained and retained specialists (Figure 8). The countries with the strongest reliance on EU mobile workers and migrant workers are Switzerland and Sweden, with percentages of local specialists of around 40 % and 60 %, respectively.

Figure 8: Country of origin of specialist medical practitioners, EURES, 2024



NB: Only for countries with available data.

Source: EU Labour Force Survey special data extraction.

Box 4: Stakeholder consultation: attractiveness of the occupation and migration drivers

According to one stakeholder, labour mobility among healthcare professionals is driven by factors that go beyond pay levels. A clear career path and opportunities for professional growth, including access to high-quality training and development, are major motivators. Working conditions and work–life balance remain high on the list, alongside pay safety and job security. In addition, mandatory rural service requirements often lead to migration from rural to urban areas within countries. For young doctors, training opportunities are also strong mobility drivers.

Another stakeholder pointed out that, within the public systems and hospitals of some countries, specialists face increasing managerial responsibilities. This adds to their clinical workload and may contribute to doctors shifting to the private sector or relocating to countries where these responsibilities are less demanding.

National mobility trends and distribution of specialist medical practitioners within countries

Across many EURES countries, outpatient specialist care is mainly concentrated in larger towns. In Slovenia, for example, some specialties such as oncology/radiotherapy, rheumatology, haematology and neurosurgery are only available in larger centres, such as the Institute of Oncology Ljubljana and the university medical centres in Ljubljana and Maribor (Albreht et al., 2021). Similarly, in Denmark, practising specialists are concentrated in the capital and in other urban areas, creating imbalances in access to specialised services (Okkels Birk et al., 2024). The distribution of specialists is also very unequal across metropolitan France, with density varying from 70 to more than 600 specialists per 100 000 inhabitants. Inequalities are especially marked for those specialists who do not extra-bill patients (direct charges to the patient for medical services outside publicly funded insurance plans) (Or et al., 2023).

It should be noted that the concentration of specialist medical services in urban centres may reflect deliberate planning decisions aiming to balance access to care with the financial viability of maintaining specialist infrastructure. Rural hospitals often face financial sustainability challenges because of low patient volumes, leading to higher fixed costs per patient (OECD, 2021). Similar considerations can lead to decisions to centralise specialist services and to scale down rural facilities where utilisation is too low to support high-cost specialist services.

A large share of specialists works in hospitals, making the geographical distribution of hospitals a critical determinant of the accessibility of specialised care. In Slovenia, for instance, the majority of physicians work in hospitals (3 960 in 2019, corresponding to 58 % of the physician workforce) (Albreht et al., 2021). Consequently, disparities in hospital location translate directly into disparities in specialist availability.

However, even in countries with relatively high hospital density, access to specialist care varies by both geography and medical discipline. In Germany, for instance, psychiatric hospitals are accessible to both urban and rural populations, with many people able to reach them within 15–30 minutes by car. In contrast, breast cancer centres are mostly located in cities, with only 10 % found in rural areas, making access more limited for those living outside urban regions (Blümel et al., 2020).

Recognising these inequalities, several countries have implemented reforms to improve the spatial distribution and coordination of hospital services. In Croatia, for example, hospitals remain unevenly distributed, with the highest concentration in central regions such as Zagreb. In 2019, an external audit was conducted in 33 hospitals as part of the World Bank's project aiming to improve the quality and effectiveness of healthcare delivery (Džakula et al., 2021). Similarly, the Hospital Act (Federal Public Service Justice, 2019) in Belgium outlines different forms of hospital collaboration with specific geographical and operational criteria, such as maximum distances and shared services. Since 2020, all hospitals are legally required to join a loco-regional network, ensuring coordinated care and task distribution among general, specialised and university hospitals. Moreover, hospital groups can have a maximum of 25 km between collaborating hospitals (Gerkens et al., 2020).

5. Skills and qualification gaps

Fragmentation in training standards

Training standards for specialists across EURES countries are governed by the Bologna Process (1999) (European ministers of education, 1999) and Directive 2005/36/EC (European Parliament et al., 2005), which established minimum training standards for specialists training in the EU. It mandates that specialist training must follow at least five years of basic medical education and be completed in a recognised specialty.

The duration and structure of specialist training vary by field but must meet the standards outlined in the directive. For example, In Sweden, upon completion of their studies, graduates must obtain a licence from the National Board of Health and Welfare, followed by six months of mandatory introductory clinical training before entering specialist training (Janlöv et al., 2023). In Slovenia, physicians must first complete six years of medical education, followed by a six-month internship in emergency medicine. Afterwards, they enter specialist training through public tenders organised twice a year by the Medical Chamber (Albreht et al., 2021). The harmonised minimum training requirements facilitate professional mobility while maintaining consistent quality across national health systems.

Recognition of qualifications and related barriers Specialists are among the occupations subject to automatic recognition across EU Member States / European Economic Area countries under Directive 2005/36/EC (European Parliament et al., 2005). The harmonised minimum training requirements ensure that a specialist trained in one Member State can practise in another without needing to requalify or undergo extensive additional training. In practice, however, the recognition process is often slow and bureaucratic. The European Court of Auditors found in 2024 that the recognition system is 'essential but inconsistently applied' (European Court of Auditors, 2024).

Under Directive 2005/36/EC, 'doctors (medical practitioners)' benefit from automatic recognition across Member States when minimum training standards are met. Under Article 27 of the directive, Member States are allowed to require additional certification for doctors who undertook part-time specialist training before 1983, confirming at least three years of lawful practice. Furthermore, if a Member State repealed its laws on awarding specialist qualifications and introduced acquired rights for its nationals, it must extend those rights to other EU nationals with equivalent qualifications issued before the repeal date.

Box 5: Stakeholder consultation: barriers to qualification recognition

According to two stakeholders, despite freedom of movement among EURES countries and the legal recognition of qualifications, barriers to qualification recognition persist. Language requirements, administrative delays and misaligned training programmes could represent obstacles, while financial burdens and unclear rules could add further complexity to the process. Additional challenges include circular requirements, such as needing board approval to begin an adaptation period, while the adaptation period itself requires prior approval.

Role of healthcare workforce planning

Strategic healthcare workforce planning is essential to address ongoing shortages, yet approaches vary significantly across EURES countries. While some have increased student intake, many still fall short in training enough specialists to meet demand. This gap is largely due to ineffective planning of medical school admissions and specialist training programmes, and also a failure to account for dropout rates, professional migration and graduates choosing not to enter the medical field (Pennisi et al., 2023).

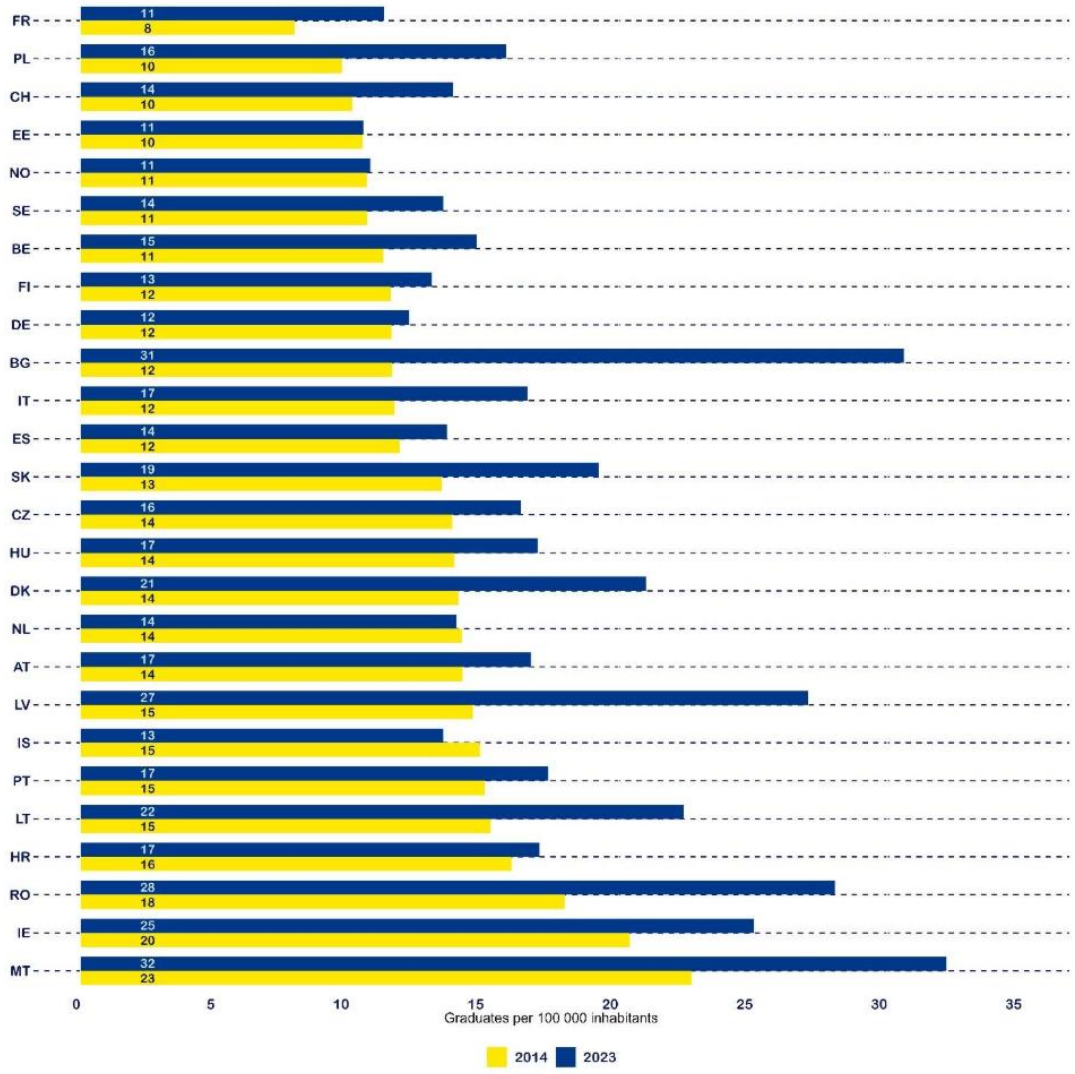
In Sweden, the demand for specialist doctors is shaped by a decentralised planning system, where universities independently determine the number of medical students, while regions control the availability of specialist training positions through negotiations with hospitals and other providers. Although the government influences medical education indirectly by funding clinical training placements, there is no national coordination of education capacity. This fragmented approach leads to regional disparities in the distribution of specialists. To improve strategic workforce planning, the government established the National Health Competence Council in 2020, which aims to assess skills needs and foster collaboration among key stakeholders at the national and regional levels (Janlöv et al., 2023).

In some countries, such as Denmark, the recruitment of foreign-trained health professionals has been part of a national strategy since the early 2000s to address workforce gaps across the health system (Okkels Birk et al., 2024). Similarly, France uses the 'pull' factor of higher income to encourage the inflow of physicians from countries where the wages are even lower to fill vacancies that remain unattractive to domestically trained workers (Mans et al., 2020).

Suitability of medical education systems to meet job market needs

As shown in Figure 9, the number of physician graduates (either GPs or specialists) per 100 000 inhabitants increased in almost all EURES countries between 2014 and 2023. Graduate output is rather uneven across EURES countries. In 2023, Malta, Bulgaria and Romania reported the highest rates of physician graduates: between 25 and 35 per 100 000 people. In contrast, Estonia, Norway, and France had the lowest rates: around 10 per 100 000 inhabitants.

Figure 9: Number of physician graduates (generalist or specialist medical practitioners) per 100 000 inhabitants by country, EURES, 2014 and 2023



NB: Only for countries with available data.

Source: Eurostat dataset (hlth_rs_grd2) (15 July 2025).

In some countries, a mismatch between new graduates and the offer of specialist training is reported. In Spain, the number of medical schools has grown in recent years, increasing from 28 to 53 between 2010 and 2023. Nonetheless, the number of medical graduates remains relatively low. In 2023, only 6 316 students completed their medical degrees. This value was lower than the number of positions available in the national medical internship programme, which must be completed to become a specialist in the public health system. This mismatch is particularly concerning given the ageing medical workforce and the uneven distribution of specialists across fields (Bernal-Delgado et al., 2024).

Box 6: Stakeholder consultation: gaps in training

One stakeholder pointed out that curriculum reforms are under way in several countries to improve training quality, shifting from time-based to skills-based approaches and incorporating communication skills and migrant health as topics. Western and northern European countries are leading these changes, while others, including Germany and parts of eastern Europe, are lagging behind. Discrepancies remain significant, particularly as migration introduces diseases rarely seen in recent decades, such as diphtheria, requiring updated knowledge and preparedness. Although European training curricula are slowly adapting progress is uneven and systems remain slow to respond to changing needs.

According to one stakeholder, paediatric care structures vary across Europe. In some countries, primary care paediatricians do not exist, and children are treated by either hospital-based specialists or GPs with limited paediatric training. This short training period is insufficient to address complex needs such as adolescent health, behavioural issues, sexual health and the prevention of non-communicable diseases. As a result, many teenagers transition to GPs who are inadequately prepared for these challenges.

One stakeholder pointed out that specialists are becoming increasingly sub-specialised, which creates gaps in general medical knowledge. Internal medicine suffers from a lack of specialists, highlighting the need for a more balanced approach to workforce planning.

Demand for new skills

The integration of digital technologies and AI into the European health system is expected to support health workers in managing their workflow and enhancing their productivity. For instance, the employment of AI applications in laboratory testing, image processing and the analysis of genomic data for early symptom detection enables professionals such as radiologists and pathologists to interpret tests with greater precision (OECD et al., 2024). Nonetheless, while offering significant potential for enhancing health professionals' work, the increased use of digital technologies also poses challenges and risks.

Digital skills in healthcare encompass a broad range of capabilities, including proficiency in the use of electronic health records, telehealth platforms, data analysis and digital communication tools, and awareness of emerging technologies. This is especially critical given the current clinical workforce is not adequately trained or equipped to fully leverage the benefits of digital health technologies, which directly impacts both patient care quality and operational efficiency (Ferreira et al., 2025).

The digital skills deficit in healthcare is a major concern in EURES countries (Roda, 2021). Physicians face the need to reshape their skills sets by developing digital and data literacy competencies. In Estonia, for instance, GPs increasingly rely on e-consultations to accelerate access to specialist advice, with specialists providing remote treatment recommendations. By 2021, although e-consultations made up only 8 % of referrals, over a third of patients avoided in-person visits thanks to digital input from specialists. This shift highlights the need for specialists to be proficient in digital communication and remote clinical decision-making (Kasekamp et al., 2023). Similarly, in Sweden, digital consultations have expanded beyond primary care into outpatient services, driven by regulatory changes and private sector innovation. Since 2016, patients across the country have accessed specialist care remotely, with the costs of consultations reimbursed by their home regions. This model has introduced a parallel digital healthcare supply, requiring specialists to adapt to virtual care environments and new reimbursement structures. As digital health becomes more embedded, specialists must develop competencies in telemedicine, data management and patient engagement through virtual platforms (Janlöv et al., 2023).

Aligning the demand for new skills with those offered by the medical education system in EURES countries is essential. Introducing curricula and courses focused on developing digital skills is critical to addressing the challenges of digital healthcare. Even if the interest in and knowledge of telemedicine are increasing, especially in the post-pandemic period, there is still a lack of technological and digital competencies among medical students (Marsilio et al., 2024).

In addition to integrating digital health curricula, it is essential to foster a culture of innovation and collaboration within healthcare settings. Some of the key barriers to digital transformation are the reluctance among healthcare providers and the resistance to change (Ferreira et al., 2025).

Box 7: Stakeholder consultation: digitalisation of the healthcare sector

According to one stakeholder, the growing digitalisation of healthcare has significantly increased the administrative weight of the profession. Doctors are spending increasingly more time entering data into systems, reducing the time they can dedicate to patients. In addition, many doctors report losing considerable time to trying to understand the digital programs and systems they are required to use, often designed by people with little understanding of medical practice. This shift towards administrative tasks and the need for new technical skills are seen as major challenges affecting the attractiveness of the specialist medical practitioner occupation.

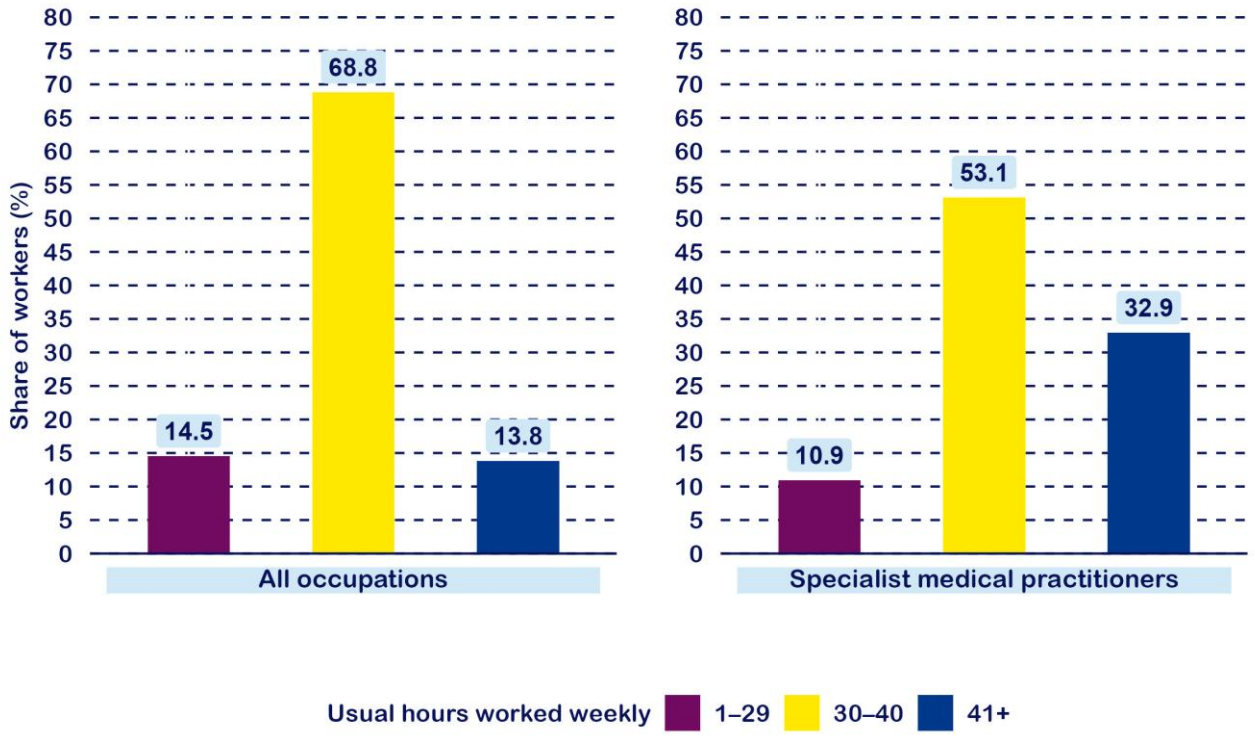
Another stakeholder pointed out that the digitalisation of healthcare systems is improving efficiency and optimising processes, but it also requires adaptation from medical professionals. The integration of AI into clinical practice demands clear regulations and boundaries to ensure safe and ethical use. As technology becomes more embedded in healthcare delivery, digital literacy and cybersecurity skills are increasingly essential. In some countries, there have even been discussions about linking medical licences to digital competency, although concrete steps are yet to be taken.

6. Working conditions and occupation attractiveness

Working hours and patterns

Figure 10 shows weekly working hour patterns among specialists. The trends consistently differ from those of all occupations, with a larger share of specialist working a higher number of hours per week. Around a third (33 %) of specialists in EURES countries work 41 or more hours per week, compared with 14 % of the workforce in all occupations.

Figure 10: Usual weekly hours worked by specialist medical practitioners, EURES, 2024

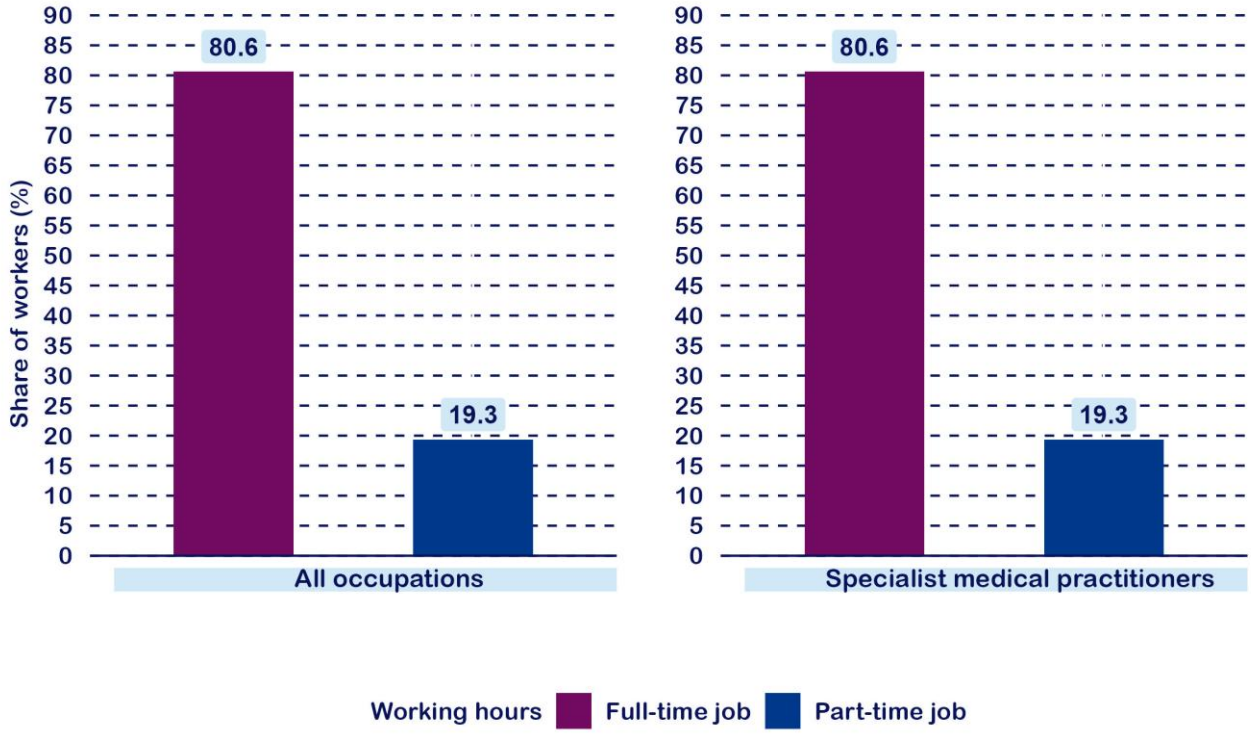


NB: For readability purposes, not all categories are displayed on the graph and the shares may not add up to 100 %.

Source: EU Labour Force Survey special data extractions.

Regarding working hours (Figure 11), specialists are primarily employed in full-time roles, with 80.6 % working full-time and 19.3 % part-time (identical to the average for all occupations).

Figure 11: Share of part-time positions among specialist medical practitioners, EURES, 2024



NB: For readability purposes, not all categories are displayed on the graph and the shares may not add up to 100 %.

Source: EU Labour Force Survey special data extractions.

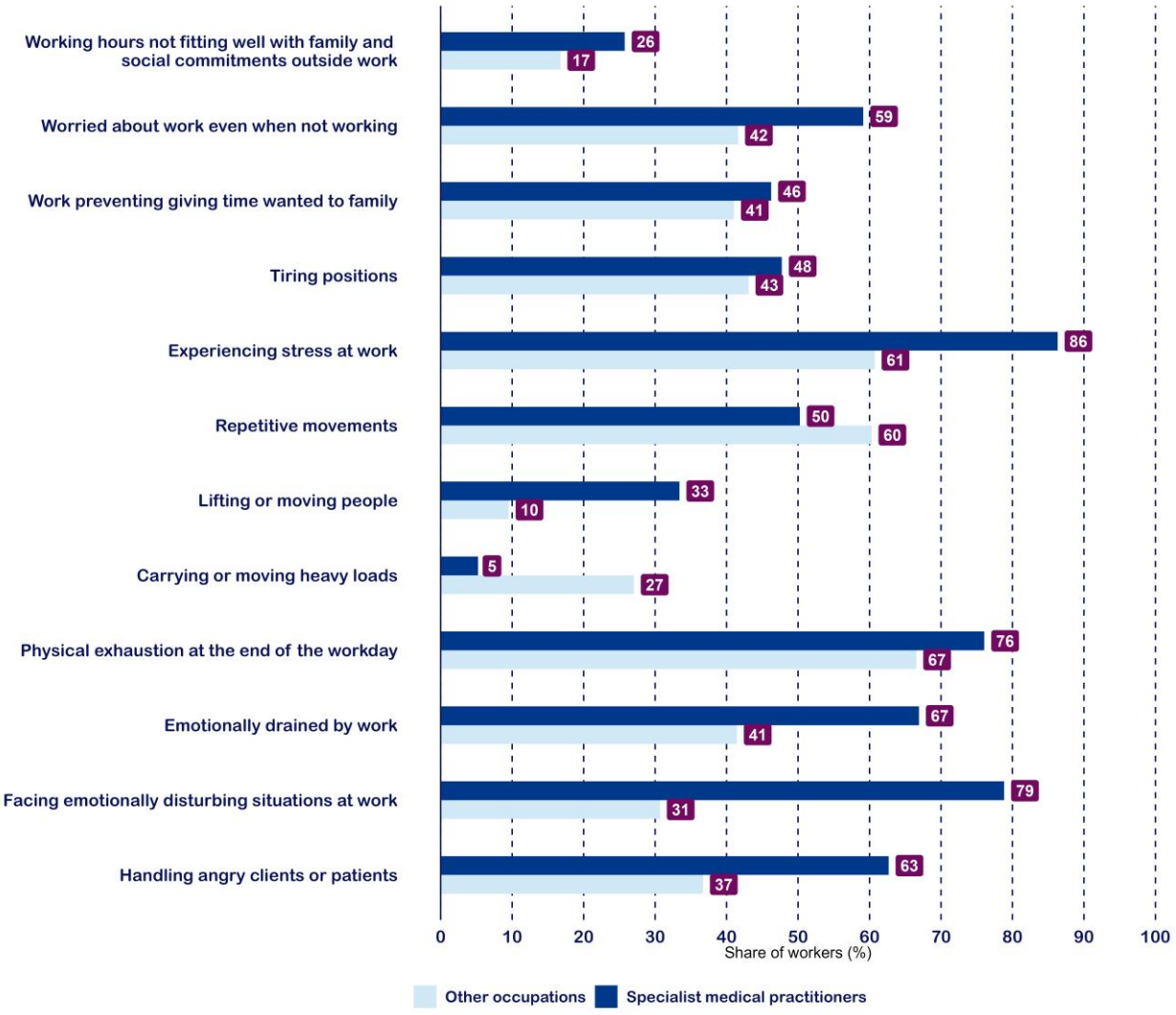
The demanding nature of the medical profession, combined with the pressure to deliver high-quality care, can have serious consequences for doctors' well-being and mental health. The significant and complex workload is a crucial driver of mental ill health among medical students and doctors (Carrieri et al., 2020). Increased autonomy in planning and performing tasks, combined with rising workloads, is also associated with the exhaustion of specialists (Huhtala et al., 2021).

Figure 12 shows that 26 % of specialists in 2024 experienced difficulties in aligning their working hours with family and social commitments, compared with 17 % of workers in all other occupations. In addition, 46 % of specialists reported that work always, often, sometimes or rarely prevents them from dedicating as much time as they would like to their family, versus 41 % for the average across all occupations.

Furthermore, 86 % of specialists reported experiencing stress at work (always, often, sometimes or rarely), compared with 61 % of workers in other sectors, and 59 % reported worrying about work even when they were not working (versus 42 %).

Specialists also experienced higher levels of physical and emotional exhaustion than the average of all occupations: 67 % reported feeling emotionally drained by work, 79 % reported encountering emotionally disturbing situations and 63 % reported dealing with angry patients. Additionally, 33 % of specialists (versus 10 % of all other occupations) reported lifting or moving people as part of their work activities, and 76 % (versus 67 %) reported feeling physically exhausted at the end of the workday.

Figure 12: Working conditions for specialist medical practitioners and all other occupations, EURES, 2024



NB: Figure shows combined share for workers reporting facing the listed situations always, often, sometimes or rarely.

Source: European Working Conditions Survey, 2024.

Doctors also tend to experience more mental ill health when they feel isolated or unable to perform the job for which they were trained. Such pressures may lead to inequitable and lower-quality patient care, increased absenteeism, poor workforce retention and, in extreme cases, even suicide. Surgical specialties are particularly correlated with risk factors such as heavy workload and long working hours, long shifts, unpredictable working hours and sleep deprivation, and stressful situations (Dutheil et al., 2019).

The increasing demand for specialist care is impacting junior doctors, who face overwhelming higher workloads. This pressure often forces them to make quick decisions without sufficient supervision or time for reflection. Combined with their limited experience, this leads to insecurity about the quality of care they provide and a sense of frustration from not being able to deliver optimal patient care (European Junior Doctors Associations et al., 2023). The lack of a safe space to share personal concerns and the ability to maintain work–life balance can lead to a loss of commitment and attrition among medical trainees.

In the Netherlands, the main reasons for trainees leaving hospital-based specialties include a disrupted work–life balance, an excessive workload and an unappealing specialty culture (Bustraan et al., 2019). Most attrition occurs early in residency training, with many medical trainees transitioning to non-surgical specialties or pursuing careers outside medicine (Querido et al., 2023).

Health and safety concerns

Health workers face a high risk of violence, with up to 38 % experiencing physical attacks during their careers and many more being exposed to verbal abuse or threats (WHO, n.d.). Moral injury resulting from psychological trauma is also commonly experienced by physicians in EURES countries. The COVID-19 pandemic, for example, has profoundly affected healthcare professionals, exposing them to ethically challenging situations that conflict with their core values. Such experiences can lead to moral distress, burnout, early retirement or attrition (Rosen et al., 2022).

Findings from the Mental Health of Nurses and Doctors Survey in the EU, Iceland and Norway show that exposure to physical violence and violent threats is consistently high across care settings, with the highest levels reported in emergency services (in both pre-hospital and hospital-based settings) and inpatient care. Exposure to anger from patients and their relatives is also very common among nurses and physicians: more than 70 % reported being confronted with this type of violence in the workplace (WHO Regional Office for Europe, 2025).

In addition, doctors are often exposed to inappropriate sexual behaviour, harassment or assault (European Union of Medical Specialists, 2024). Physicians are often exposed to interpersonal mistreatment from co-workers, patients and patients' relatives (Gynning et al., 2025). Mistreatment can also be based on ethnicity or gender, and may include verbal, non-verbal or sexual harassment.

Despite the high prevalence of these incidents, doctors often refrain from reporting violent incidents, especially those involving verbal abuse or patients with psychiatric conditions, viewing them as part of the job or not serious enough to escalate. This under-reporting contributes to a lack of recognition of non-physical forms of violence, which are equally as harmful as physical forms and should be acknowledged (Kumari et al., 2020). Moreover, exposure to violence in the workplace is associated with higher rates of mental health conditions, including depression and anxiety. According to the Mental Health of Nurses and Doctors Survey findings, female specialists are more affected by depression and anxiety than their male counterparts (WHO Regional Office for Europe, 2025).

Box 8: Stakeholder consultation: violence and emotional harassment in the workplace

According to one stakeholder, increasing rates of violence and emotional harassment targeting doctors are serious concerns across EURES countries. Physicians are given opportunities to report aggression, and support mechanisms exist to help them seek justice when necessary. As an example, they noted Belgium ([2]), where doctors can access specialised units staffed by experienced professionals, including psychologists, to help them cope with aggression. Similar support structures exist in France through the Ordre des Médecins.

([2]) See the Belgian Ordre des Médecins web page (https://ordomedic.be/fr/formulaire-de-notification-agression).

Career prospects

The pay levels and dynamics of specialists vary across EURES countries. Differences in the salary levels of doctors across countries could represent 'push' and 'pull' factors in relation to occupation attractiveness. In all EURES countries, physicians, both GPs and specialists, earn significantly more than the average worker, with specialists making approximately six times the average salary in Belgium and Germany (OECD et al., 2024).

Pay-for-performance schemes have become always more common among physicians' remunerations. These schemes aim to improve healthcare quality by linking payments to performance, unlike traditional models such as fee-for-service schemes (which may encourage over-treatment) or capitation (which may lead to under-treatment). Although many governments have endorsed and promoted performance-based models in healthcare, their adoption by healthcare professionals has been slow. Medical associations have raised concerns about increased workloads, faster-paced environments, reduced base salaries and a heightened risk of burnout (Kavas et al., 2025).

Some countries present a mixed remuneration scheme, incorporating performance-based payments as well. In Spain, for instance, hospital specialists receive free-for-services payments and pay-for-performance bonuses, in addition to payments through the general salary structure (Bernal-Delgado et al., 2024). In Cyprus, specialists employed in public hospitals receive a monthly salary that is adjusted based on their seniority and years of experience. Additionally, they are entitled to a bonus if their hospital department is profitable (Theodorou et al., 2024).

In Sweden, a full week's work is 40 hours, and the salary includes compensation for work during non-regular working hours (Janlöv et al., 2023). Similarly, in Slovenia, specialists are usually paid for a fixed number of hours; however, a system of 'equivalent hours' allows specialists to receive payment for more hours of work than those formally performed (Albreht et al., 2021).

In some EURES countries, the payment mechanisms for providers of health services are defined by the region. In Sweden, for instance, specialised care is primarily funded through global budgeting, especially in publicly owned hospitals, although some regions supplement this with alternative models such as capitation, diagnosis-related-group-based payments and, to a lesser extent, pay-for-performance schemes. Especially for outpatient care, episode-based payments, particularly in orthopaedics, are emerging in some regions, incorporating adjustments for case complexity and linking compensation to performance and complication management. These developments reflect a gradual shift towards more outcome-oriented and accountable financing for specialists (Janlöv et al., 2023).

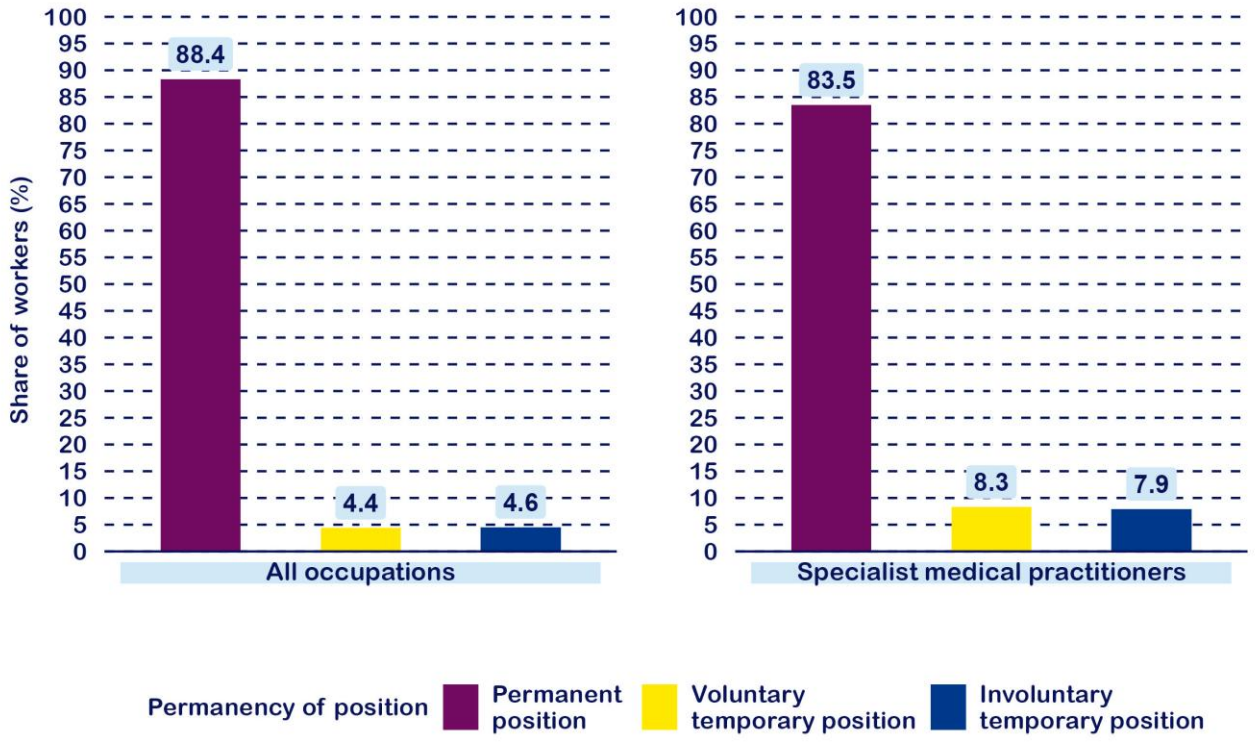
In hospitals, specialists progress through the ranks from junior to senior roles and may advance to leadership positions. Their performance is reviewed every three years, with potential for regular or exceptional promotions based on valuation (Albreht et al., 2021).

7. Recruitment practices and retention trends

Employment forms and contracts

Permanent contracts are the dominant form of employment among specialists, applying to more than 80 % of the specialist workforce, remaining slightly below the average across all occupations (Figure 13). Voluntary and involuntary temporary employment among specialists is relatively uncommon, accounting for approximately 8 % and 8 % of positions, respectively. Although temporary roles are less prevalent than permanent roles among specialists, their incidence is higher than for all occupational groups.

Figure 13: Share of temporary positions among specialist medical practitioners, EURES, 2023



NB: For readability purposes, not all categories are displayed on the graph and the shares may not add up to 100 %.

Source: EU Labour Force Survey special data extractions.

In some countries, the increase in temporary workers, especially in the public sector, represents a challenge for the stability of the sector. In Spain, for instance, the share of temporary workers in the public sector increased from 29 % to 42 % between 2012 and 2020 (Bernal-Delgado et al., 2024).

Employment models for specialists vary across countries, but salaried positions remain the most common. In Sweden, most physicians across both private and public providers, and independent of service sector, are salaried employees. No major difference in salaries exists between GPs working in primary care and specialists working in hospitals (Janlöv et al., 2023). Similarly, in Spain, all healthcare workers registered in the Spanish National Health System are salaried workers, which means they fall under the general salary structure (Bernal-Delgado et al., 2024). In France, self-employment is more common among GPs (57 %) than specialists (34 %) (Or et al., 2023).

In Slovenia, healthcare specialists may work as public employees, under public–private contracts, or independently outside the public system, depending on how their services are funded and delivered (Albreht et al., 2021).

In some systems, private sector arrangements introduce additional incentives for specialists. In Spain, for instance, some specialists employed under private sector labour laws receive productivity-linked supplementary payments (Bernal-Delgado et al., 2024).

Early retirement rates and dropouts of incumbent staff

In some EURES countries, there is a growing number of physicians transitioning to early retirement. The COVID-19 pandemic is said to have accelerated the retirement of part of the specialist workforce. Among the main causes of specialists' early retirement were negative aspects of job satisfaction, such as burnout, excessive workload, unhealthy work–life balance and low job control. The timing of retirement can influence the healthcare system in different ways. For instance, replacing the most experienced staff can be particularly challenging due to their invaluable knowledge and expertise, and the higher efficiency and quality of care they provide through their advanced skills (Kimak et al., 2023).

In recent years, there has also been a growing trend of job resignations among junior doctors. These mostly occur before or at the end of postgraduate training programmes. In some cases, resignations occur among recent graduates who choose to work outside the field of health and care and move to pharmaceutical companies or consultancies (European Junior Doctors Associations et al., 2023).

8. Measures to tackle labour market imbalances

Skills mix and role substitution

A shift from hospital-based care to more decentralised models is reshaping specialist service delivery. In Sweden, the shift from inpatient hospital care to outpatient and day care – along with the consolidation of highly specialised services into fewer, broader services – enables the better use of medical expertise and advanced technologies, improves treatment outcomes for complex and rare conditions, and supports more efficient resource allocation. By separating emergency and elective care and concentrating services at the regional and national levels, the system enhances continuity, reduces duplication and ensures that patients requiring specialised interventions receive care in facilities equipped with the necessary competencies and infrastructure.

Over the past few decades, Sweden's specialised care system has developed from a hospital-centred model into one of outpatient and day care services, with increasing emphasis on separating emergency and elective care. The 1990s saw a rise in day surgery and the specialisation of smaller hospitals, followed by a concentration of emergency services in larger hospitals. This trend continued into the 2010s, with regional and later national consolidation of highly specialised services. The establishment of regional cancer centres supported this centralisation. Since 2018, national highly specialised care has been regulated and must be delivered by a maximum of five designated hospitals, selected by the National Board of Health and Welfare, to ensure the highest quality for rare and complex treatments. This form of care accounts for approximately 4–5 % of inpatient service volume (Janlöv et al., 2023).

In some countries, measures have been taken to address the uneven distribution of specialised medical practitioners working in hospitals. In Estonia, for instance, general hospitals in remote areas face a severe shortage of physicians. To maintain service delivery, visiting doctors from regional or central hospitals are brought in to cover the gaps (Kasekamp et al., 2023).

Support measures for labour market entry

Expanding specialist training requires sustained investment in education and workforce planning. Some EURES countries increased the funding dedicated to doctors in specialist training. For instance, in Italy, thanks to funding from the national recovery and resilience plan, the number of medical specialisation contracts for full five-year study cycles has increased by approximately 4 200 since the 2020/2021 academic year. This expansion was further supported by the 2022 Budget Law, approved by the Council of Ministers in October 2021, which introduced a progressive increase in funding for specialist medical training. Notably, over EUR 2 billion in additional expenditure is projected by 2027 (de Belvis et al., 2022). Similarly, in Spain, the Ministry of Health has been increasing the number of medical internship programme training positions since 2019, with a 29 % rise by 2024. This expansion aims to better align the supply of specialists with the changing needs of the population (Bernal-Delgado et al., 2024).

Box 9: Stakeholder consultation: workforce planning

According to one stakeholder, there are initiatives in place to approach workforce planning in a way that reflects actual needs. Currently, planning is often based on headcount, without considering the fact that some professionals work part-time and therefore cannot provide the equivalent of full-time capacity.

Quota systems are used to regulate access to medical specialisation training. In Belgium, education policy is managed by regional communities, which have implemented measures to control the number of medical students progressing to specialist training. To align with quota limits, the Flemish Community introduced an inter-university admission test at the start of medical education, requiring students to pass and rank sufficiently to continue. The French Community adopted similar controls, including strict orientation and reorientation tests. Despite these efforts, an oversupply of candidates persists, prompting discussions about additional corrective measures (Gerkens et al., 2020).

Strategies to improve the attractiveness of the occupation

In some countries, the number of temporary workers is on the rise. To address this issue and enhance job stability and attractiveness, national reforms play a crucial role. In Spain, Royal Decree-Law 12/2022, in effect since July 2022, limits temporary contracts within the Spanish National Health System to a maximum duration of three years. These contracts are permitted only in specific circumstances, such as in health programmes or to cover long-term vacancies. If the position remains necessary, health authorities are required to establish a permanent role with the relevant healthcare provider (Bernal-Delgado et al., 2024).

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